RESEARCH INSTITUTES



UNIVERSIDAD DE BUENOS AIRES



UNIVERSITY OF BUENOS AIRES

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Prologue

In 2009, the University of Buenos Aires published its first book about the Research Institutes working in the different academic units. Today, such high-level research structure has strengthen both regarding its quality and size due to a process of mergers, changes of institutional dependence, and creation of new institutes, which has since then taken place and entails the growth of scientific fields, as well as the diversification of lines of research and a renewed development of technological and services supply provided by the University in a framework of continuous change, always in accordance with the needs of national and regional development.

Issuing this new publication on Research Institutes, which covers both the Institutes of the University and those shared with the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas - CONICET), means to acknowledge the lifework of researchers who develop their nationally and internationally prestigious scientific and technological activities within said Institutes.

Actually, most Institutes maintain stable scientific relationships with foreign specialized centers; in some cases, carrying out studies which surpass the local framework to adopt a regional approach; in other cases, taking advantage of a regional position so as to establish worldwide prestigious scientific liaisons; and in every case, developing open communications among the national and international academic communities, integrating its production with the developments of contemporary scientific research.

Nationally, the Institutes develop high-level researches, producing and transferring hightechnology for the productive sector. Those involved in care intervention, combine basic with clinical research, providing new criteria for diagnosis.

In the area of natural resources, researches contribute to deal with specific problems providing good prospects of making rational decisions for the sustainable use of resources and favoring society awareness so as to get its support when implementing public policies.

Pioneers in vacant areas, the research institutes strengthen the university's potential in training high-quality human resources by running seminars and organizing academic activities along with specialists of national and foreign universities, thus holding cooperation agreements for new researches and training venues. Those producing knowledge of social impact stand out, acting as a network of actors oriented not only to academic activities but also to extension activities, focusing on the diverse forms university and society might relate with one another.

We then invite you to go through the following pages and learn the scope and potentials of perspectives and research lines currently in place, being developed in venues the University of Buenos offers for the generation and transmission of scientific-technical knowledge.

Dr. Ruben Hallu

Rector University of Buenos Aires







Strengthening research institutes in the University of Buenos Aires

Dr. Hugo Sirkin

Secretary of Science and Technology of the University of Buenos Aires

In the University of Buenos Aires, a system of research institutes operating in its dependencies is being established, derived from the understanding that this organizational structure is the most effective for developing research activities in different areas and disciplines; since it provides with the generation of a critical mass of human resources, allowing fluent interactions among its members and the promotion of interdisciplinary approaches, access to equipment, its rational and shared use as well as providing technical and administrative support structure, and complementary support mechanisms to specific tasks (through libraries, map libraries, thematic museums, specialized services). When institutes are integrated to academic units, it is only reasonable that the abovementioned support structures complement each other and / or find themselves integrated with the central unit.

Obviously, that is not a unique or exclusive structure: in some academic units, other dependencies play partially such roles. As a general rule, researchers and Boards of Directors are the ones who suggest and bolster these kinds of organizations. In other cases, they exist for historical reasons.

Nowadays, when the creation of UBA Institute is suggested, be it under any of the two current modalities – UBA Institute or institute of double dependency UBA-CONICET, – such proposal is in both cases submitted to UBA Superior Board, and also to the Board of CONICET in the second case. Once the proposals are approved, the public examination process starts to cover the position of director, in accordance with the procedures established in the corresponding regulations.

The institutes of double dependency UBA-CONICET have an operating budget provided by CONICET covering most of its operational needs, but not to be used for research tasks, which are financed by other organizations. Following the same criteria, the UBA Superior Board has recently approved the allocation of grants to support the activities of the Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires, which will became effective during the second semester of 2012 for those which institutional normalization process has been fulfilled or is being fulfilled.

In summary: regulatory frameworks that take into account every stage oriented to guarantee the quality of scientific and technological activities and support mechanisms in permanent adjustment are the adequate institutional contributions for the development of the highest academic level in the University.







Research Institutes in the University of Buenos Aires

The institutes of scientific-technological research developing their activities in the different venues of the University of Buenos Aires admit two kinds of institutional dependency: they might be institutes of the University of Buenos Aires or Institutes of shared dependency with the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET).

Regarding the first category, there are sixteen research units grouped under the name of *Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires* (Institutos de Investigación Científica, Humanística y de Desarrollo Tecnológico de la Universidad de Buenos Aires). In the case of the double-dependency institutes, forty operational units are recognized as *UBA-CONICET Institutes* (Institutos UBA-CONICET).

Research is the main activity of institutes. However, it is necessarily associated with training researchers, lecturers and scholars, as well as with the exchange and liaison with other specialized groups or centers. Scientific-technological production is disseminated through publications of national and international scope. A varied supply of services meets the transfer needs to the public and private sectors through different methods, as well as to the general public (libraries, map libraries, documentary archives, laboratories and care units.)

Creating research institutes within the university responds to a multiplicity of factors of different nature, related to processes of institutionalization of science and to the progressive appearance of demands for innovation and development, closely related to changes in the historical and political context of the country.

Times of emergence of proposals for conceptual and operational transformations related to science take turns with times of isolation and silence; but the changes of path depend on a generation of requirements derived from a larger social structure that supports the University. Creating and developing focal points locally and developing scientific approaches internationally, with which the academic-scientific centers must be coordinated, are mere dimensions of a fluid and dynamic process potentiating scientific-institutional progress. However, said forces are cut short and reverted when official policies impose other criteria of efficiency and quality, when concepts of innovation and development change of meaning having been their underpinning assumptions reformulated.

Analyzing conditions encouraging foundational initiatives of research institutes is complex, since it implies multiple variables valid for different frameworks, from the most restrictive to the widest, responding to regional or worldwide movements.

In the following pages, the histories of the different research institutes of the University are described, showing the plurality of motivations that led to their creation. Incorporating new areas and subsequently widening scientific fields fostered the development and articulation

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of research groups, which would then form groups that would suggest the creation of new institutional spaces.

Another underlying reason for the origin of institutes is the search for synergy and complementation of groups and equipment so as to potentiate lines of research. Also, recent integration of traditional branches knowledge has given way to original approaches and perspectives, modifying the scope of research and demanding their own institutional space. In the same way, the proposals for articulating postgraduate lecturing with university hospital care have caused such organizational forms to emerge by boosting the relationship between basic and clinical research.

It is important to highlight that the ups and downs of the university scientific system are not unconnected with changes in the political context of the country: many foundational initiatives have taken place in moments of restructuration and reformulation of the area of higher education, derived from the recovery of democracy as well as university autonomy. A concurrence of interests has started taking place in the 1980's and continues up to date between the University of Buenos Aires and CONICET regarding the need to strengthen and support specific scientific fields, areas of technological demand, programs and laboratories, giving birth to agreements for the creation of new institutes.

On the contrary, closings and suspension of scientific-technological activities have taken place during dictatorships, stopping researches in national universities while allowing private centers to grow thanks to governmental or international support. The role of science changes, undoubtedly, whether it derives from a democratic or authoritarian ethos. The sustained growth during democratic processes depicts which is the best framework for science and connected practices to develop. No coincidence is the increase in number of research institutes of the University of Buenos Aires in recent years.

A provisional balance on promotion and maintenance of these research units unravels advantages hard to achieve under other organizational frameworks, such as the notable increase of a critical mass and new research transfer and extension lines, as well as the inclusion of laboratories with infrastructure and equipment, providing researchers and scholars with an easier access to high tech instruments. Moreover, scientifically relevant results stand out: many of said institutes have become unique centers at a regional and international level.

Regulatory framework

Historically, creating research institutes within the university meant progress in the process of institutionalization of science and professionalization of research, which enhance the excellence of the academic profession in the framework of modernization proposals that call for institutional reorganization projects.







The institutional belonging of full-time researchers is entwined with new organizational forms which overcome the departmental structure, thus combining activities of tutoring and research as well as creating the material basis for university research.

The view inspiring the process of normalization of research institutes in the late fifties and early sixties of last century lays on such principles. The superior hierarchy attributed to institutes as venues of complex research is already shown by the University Bylaws (1958) in which institutes are defined as research units requiring for its creation of qualified specialists and means which guarantee their proper functioning to contribute to training lecturers and researchers, direct scholarships and provide specialization courses.

Resolution No. 2853, passed by the Honorable Superior Board on 16 December 1961, rules over research institutes conditions, missions and functions. Said resolution defines the objectives of creation and approval as ones that surpass the classical objectives of generation of new knowledge and training of researchers, adding the idea of "guaranteeing interdisciplinary collaboration, covering functions and providing services for the University as a whole". Other relevant aspects are included in this framework: the scientific autonomy of the institutes is guaranteed, leaving scientific management, creation of activity areas, their assessment and supervision to each institute's authorities.

Resolution No. 2853 stopped being applicable since 1964 for a period of twenty years. In 1985, by Resolution No. 1652, the Acting Superior Board of the University decided to ratify it, adapting the organization of every institute to such regulation and annulling approvals of institutions non expressly made by the Superior Board or non respectful of the conditions duly established in the early sixties.

In August 2005, the Superior Board of the University overturns prior resolutions and passes Resolution No. 5042, adapting fundamentals drawn up more than four decades before to the changes occurred in research organization and assessment. At that time, the current name of the Institutes of the Universities is set: *Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires*.

The creation and approval of institutes now intend to establish university research groups, focusing on sustainability of specific lines of research of an interdisciplinary nature, in the medium and long term. The strategic positioning of institutes, the ever-going improvement of quality and relevance of research/training activities and the commitment that they entail with the scientific community and society are the focus of the renewed attention on the internal and external periodical assessment, which includes both the progress in creating knowledge and training human resources, and in technological transfer and liaison with other research groups.

In the same year, the University of Buenos Aires and the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET)

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signed a framework agreement, of ten years of duration, which replaced the General Agreement of Scientific and Technical Collaboration signed on August 11, 1977, and approved by Superior Board Resolution No. 185/77, "which is thus revoked, as well as any other agreement related to any aspect considered hereby."

The Framework Agreement UBA-CONICET establishes: "CONICET and UBA express their desire of strengthening reciprocal complementation actions in relation with promotion and realization of scientific research, technological and human resources training tasks which contribute to the development of knowledge.

CONICET and UBA share the responsibility to maintain several institutes, which are located in UBA dependencies.

Both institutions acknowledge the need of establishing a regulatory common framework as regards management and operation of those shared Institutes which shall include the procedures for appointing its authorities.

Likewise, both parties wish to establish transparent methods for providing services to third-parties, technical, research, development and transfer support to third parties, in an attempt to guarantee a proper and equitable participation of both parties in the benefits such services might bring about in relation with the resources each has respectively provided."

Further in the text, regarding institutional dependency of institutes, the following is established: "For the purposes of this agreement, the name of 'shared institutes' will refer to every Executory Unit of CONICET operating in any dependency of UBA. For all intents and purposes, such institutes shall be considered as double dependency institutes."

Within CONICET, institutes gained relevance in the period 1972-1983. During initial stages, after its creation in 1958, CONICET was focused on strengthening basic research in the fields of natural and biomedical sciences, entrusting the challenge of technological research to other organizations founded in the same period, such as INTI and INTA. Decree No. 200/81 shows the results of the expansion of centers leading to a change in its original objectives, which entailed establishing liaisons with national universities to build up and reproduce scientific and technological frameworks, strengthening the relationship between research and lecturing.

Since 2005, the Framework Agreement UBA-CONICET has been the regulatory framework of shared institutes. In the case of institutes belonging to the University, during 2008 and 2009, a new process of reviewing accumulated experience was developed, leading to an update of the regulatory framework. Superior Board Resolution No. 6835/09 established new criteria as regards governing and periodic assessment of research institutes, including new regulations on background competition and proposals for appointing Directors. Such regulation, along with two partial modifications approved by Superior Board of the University, Resolution No. 908/10 and No. 2053/11, is the current regulatory framework







for creating and approving, and evaluating and appointing directors of the Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires.

Recent history (2009-2012)

During this period, the University underwent institutional normalization processes including every research institute located within the different academic units, in accordance with current regulations.

Regarding institutes belonging to the University, the first stage of approval of institutes, internal regulations and appointment of Directors finished in 2007. First periodical biannual assessment (2007-2009) was carried out during 2010 and 2011 with the participation of external evaluators, suggested by academic units and selected by Technical Advisory Commissions (CTA). The General Direction of Juridical Affairs intervened so as to adequate internal regulations of each institute to the regulations approved in 2009, and it ruled over the modifications each institute made. In 2011, the process of public contests to cover Directors positions began, which is still standing. During the period 2010-2011, mergers and changes of institutional dependency of institutes were approved, as well as the creation of three new institutes located in the Faculty of Economic Sciences, Faculty of Veterinary Sciences and Faculty of Medicine, respectively. All those processes concluded with the corresponding approval by the Superior Board of the University.

During the period 2009-2012, the coordination and complementation of efforts between the University of Buenos Aires and CONICET involved to an intense administrative activity developed in accordance with current regulations and approved by both organizations. Between 2008 and 2009, examinations were carried out to cover the positions of Director in the originally shared institutes. Between 2010 and 2011, fifteen institutes of double dependency were created, three of them were the result of mergers and change of dependency of the aforementioned UBA Institutes. In 2011, the examination process began to cover Director positions, which is now still in place.

Every research institute operates within University dependencies, which include the Rectorship and two University Hospitals. Four academic units are venue for 70% of the Institutes: the Faculty of Exact and Natural Sciences, the Faculty of Pharmacy and Biochemistry, the Faculty of Medicine, and the Faculty of Philosophy and Letters.

Cognitive interests and research areas covered by the institutes form a wide and diversified spectrum. Some institutes focus their projects in basic research whereas others conceive them jointly with applied research. Many of them work on their objects of study from an interdisciplinary approach: one institute coordinates teams and disciplines from all academic







units.

Recent creation of institutes intensify the offer of scientific fields, research areas, and contributions in terms of technology and services: every branch of economic sciences, Earth and atmosphere sciences, mathematics and ecology broaden the horizons of scientific and technological research developed in the University of Buenos Aires. Although the aforementioned diversity makes it hard to classify institutes according to areas of knowledge, in general, the trends depicted in the first edition of 2009 of the book seem to remain standing: as regards UBA Institutes, social sciences and humanities seem to be predominant, whereas biological and health sciences are prevalent in UBA-CONICET Institutes.

Hereafter the reader will find a presentation of the Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires and of Shared Institutes. Every presentation intends to give an account of the historical moments in which the institutes were created as well as their physical location within the different Academic Units of the University. Both moments and locations reflect cognitive and institutional interests of the different creation epoches. The relevance of scientific and technological activities developed by each institute, as well as its background, is translated in the services and possibilities of application they offer, the mechanisms of liaison and cooperation with other specialized centers, nationally and internationally, and the national and international recognitions gained.

The Institutes are presented following the alphabetical order of the Academic Units of the University of Buenos Aires they belong to. The data of every Institute has been provided by its authorities, to whom we thank their valuable contribution.

The heading identifying each institute includes its respective institutional logo/s and resolution of approval; as regards Shared Institutes UBA-CONICET, it corresponds to the Framework Agreement signed in 2005, which included a list of institutes thereby approved to be created and set up.







Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires (Institutos de Investigación Científica, Humanística y de Desarrollo Tecnológico de la Universidad de Buenos Aires)

History
Scientific field / research areas
Services / Technological supply
Cooperation / liaison / exchange
National and international recognitions







Institute of American Art and Aesthetic Research "Mario J. Buschiazzo" (Instituto de Arte Americano e Investigaciones Estéticas "Mario J. Buschiazzo" – IAA)

The Institute of American Art and Aesthetics Research was created by the University of Buenos Aires in July 24, 1946. In 1972, it was named Mario José Buschiazzo after its first Director.

Through Superior Board Resolution No. 3512/07 it was acknowledged as an Institute for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires.

A series of events led to the foundation of the Institute. During the II International Congress of American History, held in July 1937 in Buenos Aires, the Director of the Institute of Aesthetics Research of the National Autonomous University of Mexico (Universidad Nacional Autónoma de México), Manuel Toussaint, submitted a proposal for the creation of institutes of research on Spanish American art history similar to the one he had established, taking the Arts Laboratory of the University of Seville as a model. Such initiative was heard: in 1938, Juan Giuria founded the Institute of American Archeology (since 1948, Institute of Architectural History) within the University of the Republic (Universidad de la República), Uruguay. Shortly after that, the Institute of Artistic Research of the Higher University of San Andrés of La Paz (Universidad Mayor de San Andrés de la Paz), Bolivia, was founded.

Unlike the abovementioned research centers, which are focused in local studies, the Institute of American Art has embraced a regional and American approach. During its first years, the Institute centered its studies on colonial art and architecture, and also gave some attention to the works of the 19th and 20th century. The different managements modified such trend, including studies on urban history and contemporary architecture. Without leaving aside major author works and the problems regarding iconography and style, studies have been conducted on metropolization processes and massive production within built environment.

At the same time, Mario José Buschiazzo has fostered the creation of similar institutes across the region. The Institute of American Art and Aesthetics Research keeps a close relationship with all of them. Numerous high figures of the academic world have contributed to the Institute, among which stand out Spanish professors Diego Angulo Iñíguez and Enrique Marco Dorta, who along with Buschiazzo wrote the remarkable history of art and architecture in colonial America. From the pages of the Institute's Annals stand out the contributions of Americanists such as George Kubler, Alfredo Benavides, Emilio Harth-Terré, Carlos González Lobo, José de Mesa, Teresa Gisbert, Ramón Gutiérrez and Guillermo Furlong, among others.

Previous Directors of the Institute were: Mario J. Buschiazzo (1946-1970), Jorge Gazaneo (1970-1984), Roberto Fernández (1984-1987), Jorge Francisco Liernur (1987-1992), and Alberto De Paula (1992-2008).









Acting Director Mario Sabugo

Res. (CS) No. 3512/07

Venue Faculty of Architecture, Design and Urbanism

Scientific field / research areas

The Institute of American Art and Aesthetics Research is devoted to historical, theoretical and critical studies on the manifestations of inhabiting in relation with design, architecture, urbanism, rural areas, and territory, especially in America, Argentina, and the Autonomous City of Buenos Aires and its Metropolitan area; as well as to the conduction of researches in the field of aesthetics and related disciplines.

The Institute issues and distributes *Anales* and other journals, which publish the work of not only researchers of the Institute but also of other similar institutes, so as to transfer knowledge nationally and internationally.

Departments:

- ► Department of Historical Studies (Sección de Estudios Históricos).
- Department of Aesthetical Research (Sección de Investigaciones Estéticas).
- Department of Urban Archeology (Sección de Arqueología Urbana).
- Department of Documentary Archive (Sección de Archivo Documental).

Programs:

- Culture, History and Spaces (Cultura, Historia y Espacio – CHE).
- Archive of Digital Images (Archivo de Imágenes Digitales – AID).
- Architecture and Clay Building (Arquitectura y Construcción en Tierra – ARCONTI).

Services / technological supply

Open to public:

- Library Andrés Blanqui, specialized in Latin America and the Caribbean.
- ▶ Library catalogue to be accessed online.
- ▶ Documentary archive and map library.
- ► Image library.
- ▶ Website with publications and digital images.



- Assistance on urban history, history of architecture and design, archaeology and urban heritage.
- ▶ Technical support for public and private organizations.

Cooperation / liaison / exchange

The Institute of American Art and Aesthetic Research exchanges research works, documents and publications with other universities and research centers, both national and regional. The Institute holds cooperation agreements with different academic organizations.







Superior Institute of Urbanism, Territory and Environment (Instituto Superior de Urbanismo, Territorio y el Ambiente – ISU)

A project to create an Institute of Urbanism within the Faculty of Architecture in 1944 set the precedent to ISU, in the framework of an organization oriented to establish a Faculty of Architecture and Urbanism capable of delivering graduates trained in both specializations.

The Resolution of March 11, 1948, created the Superior Institute of Urbanism of the Faculty of Architecture and Urbanism. Later resolutions approved the appointments of the different Directors: Professor Engineer Carlos M. Della Paolera, April 24, 1948, and Architect Sergio Fernández Pico, September 28, 1956.

Afterwards, the Institute underwent a long period of inactivity that lasted until 1993. Board of Directors Resolution No. 321, passed on December 7, 1993, appointed Professor Emeritus Architect Juan Manuel Borthagaray as Director of the High Institute of Urbanism.

So as to keep pace with the changes of perspective of Urbanism as a discipline, and the subsequent need to modernize and adapt the orientation of studies, Board of Directors Resolution No. 579, passed on December 16, 2003, modified the name of the Institute to its current name: Superior Institute of Urbanism, Territory and Environment.

In accordance with the normalization process of research institutes undertaken by the University, Superior Board Resolution No. 2146/07 officially recognized the Institute as one of the Research Institutes of the University of Buenos Aires, and appointed Architect Juan Manuel Borthagaray as its Director.

The Superior Institute of Urbanism, Territory and Environment is the academic area in charge of creating the necessary conditions to promote research and production of new knowledge within the main and secondary fields that study the urban and metropolitan phenomena, including the wide range of its dimension and its impact on human life.

One of the main goals of the Institute is to build an alternative view over national territory so as to represent and work towards a better situation than the one described in current assessments regarding territory, urbanism and environment. The Institute also aims to provide appropriate and useful definitions of development and sustainability, applicable to the situation in Argentina within Latin America –of blurry borders– and the globalized world.







Director Juan Manuel Borthagaray

Res. (CS) No. 2146/07

Venue Faculty of Architecture, Design and Urbanism

Scientific field / research areas

- Planning and Management in Buenos Aires urban agglomeration.
- Urbanism and Territory.
- ► Transport.
- Urban assessments.
- ► ICT (Information and Communication Technology) development.

Services / technological supply

Remote Sensing Applied Research Center (Centro de Investigación Aplicada en Percepción Remota - CIAPER)
Its objective is to merge satellite image with analysis tools of the Metropolitan Area of Buenos Aires in use in FADU: the System of Geographical Information SITAMBA (developed by the Center of Metropolitan Information - CIM) and the Institute's system INFOURBAN (support system for graduate and postgraduate lecturing and research, developed using aerial images stored in the Institute's image library). The Center, focused in the Metropolitan Area of Buenos Aires, also provides with information to local and international centers requesting satellite photos.

ISU Library (Biblioteca ISU)

The Institute has a specialized library for professors, researchers, students and other specialists from UBA or other national or international institutions, available through Red Vitruvio - Network of Libraries of Architecture, Art, Design and Urbanism, http://www.vitruvio.cpaupage.com/.

Services / Transfer

Consultancy and assistance on issues regarding urbanism, planning, design and ICT (Information and Communication Technology) development.



Cooperation / liaison / exchange

The Institute maintains a constant communication relationship with national and international universities and research centers so as to share documents and publications. Its liaison activities include numerous academic cooperation and/or technical support agreements with similar institutions within the academic area, governmental organizations from different jurisdictions and NGOs. An international network is expected to be set up thanks to the already established liaisons with São Paulo, Toulouse and Houston.

National and international recognitions

Recognition for the book *El Río de la Plata como Territorio*. Note No. 161 - AGR – 2002, Ministry of Environment and Urban Planning of the City of Buenos Aires.

Award *Mercociudades de Ciencia y Tecnología* for the paper called: *"Diagnóstico Ambiental del AMBA: Sistema de Información Ambiental"*, Secretariat of Economical Development of the City of Buenos Aires, 2002.









Institute of Human Spatiality (Instituto de la Espacialidad Humana – IEHu)

Superior Board Resolution No. 1553, signed on December 7, 2006, approved the creation of the Institute of Human Spatiality and acknowledged it as a Research Institute of the University of Buenos Aires, and appointed Architect Dr. Roberto Doberti as Director.

The Morphology Laboratory, set up in 1990, is a precedent to the Institute. It has been active for twenty two years and is now integrated to the Institute. The Laboratory has a tradition in the development of research projects, doctoral thesis and internships, as well as in the education of different categories of scholars, and in being a space for holding seminars.

Members of the Institute have long and distinguished careers as lecturers in graduate and postgraduate courses, in specialization courses, masters and doctorates, not only in the University of Buenos Aires but also in others centers of superior studies

The research groups of the Institute produce a vast amount of knowledge based on a new approach regarding the notion of Form. Such researches are continuously being published in journals, conferences, papers and conventions.

The fields of Architecture, Design and Urbanism focus on the study of human space and the way of modifying it. Spatiality is a highly complex subject and, therefore, research activities must include the multiple dimensions of spatiality as well as the various relations that provide it with a unity of sense within the field of projective activities.

The Institute takes into consideration the two essential dimensions that form Human Spatiality: the objective or abstract dimension, and the sensible and significative dimensions. It is organized in two Research Centers. One of them is the abovementioned Morphology Laboratory, home of the following research groups: Research Group on Form General Theory; Research Group on Form Generation; Research Group on Color and Cesia.

The other center, the Research Center on Habitation, was created along with the Institute. It is home of the Research Group on Theoretical Foundations of Theory of Habitation, the Interdisciplinary Research Group of Habitation and the Research Group of Projective Interventions over Habitation. Both centers function as departments of the Institute.

The scientific-institutional objective of the Institute is to deal with all the aspects of Human Spatiality, so as to understand them in an articulated and integrated unity of sense.







Director Roberto Doberti

Res. (CS) No. 1553/06

Venue Faculty of Architecture, Design and Urbanism

Scientific field / research areas

- Spatial Morphology.
- ▶ Theory of Habitation.

Services / technological supply

- ▶ Library for specific consultancy on Spatial Morphology and Theory of Habitation.
- ▶ Museum of Form (Museo de la Forma), including tridimensional, bidimensional elements and digital archives.
- Assistance and provision of services to public or private, national or international organizations, in accordance with the Board of Directors of the Faculty of Architecture, Design and Urbanism.

Cooperation / liaison / exchange

The Institute maintains collaboration relationships with scientific associations and universities:

- ► Argentine Society for Morphological Studies (Sociedad de Estudios Morfológicos de la Argentina SEMA).
- ► Latin American Association for Habitation Theory (Asociación Latinoamericana de Teoría del Habitar ALTEHA).
- Association for Latin American Philosophy and Social Sciences (Asociación de Filosofía Latinoamericana y Ciencias Sociales ASOFIL).
- ► Argentine Color Group (Grupo Argentino de Color GAC).
- ▶ International Mathematics and Design Association (M&D)
- ► Argentine Semiotics Association (Asociación Argentina de Semiótica AAS)
- ► National University of San Juan (Universidad Nacional de San Juan).
- ► National University of Littoral (Universidad Nacional del Litoral).
- National University of Rosario (Universidad Nacional de Rosario).
- University of the Republic (Universidad de la República), Uruguay.
- National University of Colombia (Universidad Nacional de Colombia).



The Institute of Human Spatiality is assisted by professionals of national and international universities:

- ► Architect Carlos González Lobo, UNAM.
- Architect Jorge Mario Jáuregui, University of Rio de Janeiro, Brazil).
- Architect Antonio Vélez Catraín, Superior Technical School of Architecture (Escuela Técnica Superior de Arquitectura), Madrid.
- Dr. José Manuel Gallego Jorreto, Superior Technical School of Architecture (Escuela Técnica Superior de Arquitectura), Madrid.
- Architect Humberto Eliash, University of Chile (Universidad de Chile), Santiago de Chile.
- ► Architect Conrado Pintos, University of the Republic, (Universidad de la República), Uruguay.
- Architect Gastón Breyer, Professor Emeritus in FADU-UBA, Doctor Honoris Causa of UBA.
- Architect Dr. Héctor Floriani, Faculty Architecture, Planning and Design.
- ► Professor Rosa María Ravera, President of the National Academy of Arts (Academia Nacional de Bellas Artes).
- ▶ Dr. Vera Spinadel, President of the Mathematics and Design Association (Asociación de Matemática y Diseño).
- Lic. Arturo Sala, Faculties of Theology and Philosophy of the Latin American Association of Universities of the Society of Jesus (Facultades de Teología y Filosofía de la Asociación de Universidades de la Compañía de Jesús de América Latina).

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Research Institute for Administration, Accounting and Quantitative Methods for Management (Instituto de Investigaciones en Administración, Contabilidad y Métodos Cuantitativos para la Gestión - IADCOM)

On November 24, 2010, the Research Institute on Administration, Accounting and Quantitative Methods for Management was approved as an Institute for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires.

A Superior Board Resolution approved simultaneously the creation of the Institute and its internal regulations, highlighting that "the Institute is the academic place for the development of researches on specific subjects within the fields of Administration, Accounting and Quantitative Methods for Management, thus promoting the coordination, exchange, evolution and integration of such fields."

The Research Institute for Administration, Accounting and Quantitative Methods for Management entails a merger of the Institute for Administrative Research, the Institute for Accounting Research Professor Juan Alberto Arévalo, and the Institute for Statistics and Actuarial Mathematics Research Professor Fausto I. Toranzos. Each of them represent different departments of the Institute, and are preexistent research centers with a long history in the University of Buenos Aires; and the thirteen specific research centers of the Institute are accountable to them. It is important to highlight the coordination between research and lecturing (in graduate and postgraduate level) and society, due to the interdisciplinary nature of the study of Economic Sciences.

During the history of the Institute, numerous renowned specialists have collaborated, such as: Ugo Broggi and José González Galé, pioneers in the research on Biometry and Actuarial Mathematics, which they started in 1910; José Barral Souto; Ramón Antonio Cereijo, Professor Emeritus and Minister of Economy of Argentina; José Faustino Punturo, Professor Emeritus in Costs; William Leslie Chapman, Professor Emeritus in Auditing; Raúl José Roca, Professor Emeritus; Pedro Antonio Pavesi, Professor Emeritus in Administration; Fausto Ismael Toranzos, Professor Emeritus in Mathematics; Francisco Martín Suárez, Professor Emeritus in Administration.

Also deserve a special mention: Emilio M. Machado, Professor Emeritus; Maria Teresa Casparri, Professor Emeritus; Juana Zulema Brufman, Professor Emeritus; Mario Biondi, Honorary Tenured Professor; Carlos Luis García Casella, Professor Emeritus; Luisa Fronti de García, Professor Emeritus; Carlos Manuel Giménez, Professor Emeritus.

The scientific production of the Research Institute for Administration, Accounting and Quantitative Methods for Management is published through articles in specialized journals: Contabilidad, Auditoría e Investigaciones en Teoría Contable, journal accredited by the Basic Nucleus of Argentine Scientific Journals of CONICET (Núcleo Básico de Revistas Científicas Argentinas), and indexed to Latindex catalogue; Revista del Centro de Estudios de Sociología del Trabajo – CESOT; Cuadernos CIMBAGE, annual journal included in the catalogues Latindex and Unired – CMA.







Director Maria Teresa Casparri

Res. (CS) No. 1671/10

Venue Faculty of Economic Sciences

Scientific field / research areas

Administration, Accounting and Quantitative Methods for Management, developing specialties through thirteen centers grouped in three departments:

Department of Administration Research (Sección de Investigaciones en Administración)

- ▶ Insurance Center (Centro del Seguro).
- Center of Organizational Studies (Centro de Estudios Organizacionales CEO).
- Study Center on Sociology of Work (Centro de Estudios de Sociología del Trabajo – CESOT).
- Study Center on Social Security (Centro de Estudios de Seguridad Social – CESS).
- Research Center on Public Administration (Centro de Investigaciones en Administración Pública CIAP).
- ► Cultural Observatory (Observatorio Cultural OC).

Department of Accounting Research (Sección de Investigaciones Contables)

- Research Center on Accounting Models (Centro de Investigación en Modelos Contables).
- Research Center on Audits and Social Responsibility (Centro de Investigación en Auditoría y Responsabilidad Social).
- Research Center on Social Accounting (Centro de Investigación en Contabilidad Social).
- Research Center on Heritage and Environmental Accounting (Centro de Investigación en Contabilidad Patrimonial y Ambiental).

Department of Quantitative Methods for Management Research (Sección de Investigaciones en Métodos Cuantitativos para la Gestión)

- ▶ Research Center on Quantitative Methods applied to Economy and Management (Centro de Investigaciones en Métodos Cuantitativos aplicados a la Economía y la Gestión – CMA).
- Research Center on Fuzzy Methodology applied to Management and Economy (Centro de Investigación en Metodología Borrosa aplicada a la Gestión y a la Economía CIMBAGE).



 Research Center on Econometrics (Centro de Investigaciones en Econometría).

Services / technological supply

On demand assistance and technical support to public (national, provincial, municipal) and private centers and organizations. The Institute's publications are available in the library of the Faculty of Economic Sciences Dr. Alfredo L. Palacios.

Cooperation / liaison / exchange

The Institute maintains a close relationship with national and international universities, and with national and international institutions.

National and international recognitions

- Francisco Martín Suaréz. Premio KONEX.
- Mario Biondi. Contador Benemérito de las Américas, Interamerican Accounting Association (Asociación Interamericana de Contabilidad).
- ► María Teresa Casparri. Premio a la Trayectoria Académica y Profesional Día de la Mujer, CPCE, 2012. Premio Facultad Tesis Doctoral, 1966. Premio Trayectoria Académica, FCE UBA, 2008.
- ► Carlos Luis García Casella. Colombia, University of Quindio (Universidad de Quindio), Faculty of Economic and Administrative Sciences (Facultad de Ciencias Económicas y Administrativas), opening of García Casella professorship on Accounting Models and Theory, 2009.

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Institute of Calculus (Instituto de Cálculo - IC)

The Institute of Calculus was created in 1962 by the University of Buenos Aires within the Faculty of Exact and Natural Sciences in an attempt to provide an institutional framework for the computerized solution of problems (generally, from physics and engineering) which were beginning to arise at that time.

The first computer acquired by an Argentinean University was placed in the Institute, it was a Mercury Ferrante and it started running in 1963. The first director of the Institute was Dr. Manuel Sadosky; he held office from 1962 to 1966. During that period, the Institute of Calculations became widely known thanks to the developments carried out by its research groups. In 1966, the University of Buenos Aires was taken over by the *de facto* government and most of its researchers, led by Dr. Sadosky, resigned to their positions.

During the military intervention, the activity of the Institute turned exclusively to administrative tasks. In 1988, the Institute was re-created under the management of Dr. Pablo M. Jacovkis, who favored the recruiting of researchers of different areas within the field of Applied Mathematics. In 1998, Dr. Jacovkis became Dean of the Faculty of Exact and Natural Sciences, and was succeeded as director of the Institute by Dr. Víctor J. Yohai (1998-1999) and Dr. Graciela L. Boente (1999-April 2008). Dr. Susana Blanco was Deputy Director between 1998 and 2002, succeeded by Dr. Ana M. Bianco (2002-April 2008).

Towards the end of 2007, the Superior Board Resolution No. 3412 officially recognized the Institute of Calculus as one of the Research Institutes of the University of Buenos Aires, based on its history of research, postgraduate training of human resources, and technology transfer. Then, Dr. Liliana Orellana became Director of the Institute. In December 2011, Dr. Guillermo Durán became Director, appointed by public contest, in accordance with the new regulations of the Institutes of the University of Buenos Aires.

As years went by, the Institute has grown to become a major place for the development of research in the different fields of mathematics, statistics, computer sciences and physics. Its researchers perform permanent, frequently multidisciplinary, research tasks and maintain solid relationships with other universities and centers, both Argentinian and international, relationships which give birth to joint publications and frequent visits of invited professors.

The professors and researchers of the Institute actively took part in the creation and development of the Master in Medical Physics, the Master and Specialization Courses on Mathematical Statistics, and the Program and Update Course on Statistics in Health Sciences.







Director Guillermo Durán

Res. (CS) No. 3412/07

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

- Probability.
- Statistics.
- Biostatistics
- Computational Fluid Dynamics.
- ► Inverse Problems.
- ► Nonlinear Dynamical Systems.
- ► Combinatorial Optimization.
- ► Graph Theory.

Services / technological supply

Assistance with: multivariate analysis, design of experiments, nonparametric estimation, causal influence, structural models, generalized linear models, time series, survival analysis; river basin, bay, estuary, water balance, energy modeling; development of counting modeling; semi-Markov processes; applications of operations research.

Consultancy and counseling to the following institutions: Food Technology (Tecnología de Alimentos), FECN, UBA; Center for Industrial Research (Centro de Investigaciones Industriales), FUDETEC, Techint; Repsol-YPF; Osmotica Pharmaceutical; Roemmers Laboratories; Pediatric Hospital Dr. Juan P. Garrahan; Faculty of Psychology (Facultad de Psicología), UBA; Argentinian Society of Pediatrics (Sociedad Argentina de Pediatría); Hospital Italiano de Buenos Aires; Maternal Infant Hospital Ramón Sardá; LUSIDA Project and Secretariat of Health of the City of Buenos Aires (Secretaría de Salud de la Ciudad de Buenos Aires); National Ministry of Health of Argentina (Ministerio de Salud de la Nación); Research Institute of Genetic Engineering and Molecular Biología Molecular – INGEBI); Government of the City of Buenos Aires; Government of the Province of Buenos Aires.

Cooperation / liaison / exchange

The members of the Institute maintain close relationships with national and international universities: Universidade de São Paulo; Autonomous University of Madrid (Universidad Auntónoma de Madrid); Center for Mathematics and Computer Science (Amsterdam); Technical Superior Institute of Lisbon, cooperation



project with Portugal; University of Santiago de Compostela (Universidad de Santiago de Compostela); University of Illinois, Urbana-Champaign; University of California, Davis; University of Indiana, Bloomington; Charles III University of Madrid (Universidad Carlos III de Madrid); Université de Lausanne, Suiza; University of British Columbia, Canada; Harvard School of Public Health, Harvard University, Boston; Fiocruz Institute, Brazil; National Institute of Medical Sciences and Nutrition "Salvador Zubirán" (Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán), Mexico City; Department of Epidemiology and Community Health, University of Minnesota; MIT, Cambridge; New York University; Michigan Tech; University of Chile (Universidad de Chile); Federal University of Rio de Janeiro.

National and international recognitions

- ▶ Víctor Yohai: *Mahalanobis Award, International Statistical Institute, 2011.*
- ▶ Graciela Boente: Premio Consagración de la "Sección de Matemática, Física y Astronomía", National Academy of Exact, Physical and Natural Sciences (Academia Nacional de Ciencias Exactas, Físicas y Naturales - ANCEFN), 2008.
- ► Enrique Álvarez: *IASI Award for Excellence*, Inter-American Statistical Institute, 2006.
- Víctor Yohai: Dr. Honoris Causa of Charles III University of Madrid (Universidad Carlos III de Madrid), Spain, 2006.
- ▶ Diana Kelmansky: *Educational Ambassador*, American Statistical Association (ASA), 2005.











Research and Technology Institute for Animal Reproduction (Instituto de Investigación y Tecnología en Reproducción Animal – INITRA)

For over twenty years, the Faculty of Veterinary Sciences has been house of research and technology transfer projects, achieving important developments in the area of study of animal reproduction, both in basic and applied research. A major number of doctoral and postgraduate researches of researchers-professors cover these areas, and thus create an important critical mass.

The Institute's researches in the area of animal reproduction comply with the necessary requirements of high level academic work: originality, quality, wide relevance, adaptation to the needs of the productive sector, and technology transfer. In this regard, various groups work towards the detection, identification and implementation of research lines with high impact in the relevant disciplinary field, holding agreements with national and international institutions.

In February 2007, the Dean of the Faculty of Veterinary Sciences, Dr. Marcelo Míguez, summoned a meeting of researchers which he entrusted with the creation of a center or institute to take care of the arising problems in the area of animal reproduction. All the directors of related projects and twelve professors of four areas (Theriogenology, Histology, Biological Chemistry, and Biological Physics) were present, and agreed to the creation of a research institute. Later, it took the name of Research and Technology Institute for Animal Reproduction, and its regulations were drafted in accordance with the regulations of the University. Through Board of Directors Resolution No. 808/07, the Board of Directors of the Faculty of Veterinary Sciences endorsed and submitted the proposal to create the Institute to the Superior Board of the University of Buenos Aires.

In December 2007, once finished the external evaluation process, the Superior Board approved through Resolution No. 3411/07 the creation of the Research and Technology Institute for Animal Reproduction, currently run by Prof. Dr. MV. Daniel M. Lombardo along with an Academic Committee comprised of the four people responsible for the research areas involved, and a Technical-Administrative Department.

Recently, INITRA has received a FONTAR grant (ANPCyT), currently in execution phase, for the setting up of a Reference Center of Spermatology and Early Embryonic Development. Said grant covers for adaptations of facilities and high-tech equipment needed for conducting researches and providing services in the area.

INITRA is known for generating transferable knowledge through technical support, providing services and producing advanced technologies that entail improvements related to zootechny. The Institute promotes research so as to raise the standard of production through creating knowledge of national and international impact.









Director Daniel Lombardo

Res. (CS) No. 3411/07

Venue Faculty of Veterinary Sciences

Scientific field / research areas

Research lines include:

- ▶ Cell and molecular biology of ovarian dynamic process.
- ▶ Biochemistry of gametes and embryos.
- Assessment and cryopreservation of gametes.
- ▶ Biotechnology applied to reproduction.
- ► Reproductive clinic.

Services / technological supply

- ▶ Digital capture, processing and analysis of images.
- Scientific support and technological development in routine histology, historesins, histochemistry and frozen section procedure.
- ► EmbryoLab (laboratory for the production of *in vitro* bovine embryos).
- ▶ Biochemistry of bovine gametes.
- ► Laboratory of seminal quality and cryopreservation of gametes.
- ► Service of artificial insemination and embryo transfer in equines, bovines, canines, and South American camels (authorization SENASA IATE-52).
- Theriogenology in canines, felines, equines, bovines, and South American camels.

Cooperation / liaison / exchange

Cooperation and exchange relationships at a national level: National Atomic Energy Commission (Comisión Nacional de Energía Atómica – CONEA); Laboratory of Ionizing Radiation (Laboratorio de Radiaciones Ionizantes); National University of Rio Cuarto (Universidad Nacional de Río Cuarto – UNRC); National University of Central Buenos Aires (Universidad Nacional del Centro de la Provincia de Buenos Aires – UNCPBA); Experimental Medicine and Biology Institute (Instituto de Biología y Medicina Experimental – IBYME); Research Institute on Reproduction (Instituto de Investigaciones en Reproducción – IdIR); Bioandina Foundation; Buenos Aires Zoo (Jardín Zoológico de la Ciudad de Buenos Aires); Cethus Fundation, Argentina; Physical Chemistry Professorship,



Faculty of Pharmacy and Biochemistry (Facultad de Farmacia y Bioquímica), UBA; Fundación Espacios Verdes; Halitus S.A. Medical Institute; Argentine Chamber of Biotechnology for Artificial Reproduction and Insemination (Cámara Argentina de Biotecnología de la Reproducción e Inseminación Artificial – CABIA).

Cooperation and exchange relationships at international level: Laval University, Canada; University of Adelaide (Australia); Kansas State University (USA); Colorado State University (USA); Faculty of Veterinary Sciences, University of Zaragoza (Universidad de Zaragoza) (Spain); Faculty of Veterinary Sciences, University of Utrecht (Netherlands); University of Leon (Universidad de León) (Spain); University of Girona (Spain); University of Sassari (Italy); University of the Republic (Universidad de la República) (Uruguay); Autonomous University of Madrid (Universidad Autónoma de Madrid) (Spain).

National and international recognitions

- ► Humberto Cisale. Argentinian representative in the International Congress on Animal Reproduction ICAR, until 2020.
- Juan Carlos Stockert. Doctor Honoris Causa of the University of Buenos Aires and the National University of Río Cuarto (Universidad Nacional de Río Cuarto), Córdoba.

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Center for Transdisciplinary Water Studies (Instituto Centro de Estudios Transdisciplinarios del Agua – CETA)

The Center and Institute for Transdisciplinary Water Studies, recently recognized as an Institute for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires, has a history defined by the integration of researchers from different disciplines into national and international researches related to water. Such activities have translated into more than a hundred periodical peer-reviewed publications, book chapters, books, papers presented in national and international congresses, and postgraduate and postdoctoral training of human resources. CETA stands out due to a close relationship with national and international institutes for the coordination of themed and academic nets and the organization of national and international scientific events. Likewise, its relationships with planning and management organizations favors a rich exchange: developments in research are the foundation of efficient planning, while the needs identified by management organizations are the origin of new researches.

Questions related to water imply an integration of knowledge of a diversity of systems not usually regarded simultaneously, since such activity calls for the theoretical and methodological coordination of different disciplines. Sustainable management of water transcends its scientific and technical aspects and entails a political, social and cultural challenge, involving society as a whole for the adoption of appropriate strategies: in this sense, it is of paramount importance to contribute to the training of specialized human resources and to raise the awareness of society so as to gain its participation on implementing and carrying out environmental policies.

Research lines show the typical specificities of the subject at hand, defining the academic and institutional objectives, which are headed in different directions. Likewise, researches are oriented to generate knowledge on the relationship between the use of water in productive systems and the ecosystems supplying it so as to guarantee the sustainability of the resource; as well as knowledge on the complex interactions among ecosystems and the processes which determine such interactions so as to guarantee the minimum possible alteration of natural hydrological cycle; and to deliver accessible and relevant information to solve critical environmental issues in order to overcome the lack and diversity of data.

CETA is the venue for the Master in Water Management, which started functioning in 2004 and is delivered biannually, and counts with a high quota of Ibero-American students. It is important to highlight that 90% of students have already finished their Master's thesis. In 2011, CETA was distinguished as Leader of the Latin American Network of Centers of Excellence in the Water Sector (RALCEA), of the European Union. Said consortium includes centers from Bolivia, Brazil, Chile, Colombia, Guatemala, Mexico and Peru, and France as extra-regional partner.







Director Alicia Fernandez Cirelli

Res. (CS) No. 3460/11

Venue Faculty of Veterinary Sciences

Scientific field / research areas

- ▶ Anthropic water cycle in agroecosystems.
- Animal production in areas where arsenic is naturally abundant.
- Micronutrients and microcontaminants in crop-livestock production. Interactions, bioavailability and transference to food chain.
- ▶ Influence of climatic change over agroecosystems and aquatic ecosystems.
- Crop-livestock intensification: strategies for its sustainability.
- Treatment of crop-livestock and agri-food industry effluents.
- Assessment of water quality in aquaculture according to digestibility and utilization of food.
- ► Effect of trace elements in the production and reproduction of fish.
- ► Establishing stock of marine and freshwater commercial species of fish.
- ▶ Economic and institutional aspects of water and sanitation.

Services / technological supply

Technical support: assistance to national and international organizations, such as the Ministry of Agriculture, Livestock and Fishery (Ministerio de Agricultura, Ganadería y Pesca – MINAGRO); Argentine National Senate; Secretary of Environment and Human Development (Secretaría de Ambiente y Desarrollo Humano); Provincial Organism of Sustainable Development (Organismo Provincial de Desarrollo Sostenible – OPDS); National Secretary of Water (Secretaría Nacional del Agua – SENAGUA), Ecuador; United Nations Development Program (UNDP); and to companies: Agua y Saneamientos Argentinos S.A. (AySA).

Assessment of environmental impact; environmental audits and consultancy; mitigation of adverse environmental impacts caused by rural and urban productive activities; quality of water for different uses: industrial, agricultural (irrigation), husbandry (animal drink); contamination



assessment of underground water; nutrients in surface water (eutrophication); phytoremediation.

Services to others: assessments of physical-chemical and aggregation properties; determination of metals; atomic absorption, ICP-emission; determination of anions; determination of nutrients; determination of organic components.

Technological development: development of treatments of effluents for small business ventures (urban and rural).

National and international recognitions

In November 2011, CETA was honored with the MERCOSUR Science and Technology Award in the category Integration for the work "El problema del arsénico en el MERCOSUR. Un abordaje integrado y multidisciplinario en la investigación y desarrollo para contribuir a su resolución", Montevideo, Uruguay.

Members of CETA have been awarded in different areas, and their publications are among the TOP25 of their area of research at an international level.



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Research Institute "Gino Germani" (Instituto de Investigaciones "Gino Germani" – IIGG)

A great amount of research activities of the Faculty of Social Sciences of the University of Buenos Aires are developed in the Research Institute "Gino Germani". The research lines of the Institute reflect the disciplinary contents of social sciences, bringing together in a sole academic venue professors-researchers of the courses of studies of Labor Relations, Communication Sciences, Political Sciences, Social Work and Sociology.

The Institute has its origins in the early 1940s, when the historian Ricardo Levene, Sociology professor, set up the Institute of Sociology within the Faculty of Philosophy and Letters of the University of Buenos Aires. In 1988 when the Faculty of Social Sciences was created, the current Research Institute was founded and established, and it received the name "Gino Germani" honoring the great contribution the Italian sociologist made to social science research in Argentina. On 14 March 2007, the Research Institute "Gino Germani" is recognized as Institute of the University of Buenos by Superior Board Resolution No. 1856.

Within the Institute, research projects of a basic and applied nature are carried out, fostering social research and understanding it as a fundamental instrument both to creatively face the complex challenges of the contemporary social order and to build a more equitable, inclusive and democratic society. Nowadays, two hundred and forty projects are being carried out in the Institute, accredited by different scientific and technical organizations.

The Institute is at the service of the academic community to support the generation and transmission of knowledge in social sciences, in an attempt to combine and integrate in an interdisciplinary way its findings with others from different fields of contemporary scientific research. The Institute is actively involved in training and updating human resources, strengthening their profile of professor-researcher through keeping a close relationship between lecturing and researching, such is the distinctive mark of the organization. Likewise, the Institute contributes to enrich graduate and post-graduate teaching, encouraging the vocation for the academic profession by favoring the training in research.

Nowadays, the Institute has more than a hundred and sixty researchers trained in different areas of social sciences and humanities, with PhDs or equivalent merits. More than three hundred scholars sponsored by UBA, CONICET, FONCyT and CLACSO are part of the staff of the Institute. There are more than a hundred research assistants, students and graduates from different courses of studies of the Faculty of Social Sciences, who perform tasks to assist research in different areas.







Director Carolina Mera

Res. (CS) No. 1856/07

Venue Faculty of Social Sciences

Scientific field / research areas

The Institute is organized in fourteen research areas devoted to different subjects covering the complexity of social life: Health and Population, Gender Studies, Migration Studies, Cultural Studies, Conflict and Social Change, Labor Studies, Urban Studies, Rural Studies, Social Stratification, Political Theory, Public Sector and Reform of the State, Historical Sociology, Education and Society, Epistemology and Philosophical Studies of Action.

Services / technological supply

- Assistance and services to third parties (public organizations, non-profit and private associations).
- ➤ Center of Documentation and Information to publish academic information of the Institute, maintain the website and manage the digital and newspaper library. The Center holds more than 4,500 books and a great number of academic journals.
- ► Publications: <u>Documentos de Trabajo</u> and Young Researchers, available free of charge in the website.
- ▶ Journals: Delito y Sociedad Revista de Ciencias Sociales; Lavboratorio - Informe de coyuntura laboral; Observatorio Social sobre Empresas Recuperadas Autogestionadas; Conflicto Social; Cuadernos de Marte - Revista latinoamericana de sociología de la guerra; Cuaderno CESPyDH; Quid 16; Anacronismo e irrupción; Hic Rhodus.
- ► Archive of Oral History of Contemporary Argentina (1958-2003) and Archive of Audiovisual Memory.
- ► Ethical Committee: assessment, assistance and publication of ethical and bioethical aspects related to research activities in the field of Health and Population.

Cooperation / liaison / exchange

The Institute maintains academic relationships with national and international organizations, and is part of networks such as the Latin American Council of Social Sciences (Consejo Latinoamericano de Ciencias Sociales – CLACSO); European Commission, Seventh Framework Program; Social and Human Sciences (SHS); Documentation, UNESCO;



Committee for International Cooperation in National Research in Demography (CICRED); Centre d'Études de Population et Dévelopment (CEPS/INSTEAD); IRD (Institutes de Recherche en Démographie CEPED); Latin American Research Network; Association of Universities Grupo Montevideo (AUGM); Cooperation network for member countries of the European Union PADOR; Waterlat Network of research in Governability and Citizenship for the management of water and environmental health in Latin America; New Perspectives of Cultural Theory cooperation network, University of Konstanz (Germany); Consorzio Interuniversitario Italiano per l'Argentina (CUIA) promoted by Università di Camerino; International Institute of Qualitative Inquiry (IIQI), University of Illinois, Urbana-Champaign (USA).

National and international recognitions

The researchers of the Institute "Gino Germani" have received national and international awards and acknowledgements: Houssay Award, Konex Award, Scholarships granted by the John Simon Guggenheim Memorial Foundation and by the Latin American Studies Association, national and international scholarships and titles of Professor Emeritus, Honoris Causa and Honorary Professor. Likewise, the publications of the Institute have received several distinctions.











Institute of Legal and Social Research "Ambrosio Lucas Gioja" (Instituto de Investigaciones Jurídicas y Sociales "Ambrosio Lucas Gioja")

Until March 1984, the scarce research developed within the Faculty of Law was conducted by dependencies then called Institutes, related to specific subject areas of different juridical disciplines such as civil, commercial and employment law. Such researches were mainly of a dogmatic nature: studies of normative corpus aiming to turn them into consistent and systematic corpuses, many of which are still standing nowadays.

During the management of the Government-appointed Dean, designated by the democratic government elected in 1983, an interesting plural and participatory debate about the task of research was put into place, so as to define a specific criteria for deepening and updating it, in accordance with the new needs emerged from both the institutional situation of the country and the evolution of knowledge. From such revision, and the policies therefore designed, arose the project of gathering in one sole venue all researchers of the Faculty, irrespective of the branch of law they belonged to, with the purpose of generating a positive synergy which would gather them round common epistemic and methodological issues. At the same time, every full-time professor would orientate part of their working hours to research tasks so as to guarantee a sufficient critical mass of researchers would work in the research institute to be created.

On such basis, on 5 March 1984, the Institute of Legal and Social Research "Ambrosio Lucas Gioja" of the Faculty of Law and Social Sciences was created by Superior Board Resolution No. 136/84, which basically adopted the draft submitted by the Board of Directors of the Faculty. On 29 August 2007, the Supreme Council of the University of Buenos Aires by Resolution No. 2559 resolved to recognize the Institute as an Institute of the University of Buenos Aires, in the framework of the institutional normalization derived from the latest regulations, ratifying at the same time Dr. Carlos María Cárcova as Director.

Most of ordinary researchers that are current members of the Institute are part of the foundational group. Among the most active members during the twenty five years since its creation, some specially prestigious names stand out, such as Professor Juan Carlos Agulla, first director and a major booster of the initial activity, Dr. Gladys Mackinson, from the Department of Research and Postgraduate Studies, and Dr. Germán Bidart Campos, Director of the Institute in the period from 1994 and 2002.

Setting up Permanent Research Seminars favored an increase in regular activity and the integration of new researchers. Nowadays, in average ninety researchers carry out their activities in the Institute, thirty five of those are permanent researchers, thirty are associate researchers and the rest are master or doctorate scholars. Part of the staff is formed by researchers from UBA, and part by researchers from CONICET whose work venue is the Institute.









Director Carlos María Cárcova

Res. (CS) No. 2559/07

Venue Faculty of Law

Scientific field / research areas

A policy of knowledge oriented to the relation and articulation of the *juridical* dimension with the *socio-political* and *economical* dimensions is applied in the Institute of Legal and Social Research. Interdisciplinary and interinstitutional research is thus promoted, covering subjects such as History of the Faculty of Law, Human Person and Family, Legal Framework of Small Corporate Business Ventures, Foreign Debt, Public Policies, Democracy and Globalization, Conflict Theory, and Law & Health. Nowadays, many projects are being carried out: fourteen projects of established groups, nineteen projects of under training groups and two interdisciplinary projects.

Services / technological supply

The Institute is often called by public and private organizations to express its institutional opinion regarding complex issues. There are four hundred and fifty squares meters at the service of research activities:

- ➤ Two rooms with a total of 24 stalls furnished with computers. The stalls have electricity and Internet, and an exclusive place to keep books, documents and other materials.
- ▶ One multipurpose room which can hold up 80 people, suitable for different uses: conferences, seminaries, group dynamics, panels or interactive techniques. It is furnished with TV equipment, a video recorder and a DVD player, microphones, loudspeakers, amplification equipment, an overhead projector, a mono-projector, a slide projector, a screen, and other IT resources.
- Two meeting rooms which can hold approximately 20 people seated.
- ▶ A small room, furnished with a PC and amenities to be used by up to 3 researchers.
- ► A library holding around 6000 volumes and a newspaper library with 200 titles for the exclusive use of researchers, which also has a PC and space for reading.



Cooperation / liaison / exchange

- Academic and institutional liaison with every equivalent national and international organization, focusing on bordering countries.
- ▶ Within the University of Buenos Aires, permanent contact with some of the Institutes of the Faculty of Philosophy and Letters and, in particular, with the Institute "Gino Germani" of the Faculty of Social Sciences of UBA.
- ► Foreign researchers develop their studies as scholars, doctorate students and the like in the Institute.

National and international recognitions

The activities of the Institute are recognized worldwide and its venue is often visited by renowned specialists of the field of juridical and social sciences for short-term assignments or to be part of its academic platform.









Institute of Physiopathology and Clinical Biochemistry (Instituto de Fisiopatología y Bioquímica Clínica – INFIBIOC)

A long tradition of researches carried out by INFIBIOC groups and the fact that it is located between the Hospital de Clínicas and the Faculty of Pharmacy and Biochemistry come to reassert the need for maintaining over time this qualified place of research, an excellence center in biomedical research with a rich history in contributions to teaching in connection with research and patient assistance.

Originally, the Institute was created in 2006 within the Faculty of Pharmacy and Biochemistry. In 2007, the creation of the Institute of Physiopathology and Clinical Biochemistry is approved, within the regulatory framework of the Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires, and in 2011, Dr. Regina Wigdorovitz de Wikinski was appointed as Director by public contest, and Dr. Gustavo Negri is appointed Deputy Director.

The concept of translational medicine underlies in the origins of INFIBIOC, narrowing the gap between Basic Sciences and Clinics, building up a stronghold by promoting a natural integration between research findings and their clinical application. Its publications often include the collaboration of renowned medical teams of Hospital de Clínicas, other hospitals, and international centers of excellence in which scholar-doctors complete their training. The developed methodology, the physiological interpretation and the validation of new diagnosis criteria add value to the typical research work performed in any institute.

INFIBIOC is composed by Established and Under Training Groups, which are research project categories of the Scientific Programs of the University. The first type of group was included in the proposal for the creation of the Institute, including the associate group of Basic and Applied Hematology of the Consultant Professor Dr. Nilda Fink from the National University of La Plata. Under Training groups develop their activities in an ever-growing process, in terms of projects, doctoral and master thesis, as well as infrastructure, subsidies, equipment, laboratories and support personnel. The performance assessment of INFIBIOC, since its creation as an UBA Institute, reveals encouraging results in relation to the increase in the amount of researchers, scholars, and of regional and international publications.

Financing from different sources stand out: subsidies from the University of Buenos Aires, the National Agency for the Promotion of Science and Technology of Argentina (Agencia Nacional de Promoción Científica y Tecnológica – ANPCYT), CONICET, the National Ministry of Health of Argentina (Ministerio de Salud de la Nación), and Roemmers Foundation. Some members of INFIBIOC also work in volunteer projects in which are actively involved students of Health and Social Sciences, subsidized by the National Ministry of Education (Ministerio de Educación de la Nación).







Director Regina Wigdorovitz de Wikinski

Res. (CS) No. 2283/07

Venue Faculty of Pharmacy and Biochemistry

Scientific field / research areas

During 2009-2010, the culture of integrating groups around relevant subjects calling for different points of view was established, thus setting up a Conceptual Network that gathers groups to work jointly in subjects as peroxidation, sepsis and defense mechanisms, inflammation, hypertension, anemies, dysproteinemias, Metabolic syndrome, Diabetes Mellitus, fatty liver disease and related enzymes, chronic kidney disease and hemodialysis, atherogenic mechanisms, heart failure, neoplastic mechanisms (its cytology and stress), infectious diseases, emerging pathogens and their epidemiology, immunologic diagnosis of viral diseases through Real-time polymerase chain reaction, male sterility studied with latest generation machinery, fertilization and endocrinological alterations, and mechanisms of spontaneous abortions. The subject of drug resistance groups the laboratories of Toxicological Cytogenetics, Hematology, Resistance to antimicrobials and Cardiovascular Pharmacology.

Services / technological supply

Assistance to admitted patients and outpatients of the Hospital de Clínicas through the Clinical Laboratory of the Department of Clinical Biochemistry, which participates of national and international programs of External Quality Control, and has a computer system and a common printing system, both used in researches of every laboratory of the Department. Some of the services offered are:

- Assessment of new antimicrobials through clinical isolation.
- Identification of bacteria difficult to diagnose and atypical bacteria.
- Studies on drugs and food additives to prevent obesity and cardiovascular risk.
- Studies of isoenzymes in humans and animals, identification of atypical forms.
- Studies on genotoxicity of pharmaceuticals and environmental contaminants.



- ► Studies of male gamete.
- ▶ Counseling on legal issues related to clinical biochemistry.

Cooperation / liaison / exchange

Steady scientific relationships are maintained with international centers: INSERM (France); Tuft's University (USA); Southern California (USA); University of the Republic (Universidad de la República) (Uruguay); Universities of Concepción and Arauco (Chile); University of Freiburg (Germany); Project Red Geniar, CYTED, between Mexico, Brazil, Cuba, Uruguay, Chile, Argentina and Spain; Università degli Studi di Bologna (Italy).

National and international recognitions

- Regina Wikinski was awarded the title of *Gran Maestra* of the University of Buenos Aires in 2009 and 2011.
- Gustavo Negri is the Academic Secretary of the Faculty of Pharmacy and Biochemistry.
- Members of INFIBIOC received 13 lifetime achievement awards and 17 awards for their scientific works.

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Institute of Anthropological Sciences (Instituto de Ciencias Antropológicas – ICA)

With the precedent of the Institute of Anthropology, founded within the Ethnographic Museum by José Imbelloni in 1947, and of the journal *Runa-Archivo de las Ciencias del Hombre* issued since 1948, the current Institute of Anthropological Sciences was created in 1958, favoring the institutionalization of Anthropology as a course of studies. Not only have political discontinuity and consequent university interventions resulted in obstacles to developing and opening lines of research, but they have meant excluding orientations and researchers for long periods of time. In 1984, in the framework of the recovery of the University after the last military government, ICA was reorganized in the departments of Biological Anthropology, Archeology, Ethnology and Folklore, adding the departments of Ethnohistory and Social Anthropology in 1985. Such was its structure until 2007, when the creation of the Institute of Archeology as an independent institute was approved. Each department is run by a director: Biological Anthropology is run by Francisco Raúl Carnese; Social Anthropology by Mabel Grimberg; Ethnohistory by Ana María Lorandi; Ethnology by Pablo Wright; Folklore by Ana María Dupey.

Institutional continuity since 1984 and support programs to research development by the University of Buenos Aires and other national organizations such as the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET) and the National Agency for the Promotion of Science and Technology (Agencia Nacional de Promoción Científica y Tecnológica – ANPCYT) have made possible a major growth of lines of work, financed projects, training of research groups, researchers and scholars, international cooperation agreements, and other strategic aspects of scientific research. Since 2007, ICA is part of the institutes of excellence of the University of Buenos Aires.

As a research venue, ICA combines three aspects of practice: production of knowledge, training of human resources, and contribution to key questions and social requirements, in terms of transfer or extension. Being a university institute, ICA is committed to integrate research activities with lecturing and, in this sense, to contribute to teaching programs though producing knowledge and training bachelor, master, doctorate and post-doctorate students and professors. With such purpose, the Institute promotes the responsibility of researchers in delivering seminaries, organizing academic activities with specialists of national and international universities, and supervising scholars and thesis.

Nowadays, eight Programs and seventy Research Projects are being developed, in which take part ninety five researchers, a hundred and twenty eight scholars and forty five thesis students. ICA publishes three journals of renowned history: *Runa, Archivo de las Ciencias del Hombre*, which publishes theoretical anthropological production of national and foreign researchers; *Cuadernos de Antropología Social*, from the department of Social Anthropology; and *Memoria Americana*, from the Department of Ethnohistory.







Director Mabel Grimberg

Res. (CS) No. 2031/07

Venue Faculty of Philosophy and Letters

Scientific field / research areas

Biological Anthropology, Social Anthropology, Ethnohistory, Ethnology, Folklore.

Main research areas: Genetics of Populations; Education; Health; Migrations; Indigenous Peoples; Cities and Territories; Heritage; Social Policies; Social Movements; Science and Technology Studies; Visual Anthropology; Colonial Andean Societies (centuries XV-XVIII Peru, Bolivia, Argentinean Northwest); Historical anthropology and contemporary ethnography of Andean societies (centuries XIX-XXI); Region of Chaco, Littoral and Paraguay (centuries VI-XIX); Pampas and Patagonia (centuries XVI-XXI); History and Theory of historical anthropology; Ethnocide; Anthropology of religion; Ethnomusicology; Anthropology of the body; Cultural performances; Kinship; Ethnobiology; Popular culture; Folkloric Genres; Verbal Art; Social memory.

Services / technological supply

- Assistance to indigenous and indigenist organizations, governmental and social organizations.
- Electronic library of the Department of Social Anthropology.

Cooperation / liaison / exchange

International cooperation agreements though the Program of Associated Postgraduate Centers Brazil-Argentina (Programa de Centros Asociados de Posgrado Brasil-Argentina, UBrasilia-UFFluminense-UBA/UNAM), and projects financed by CAPES-SECYT, Brazil-Argentina and CNRS-CO-NICET, France-Argentina.

National and international recognitions

Francisco R. Carnese. Took part in the direction and in the Editorial Commission of the journal Revista Argentina de Antropología Biológica. Argentinian Biological Anthropologists Association (Asociación de Antropólogos Biólogos de Argentina - AABA); member of the Editorial Commission of the journal Antropología Física Latinoa-



mericana. Institute for Anthropological Research (Instituto de Investigaciones Antropológicas), UNAM, México.

- ► *Tribute to Ana María Lorandi*, XVIII International Congress of Ethnohistory, Sucre, Ethnohistory section, 2010.
- Juan Carlos Radovich. Award in the category Monograph, subject "Zurciendo prejuicios. Discursos discriminatorios hacia el pueblo Rom ('Gitano') en los medios de comunicación en Argentina", Romanó Cultural Center (Associazione Thèm Romanó Onlus), Romani Union Internazionale, Lanciano, Italy, 2009.
- Mabel Grimberg. Honorary Member of the Argentina Society for Anthropological Medicine (Sociedad Argentina de Medicina Antropológica SAMA), Argentine Medical Association (Asociación Médica Argentina), Buenos Aires, Department of Social Anthropology.
- Susana Margulies. Honorary Member of the Argentina Society for Anthropological Medicine (Sociedad Argentina de Medicina Antropológica – SAMA), Argentine Medical Association (Asociación Médica Argentina), Buenos Aires, Department of Social Anthropology.
- Pablo Wright. COSETRAN Award for his systematic research on Road Anthropology, Department of Ethnology, 2011.
- María Inés Palleiro. 1st Prize in the category Heritage Management, I Academic Committee of the National Conference on Cultural Goods, CONEA, Department of Folklore, 2011.







Institute of Hispanic Philology and Literatures "Dr. Amado Alonso" (Instituto de Filología y Literaturas Hispánicas "Dr. Amado Alonso")

The Institute of Philology, today Institute of Hispanic Philology and Literatures "Dr. Amado Alonso", was created in 1923 in answer to the petition submitted to Ramón Menéndez Pidal by Ricardo Rojas, then Dean of the Faculty of Philosophy and Letters of the University of Buenos Aires. The project was founded with the objectives of setting up a school of Argentine specialists "which would contribute to the documentary archive of universal philology", and promoting research in four areas: general, Romance, American and indigenous philology.

Its first director was Américo Castro and, after a brief rotation of successors to his position, in 1927 Amado Alonso was summoned and was appointed director for four years. His stay in Argentina lasted nineteen years, in which he trained frontline researchers (linguists, philologists and literary critics) and he took part in the development of publications and series (Library of Hispano American Dialectology, Collection of Indigenous Studies, Collection of Stylistic Studies) which gave the Institute an international relevance, such as the Journal Revista de Filología Hispánica, first published in 1939 and interrupted in 1946 when Amado Alonso left the country.

The Institute then went through administrative and dependence changes. As a "Romanic Department" of the Institute of Classical Linguistics, it regained importance under the administration of Alonso Zamora Vicente, who in 1949 encouraged the publication of the journal Filología, which keeps on being issued. In 1956, the Institute became independent once more, and in 1963 it was finally established as the Institute of Hispanic Philology and Literatures "Dr. Amado Alonso". Between 1956 and 1983 the directors were: Marcos A. Morínigo, Ana María Barrenechea, Frida Weber de Kurlat, Germán Orduna and Ángel Battistessa.

In 1983, when democracy was reestablished, the Faculty of Philosophy and Letters appointed Ana María Barrenechea as Director for the second time, who was able to bolster the Institute's prestige and renew its theoretical focus during her office, until 2003.

During said period, the Department of Foreign Literatures was set up; in this way, the developed fields of interest were integrated in the widest meaning of Philology: "the science that studies language, literature and every expression of culture of a particular group of people through written materials."

In 2007, the Institute of Hispanic Philology and Literatures is recognized as an Institute of the University of Buenos Aires by Superior Board Resolution No. 2231, appointing Melchora Romanos as director. The long history of this research unit, which celebrated its 85th anniversary in 2008, renders an understanding of its prominent position in the context of philological criticism at national and international levels.







Director Melchora Romanos

Res. (CS) No. 2231/07

Venue Faculty of Philosophy and Letters

Scientific field / research areas

Within the wide field of Humanities, the specific research areas are: Philology, Literary Theory, Spanish Literature, Foreign Literatures, Grammar and History of Languages.

Services / technological supply

- ▶ Assistance and services to third parties: expert reports on philological issues requiring a judicial resolution and from other areas.
- ▶ Library "Dr. Amado Alonso" (bibliotecafilologia@filo. uba.ar): holds approximately 33,000 monographic works (books, thesis, congress minutes), and complete and partial sets of more than 250 specialized periodical publications
- Journal Filología, periodical scientific journal of the Institute.

Cooperation / liaison / exchange

Exchange subsidies "Proalar" Program, German-Argentine Cooperation; *Thematic network integration*, Government of Generalitat de Catalunya and Universidad Pompeu Fabra, Spain; *International Teams Integration*: ARTELOPE, National Plan I + D (Plan Nacional I + D) of the Ministry of Science and Technology, Universitat de Valencia, Spain; Textual Genetics Project: ICA, Centre Nationale de la Recherche Scientifique and Research Group on Textual Genetics Research of Portier, France; ITEM and Associação de Pesquissadores do Manuscrito Literario, Brazil; "Cervantes Project", Texas A & M University and Center of Studies Cervantinos.

Journal of the International Association of Hispanists (Asociación Internacional de Hispanistas – AIH) and Duques de Soria Foundation.

National and international recognitions

► Florencia Calvo. Vocal of *Argentine Association of Hispanists* (Asociación Argentina de Hispanistas – AAH), 2010-2013.



- Norma Carricaburo. Member of the Argentine Academy of Letters (Academia Argentina de Letras).
- Mabel Giammatteo. Vice-president of the Argentine Society of Linguistics (Sociedad Argentina de Lingüística), 2010-2012.
- Lucas Margarit. President of the Argentine Association of Comparative Theatre (Asociación Argentina de Teatro Comparado – ATEACOMP), 2011-2013.
- María Inés Palleiro. Vice-president of the International Society for Folk Narrative Research.
- Melchora Romanos. Officer's Cross of the Order of Isabella the Catholic (Cruz de Oficial de la Orden de Isabel la Católica), granted by the King of Spain in recognition of her contribution to cultural relations between Spain and Argentina.
- Melchora Romanos. President of the International Association "Siglo de Oro" (Asociación Internacional Siglo de Oro AISO), 2008-2011.
- Ana María Zubieta. Deputy Dean of the Faulty of Philosophy and Letters (Facultad de Filosofía y Letras), 2006-2011.
- Ana María Zubieta. Member of the Support Association to CCMHC (Centro Cultural de la Memoria Haroldo Conti – former ESMA), 2010.









Institute of Geography "Romualdo Ardissone" (Instituto de Geografía "Romualdo Ardissone")

The first antecedent to the creation of an area of studies related to geography within the Faculty of Philosophy and Letters was the creation of the Department of Geography in 1917, which later became an Institute for Geographical Research in 1921.

During the 1920s and 1930s, the Institute for Geographical Research was run by the Ethnographical Museum at the initiative of Professor Félix Outes. Finally, in 1947, the Institute of Geography is created, including a Department of Human Geography, headed by Romualdo Ardissone, and a Department of Physical Geography, headed by Dr. Federico Daus. In this way, a relevant precedent is set for the creation of the course of studies on Geography in 1955. The Institute takes its current name, Dr. Romualdo Ardissone, in the 1970s.

Under the direction of Professor Luis Yanes since 1984, lines of research begin to strengthen, having a high social and academic impact. Such is the case of research groups on Environmental Problems, Transport and Territory, Non-Conventional Energies, Management of Water Basins, studies on Farming Frontier, and studies on Industry and Regional Development, among others. As a result of the aforementioned academic production, several processes began of transfer of on-demand knowledge to governmental organizations.

Said trend deepened during the managements of Carlos Reboratti (1990-1994), Marcelo Escolar (1995-1999), Rodolfo Bertoncello (2000-2003) and Pablo Ciccolella (2003-2010).

Through Superior Board Resolution (CS) No. 1967/07, the Institute of Geography "Romualdo Ardissone" was approved as an Institute for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires. In August 2010, Jorge Blanco was appointed director of the Institute.

In recent years, the quality of the ever-growing scientific production has brought about research programs in constant development, in relationship with national and international organizations and having an impact on the public sector and the press. Likewise, the Institute has became a significant area for training activities, being a work place for numerous scholars, and a great venue for research stays of national and international researchers.







Director Jorge Blanco

Res. (CS) No. 1967/07

Venue Faculty of Philosophy and Letters

Scientific field / research areas

The subjects dealt with depict the multiplicity of dimensions that are taken into account:

- ► Territorial Development and Metropolitan Studies.
- ► Transport, Mobility and Territory.
- ▶ Rural Development.
- ▶ Natural Resources Vulnerability, risks and catastrophes.
- ▶ Water and Energy.
- ► Tourism and Territory.
- ▶ Didactics of Geography.
- ► Environmental Problems.
- Cultural Geography.
- Political Geography.

Services / technological supply

- ▶ *Library*: holding 15,000 titles, in book and CD format.
- Newspaper library: holding 1,000 titles, including journals, monographs, yearbooks and memoirs.
- Map room: holding 7,900 titles, including topographic maps, wall maps, general atlas, historical cartography, spherical and geologic maps, photomaps and orthomaps, and cadastral maps.
- ► Consultancy for national and international organization.
- ► Issuing of *Cuadernos de Territorio serie monográfica*, since 1990.
- ▶ Digital Journal *Transporte y Territorio*, www.rtt.filo.uba. ar, since 2009.

Cooperation / liaison / exchange

Formal Cooperation Agreements: Autonomous University of Barcelona (Universidad Autónoma de Barcelona), Spain; University of the Republic (Universidad de la República), Uruguay; University of Sao Paulo, Brazil; Ministry of Federal Planning, Public Investment and Utilities (Ministerio de Planificación Federal, Inversión Pública y Servicios), Argentina; Government of the City of Buenos Aires (Gobierno de la Ciudad Autónoma de Buenos Aires – GCABA).



Informal cooperation: Federal University of Rio Grande do Sul and Federal University of Rio de Janeiro, Brazil; University of Sevilla (Universidad de Sevilla) and Autonomous University of Madrid (Universidad Autónoma de Madrid), Spain; University of Paris I and École des Hautes Études en Sciences Sociales (EHESS), France.

Liaison with national and foreign research groups: Network of Research and Postgraduate Courses on Rural Development of the Southern Cone (RedSur - Red de Investigación y Posgrado en Desarrollo Rural del Cono Sur); Universitá di Napoli L'Orientale and Università Roma Tre (Italy); Federal University of Pelotas (Brazil); Université Paul Verlaine-Metz/MHS Lorraine (France); Complutense University of Madrid (Universidad Complutense de Madrid) (Spain); Autonomous University of Mexico (Universidad Autónoma de México) (México).









Institute of Research on Education Sciences (Instituto de Investigaciones en Ciencias de la Educación - IICE)

The antecedent to the current Institute of Research on Education Sciences, formally created in 1957, was the Institute of Didactics, founded in 1927 and set up in 1929. The activities of the Institute were originally linked to the administration of the Teaching Training Course of Pedagogy, which attended the needs of the advances in training tasks within the Faculty of Philosophy and Letters. Being inextricably linked to such process, the Institute of Didactics saw its development oriented to the teaching of subjects of the aforementioned course of studies.

In March 1940, a major change occurred when the first ordinance about the Institutes of the Faculty was passed, establishing specific purposes beyond teaching. In 1957, along with the creation of the Course of Studies in Education Sciences, the Superior Board of the University of Buenos Aires approved changing the name Institute of Didactics to Institute of Research on Education Sciences, thus reflecting a turn towards more scientistic perspectives which would provide the production of knowledge in the field of education with a scientific-based epistemology. Likewise, when the Department of Education Sciences replaced the Department of Pedagogy, the activities of teaching and researching were differentiated from one another. The creation of the Department of Education Sciences was, at the same time, linked to the creation of the Departments of Psychology and Sociology.

Juan Mantovani began then his direction of the Institute in an organic way. He was succeeded by Gilda Lamarque de Romero Brest between 1961 and 1966; during her management, perspectives related to functionalism gain place. Towards 1973, the curriculum of the course of Studies in Education Sciences underwent a major change, which had an impact on the lines of research of the Institute. Such change was cut short in the time of the normalizing intervention carried out by Sánchez Abelenda in 1974.

In December 1983, when democracy was restored, Romero Brest took over the direction once more until María Teresa Sirvent took office, her management lasted until 1990. Ovide Menin was since then head of the Institute until 1998. Amanda Toubes was temporary director until December 1998, year in which Edith Litwin took over the direction. In December 2007, the Institute of Education Sciences is recognized as Institute of the University of Buenos Aires through resolution No. 3413/07. On that same month, Dr. José Antonio Castorina submitted himself in public contest and assumed as director of IICE.

The scientific proposal of the Institute of Education Sciences attempts to have an impact on public policies, favoring changes in educational practices through professors taking part in research as valid interlocutors for the identification of general and specific problems. This way, the transfer to the educational system is supposed to be enriched, acknowledging the complex relationship between academic knowledge, public organizations and educational practices.







Directo Antonio Castorina

Res. (CS) No. 3413/07

Venue Faculty of Philosophy and Letters

Scientific field / research areas

Educational researches developed in the Institute are oriented towards the production of academic knowledge through approaches that favor the analysis of difficulties, scarcities, failures or needs existing in the multiple dimensions of the educational field, translated into scientific questions, in an attempt to have an impact on public policies and educational practices. The main lines of research are:

- ▶ Philosophical and epistemological problems of Education.
- Pedagogical concepts and theories.
- ▶ Historical-political dimension of Education.
- ► General and Special (Specific) Didactics.
- Sociological, Anthropological and Psychosocial Problems in Education.
- ▶ Problems of Psychology in Education.
- ▶ The Area of Linguistics in Education.
- ▶ Institutional Analysis in Education.
- ► The field of methodological problems in social and educational research.
- ▶ Studies on Economy, Education and Labor.
- Studies on Contemporary Societies, Inequality and Educational Inclusion.
- ▶ Gender Studies and Education.

Services / technological supply

Library-newspaper library: offers information related to the course of studies of Education, its historical and documental heritage. The library is open to public, researchers, professors and students, giving access to several publications, holding 4,000 copies, 905 books, 57 exchanges. Readers can make use of a service provided by system Microlsis-Bibun, technical support and two Pentium PC with internet connection.



Cooperation / liaison / exchange

National and international research and cooperation projects with: Universidade do Valle do Rio dos Sinos (UNISINOS), Universidade Federal de Santa Catarina (UFSC) and Universidade Federal de Pelotas (UFPEL), all from Brazil; University of Kassel (Germany); University of Buenos Aires; National University of Córdoba (Universidad Nacional de Córdoba – UNC) and National University of Tucumán (Universidad Nacional de Tucumán - UNT). In 2011, the Universidade Federal Da Grande Dourados (Brazil), has join up through a project to strengthen postgraduate courses (CAPES-SPU), recently gained by public competition.

National and international recognitions

- María Teresa Sirvent. Award Democracia en Educación, Fundación Caras y Caretas, 2011.
- Adriana Puiggrós, Award Gran Maestro a profesoresinvestigadores de la UBA, 2011.
- ▶ Marcela Mollis. Award Pedro Krotsch, CLACSO, 2010.
- Graciela C. Riquelme. Canada-Latin America-Caribbean Awards (CLACA), International Council for Canadian Studies (ICCS), 2010.









Institute for Psychological Research (Instituto de Investigaciones en Psicología)

The antecedent of the Institute for Psychological Research was the one created by Horacio Piñero within the Faculty of Philosophy and Letters of the University of Buenos Aires by the early 20th century in accordance with the standards of Experimental Psychology of the time. Socially and culturally prestigious people collaborated in this Institute; namely, Alfredo Palacios, who developed ergonometric experiments there which set the base to submit bills on labor issues to the National Congress. In 1992, the experimentation equipment, by then abandoned, began to be repaired and recovered, and was then displayed in the Museum "Horacio Piñero".

Under the management of Dean Risieri Frondizi, having been the Department of Psychology of the Faculty of Philosophy and Letters already created, there was an attempt to reactivate the Institute, but the intervention to the University in 1966 stopped such initiative.

After the restoration of democracy in 1984, the Direction of Researches is created and Professor Aníbal Duarte is appointed Director. Once the Faculty of Psychology was created and established, Professor Juan Samaja was appointed Director. During those years, some CONICET researchers obtained the position of regular professor in the Faculty and their researches were continued there, thus forming the emerging nucleus of the institutional researching activity which slowly gained importance and space when the System of Science and Technology in UBA was established, which involved tutors in projects and scholarships.

In 1992, by proposition of the Faculty, the Superior Board approved the regulations of the Institute for Psychological Research, and in 1995 Professor Martina Casullo was appointed as first Director. Likewise, the Direction of Research was turned into Department.

Complex institutional situations hindered the setting up of the Institute and research activities, rising in amount and impact, were managed by the Department of Research, which included issuing scientific journals, journals of international reference, and indexed and categorized journals. Between 2005 and 2006, the project of setting up the Institute was resumed, updated and, in 2007, the Superior Board of the University decided to approve it as Research Institute of the University of Buenos Aires through Resolution No. 1857/07.

The Institute is currently a place of scientific encounter and exchange between trained and under training researchers and scholars from UBA, CONICET, other national and foreign universities, and national and international scientific associations. The Faculty is currently undergoing a remodeling process, which includes building a new Research Institute for Professors Researchers of the University of Buenos Aires and CONICET who work in the Institute.









Director Martín Etchevers

Res. (CS) No. 1857/07

Venue Faculty of Psychology

Scientific field / research areas

Departmental structure is organized through the identification of the different lines of research of the different projects being carried out in the Institute, as well as their specific methodologies. The Departments established are: Clinical and Development Psychology; Historical, Philosophical and Language Studies; Conceptual-Clinical Research in Psychoanalysis; Research on Psychological Assessment; Basic Psychological Processes; Educational Psychology and Social Psychology.

Services / technological supply / publications

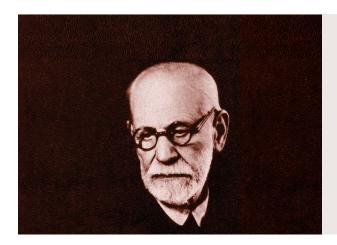
The Institute for Psychological Research guarantees the access to bibliographic material though portals with scientific publications and databases to be used by professors-researchers.

Some of the portals holding scientific publications are: Virtual Library of Science and Technology (Biblioteca Virtual de Ciencia y Tecnología); Electronic Library of Scientific Literature – Emerald; Electronic Library of Scientific Literature – Kluwer, *The Language of Science*; Edp Sciences; Electronic Library of Scientific Literature – Wiley-Inter Science; Scientific Electronic Library Online – Scielo; Educ.ar, official portal of the National Ministry of Education, Science and Technology (Ministerio de Educación, Ciencia y Tecnología de la Nación); Portal Science and Development Network.

Three publications are issued in the Institute of Research of the Faculty of Psychology, which depict the production of professor researchers of the Faculty and other universities: Research Yearbook "Investigaciones en Psicología"; Journal Revista del Instituto de Investigaciones; Journal Revista Universitaria de Psicoanálisis; Congress Minutes Research and Research Conferences.

Cooperation / liaison / exchange

The Institute encourages the liaison between professor researchers of different national and foreign universities



interests. Some activities and agreements carried out jointly and interinstitutionally are:

- ▶ Regular meetings and exchange in graduate and postgraduate training, extension and research areas held in the Association of Academic Units of Psychology of National Universities (Asociación de Unidades Académicas de Psicología de Universidades Nacionales - AUAPSI).
- International Congress, Research Conferences of the Faculty of Psychology and Psychology Researchers of MER-COSUR Meeting: significant national and international event that gathers renowned professors and researchers from MERCOSUR and other countries of America and Europe.
- Exchange scientific production system corresponding to each of the organizations (exchange with national universities and more than 40 foreign universities).
- Meeting of Editors of Scientific Journals of Psychology and Similar Fields.
- ▶ The Institute for Psychological Research and the Library of the Faculty of Psychology are part of the consultant committee and Argentine venue for the joint project of Meetings of the Electronic Psychology Library in Argentina and its inclusion in the Americas.







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Research Institute for Public Health (Instituto de Investigaciones en Salud Pública – IISAP)

The Research Institute for Public Health emerged from an interdisciplinary group of researchers-professors of the University of Buenos Aires, formed within the Master in Public Health dependent on the Superior Board of the University of Buenos Aires, therefore, its institutional development goes hand in hand with the reference course of studies created in 1993 as a result of the articulation of different academic units of the University. In 2007, IISAP was recognized as a Research Institute of the University of Buenos Aires by Supreme Council Resolution No. 2231, and Dr. Noemí Bordoni was appointed Director.

The Institute intends to operate as a network of internal and external nodes, centered in the resolution of problems. In an attempt to bolster its efficiency, the IISAP established interaction networks which connect relevant actors for the circulation, debate, and re-creation of information, thus contributing to form the critical mass needed to create coalitions oriented to meet academic objectives and to generate contributions to health management in public and private institutions.

The purpose of IISAP is to build up a place for research, reflection and comparison of proposals so as to develop solutions for the main problems regarding public health; understanding public health as based on the ethical values and equity principles required to reach human development, gain knowledge of its determinants and respect differences; strengthening the permanent relationship with informed users integrated in the iterative cycle "research-training-services"; and guaranteeing the creation of experiences which make it possible to test proposals, as long as they represent the typical academic tasks of validation of research and translation of knowledge of a University. Being a privileged actor, the Institute is a fundamental tool of institutional strengthening through creation of knowledge with social impact.

The Institute works as a network of key actors responsible of producing knowledge, and training and extension activities. The production of knowledge is focused in solving specific problems through research projects centered in those problems which solutions are available to be effectively used. Teaching is developed in the same context of research, focusing on the development of the Master in Public Health and its orientations, and its experiences in education make it possible to access to an advanced and high quality education, offered in diverse ways, renewable, and in accordance with work performance. Extension activities are focused on the relationships between society and university: the first, providing its multiple expressions and needs; the later, providing its production of knowledge and new ways of organizing, distributing and interchanging said knowledge in the context of social equipping.







Director Noemí Bordoni

Res. (CS) No. 2231/07

Venue Rectorate

Scientific field / research areas

The transdisciplinary aspect of public health allows the participation of more than fifty researchers, working in different centers of the University of Buenos Aires or in external associated institutions that cooperatively carry out researches or solve problems on public health. The main lines of study are:

- ► Situation of health: epidemiological studies, including psycho-social dimensions on prevalent, emerging and low prevalence health problems.
- Development and assessment of programs, projects and health services: studies on quality of care, training of human resources, quality of life, and financing of health.
- Determinants and conditionants of health: life condition, lifestyle and anthropological profiles, environment management.
- Health policies: relationship between state, institutions and modern societies; new concepts on public being; science and technology policies, technological transfer, bioethics and human rights.

IISAP has developed projects subsidized by the National Ministry of Education (Ministerio de Educación de la Nación), projects UBACyT, projects UBANEX, collaborative multicenter studies, and projects among its researchers in their own faculties.

IISAP's production is translated in the publication of two books, fourteen chapters of books, fifty seven in extenso published works, a hundred and fifteen congress talks, and various technical and dissemination reports.

Services / technological supply / publications

- On demand researches for public health and private organizations.
- Coordination networks with actors interested in social and health development of populations, within UBA and with other national and foreign universities, public and private organizations, and international agencies for the development of multicenter projects.



Cooperation / liaison / exchange

Nationally: with other research centers of the University of Buenos Aires, National University of Cuyo (Universidad Nacional de Cuyo), National University of Rosario (Universidad Nacional de Rosario), National University of Córdoba (Universidad Nacional de Córdoba), National Academy of Medicine (Academia Nacional de Medicina), Government of the Autonomous City of Buenos Aires.

Internationally: Bicocca University, Milan (Italy); World Health Organization – WHO, Geneva (Switzerland); International Union for Health Education and Promotion; Pan American Health Organization, Washington (USA); Universidad del Desarrollo (Chile); Cayetano Heredia University (Peru).







Research Institutes 2012 CS4.indd 48 31/10/2013 15:04:03



UBA - CONICET Shared Institutes

History
Scientific field / research areas
Services / Technological supply
Cooperation / liaison / exchange
National and international recognitions









Research Institute of Agricultural and Environmental Biosciences (Instituto de Investigaciones en Biociencias Agrícolas y Ambientales – INBA)

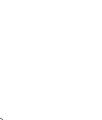
Research Institute of Agricultural and Environmental Biosciences (INBA) is the recent denomination of the former Institute of Biochemical and Physiological Research (Instituto de Investigaciones Bioquímicas y Fisiológicas – IBYF), founded in November 1999, within the Department of Agricultural Microbiology of the Faculty of Agronomy of the University of Buenos Aires. The initiative for the institute's creation emerges from the conjunction of the groups of Dr. Augusto F. García, Dr. Atilio J. Barneix and Dr. María Susana Di Bernardo de Passeron. The fundamentals of the creation are expressed in the academic scopes directed to Agropecuary Oriented Projects, based on basic research projects to which other projects related to environmental issues have been lately incorporated. This justifies the change in the denomination.

The first Director was Dr. María Susana Di Bernardo de Passeron. Afterwards, Dr. Augusto F. García took on the position on June 1, 2005. Under the Agreement entered into between the University of Buenos Aires and CONICET, pursuant to Resolution (CS) No. 4864/05, this implementation unit was included into the group of Research Institutes of double dependency. Currently, Agronomist Raúl Lavado is the Director of the Institute pursuant to Resolution (CN) No. 5259/08 as a result of a public contest, in accordance with the legislation in force.

Taking into account researcher's history in INBA, basic research activities are still being carried out, since this academic activity is the basis of human resources training. This education is completed and enriched by post-degree activities carried out within the Master of Biotechnology of the University of Buenos Aires or in the Graduate School of the University in the Faculty of Agronomy (Rated A by CONEAU).

Initial lines of research are strengthened and maintained, based on the development of microbiology, biochemistry and molecular biology applied to agriculture and agroindustry, hence widening the thematic area to crops mineral nutrition, soil nutrients availability and properties associated with them. Considering the importance of different stress on agricultural production, the effect of biotic and abiotic stress is studied on the main crops. The work is done at an eco-physiological and agronomic biochemical level, including the interaction between stress and inputs effects.

Efforts are also devoted to study in depth microbial biodiversity and bio-complexity as a suitable and rational mechanism to make use of national microbiological resources in a sustainable way. At the same time, this activity is the basis for applied research or orientated tasks. Microbiological biodiversity constitutes a strategic national resource and, being so, it is a National Government duty to promote its study with a clear political decision.







Director Raúl Lavado

Res. (CS) No. 4864/05

Venue Faculty of Agronomy

Scientific field / research areas

Agricultural Sciences, Engineering and Materials Sciences, Biology and Health Sciences, Natural and Exact Sciences.

The research aims at developing microbiology, biochemistry and molecular biology applied to agriculture and agroindustry. The INBA has an interesting proportion of researches related to soya harvesting at a biochemical, microbiological and agronomic level.

Main research lines:

- Biological control of fungal diseases in plants of agricultural interest.
- External factors and internal mechanisms that regularize nutrients remobilization in malting barley and its implications on grain quality.
- Phosphorous nutrition on crops on the Pampas region: study of efficiency of phosphorus edaphic acquisition and management availability.
- ► Signal transduction in dimorphic fungus.
- ► Heavy metals accumulation and other potentially toxic elements in soil and its effect on crops.
- Biotic and abiotic processes which affect the nitrogen cycle in agro-ecosystems with emphasis on the releases.
- ► Grain crops response to fertilization.
- Soil microbial ecology in pristine environments and under agricultural management.
- Bioinformatics research.
- Heme oxygenase: participation in the antioxidant defense mechanism in soya plants.



Services / technological supply

National Bank of Microorganisms (BNM), which gathers the mentioned stumps from crops collections internationally recognized, and native stumps separated from different regions of the country. It counts with a wide collection of rhizobia, soil bacteria, photosynthetic bacteria, phytopathogenic, and other bacteria of agronomic interest. The BNM preserves materials of different universities and experimental stations.

Cooperation / liaison / exchange

At a national level, activities are carried out in groups (workshops, scientific conferences, researches) strengthening the web composed by: Soil Microbiology Laboratory, Center of Studies of Biodiversity and Biotechnology of Mar del Plata (CEBB-MDP) of Foundation for Applied Biological Research (FIBA); Functional Biology and Biotechnology Laboratory of Azul (BIOLAB), Soil Microbiology Laboratory of the Faculty of Exact and Natural Sciences of UBA and Water Transdisciplinary Center (CETA) of the Faculty of Veterinary Science of UBA.









Research Institute for Physiology and Ecology related to Agriculture (Instituto de Investigaciones Fisiológicas y Ecológicas Vinculadas a la Agricultura – IFEVA)

The Research Institute for Physiology and Ecology related to Agriculture has its origins in the 60's in the group formed around Agronomist Alberto Soriano, Professor of Vegetal Physiology and Phytogeography in the Faculty of Agronomy of the University of Buenos Aires.

Some of the current investigation lines of the institute come from the works carried out during this initial period. Since 1981, CONICET has given support to the group activities though the Research Program on Agricultural Systems Production (PROSAG).

The creation of IFEVA was approved by Resolution No. 1342 of Superior Board of the University of Buenos Aires on June 3, 1987, and approved under the same abbreviation by the Board of CONICET on October 5, 1991 (Resolution No. 834). Since then, it has reported to both institutions; this double dependency was formalized by the Framework Agreement subscribed between this University and CONICET in 2005. The first Director was Alberto Soriano. Since the last public contest held to fulfill this position, Glaudio M. Ghersa has been appointed by Resolution (CS) No. 6063/09.

This Institute has been created to enhance the development of scientific knowledge in the areas of physiology and vegetable ecology. The main purpose of the research is to improve understanding of basic phenomena, from which diverse agriculture problems can be dealt with better perspectives in order to reach a rational decision making. The organization of IFEVA stems from the conviction that an intense as well as a strong research activity on this field should be carried out in the University.

Hence, it aims at improving the quality and increasing the available knowledge on biology, structure and agriculture systems functioning in a wide range of complexity levels and biological organization.

The Institute for Physiology and Ecology related to Agriculture is a nationally and internationally recognized center for its contributions to the development of scientific knowledge and the training of human resources orientated to agronomic problem solutions and sustainable use of natural resources with standards of excellence.

The researches are spread through articles published on specialized magazines of international reputation. Cooperation and exchange relationships with other research centers go beyond borders in joint projects, collaboration agreements and inter-institutional Agreements.







Director Claudio Marco Ghersa

Res. (CS) No. 4864/05

Venue Faculty of Agronomy

Scientific field / research areas

Biology and Agricultural Sciences, with special emphasis on Physiology and Vegetable Ecology field. Main research areas:

- ► Ecology of grazing lands and savannas.
- ▶ Ecology of forest and agriculture systems.
- ▶ Breeding control and plant development by light.
- ► Ecophysiology of crops and usable plants.
- ► Ecophysiology of germination.
- ► Ecophisiology of stress and biotic interactions.
- ▶ Analysis of regional heterology and of global changes.

Cooperation / liaison / exchange

IFEVA Agreements through the Regional and Remote Sensing Analysis Laboratory of IFEVA (LART-FAUBA) and the Faculty of Agronomy (UBA) with AACREA (Argentina); ASAGIR (Argentina): Conservación Patagónica Asociación Civil (Argentina); Dow-Agrosciences (USA); FVSA (Argentina); Federación de Centros y Entidades Gremiales de Acopiadores de Cereales (Argentina); Instituto Plan Agropecuario (Argentina); INTA (Argentina); SAGPyA (Argentina); SYNGENTA AGRO S. A. (Argentina); Università degli Studi di Catania (Italy); Università degli Studi di Palermo (Italy).

Researchers and postdegree students visitors: *Domingo Alcaraz Segura* (University of Almería, Spain); *Timothy D. Colmer* (University of Western Australia, Australia); *Isabel Díaz* (Universidad Politécnica de Madrid, Spain); *Emine Dudakli Carpici* (University of Uludag, Turquy); *Esteban Hasson* (University of Buenos Aires, Argentina); *Dush Jayawickreme* (Duke University, USA); *Clémence Mercier* (Ecole d'Ingénieurs de Purpan, France); *Lourdes Morillas Vinuales* (University of Sevilla, Spain); *Claudia Normann* (University of Osnabrük, Germany); *Puech Maxime* (Ecole d'Ingénieurs de Purpan, France); *James F. Reynolds* (Duke University, USA); *Dominik Siemon* (University of Osnabrük, Germany); Rodrigo Zarza (INIA, Uruguay).



National and international recognitions.

- Dr. Martín Oesterheld. Agro Award for Innovation, IN-NOVAR, Argentina, 2010.
- ▶ Dr. María Semmartin. UBA Award for Educational and Cultural Journalism, fourth edition, "Los residuos sólidos urbanos. Doscientos años de historia porteña", published in the magazine "Ciencia Hoy", University of Buenos Aires, Argentina, 2010.
- ▶ Dr. Emilio Horacio Satorre. "Bolsa de Cereales 2008", The Buenos Aires Grain Exchange and the National Academy of Agronomy and Veterinary, Argentina, 2009.
- ▶ Dr. María Verónica Rodríguez. *Training Award*. ATSE Crawford Foundation, Australia, 2009.
- Dr. María Verónica Rodríguez. Best Postdegree Thesis on Seeds, Argentine Association of Seedbeds, Argentina, 2009.
- Dr. María Semmartin. Member of the Team. Young Entrepreneurs Award, Foundation ASHOKA, USA, 2009.

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Buenos Aires Interdisciplinary Institute of Political Economy (Instituto Interdisciplinario de Economía Política de Buenos Aires - IIEP)

The interdisciplinary Institute of Political Economy (IIEP) is a recently created institution under the category of Research Institutes of double dependency UBA-CONICET, based on an initiative of the Faculty of Economic Sciences in coordination with CONICET. Intense work has been done so as to organize the Institute which is considered the first joint research center UBA-CONICET in the area of social sciences. The Board of Directors of the Faculty of Economics Sciences submitted the creation proposal to the Superior Board or the University on June 14, 2011, which was approved by Resolution (CS) No. 3205/2011 on September 14 and shortly after, confirmed by the Board of CONICET.

At the same time, the IIEP represents a new initiative with the same traditional lines of this Faculty and University. The Institute incorporates existent research areas and aims to widen the scope of working field looking for synergy and complements to enhance research within the Faculty of Economic Sciences. Thus, it boosts new relevant ideas for Economy with an approach that favors dialogue and interdisciplinary cooperation in a context of analytical soundness and open-mindedness.

Its main purposes are to:

- ► Enhance scientific research in economic theory and economic and social development implementation issues.
- ▶ Create opportunities for dialogue and plural debate within a serious academic rigor.
- ▶ Interact in local and external circles which generate bonds and ties boosting research ability.
- ▶ Promote multidisciplinary research that contributes to the knowledge in the area of study.
- Create a working and interaction context that stimulates the development of young researchers.
- Promote teaching activity.
- Stimulate community interest on researching and development activities.
- ▶ Transfer knowledge and make technical assistance tasks.







Acting Director Carlos Daniel Heymann

Res. (CS) No. 4864/05

Venue Faculty of Economics Sciences

Scientific field / research areas

The main working lines initially carried out in the Institute are in the following thematic areas:

- ► Economy Theory: behavior representations and interaction in economic contexts. General problems of macroeconomic analysis. Models of multiple economic agents.
- ▶ Epistemology of the Economy: methodology, epistemology and philosophy of Economic Sciences. Epistemological aspects of theories, models and practices of economic phenomena. Empirical research of behavior patterns of economic relevance. Applied Economics problems in relation with environmental issues.
- Economic History: business players, their social and economic behaviors, ways of creation and consolidation.
 Companies history and the interrelation with national social and productive structure.
- ▶ Demography, employment and distribution: The labor market. Employment possibilities and dynamism. Urban and regional issues associated with demographic growth. Government actions related with the above mentioned topics.
- ► *International Economy*: Global trade reconfiguration.
- Macroeconomics: analysis of macroeconomic fluctuations and aggregate price determination. Banking regulation and macroeconomic stability. International financial architecture.
- Finance and public policies: macroeconomic stabilization and fiscal policy. Taxation and other financing sources of public sector. Fiscal decentralization and Federalism. Public management.
- Business strategies, productive development and technology change: Studies and researches on companies. Webs and productive structures, new ways of interchange and productive organization. Business strategies and international insertion: innovative strategies and value chain incorporation. Institutionalism, governance rules. Social and economic companies behavior. Ways



of creation and consolidation of companies; their history and interrelations.

► Accounting theory.

Cooperation / liaison / exchange

The Institute considers of great importance being part of a web which favors interactions, promotes the exchange of ideas, and if necessary, does joint works with researchers from other academic centers. Meetings have been held in order to define the cooperation activities framework with other institutions, namely, National University of Córdoba, National University of La Plata, National University of San Martín, National University of the South and National University of Tres de Febrero.









Center of Carbohydrates Research (Centro de Investigación en Hidratos de Carbono -CIHIDECAR)

Antecedents to the Center of Carbohydrates Research can be found in several research groups of the Organic Chemistry Department of the Faculty of Exact and Natural Sciences of the University of Buenos Aires, which had vast experience on the carbohydrates field. Having agreed on better profiting from finance resources and common use of the own equipment, these groups strengthened the idea of merging themselves in a sole academic scope. Among the benefits pursued it can be mentioned the facilitation and furtherance of horizontal debates on common topics, namely, the interest for joint progress of new lines of research and training of human resources in those areas regarded as priority.

Based on these premises, researchers on carbohydrates related subjects requested to the Council of Directors of the Faculty of Exact and Natural Sciences, the creation of an institute which would gather them. The proposal was approved by Resolution No. (CD) 1352/93. Subsequently, in 1995, CONICET decided to organize the Center of Carbohydrates Research by Resolution No. (D) 1793/95. In 2005, CIHIDECAR was recognized as a shared institute by Resolution No. (CS) 4864/05 within the Framework Agreement entered into between the University of Buenos Aires and CONICET.

At present, CIHIDECAR is composed by twenty three CONICET researchers, two members of the Support Personnel Career (one of them, Principal Professional) and eighteen research scholars from the same institution, nine research scholars from others institutions and exclusive staff from UBA under the categories Assistance in Charge of Assignments (eight) and First Level Assistants (three).

The main purpose of the center is to carry out researches on chemistry and structural aspects of carbohydrates, and to participate in biological processes. Other institutional purposes aim to reassure national and international relevance of the unit as a specialized center in different aspects of carbohydrates chemistry and biochemistry, spreading the results through scientific publications, lectures and conferences. Likewise, a high level of competitiveness and quality in the lines of researches is of utmost importance, as well as vacancy areas detection and human resources training at a high level.

On the other hand, the Institute transfers technology and knowledge therein generated to academic and productive scopes, national or private; and maintains specialized bibliography on carbohydrates, which is regarded at present as the most updated and complete of the country.

CIHIDECAR is the only carbohydrates research center existent in Ibero-America. It is at the same level as the most important ones in the United States of America, Japan and United Kingdom.

University of Buenos Aires. Research Institutes 2012





Director Oscar Varela

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

CIHIDECAR research activities are carried out within the following global thematic areas:

- ► Enantiospecific Synthesis and polymer.
- ► Glycobiology.
- Natural polysaccharides.
- ▶ Mass spectrometry, photochemistry and microscopy.

Researches are carried out related to technological developments based on the use of carbohydrates, obtaining new materials and molecules biologically active by synthesis, with a wide range of activities. Additionally, polysaccharides from Southern Atlantic with pharmaceutical values are isolated, characterized and analyzed.

Services / technological supply

The main target for technological supply and assistance are agro, food, pharmaceutical and polymeric materials industries. Connection and transference activities include the provision of analytical services on organic chemistry, assessment on organic synthesis (planning and execution) and polymer (design, production and categorization). Thermal studies are conducted on polymeric materials, raw materials and pharmaceutical products. Specific bibliography is provided.

Likewise, assessment is given on different aspects of glycobiology and structural characterization of biomolecules, optimizing methods for isolating and characterizing simple sugars, oligosaccharides and polysaccharides from natural sources. Furthermore, total sugars determination without derivatizing are conducted in polysaccharides and glycoconjugates by using HPAEC. Processes are developed so as to profit from industrial polymer wastes and thus obtaining high aggregate value materials.



Cooperation / liaison / exchange

Cooperation and exchange agreements are maintained with the following entities (among others):

- Servicios Especiales San Antonio SA, Neuquén (Argentine).
- ► Sociedad Argentina de Tecnólogos en Recubrimientos (SATER), La Plata, Provincia de Buenos Aires (Argentine).
- ▶ Università degli Studi di Pavia (Italy).
- ▶ Plant Biophysic Biochemistry Research Laboratory (Japan).
- Universidad Autónoma del Estado de Hidalgo (Mexico).
- ► Laboratoire des Glucides, Faculté de Sciences-Amiens (France).
- ► Instituto Max Planck (Germany).









Center of Sea and Atmosphere Research (Centro de Investigaciones del Mar y la Atmósfera – CIMA)

CIMA stems from a proposal letter between the University of Buenos Aires and the CONICET in 1987 for the creation of the Center of Sea and Atmosphere Dynamism Research, at the request of Dr. Isidoro Orlanski of Geophysical Fluid Dynamical Laboratory of Princeton, USA. Later on, this initiative is materialized in 1995 by creating the center officially named as Center of Sea and Atmosphere Research, under the direction of Dr. Mario Núñez, and located at the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

After the Agreement entered into between the University of Buenos Aires and CONICET, the Center of Sea and Atmosphere Center was categorized as an Institute of double dependency by Resolution (CS) No. 5331/08. Prior public contest, Dr. Carolina Vera was appointed Director for the period commencing in November 2009.

The main purpose of CIMA is to expand the knowledge on physic processes that control and determine the behavior of atmosphere and ocean, regarded as a sole system related to fluids dynamism. The behavior of these fluids may be analyzed though numerical models (mathematics) and be studied by computers. Research Activities of CIMA mainly focus on Atmosphere Numerical Modeling, Climate Regional Variation, Regional Study of Anthropogenic Effects on Climate, Regional Modeling of Ocean, Numerical Forecast, and Climate Change.

CIMA has been pioneer at a national level on the execution of General Circulation Models (since 1990) and has been actively participating in several international projects in which forecasted climate by diverse models is compared based on different climate scenarios of the Intergovernmental Panel on Climate Change (IPCC). Based on the utilization of climate models, the Center focused on estimating climate scenarios as well as possible impacts on the different regions of Argentina. At the same time, diverse studies have been conducted in order to understand detectable effects of climate change on rainfalls and temperature on different regions of the country. Likewise, several studies have been carried out on the impact of climate change on hydro and agro resources and health.

CIMA is the main and probably the only Research Center completely dedicated to numeric modeling of atmosphere and ocean in Argentina. Since 2010, its international interactions have increased, and it is recognized as an International Mixed Unit of CNRS of France, dedicated to the study of Climate and its impacts.







Directora Carolina Vera

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Current lines of research may be summarized in the following large areas:

- ▶ Climate Change and its impacts.
- ▶ Climate variability in South America.
- Weather and Climate Forecast.
- ► Synoptic Diagram and Modeling.
- ▶ Rainfall systems in mesoescale.
- Regional Climate Modeling.
- Physical Oceanography.

Services / Technological supply

- Weather Forecast with several purposes through internet. Daily service for multiple users.
- Consultancy on atmosphere and ocean issues to national and private institutions using the system STAN CONICET.
- Studies on the circulation of the estuary of Río de la Plata and the Argentine Continental Shelf.

Cooperation / liaison / exchange

- Agreements with CONAE, National Secretary of Energy and Weather Service, among other official entities.
- Cooperation Relations with: Argentine Institute for Snow, Glacier and Environmental Sciences (IANIGLA-CONICET); National Weather Service; National Institute of Water; Center of Water Economy and Legislation.
- At an international level: LMD-CNRS, France; Maryland University, USA; French Research Institute for the Sea Exploitation (IFREMER), France; Center of Weather Forecast and Climatic Studies (CPTEC) and University of São Paulo, Brazil; University of Chile, Chile.



National and international recognitions

Internationally, CIMA is recognized for its participation in different International and Regional Programs supported by institutions like the European Union, the French Global Environment Fund, the National Oceanic and Atmospheric Administration (NOAA) USA and the Inter-American Institute for Global Change.

At an individual level, researchers have been honored with important national and international awards. CIMA actively contributes with the activities of the Intergovernmental Panel on Climate Change (IPCC), considering that Dr. Vicente Barros is the co-president of Group 2 of the Panel. Likewise, several researches are main authors of different chapters of the 4th and 5th IPCC Report and the Special Report for Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, SREX.









Institute of Astronomy and Space Physics (Instituto de Astronomía y Física del Espacio – IAFE)

The Institute of Astronomy and Space Physics (IAFE) was founded in the meeting of the Board of CONICET on December 29, 1969. It stems from the restructuring of the Cosmic Radiation National Center (Centro Nacional de Radiación Cósmica – CNRC) founded in 1964 which antecedents can be found in the Cosmic Radiation Laboratory of the National Atomic Energy Commission (Comisión Nacional de Energía Atómica – CNEA) created in the 1950s. The CNRC was financially supported by CNEA and was able to use the facilities provided by the Faculty of Exact and Natural Sciences of UBA. On December 18, 1970, the Board of CONICET engaged in an agreement with the then existing National Commission for Geo-Helio Physics Studies (Comisión Nacional de estudios GeoHeliofísicos – CNEGH) so as to have IAFE "working immediately". On April 12, 1971 an agreement was entered into between CONICET, UBA and CNEGH to "assure the better functioning of the Institute of Astronomy and Space Physics (IAFE) created by the Council".

Staff of CNRC, members of the Faculty of Exact and Natural Sciences of UBA and a group of astronomers of the Faculty of Astronomic and Geophysics Sciences of La Plata worked jointly in the foundation of IAFE. Among said group of astronomers was the first IAFE Director, Dr. Jorge Sahade, notable astronomer of international renown who had directed La Plata Astronomical Observatory and then became Dean of the Faculty of Exact Sciences of the University of La Plata. Dr. Sahade was Director of IAFE from its foundation to 1974. He was succeeded by Eng. Máximo Puparelli, Lic. Horacio Ghielmetti, Dr. Marta Rovira, and from 2009, Dr. Gloria Dubner.

IAFE started functioning in the premises of the Faculty of Exact and Natural Sciences (UBA) in the University City Block I, and after successive enlargements requested due to the steady growth and tasks expansions, in 1984 the present venue in the University City was inaugurated, which is known as Block IAFE. Since August 4 2005, with the agreement entered into between the President of CONICET, Dr. Eduardo Charreau and the UBA Rector, Dr. Guillermo Jaim Etcheverry, IAFE is one of the shared institutes UBA-CONICET.

Nowadays, IAFE is a vigorous Institute with deserved international recognition, which has over 100 members among researches, doctoral and postdoctoral research scholars and university degree thesis students and technicians.

Current research topics include: Aeronomy; High Energies Astrophysics; Astrophysics of the Interplanetary Medium; Stellar Astrophysics; Numerical Astrophysics, Atomic Collisions, Stellar and Planetary Physics, Solar Physics, Astrophysical Plasmas, Supernova Remnant and interstellar medium, Quantitative remote sensing, Relativistic quantum theories and gravitation. Research activity is complemented with a vast agenda of scientific divulgation aimed at high school students and general public, achieving more than its creation purposes.







Director Gloria Dubner

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences
Block IAFE

Scientific field / research areas

Astronomy, Physics, Earth, Water and Atmosphere Sciences.

Services / technological supply

- ▶ Consultancy on issues related to research areas.
- ▶ Developments transmissible to sectors belonging to the scientific-technological national system.
- ► Cluster HOPE, cluster Beowulf with parallel architecture working on 64bits, available for scientists researching on the atmosphere, atomic physics and atrophysics.
- Public library and newspaper library on Astronomy and Physics issues.



At a national level, IAFE holds joint actions with the rest of astronomical national institutions, as well as with other universities. Furthermore, it engages in cooperation agreements with entities such as the Atomic Energy National Commission, the Space Activities National Commission and the Leoncito Astronomical Complex.

At an international level, it engages in agreements with the European Community, Belgium; Université Pierre et Marie Curie, Paris VI; CNRS, France; NKTH Ministry of Education, Hungary; Center Leo Apostel, Belgium; MAE, Italy; Programme ECOS-SUD, France; CONACYT, Mexico, and of liaison with Europlanet Research Infrastructure.

Research activity is complemented with a vast agenda of scientific divulgation aimed at high school students and public in general.

National and international recognitions

- ► Félix Mirabel. *Deslandres Award*, Académie des Sciences, France, 2011.
- ▶ Andrés Piatti. National Sciences Award, 2010.



- César Bertucci. Stimulus Award on Astronomy, Exact and Natural Sciences National Academy, 2010.
- Patricia Tissera. L'Oreal-Unesco Award to Women in Science, 2010.
- ► Gloria Dubner. *Personalidad Destacada en el campo de las ciencias*, Legislature of the City of Buenos Aires, 2010.
- Asteroide 9515=1975RA2 named DUBNER in honor to Dr. Gloria Dubner by the International Astronomical Union, 2008.
- Patricia Tissera. Gaviola Award. National Science Academy, 2007.
- ▶ Patricia Tissera. *Houssay Award*, SECYT, 2007.
- ▶ Andrés Piatti. *José Luis Sérsic Award*, Exact and Natural Sciences National Academy, 2006.
- Juergen Scheer. Norbert Gerbier-Mumm Award, International Award World Meteorological Organisation, Switzerland, 2005.
- ► Gloria Dubner. *Enrique Gaviola Award on Astronomy*, Exact and Natural Sciences National Academy, 2005.







Institute of Physiology, Molecular Biology and Neurosciences (Instituto de Fisiología, Biología Molecular y Neurociencia -IFIBYNE)

The Institute of Physiology, Molecular Biology and Neurosciences created in 2003 by CONICET is the result of a significant institutional restructuring, officially initiated on November 13, 2001, when Dr. Osvaldo Uchitel was appointed Acting Director of INEUCI. The Institute of Neurosciences (INEUCI) is so denominated in 1989, as originally the institute was named INIMAYDE. The IFIBYNE creation represents a big step forward to the integration process and development of research groups in the Faculty of Exact and Natural Sciences of the University of Buenos Aires. This process is framed into a major one, namely, the restoring of democracy and the regaining of university autonomy.

Initial progresses on the integration process and curricular development mark the foundation of the Memory Neurobiology Laboratory (LNM) together with Molecular Biology and Neurosciences incorporation in the syllabus of the Biological Sciences Master (a six-year course of studies). In 1997, thanks to the creation of the Laboratory of Molecular Biology and Physiology (LFBM), part of the professors could be gathered, which were carrying out up to that moment their research activities in other faculties or institutes associated to UBA. Both Laboratories, together with professors and researches from associated institutes, lead to a critical mass with a distinctive approach of the scientific work which encouraged the formation of the Department of Physiology, Molecular Biology and Cell in 2001; and later on, the Department of Physiology, Molecular Biology and Neurosciences depending on CONICET, which by virtue of the agreement entered into with the University of Buenos Aires in 2005, it has been incorporated as a Research Institute of double dependency UBA-CONICET. After a public contest in 2008, Dr. Uchitel was appointed Director by Resolution (CS) No. 5332/08.

The reason for the creation of the IFIBYNE was to generate excellence in post degree research and teaching, boosting activities in each research group, multiplying inter-group and interdisciplinary activities and setting the bases for the development of major projects, not only in the search of knowledge but also in its transference to society.

The institute is organized in groups that develop their activities in the diverse laboratories, namely, Laboratory of Neurobiology of Memory, Laboratory of Social Insects, Laboratory of Apoptosis and Gene expression in mammary, Biology of Development Laboratory, Laboratory of Physiology and Molecular Biology. The association of groups includes a wide scope, from genes to their behavior. Research development is associated with post-degree teaching activities maintaining close liaison with renowned institutions of the country and from abroad.

The IFIBYNE performs broad scientific and academic activities. Scientific works production is not less than fifty papers and over a hundred presentations in national and international conferences per year.





Director Osvaldo Daniel Uchitel

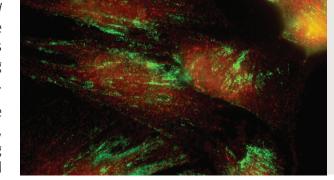
Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

The Institute devotes itself to basic research. Its main research lines are framed within *Neurosciences and Physiology and Molecular Biology*. The activities carried out facilitate the scientific and technological progress and development, this understood as a double contribution promoting understanding to diverse phenomena and improvement in human life quality.

The most important advances in molecular and cell biology are combined with developments in biophysics methodologies, making it possible to analyze cell interaction and its modulating mechanisms applicable to normal or pathogen biological processes.



Services / technological supply

Confocal Microscopy Service: the Institute is equipped with confocal microscope of three channels, two of fluorescence and one of transmitted light. This equipment is used by researchers belonging to the Institute and by those who come from other institutes.

Cooperation / liaison / exchange

At a national level: exchange, consultancy, generation of joint reflexion space with other academic centers namely, INGEBI, IBYME, Leloir Institute, Institute of Cell Biology and Neurosciences "Professor De Robertis", among others.

At an international level: cooperation agreements with FWO-Flanders, Belgium; Istituto di Biologia e Patologia Moleculare (IBPM), Italy; Institute Max Planck, Munich, Germany; Philosophy Department of the University of Leicester, England.

The IFIBYNE is subsidized by research by: Science and Technology National Agency, University of Buenos Aires, CONICET, Howard Hughes Medical Institutelcome Trust, Max Planck Institute, Fogarty-NIH, Volkswagen Foundation, International Centre for Genetic Engineering and Biotechnology, European Union, Third World Academy of Sciences.

National and international recognitions

- Osvaldo Uchitel. Plaque of Honour to International Leaders in Drugs and Neuroscience Discoveries, Science and Technology Innovation Secretary, Panama, 2011.
- Osvaldo Uchitel. Dr. Eduardo De Robertis Award, Argentine Society of Neuroscience Researchers, 2008.
- Alberto Kornblihtt. Investigador de la Nación Argentina 2010, Presidency of Argentine Nation, 2011.
- Alberto Kornblihtt. Bernardo Houssay Award 2010 Experience in Chemistry, Biochemistry and Molecular Biology, Ministry of Science, Technology and Productive Innovation, 2011.
- ► AAnabella Srebrow. *Special Mention. National Award* L'Oreal-UNESCO, 2011.
- ► Francisco Urbano. Scholarship of the Foundation John Simon Guggenheim Memorial, 2011.
- ▶ José Estévez. Fulbright-CONICET Fellow, 2011.
- ▶ Daniel Tomsic. *Ted Bullock Annual Award*, International Society of Neuroethology, 2011.
- Amaicha Depino. John Kendrew Young Scientist Award, 2011.

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Institute of Geochronology and Isotope Geology (Instituto de Geocronología y Geología Isotópica – INGEIS)

The Institute of Geochronology and Isotope Geology was created within the CONICET on May 23, 1969, and the Agreement that regulates its organization and functioning was signed on December 4 of the same year, in the Dean's office of the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

This agreement was entered into by the following parties: Dr. Bernardo H. Houssay, on behalf of the National Scientific and Technical Research Council (CONICET); engineer Oscar Quihillalt, on behalf of Atomic Energy National Commission (CNEA); Dr. Raúl Zardini on behalf of the Faculty of Exact and Natural Sciences of the University of Buenos Aires; Dr. Edgardo Rolleri, on behalf of the Faculty of Natural Sciences and Museum of the University of La Plata; and Dr. Eduardo Padula on behalf of Yacimientos Petrolíferos Fiscales (YPF). The first four mentioned institutions acted in their capacity of Responsible Entities for the Institute functioning, while the latter did so in their capacity of Cooperating Entity.

On the same date, Dr. Enrique Linares, author of the creation project, was appointed Director of INGEIS by unanimous decision of these institutions. He remained in power until December 31, 2000, when Dr. Héctor Panarello took over as an Acting Director. Under the Framework Agreement executed between the University of Buenos Aires and CONICET in 2005, INGEIS was incorporated as a double dependency research institute.

The setup of the first laboratories was completed by the end of 1971 and the first geochronology datings are performed on the following year. From 1976 on, new laboratories were opened, developing stable isotope determinations in water, natural materials and other substances. INGEIS leads and promotes researches on Geochronology, Isotope Geology and their implementations in Regional Geology, Hydrogeology and Natural Resources, as well as the exploitation of Mineral Resources, Hydrocarbons and environment control. In Geophysics and Geochemistry fields, it conducts studies in geothermal issues and paleoenvironments. It also studies soil fertility and vegetables chemistry. Furthermore, it carries out studies on soil pollutants in sanitary landfills, and oil and gas deposits. In the field of biogeochemistry, it studies the mobility of prehistoric Argentine population and conducts paleodietary studies.

Apart from research activities, and students, technicians and researches training, INGEIS develops and executes plans for the solution of specific problems, either alone or in collaboration with official entities and private companies. On the basis of available methodologies, it also provides services to CONICET researches and other national and foreign organisms. The activities are developed within the High Level Services (STAN), and specific contracts which expand these services. Trials quality seeks to be guaranteed by national and international quality norms accreditation.







Acting Director Héctor Panarello

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Exact and Natural Sciences: Earth, Atmosphere and Hydrosphere Sciences.

The main investigation lines in geochronology are related to igneous petrology and metamorphic of the regions of Cuyo, north Patagonia and north of the province of Buenos Aires. Others are orientated to geophysics studies in Sierras Pampeanas and the province of Entre Ríos. Regarding the environment area, soil and sediment pollutants are determined. As for soil and vegetables, agronomic characteristics are studied as well as those regarding fertility and nutrients. Other researches deal with problems in connection with isotope geology, isotope hydrology, isotope geochemistry and isotope archeology.

Services / technological supply

Services such as, technology transfer mechanism have increased during the last years: over 10,000 annual analyses include routine activities and particular developments associated with the resolution of specific problems. Diverse laboratories are adequate environments for those activities.

- ► Laboratories of Environment Isotopes: they include laboratories of stable isotope, tritium, carbon 14 (light) and of Rb/SR (heavy).
- ▶ Laboratories of X Rays: XRF and SRD.
- ► Special Development Laboratory.
- ► Chromatography and Isotope-ratio mass spectrometry Laboratory (IRMS).

Specific studies upon demand: soil emissions determinations in sanitary landfills and oil fields; souring causes studies on oil and gas fields, studies on geological formations used as gas storage; pipeline corrosion studies; studies of fouling electricity generating turbines; studies of aquifers salinization causes.



Cooperation / liaison / exchange

INGEIS cooperates with national universities and CONICET institutes by elaborating joint works, teaching, transferring technology and consultancy tasks. Internationally, it maintains strong bonds with specialized centers namely, International Atomic Energy Agency (IAEA), Vienna, Austria; University of Krakow, Poland; Universities of Washington and New Mexico, USA; University of Waterloo, Canada.

National and international recognitions

- Laboratory of reference on environmental isotopes. International Atomic Energy Agency (IAEA), Vienna, Austria.
- ► FUNPRECIT Award to technology transfer.
- ▶ Distinction for the quality contribution. Argentine Accreditation Body (ISO/IEC 17025 norm).







Institute of Chemical Physics for Materials, Environment and Energy (Instituto de Química Física de los Materiales, Medioambiente y Energía – INQUIMAE)

In 1984, a new project aimed at reaching a scientific level of excellence started to be developed in the Department of Inorganic, Analytical and Physical Chemistry (DQIAQF) of the Faculty of Exact and Natural Sciences of the University of Buenos Aires. The scientific foundation core of INQUIMAE was based on five research groups, most of them created in that period, namely, Inorganic Chemistry, Chemical Thermodynamics, Electrochemistry, Photochemistry and Analytical Chemistry. Since the beginning of the project, it has come as a necessity to imprint a modern scientific bias to the works of the DQIAQF groups, with special emphasis on themes related to chemistry of materials, energy and environment.

Aiming at reinforcing these issues within the scientific lines developed, while reaching an adequate assessment capacity and high quality services to be provided to productive and services sectors, the Institute of Chemical Physics for Materials, Environment and Energy (INQUIMAE) was created by Resolution No. 2934 of the Superior Board, on September 16th, 1992, and located at the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) from Germany contributed with its foundation by granting a donation thanks to which the Institute could be equipped. Since 1995, INQUIMAE has been part of CONICET. In March 1999, by Resolution No. 44/77 it became an Execution Unit dependent on CONICET. Since the Framework Agreement subscribed between the University of Buenos Aires and CONICET in 2005, the Institute of Physical Chemistry of Materials, Environment and Energy has constituted a research unit and one of the shared institutes by both institutions. After the corresponding public contest, Dr. Ernesto Calvo was appointed Director of INQUIMAE by Resolution (CS) No. 4207/08.

The INQUIMAE scientific activities entail: basic chemistry research and research students training, Applied Research and Development through research agreements and chemistry services to industry, specialized training courses and special lectures.

INQUIMAE provides industries and Governmental Agencies with high technology services, as well as research and development contracts, by virtue of confidentiality agreements in order to protect industrial property. Several patents have been filed at national and international levels.

The Institute also offers its laboratories to students who ask for doctoral scholarships from CONICET, the University of Buenos Aires, the National Agency for Promotion of Science & Technology (ANPCyT), and international funding organisms.







Director Ernesto Julio Calvo

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Basic research on Chemistry, Applied Research and Development.

Technological services / offers

Regarding technical services and instrument provision it can be mentioned: Trace Analysis: Atomic Absorption (AA); Chromatographic Techniques; Spectrophotometry, X Rays Diffraction; Photochemical Studies; Analysis of pollutants and Photochemical Analysis; Thermophysical Properties; Characterization of Surfaces.

Other services include: Precision Mechanics workshop for prototype building, Glassblowing, Development of equipment and special experimental methods: Particularly, INQUIMAE outperforms in developments for industrial areas such as environmental chemistry, materials and energy.

Cooperation / liaison / exchange

INQUIMAE and the Department of Inorganic, Analytical, and Physical Chemistry counts with exchange programs for chemistry students namely, PIRE (NSF), Von Humboldt, Volkswagen and scholarships of DAAD, cooperation with Max Planck Gesselschaft, Universities of Europe and the USA, and an active cooperation with Brazil.

Scholarship researchers of INAQUIMAE participate in the National Web of Nanoscience and Nanotechnology, Center for Nanoscience and Nanotechnology (PAE 37063), with the Balseiro Institute of Bariloche, Atomic Energy National Commission (CNEA) and the Physical Chemistry Institute of La Plata (INIFTA). Furthermore, post doctorate and research students, and researchers actively participate in exchanges with research centers of Europe and the USA.

INQUIMAE as a center of excellence is associated with the Third World Academy of Sciences (TWAS). It also participates in the VII Framework Program of European Community, in the Action and Coordination program EULASUR, Advanced Materials Web and Nanomaterials of industrial interest



between Europe and MERCOSUR countries: Argentina, Brazil, Uruguay and BIOMOLECTRONICS (Biomolecular Electreonics and Electrocatalysis), Marie Curie of international researches exchange.

Additionally, the Institute participates in the Binational Center Argentine-Brazilian of Nanotechnology though students exchange, specialized schools and courses such as "the nano-particles", "sogel chemistry" "surface chemistry" offered to all the scientific community. The Institute promotes courses and visits of international scientists such as Professor Luis Marzán, from the University of Vigo (Spain) in December 2008 (from colloidal chemistry to nano-particles) and professor Héctor Abruña from the University of Cornell in July 2009 (Opportunities of Chemistry in Energy).



PROPLAME-PRHIDEB

The Institute was created in August 2005 by merging two CONICET programs which were functioning within the Faculty of Exact and Natural Sciences of the University of Buenos Aires: the PROPLAME - Program of Toxic and Medicinal Plants, Synthetic and Natural Compounds (Programa de Plantas Tóxicas y Medicinales, Metabolismo de Compuestos Sintéticos y Naturales) and the PRHIDEB - Program of Fungi that Participate in Biological Degradation (Programa de Hongos que Intervienen en la Degradación Biológica).

PRHIDEB started its activities in 1990 and Dr. Jorge Wright was the Director. Dr. Daniel Cabral, Deputy Director between 1993 and 2000, has been in charge of the Program since 2000. Since the beginnings of the Program, he has been part of a large group of mycologists of the Biodiversity and Experimental Biology Department of the Faculty of Exact and Natural Sciences. A group dedicated to the study of fungi in relation with human activity and the surrounding ecosystem. The initial research lines, mainly focused on the study of species biodiversity, have been widen and enriched thanks to the incorporation of new topics, namely, biodegradation; agriculture; pharmaceutical industry; fungal metabolites industrial production; endophytes; fungi enzyme production; fermentations; plant, animal and human pathogen; and biodeterioration.

PROPLAME was created in 1991 under the direction of Dr. Alicia Pomilio who remained in charge until 2004. The Institute is located at the Organic Chemistry Department of the Faculty of Exact and Natural Sciences, and from there, significant liaisons are established with other institutes and national universities.

In 2005, the Framework Agreement subscribed between the University of Buenos Aires and CONICET incorporated a new unit under the denomination of shared institute of double dependency. Dr. Cabral was appointed Acting Director. Due to the decease of Dr. Cabral in 2008, the direction of the Institute has been in charge by the Acting Deputy Director Dr. Graciela Vaamonde. Upon merger of the two programs, some groups were formally incorporated that functioned within the Organic Chemistry Department of the Faculty of Exact and Natural Sciences, and that carried out works in the mycology and food chemistry fields.

At present, a change in the denomination and acronym deriving from the conjunction of both programs is in the process of being approved, so that a new one may represent the current research lines.

The organization of this Institute has contributed to tighten ties among research groups belonging to preexistent programs. Integration is materialized by publishing joint works, codirecting degree and postdregree theses, as well as running postdegree courses in mutual collaboration.

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Director Graciela Vaamonde

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field/ research areas

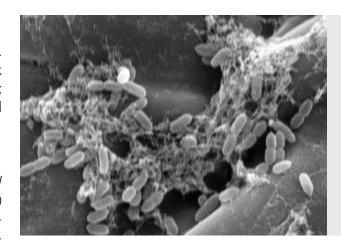
Biology, Chemistry, Agricultural Sciences, Anthropology. Application fields: agricultural development, forests, livestock breeding; food; environment control and protection; health; paper and printing press; social development and social services; general promotion of knowledge.

Services / technological supply

- ➤ Specialized library on mycology, phytopathology and fungal biodiversity issues. It has at its disposal, 1970 works, including doctorate and degree theses; 12 magazines (424 volumes); 15,600 supplements, 150 Congresses, Minutes and Synopsis.
 - It was donated to CONICET by Dr. Jorge E. Wright, its founder, and it is of open access to researchers, students and public in general.
- ▶ Mycology library (BAFC) with 20,000 entries of fungi samples and related organisms from different regions of Argentina, Chile, Paraguay and Uruguay. It includes duplication of herbal collections of the United States and Europe. It is available by a borrowing system for exchange with national and foreign researchers, by transfer agreements.
- Collection of cultures of filamentous fungi, denominated BAFC cult, with around 2,000 strains are offered by transfer agreement.
- ➤ Toxic Fungi Identification Service: in direct relation with Posadas Hospital, Children's Hospital, Fernandez Hospital and other public and private entities. It provides free services during the 24 hours.
- Consultancy to institutions, corporations and individuals, in the form of projects and services to third parties of different nature: edible and medicinal fungi cultivation, diagnosis of plant diseases, bioremediation, biodegradation, pasture improvement by endophyte fungi.

Cooperation / liaison / exchange

The Institute maintains cooperation links with distinguished research centers of the country and from abroad by



internships, exchanges and scientific projects. Among them it could be mentioned: National University of La Plata, National University of Río Cuarto, National University of Córdoba, National University of Quilmes, The Botanical Darwinion Institute (Instituto de Botánica Darwiniano (UBA); Spegazzini Institute (Instituto Spegazzini – UNLP), National Institute of Agricultural Technology (Instituto Nacional de Tecnología Agropecuaria – INTA), CITEFA – Armed Forces Scientific and Technical Research Institute (Instituto de Investigaciones Científicas y Técnicas para la Defensa).

The following international centers could be mentioned: University of Rutgers, USA; University of Kentucky, USA; ISPA, Bari, Italy; American Research Service-USDA, USA; Centraalbureau voor Schimmelcultures-CBS, Utrecht, Netherlands; Technical University of Denmark, Denmark; University of Cranfield, United Kingdom.

National and international recognitions

- The Toxic Fungi Identification Service is a center of reference at a national level for intoxication cases for wild fungi ingestion.
- ► The collections of cultivation of filamentous fungi (Mycology library BAFC and BAFC cult) are recognized at national and international levels, and they appear in the *Index Herbariorum*.

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Microanalysis and Physical Methods Unit in Organic Chemistry (Unidad de Microanálisis y Métodos Físicos en Química Orgánica -UMYMFOR)

The Microanalysis and Physical Methods Unit in Organic Chemistry (UMYMFOR) was created in 1978 thanks to the initiative of Dr. Eduardo Gros, its first coordinator, by an agreement between CONICET and the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

During the first years, the activity was centered on three research groups of bio-organic chemistry and natural product areas. At present, the UMYMFOR includes twelve research groups that develop basic lines of research and applied to different rages of organic chemistry, including medicinal, synthesis, natural product chemistry, chemistry applied to art and new materials.

Since its beginning, UMYMFOR has been providing technological instrumental services for development and consultancy to chemistry industry in the country and abroad, being this the first collaboration experiences between an academic center and the productive sector in Argentina. The resources generated make it possible to keep the Unit's high complexity equipment updated and maintained, to which researchers from the whole country and from neighboring countries have access.

In 2001, the LANAIS of High Resolution Mass Spectrometry (LANAIS-EMAR) was incorporated to UMYMFOR, as well as the LANAIS RMN-500 with all its infrastructure and equipment in 2003. Its park of instruments started being renewed mostly in 2004, with an investment of over a million dollars. At present, UMYMFOR has over fifty professionals, among them CONICET's researchers, university professors, support staff and scholarships who carry out scientific research and service activities.

In 2005, the Microanalysis and Physical Methods Unit in Organic Chemistry was included on the list of units known as shared institutes and accepted as of double dependency pursuant to the Framework Agreement subscribed between the University of Buenos Aires and CONICET. Its current Director is Dr. Gerardo Burton and it functions within the Department of Organic Chemistry of the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

Following the initial guidance of inter-sectoral cooperation, the research activities are based on the formation and training of human resources of the academic, professional and technical areas of the several research and service fields. UMYMFOR provides instrumental and basic analysis services, including data interpretation, development or analytical chromatographic methods adjustment, as well as consultancy on the appropriate methods for the resolution of specific problems.







Director Gerardo Burton

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Organic Chemistry, Medicinal Chemistry, Natural product chemistry, Chemistry applied to arts and protection of cultural property, mass spectroscopy MRI.

Services / technological supply

UMYMFOR has engaged in a policy of institutional quality based on the commitment of implementation and maintenance of a quality management system under the Norm ISO 9001:2008. The technological supply includes the following services:

- Nuclear Magnetic Resonance Spectrometry: In spectrometers Bruker 4,7 and 11,5 Tesla (1H to 200 and 500 MHz, respectively). MRI mutinuclear including 19F and 2H, 1D and 2D spectrum, direct and inverse detection and quantitative MRI (QNMR).
- ▶ Mass Spectrometry: Highly accurate determination of mass in spectrometer Bruker micrOTOF-Q II ionization ESI, APCI and APPI, direct injection and coupled to a liquid and gas chromatograph. Low resolution spectrum by chemical ionization and electronic impact, in equipment of type quadruple by direct injection and coupled to a gas chromatograph (Shimadzu QP-5000 y Thermo Scientific DSQ-II).
- ► *Infrared Spectrometry*: in spectrometry FTIR Nicolet Magna 550.
- ▶ Organic basic analysis of C, H, N y S: in automatic analyzer Exeter CE 440.
- Spectrophotometry UV-visible, circular dichroism, optical rotatory dispersion and polarimetry: in spectropolarimeter Jasco 815 and polarimeter Perkin Elmer.
- ▶ Development Services: development of specific analytical methods, development of synthesis methods at laboratory and multigram scale; synthesis of organic compounds by order.
- ➤ Techology and Consultancy Services: structural characterization of organic compounds including polymers; analysis of unknown samples so as to identify organic compounds. Characterization and identification of impurities (unknown) in drugs and agrichemicals.

Cooperation / liaison / exchange

International Cooperation: Contract CAPES-MINCYT with the Federal University of Santa Catarina, Brazil, 2011-2012. Exchange with the University of Santiago de Compostela.



Liaison: UMYMFOR is related to over eighty corporations of the chemistry field (pharmaceutical laboratories, producers of agrichemistry and chemistry products in general) which regularly use technology and consultancy services, or they enter into research and consultancy agreements. National and international official organisms also require the technology and consultancy services of UMYMFOR, namely, AFIP-DGA Federal Administration of Public Revenues - General Directorate of Customs (Administración Federal de Ingresos Públicos - Dirección General de Aduanas); ANMAT-INAME National Administration of Drugs, Foods and Medical Devices (Administración Nacional de Medicamentos, Alimentos y Tecnología Médica); National Institute of Industrial Technology (Instituto Nacional de Tecnología Industrial -INTI); National Food Safety and Quality Service (Sercicio Nacional de Sanidad y Calidad Agroalimentaria- SENASA); National Centre for Restoration and Conservation (Centro Nacional de Restauración y Conservación), Chile; Museum of Anthropology, Uruguay.

National and international recognitions

- ► Certification IRAM ISO-001:2008 for the Management Quality System since 2009.
- Member of the National Laboratories Web of SENASA since 2007.
- Diploma of Cooperation FUNPRECIT UMYMFOR. Foundation for the Interaction of Productive, Educational and Scientific-Technological Systems, Argentina, 2005.
- ► FUNPRECIT Award for the Transference to the Industry. Foundation for the Interaction of Productive, Educational and Scientific-Technological Systems, Argentina, 2003.

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Institute for Plasma Physics (Instituto de Física del Plasma – INFIP)

The Plasma Physics Laboratory was created in 1970 within the Faculty of Exact and Natural Science of the University of Buenos Aires, and stemmed from a research group which had been founded two years before. In 1983, the Program of Research in Plasma Physics (PRIFIP) was created by an agreement between this Faculty and the National Scientific and Technical Research Council (CONICET) in order to support the activities of the homonymous Laboratory. Thanks to the contribution of professors and researches from the University of Buenos Aires and CONICET, the scientific activity carried out in the Laboratory and in PRIFIP gained international recognition. Therefore, the program became a research center of the CONICET under the name Institute for Plasma Physics (INFIP) in January 1991.

In virtue of the Framework Agreement suscribed between the University of Buenos Aires and CONICET in 2005, the Institute for Plasma Physics was included to the group of units known as shared institutes. Its current director is Dr. Héctor Kelly, appointed by Resolution (CS) No. 6395/09.

The objective of the science of plasma is to understand and to apply the properties of the fourth state of matter when it is partially or completely ionized to temperatures above ten thousands degrees Celsius. 99% of observable matter in the Universe is in plasma state. That is the reason why this branch of physics is of great importance for the interplanetary space physics and astrophysics.

The development of Plasma Physics has been also encouraged since the decade of 1950 by nuclear fusion, aiming at reaching controlled nuclear fusion at a laboratory scale for peaceful purposes.

Therefore, management and control of plasmas is essential to the success of industrial applications such as treatment and coating of metallic surfaces by plasma and the new generation of microelectronic technology.

Experimental research on dense plasmas is of great potential for technological applications, among which non-thermal at high pressure plasmas have been included. Experiments have been also carried out on the treatment of surfaces for plasma arcs, as well as for the design and building of portable neutron sources and X rays, for materials analysis by activation or for its use in tomography.

The Institute for Plasma Physics is a national center where pure and applied researches are conducted in a wide variety of issues of this field, namely, technological application of plasmas, study of space and astrophysics plasmas, plasmas and fluids computational physics, some topics of physics of nuclear fusion and mathematical physics associated with these areas.







Director Héctor Kelly

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

- ► Theoretical and computational plasmadynamic in plasma of nature and laboratory.
- ▶ Dense plasmas, plasma focus equipment and inertial confinement.
- ► Fluid dynamics in applications to industrial and environmental problems.
- ► Technological activities in plasmas.

Services / technological supply

Some of the applications derive from research lines of the Electrical Discharge Laboratory:

- Consultancy and technical assistance for the development of contactors of high current and/or voltage.
- ▶ Techniques to measure electricity, direct and pulsed current.
- ▶ Development of high vacuum chambers.
- ▶ Development of methods for the diagnosis for plasmas generated in electric discharges.
- ► Consultancy and technical assistance for the usage of plasmas in industrial processes (coating, thermal treatments, metal cutting, waste processing).

Cooperation / liaison / exchange

Abroad: Space Science Center, University of New Hampshire, USA; Electrical Discharge and Plasma Laboratory, University Ramat Aviv, Israel; Optics and Plasma Laboratory, Pontifical Catholic University of Chile, Chile; Plasma Associated Laboratory, Instituto Nacional de Pesquisas Espaciais, San Pablo, Brazil.

In the country: Fluid Dynamics Laboratory, Faculty of Engineering, UBA; Magnetized Dense Plasmas Laboratory (PLADEMA), CNEA and Fluid Laboratory, UNCPBA, Tandil; University of Mar del Plata; UTN, Regional Venado Tuerto, Santa Fe; UTN, Regional Concepción del Uruguay; Department of Physics, Favaloro University.



National and international recognitions

- Banco de Crédito Argentino Award to the Techno-entrepreneur: First Prize Category University students in technology of surface coating by pulsed arc plasmas, 1994.
- Main award of the competition INNOVAR 2006: development of a compact and pulsed generator of X rays, National Secretary of Science and Technology.









Institute of Andean Studies "Pablo Groeber" (Instituto de Estudios Andinos "Don Pablo Groeber" – IDEAN)

IDEAN stems from an initiative for the integration of a group of researchers from several laboratories and working teams of the University of Buenos Aires historically focused on interdisciplinary studies on a common theme. In March 1984, studies started on tectonic evolution of Andes Mountain Range and are then carried out by the Andean Tectonic Laboratory, which has now become a reference center for Andean studies in South America. The interdisciplinary nature of these studies encourages an intense collaboration with the High Resolution Biostratigraphy Laboratory, which through careful and detailed analysis provides the geological ages of analyzed stratigraphic sequences, of utmost importance in order to solve tectonic problems.

The cooperation of the Continental Environments Paleobiology Research Group should be highlighted. It actively works in the filling of rift Triassic systems, specifically in the study of its biotas, paleoenvironmental and paleographic correlations. These systems had an important control on the later Andean deformation.

The creation of a Geological Modeling Laboratory has enabled the simulation, from analogue physical models, of deformation processes which take place in the Andes Range. This laboratory makes mechanic and kinematic numerical modeling, not only in 2D but also in 3D. It develops as well computer tools for the building of structural sections and palisnpastic reconstructions. These studies are complemented with the evaluation of potential volcano risks in the active regions of Andes by the association with the Group for the Study and Follow up of Active Volcanoes, which has outlined the steps to follow in a volcanic crisis, and which is of widespread use by different populations and institutions of the country.

The strong interest on the international scientific community on aspects related to climate change, together with the fact that there are excellent files in the country on paleoclimatic reconstruction, encouraged the creation of the Laboratory of Continental and Marine Environment Surveys where paleoenvironmental and paleoclimatic reconstructions are carried out from biological indicators, particularly in mountainous areas of Patagonia. This enables the analysis of the quaternary paleoenvironmental evolution within a context of global, hemispheric and regional climatic evolution, and thus studying the main cause of this change. The carbonates and cyclostratigraphy group studies the platforms and ramps with spectacular outcrops in order to recognize their paleoenvironmental evolution through detailed stratigraphic, microfacial, diagenetic and sequencial analyses. The study made it possible to obtain a throughout knowledge on its cyclicality and periodicity in the Milankovitch cycles, relevant aspects for the comparison with those stratigraphic cycles of the Northem Hemisphere.

In 2006, a score of UBA and CONICET researchers suggested the creation of the Institute of Andean Studies "Pablo Groeber", which was approved on September 13, 2010, by the Board of CONICET. In the same year, the IDEAN is included by the Superior Board of the University of Buenos Aires as an institute of double dependency.



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Appointed Director Beatriz Aguirre Urreta

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Exact and Natural Sciences. Earth Sciences, Atmospheric and Hydrospheric Sciences.

The Institute of Andean Studies gathers geologists, biologists and paleontologists who participate in several work groups with a shared issue in different disciplinary aspects: the study of Andes and areas of influence. The groups belong to the following research fields:

- Andean tectonic laboratory.
- ► High resolution biostigraphy laboratory.
- ► Geological modeling laboratory.
- ▶ Paleontobiologic studies on continental environments.
- ▶ Group of study and follow up of active volcanoes.
- ▶ Group of study of carbonates and stratigraphic cycles.
- ▶ Marine and continental environment exploration.

IDEAN gathers twenty eight researchers and thirty four scholars in this research field with a good level of scientific production.

Services / technological supply

The Institute is devoted to carry out basic research within its research areas, but it also provides relevant services to the community. Among them, the study of active volcanoes could be highlighted, as it has had an intense participation in the analysis of the last volcanic crises and it keeps an important follow up of active volcanoes. Another group of crucial application is the environmental surveys, with an outstanding role in the study of environmental impacts produced by the paper mills in the litoral region. The work groups of IDEAN are consulted for specific purposes related to their research projects.



Cooperation / liaison / exchange

A strong collaboration is carried out with other CONICET institutes and national universities by developing works, teaching in field courses, and executing shared projects. Collaboration is also shared with researchers and working groups from international centers, focused on diverse Andean matters, namely, the University of Cornell, USA, and different European universities, from Spain, England and Germany.

National and international recognitions

At present, IDEAN constitutes a reference for the study of Andes, and whose researchers have been awarded with numerous recognitions. Furthermore, it participates in numberless research programs funded by national organisms and foreign institutions.









Institute of Biodiversity and Experimental Applied Biology (Instituto de Biodiversidad y Biología Experimental y Aplicada – IBBEA)

Around a decade ago, the Department of Biological Sciences of the Faculty of Exact and Natural Sciences was divided into the Departments of Biodiversity and Experimental Biology (DBBE); Ecology, Genetics and Evolution (DEGE); and Physiology, Molecular and Cellular Biology (FBMyC). The direct antecedent of the current Institute of Biodiversity and Experimental Applied Biology (IBBEA) is the creation of DBBE. This Department tackles a level of organismic study, not only in relation to biodiversity itself, but also regarding other biological aspects namely, anatomy, taxonomy and systemic physiology. The recently created IBBEA, which is located at the Faculty of Exact and Natural Sciences of the University of Buenos Aires, gathers a critical mass of researchers and scholars from CONICET, and it belongs to the group of research institutes of double dependency UBA-CONICET.

The Institute of Biodiversity and Experimental Applied Biology, working within the Department of Biodiversity and Experimental Biology of the Faculty of Exact and Natural Sciences, was created aiming at promoting scientific and technological research tasks of quality and relevance in interdisciplinary areas related to the study of diversity of current organisms (protists, plants, fungi and animals). The study of this biodiversity is tackled by different disciplines and branches of the scientific knowledge, among them: taxonomy, biogeography, morphology, embryology, physiology, histology, ethology and bioengineering.

One of the main objectives of IBBEA is to generate knowledge in order to promote the conservation of species, increase the capacity of services and contribute to scientific and technological innovation by encouraging cooperative activities and interdisciplinary approaches by research groups that are part of them. This favors the formation of human recourses highly trained in diverse disciplines.

On the other hand, the creation of the Institute aims to strengthen the advantages of shared use, already existent within the Department (DBBE) and the Faculty of Exact and Natural Sciences, as well as encourage new advantages.

The results dissemination of the research activities responds to the interest in promoting the scientific and academic exchange with institutions and organisms, from the country and abroad, focused on science research and teaching, and ultimately in making a contribution to society.

In order to fulfill these objectives, work is coordinated with the Department of Biodiversity and Experimental Biology of the Faculty of Exact and Natural Sciences. The IBBEA furthers the development of educational tasks and extension courses in the DBBE, by every member researcher.







Director Laura S. López Greco

Res. (CS) No. 4864/05

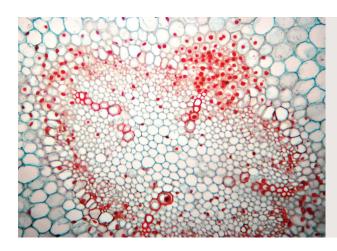
Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

- ▶ Biodiversity in agroecosystems.
- Inoculants.
- ▶ Biodiversity, ultrastructural and ecophysiology of microalgae.
- ► Continental diatoms.
- Applied vegetal anatomy.
- ▶ Biology of the development of plants.
- ▶ Vegetal aquaporin.
- ▶ Estructure and dynamism of marine zooplakton.
- ▶ Biology of marine invertebrates.
- ▶ Biodiversity of crustaceans.
- Biology of reproduction and growth of decapod crustaceans.
- ▶ Physiology of crustaceans.
- ▶ Physiology of insects.
- ▶ Neuroendocrinology and behavior of fish.
- Aquatic ecotoxicology.

Services / technological supply

- Special studies upon request: determination of plant and animal species.
- ► Consultancy on germplasm conservation.
- ▶ Biodiversity on agroecosystems.
- Soil microorganisms. Inoculants.
- Biodiversity, ultrastructure and ecophysiology of microalgaes.
- Continentals diatomeas.
- ► Consultancy on aquaculture of crustaceans.
- Processing of tissues (particularly hepatopancreas and gonads) to characterize eventual cellular alterations by defects of different treatments.
- ► Toxicology bioassays to evaluate lethal and sublethal effects (fish and crustaceans).
- Cultiavation and provision of microalgaes and ciliates strains.
- Microalgae tests for forensic practice.
- Analysis of specific composition of diatomites and derived products.
- Qualitative and quantitative analysis of diatoms in phytoplankton and phytobenthos samples.



- ► Consultancy to corporations on biofertilizers.
- Consultancy for the development of new products on fungi bases.

Cooperation / liaison / exchange

At a national level: cooperation activities with universities and CONICET institutes.

At an international level, with specialized centers in several countries: University of Colonia, University of Bremen, University of Würzburg (Germany); University of New Brunswick, Saint John (Canada); Center of Advanced studies in Arid Areas - CEAZA - University La Serena (Chile); University of Islas Baleares, Mallorca, University of Granada, University of Barcelona (Spain); University of Ferrara, University of Padova and Pavia, University of Sannio, Institute of Biophysics (CNR Area of Ricerca, Pisa) (Italy); National Autonomus University of Mexico, Iztacala, CIBNOR (Mexico).







Buenos Aires Institute of Ecology, Genetics and Evolution (Instituto de Ecología, Genética y Evolución de Buenos Aires – IEGEBA)

The creation of the Buenos Aires Institute of Genetics Ecology and Evolution of was encouraged by the necessity to creatively respond to the challenges Biology Sciences have recently been facing. Among the present Biology challenges it could be mentioned: the integration of knowledge generated by traditional branches such as Ecology, Biology of Behavior, Ecophysiology, Genetics, Biophysics, Evolutionary Biology with Bioinformatics methodologies applied to the study of Genetic, ecologic and evolutionary processes and patterns. Thus, the creation and functioning of the institute will capitalize on the huge amount of knowledge and tools of the groups which are part of it. The Institute counts with multidisciplinary and integrated research groups providing a wide approach to the problems posed, and based on the strong interaction between theory, and empirical and methodological research. Likewise, the creation of the Institute aims at strengthening the scientific and academic image before society and other institutions.

On December 12, authorities of the Department of Ecology, Genetics and Evolution (EGE) of the Faculty of Exact and Natural Sciences of the University of Buenos Aires, with the consensus of its members, filed a petition to the authorities of CONICET to organize a research institute which would be categorized as one double dependency between the University of Buenos Aires and CONICET. The foundation of the Institute was approved in February 2012, being appointed the existing authorities of the Department of Ecology, Genetics and Evolution Dr. Hasson and Dr. Gürtler. Recently, after the proceeding of the due contest, Dr. Esteban Hason was appointed Director. During March 2012 the members of the Institute were called upon to establish who would be part of the directive committee responsible for IEGEBA and how the allocated resources would be administrated. At the time of foundation, IEGEBA counted with twenty eight research units that gathered sixty seven trained researchers, seven technicians and support staff, over a hundred and thirty scholars who currently work Department of Ecology, Genetics and Evolution (EGE) of the University of Buenos Aires.

Due to the recent creation of IEGEBA, it is not possible to evaluate progresses and achievements; however, institutional objectives which lead its foundation can be highlighted. Among the most relevant ones, it could be mentioned: to provide a framework of institutional reference that favors administrative and scientific integration among the groups part of it; to support and coordinate research projects in progress, developed by member researchers; to promote the development of projects leading to common enrichment from the collaboration from the institute members; to optimize the organization and use of spaces and common equipment; to boost the capacity of resource mobility from diverse sources; to stimulate postgraduate training in ecology, genetics and evolution through specialization courses.







Director Esteban Hasson

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

The application field of the Buenos Aires Institute of Genetics Ecology and Evolution is related to processes which act at ecosystemic, community, population, individual, cellular, genomics, gene and molecular scales. In this context, pressing issues are tackled, namely, biodiversity conservation, natural resources management, ecology, plague and infectious disease epidemiology control. The referred approaches are adopted by integrating diverse biology disciplines such as ecology, genetics and evolutionary biology.

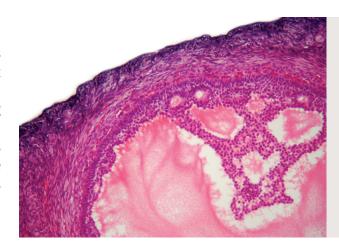
Services / technological supply

- Consultancy and technical assistance to governmental organisms (municipal, provincial and national), to NGOs, industries and private companies in activities including environmental monitoring and impact assessment; productive activities; health; plague control; ecosystems and natural resources management; biodiversity conservation; cytogenetic characterisation of animal and vegetable species, of cellular lines and chemical genotoxic monitoring.
- ► Provision of *Drosophila*'s strains
- Service of DNA sequencing and genotyping.
- Service of laser microdissection.
- ▶ Institutional libraries specialized in genetics.
- Journal library on ecology.

Cooperation / liaison / exchange

The IEGEBA cooperates with national universities and CONICET institutes by designing and developing research projects, offering courses and teaching training, tasks of technology transfer and consultancy.

Abroad, IEGEBA maintains strong academic links with specialized health and nature protection centers, also with internationally recognized universities (Harvard, Oxford, Toronto, California) and others from Europe.



National and international recognitions

Due to the fact that IEGEBA has been recently created, the several distinctions obtained belong to its researchers.

- ▶ Demetrio Boltovskoy. *Merit Diploma for the Scientific and Techonological Career, Animal Biology Field*, Konex Foundation, 2003.
- Demetrio Boltovskoy. Award to Cooperation Projects to great impact for the development of an Atlas of Environmental Sensitivity, FUNPRECIT Foundation, 2005.
- ▶ Paula de Tezanos Pinto. *Balech Award, Distinction to the youth phycologist under 40 with the largest number of phycological publications within the period 2009-2010,* Argentine Phycology Association, 2011.









Buenos Aires Institute of Basic, Applied and Environmental Geosciences (Instituto de Geociencias Básicas, Aplicadas y Ambientales de Buenos Aires – IGEBA)

The recently created Institute of Basic, Applied and Environmental Geosciences of Buenos Aires (IGEBA) is part of the group of shared institutes between the University of Buenos Aires and the National Scientific and Technical Research Council (CONICET). It is located at the Department of Geological Sciences of the Faculty of Exact and Natural Sciences of the University of Buenos Aires.

The conformation of IGEBA stems from the merging of the Institute of Geophysics "Daniel A. Valencio", created in 1998, and some research groups in diverse branches of Geology. All of them are currently part of the Department of Geological Sciences of UBA. The creation of IGEBA was approved by CONICET on August 9, 2011, and ratified by the Superior Board of the University of Buenos Aires on September 14 of the same year.

IGEBA gathers forty two researchers, thirteen support professionals and seventeen scholars who tackle a wide scope of geosciences, from geophysics researches to environmental studies, also including branches such as sedimentology, mineralogy, petrology and natural resources, among others.

The Institute is composed by two main areas (Geology and Geophysics), which had been opportunely divided into seven and they include: Sedimentology, Environmental Sciences; Mineralogy and Petrology; Sustainable Mineral Resources; Paleomagnoetism and Geomagnetism; Applied Geophysics; Rock, Environmental and Quaternary Magnetism; Neotectonics and Rheology.

The main objectives are to promote the development of researches in the field of geosciences, especially in inter and multidisciplinary research works; to boost the training of human resources in Geology, Geophysics and related sciences; and to assist public and private institutions in issues related to Geosciences in general. As to the latter, the objectives are in connection with the exploration and prospecting of mineral resources, the evaluation of risks and environmental damages in the geological realm, the risk linked with diverse geological processes and tools for its determination and eventual moderation.

Apart from the research activities, IGEBA plays a major role in the training of human resources (researchers, technicians, scholars and doctoral students) and carries out assessments focused on the solution of specific problems posed by institutions not only from the public sector but also from the private sector.







Director Carlos Oscar Limarino

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Exact and Natural Sciences: Earth, Atmosphere and Hydrosphere Sciences. At present, different research areas are developed:

- Paleomagnetism: paleomagnetic studies and of magnetic factory applied to paleogeographic reconstructions, tectonic studies, metallogenics researches.
- ▶ Rock and environment magnetism: paleoclimate and environment reconstructions by recording magnetic minerals.
- Applied Geophysics: utilization of diverse geophysical methodologies such as gravimetry, magnetometry, recessive tomography, seismic refraction and shallow reflection to solutions to geological and environmental problems at regional, and even local levels.
- Neotectonic and rheology studies focused on distribution patterns, geometry and kinematics of deformation, recent and old in the country.
- Stigraphy and tectosedimentary response to evolution of basins and modeling of depositational paleoenvironment evolution.
- Prospecting of marine authigenic minerals as source of phosphorous and potassium for the fertilizer industry: geology, prospecting, environmental evaluation and impact.
- ► Geomorphological evolution and dynamic of costal environments to mega, meso and micro scales.
- Petrological and geochemical studies of igneous rocks, metamorphic and sedimentary.
- Metalogenetic and deposit researches, focused on sustainable mineral resources.

Services / technological supply

- ► Laboratory of Sedimentology: with laser sedigraph for grain size studies of sediments and equipments for mineralogical classifications.
- Laboratory of Chemical Analysis of Rocks and Water: characterization of chemical composition of water and determination of majority and minority elements in rocks.



- ► Laboratory of Minetalogy-Microthermometry with heating platen and microscopy system which allows the study of gas inclusion in rocks.
- ► Laboratory of Optical Microscopy: study of loose rocks and sediments through petrographic magnifying glass, polarization microscope and epifluorescence.
- ▶ Laboratory of Paleomagnetism "Daniel Valencio": cryogenic and rotating magnetometers, desmagnetizers, magnetizers by pulses and anhysteretic, meter of susceptibility of anisotropy at high and low temperature, vibrant magnetometer (VSM).
- ► Laboratory of Applied Physics: gravimeter, proton magnetometers, resistivity tomograph, equipment of seismic reflection-refraction of 96 channels.
- ► Laboratory of neotectonic: modeling of different deformation processes and its morphotectonic relation.

Cooperation / liaison / exchange

Members of IGEBA develop a huge number of cooperation projects not only with state organizations, such as SEGEMAR (Argentine Geological Mining Service), the Argentine Antarctic Institute, and CONEA; but also with private companies, mainly orientated to hydrocarbon exploration and exploitation.

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Institute for Mathematical Research "Luis A. Santaló" (Instituto de Investigaciones Matemáticas "Luis A. Santaló" – IMAS)

The recently created Institute for Mathematical Research "Luis A. Santaló" (IMAS) has as objective to gather researchers from the area. Its venue is at the Faculty of Exact and Natural Sciences of the University of Buenos Aires, and in this way it aims at coordinating activities to optimize resources and to support interaction between researchers from different fields of Mathematics.

On April 13, 2011, the Institute for Mathematical Research "Luis A. Santaló" (IMAS) was created by Resolution No. 2338/2011 of the Superior Board of the University of Buenos Aires, under agreement of the parties, and incorporated to the group of institutes of double dependency UBA-CONICET.

The name of the institute honors who was one of the most outstanding mathematicians in Argentina, worldwide recognized for his contributions in the area of Geometry. Having born in Spain, and moved to Argentina when he was young, Dr. Santaló essentially contributed to the development of mathematics in the country, not only in relation to research in this area but also regarding education at different levels.

The Institute for Mathematical Research is oriented to encourage academic interaction by organizing seminars where researchers explain to a wide public of mathematicians the main lines and objectives of research in the area. These seminars have a double function: to extend the training of students and, at the same time, to allow future interns to know the existing research groups so as to let them decide which one to choose.

Mathematical knowledge is spread among general public by collaborating with tasks carried out by the extension area of the Faculty of Exact and Natural Sciences with other institutions, for example, coordinating events with the Government of the City of Buenos Aires and the National Government.

In order to optimize bibliographic resources, IMAS collaborates with the maintenance and updating of the library of Mathematics, particularly participating in consortiums and interacting with other institutes of the country.

The scientific and technological research activities of the groups which are part of the Institute for Mathematical Researches are certified by hundreds of works published in international journals and several academic activities.









Director Ricardo Durán

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

The IMAS has a staff of researchers who work in a wide range of mathematics. The main areas of study are:

- Computer Algebra.
- Homological and Non Commutative Algebra.
- Harmonic and Real Analysis.
- ► Functional and Complex Analysis.
- Numerical Analysis.
- Differential Equations.
- Algebraic Geometry.
- Algebraic Topology.
- Logic.
- Category Theory.
- Probability.
- Statistics.
- Number Theory.

Services / technological supply

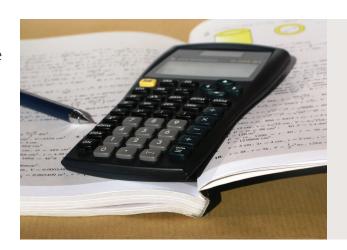
Many of the areas in IMAS have potential applications that admit the supply of services in different areas. Particularly, services in applications which involve methods of statistics, numeric or computer algebra.

Cooperation / liaison / exchange

IMAS researchers cooperate with a great number of national universities and institutes of the National Scientific and Technical Research Council (CONICET) through joint researches and training courses.

At an international level, IMAS maintains strong relations with universities from different parts of the world collaborating with their researchers, many of them in a context of cooperation projects funded by diverse national organisms, namely, CONICET and ANPCyT, and their related institutions abroad.

It could be mentioned: Universidade de São Paulo (Brazil); Universidade Federal de Santa Catarina (Brazil); University of



Catholic University (Peru); National Autonomous University of Mexico (Mexico); Université de Paris 13 (France); Université de Saint-Etienne (France); Université de Montpellier 2 (France); Université de Paris - Sud (France); University of Clermont-Ferrand (France); Autonomous University of Madrid (Spain); Autonomous University of Barcelona (Spain); University of Valladolid (Spain); Free University of Berlin (Germany); University of Leipzig (Germany); University of Marburg (Germany); University of Pavia (Italy); University of California (USA); University of Colorado (USA); University of Nebraska (USA); University of Oregon (USA); Rutgers University (USA).



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Buenos Aires Institute of Physics (Instituto de Física de Buenos Aires – IFIBA)

The Buenos Aires Institute of Physics was officially created in the year 2009, after a long process that started in 2001. The IFIBA integration process began with the group of researchers from the National Scientific and Technical Research Council (CONICET), located at the Department of Physics of the Faculty of Exact and Natural Sciences of the University of Buenos Aires, aiming to support physics research activities carried out in the Department. In July 2009 Dr. Juan Pablo Paz was appointed Organization Director of IFIBA, and was also the first appointed Director in September 2011, after the due public contest.

Since its beginning, the Institute has been conceived as an entity with two distinctive characteristics. The first one, it does not specialize in any area of physics, on the contrary, it deals with all the areas of the Faculty of Exact and Natural Sciences of the University of Buenos Aires. The second one, the IFIBA has a clear and explicit objective which is to promote and foster excellence in physic research in the framework of the Faculty of Exact and Natural Sciences. Thus, IFIBA does not aim nor will aim to develop itself in an autonomous way. It will only exist as a quasi-subsidiary organization of this dependence of the University of Buenos Aires.

In the creation phase of IFIBA, played a protagonist role the researchers who succeeded the Direction of the Department of Physics: Dr. Juan Pablo Paz between 2000 and 2003; Dr. Diego Mazzitelli between 2003 and 2005; Dr. Silvina Ponce Dawson between 2005 and 2009; and Dr. Paz, again, between 2009 and 2011.

At present, most of CONICET researchers, who previously carried out their activities in the Department of Physics in this Faculty, have been formally incorporated to IFIBA. Currently, the Institute counts with a staff of sixty six researchers of the Committee of Scientific Researches (CIC), two hired researchers and three members of the Support Personnel Career. It could be also mentioned that more than sixty scholars form diverse categories are part of the IFIBA's staff.

Research works are published in journals of high impact: there are more than 200 works published in journals indexed by the International Statistical Institute (ISI). Over 30% of the published works by Argentine authors in leading journals (Physical Review, Nature, Science) belong to IFIBA researchers. In the last four years, IFIBA researchers have published at least a work in the journals of major general impact, namely Nature, Science, PNAS and PLOS.







Director Juan Pablo Paz

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

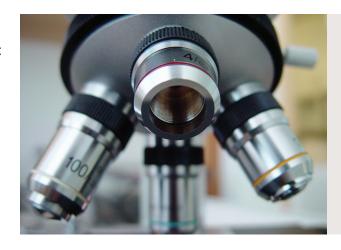
Scientific field / research areas

Research activities are developed by groups and laboratories:

- Laboratory of Low Temperatures (LBT).
- ▶ Laboratory of Quantum Electronics (LEC).
- ► Laboratory de Image Processing (LPI).
- ► Laboratory of Applied Nanophysics (LNA).
- ▶ Laboratory of Mechanical Properties of Polymers (LPM).
- ► Laboratory of Cognitive Neuroscience (LNC).
- ► Laboratory of Dynamic Systems (LSD).
- ► Applied Geophysics Group (GGA).
- ▶ Group of Experimental Physics of High Energies (GFAE).
- ► Elemental Particle Physics Group.
- ► Field and Gravitational Theory Group.
- ► Molecular Physics Group.
- ► Applied Electromagnetism Group (GEA).
- ► Condensed Matter Group.
- ▶ Liquid and Quantum Gases Group.
- ► Fundamentals of Quantum Information and Fundamentals Group (QUFIBA).
- Group of Fluids, Plasmas and Astrophysics.
- ► Interdisciplinary Studies Group (GEBI).
- Group of Physics of Biological Systems.

Services / technological supply

Advanced laboratories updated in all areas. Also shared use facilities. Precision mechanical workshop, Sample Preparation Room, Electronics Repair, Library and Journal Library Room, Meeting Rooms, Conference Rooms, Computing Center, Centralized Printing System, Central Photocopying Service, Laboratories wich are part of national systems (such as the National System of Microscopy and High Performance Computing).



Cooperation / liaison / exchange

The Institute is part of the regular functioning of the Department of Physics, participating in all the exchange programs. It holds the national coordination of I2CAM (National Web on Physics of Complex Systems).

National and international recognitions

IFIBA researchers have received international recognitions: Scholarships Guggenheim, Foundation Humboldt Research Scholarships, designations as Fellow of the APS (American Physical Socienty). They have also received national awards: Bunge & Born Award, Awards of the Academy of Exact Sciences and Engineering, Houssay Awards.









Institute of Biological Chemistry of the Faculty of Exact and Natural Sciences (Instituto de Química Biológica de la Facultad de Ciencias Exactas y Naturales - IQUIBICEN)

The Institute of Biological Chemistry of the Faculty of Exact and Natural Sciences of the University of Buenos Aires (IQUIBICEN) as an Executive Unit of the CONICET stems from a fruitful relationship strengthened along the last years between the Department of Biological Chemistry of the Faculty of Exact and Natural Sciences – UBA and CONICET. The creation of IQUIBICEN as an Institute of double dependency UBA-CONICET was approved by Resolution (CS) No. 3304, on September 28, 2011.

The purpose of IQUIBICEN is to foster scientific research and quality technological activities within the Faculty, which are relevant to the biological chemistry field, as well as to interdisciplinary areas that study physico-chemical underlying phenomena to the structural and functional organization of living organisms, in normal and pathological conditions, and in relation with the environment. This aims to predict their behavior and modify it if necessary.

The creation of IQUIBICEN strengthens the generation of knowledge so as to improve health, increase industrial and service capacity, contribute to scientific and technological innovation, and instruct human resources highly trained in the diverse areas of biological chemistry.

The promotion of cooperative activities and interdisciplinary approaches between research groups already consolidated and groups of recent formation is boosted by updating and maintaining the shared use facilities existent in the scope of the Department of the Faculty of Exact and Natural Sciences, carrying out open days to the scientific community and liaising related institutions.

The coordination of activities under the Agreement UBA-CONICET positively affects the training of human resources, technology transfer and extension; also the better use of resources provided by both institutions. The infrastructure of the Department of Biological Chemistry counts with over sixty laboratories, equipment rooms, lecture halls, student laboratories, multipurpose hall and equipment, and instruments necessary for the development of research activities by diverse groups. The Faculty of Exact and Natural Sciences has the following facilities: Central Vivarium, Library, Journal Library and Computer Services, Health and Safety facilities for the assessment and waste and maintenance control.







Director Elba Susana Vázquez

Res. (CS) No. 4864/05

Venue Faculty of Exact and Natural Sciences

Scientific field / research areas

Biochemistry and Molecular Biology; Immunology; Microbiology Area; Physiological and Biomedical Chemistry; Toxicology and Legal Chemistry; Virology.

Services / technological supply

- Specialized technical services and consultancy: flow cytometric service and proteomics.
- Services to third parties: Technical assistance requests.

Cooperation / liaison / exchange

At national level: National University of Córdoba; National University of Rosario; National University of Mar del Plata; National University of the South; Institute of Biology and Experimental Medicine (IBYME); Institute for Genetic Engineering and Molecular Biology Research (INGEBI).

At an international level: USA: University of Pittsburgh; Center for Pulmonary and Infectious Disease Control, University of Texas, Health Center, Tyler, Texas; Department of Obstetrics, Gynecology & Reproductive Sciences, Yale; University, New Haven; MD Anderson Cancer Center, Houston, Texas; University of California, San Diego, California; University of Utah, Salt Lake City, Utah. Spain: Institute of Molecular and Cellular Biology of Plants UVP-CSIC; Polytechnic City of the Innovation, Valencia. Germany: Charité University Medicine, Berlin; Max Planck Institute for Biophysical Chemistry, Göttingen. France: INSERM - Marsella; Institute Gustave Roussy, Paris. Belgium: Department of Molecular Microbiology VIB - Flanders Institute for Biotechnology; Leuven-Heverlee Flanders.



National and international recognitions

- ► Elsa Damonte. Argentine Association of Microbiology Award 2011, Argentine Association of Microbiology in recognition for her scientific career, Buenos Aires, Argentina, 2011.
- ► Gabriel Rabinovich (IBYME) and the group of researchers including Daniel Campagno and Diego Laderach (IQUIBICEN). Houssay Award CEDIQUIFA 2011 for the research carried out by the most outstanding team research, Buenos Aires, Argentina, 2011.
- ► Fernández; Ciancia; Estévez; Pol-Fachin; Caramelo; Quintana. Best Research Work in Biochemistry with future clinical application in hemostasis and thrombosis, XXII International Congress Cooperative Group of Homeostasis and Thrombosis, September 1 to 3, Montevideo, Uruguay.
- Scorticati; Cotignola; Leonardi; De Siervi; Álvarez; Mazza; Vázquez. Best Research Work, President Award from the Argentine Urology Society, 2011.









Institute of Humoral Immunity Studies "Professor Ricardo Margni" (Instituto de Estudios de la Inmunidad Humoral "Professor Ricardo Margni" – IDEHU)

The Institute of Humoral Immunity Studies was created on December 28, 1982, pursuant to the Framework Agreement between the National Scientific and Technical Research Council (CONICET) and the University of Buenos Aires.

Its first director was Dr. Ricardo Aníbal Margni, together with the Committee of Representatives that was composed by Dr. José Alberto Santome (full member) and Dr. Miguel D'Aquino (alternate member), who had been appointed by the Faculty of Pharmacy and Biochemistry of the University of Buenos Aires.

It was created in accordance with an initiative to generate a specific space for the development of molecular immunology, centered, at that time, in the area of antibodies and their interactions.

The foundational objectives aimed to develop scientific research in the field of cellular and humoral immunity.

From one part, IDEHU's current academic activities aim at carrying out immunochemistry studies so as to have a better knowledge of antigens, antibodies and associated products; as well as to develop new immunochemistry and cellular immunity methodologies.

As in all research units, its responsibilities include to train researchers, technicians, and professionals, as well as to provide postdegree education in the field of humoral immunity and immunochemistry.

Academic activities are reflected in technological transfer, through the provision of high complexity services. In this context, research groups develop strong bonds with other specialized centers of the country and from abroad.

The Institute of Humoral Immunity Studies (IDEHU) is part of the research units which are denominated shared institutes, of double dependency, pursuant to the Framework Agreement subscribed between the University of Buenos Aires and CONICET, in August 2005. In accordance with the legislation in force, in November 2008, a public contest for the position of Director took place, resulting in the appointment of Dr. Edgardo Poskus, by Resolution (CS) No. 5499/08.

The Laboratory of Immunotoxicology was inaugurated in June 2011, and it is located at the Clinical Hospital "José de San Martín" (UBA). The laboratory is part of Specific Agreements among the referred Hospital, the Faculty of Pharmacy and Biochemistry (UBA) and CONICET, together with the Laboratory of Immunoendocrinology. Other associations have been also executed with the Laboratory L. Satz from the same Hospital and with the Department of Microbiology of the Faculty of Medicine (UBA).









Director Edgardo Poskus

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

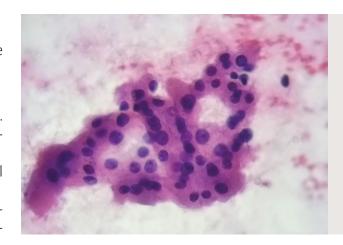
Scientific field / research areas

Activities are carried out in nine groups which tackle the following lines of research:

- ▶ Inmunomodulation, cell signalling, survival and death.
- ▶ Brucellosis, associated arthritis, immunity of the mucous.
- Immunology of the reproduction, asymmetrical antibodies, inmunorregulation and gestation.
- ► Tumor immunology, role of adherence molecules, cell activation and immune response.
- Immunoglobulins of camelids, action of UV light and immunology in vivo and in vitrio, immunomodulating activity and antigens of Lactobacillus.
- Molecular and structural immunology, superantigens, Chagas desease.
- Modulation of immune response, antitumor activity, Enterococcus faecalis.
- Immunoendocrinology, autoimmune diabetes, autoantigens and markers, structure and function of Protein Tyrosine Phosphatases.
- Immunoparasitology, trichinellosis, immunomodulation in the relation host-parasites.

Services / technological supply

- ▶ High complexity analytical services provided by LIE since 1994. Expertise "Immunoanalytical Diabetological" (autoimmunity markers and control and follow up tests). It has been designated as Reference and Service Laboratory by the Faculty of Pharmacy and Biochemistry, UBA. It has been also authorized as provider Laboratory of High Technology Services (STAN) by CONICET.
- Services of flow cytometric, authorized by CONICET as provider Laboratory of High Technology Services (STAN).
- Service of Surface Plasmon Resonance (SRP) Biacore T100.



Cooperation / liaison / exchange

The Institute keeps agreements with the following institutions: FUNPRECIT; Petra Arck: National Park El Palmar; Argentine Accreditation Organization; International Commission on Trichinellosis (part of the Executive Committee); Faculty of Bromatology - UNER; International Centre for Genetic Engineering and Biotechnology; Collaborative Research Project (Italy).

National and international recognitions

- Bundesministerium für Bildung und Forschungf (BMBF)
 MiCyT Collaborative Research.
- ▶ Project, 2010-2012.
- Bill and Melinda Gates Global Health Travel Award, USA, 2010.
- ► ABA 2006, Argentine Biochemistry Association, Argentina.
- ▶ 150° Anniversary of the National Academy of Pharmacy Biochemistry, Argentina, 2006.
- Ricardo Margni Award on Immunology, CEDIQUIFA, Argentina, 2005.
- ► *AMSUD-PASTEUR*, France, 2004.









Institute of Pharmacological Researches (Instituto de Investigaciones Farmacológicas – ININFA)

By mid 1968 the Institute of Pharmacological Researches (ININFA) was created within CONICET by initiative of Dr. Bernardo Houssay. Its founding goals prioritize original research in the area of Pharmacology and human resources training that assure the continuity of this endeavor. Initially, ININFA functioned in laboratories belonging to the Department of Physiology of the Faculty of Medicine. Since 1972, it has been located at the Faculty of Pharmacy and Biochemistry of the University of Buenos Aires.

The Framework Agreement subscribed between CONICET and the University of Buenos Aires includes ININFA as a research institute of shared dependency. In 2008, pursuant to the legislation in force, a public contest took place in 2008 so as to appoint the Director of the Institute. Consequently, Dr. Rubio is appointed Director for a new period by Resolution (CS) No. 5249/08.

Since its foundation, the Institute of Pharmacological Researches has been doing a remarkable work on basic researches applied to physio-pharmacological issues that could be reflected in around fifty Doctoral Theses and hundreds of publications in qualified international refereed journals.

The original descriptions of behavioral, biochemical and physiological mechanisms that involve diverse neuronal systems, as well as kinetic parameters analysis affecting the therapeutic efficacy of drugs, have positioned ININFA as an international referent in applied and basic pharmacological research.

During the last years, a transition has taken place from the classical pharmacology to molecular pharmacology. This means that, without leaving apart the knowledge of the whole animal, several lines have been developed where work is done at an intracellular level and with isolated cells. In many cases, the transition from the extracellular pharmacology to intracellular is needed, that is to say, from classical work on membrane receptors to the management of cascade of second messengers and intracellular proteins. The change has demanded the reengineering of the equipment and space: a quarter of tissue culture has been designed and it has been mounted with the stove for culture and two laminar flows to work, one of them of security. A room of microscopy has been also set up.

Several of the research projects include an area of animal behavior: the conditions of the behavior room have been improved, assuring conditions of acoustic insulation and homogeneity of light intensity and temperature. The vivarium's infrastructure has been improved still complying with the norms of ANMAT for the transit vivariums. A network server has been set up for the Institute, optimizing its use and implementing an extra security system of these documents.

In the last year, a PCR Real Time equipment has been incorporated for the study of molecular pharmacology of diverse lines of the Institute. An internal quality program is being developed that includes certification of equipment, elaboration of operation manuals and staff training so as to work under GLP norms.









Director Modesto Carlos Rubio

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

Scientific field / research areas

Within the field of Biological and Health Sciences, researches are developed in the following issues: Cardiovascular Pharmacology; Experimental therapies for Parkinson's diseases; Depression Memory; Plasticity and Synaptic Connectivity; Neurobiology of Addiction; Cellular Neurobiology; Neurobiology of transport in CNS; Bioavailability and eflow transport; Neurobiology of consumption and stimulants.

Services / technological supply

The Institute of Pharmacological Researches provides services, together with the Department of Pharmacology of the Faculty of Pharmacy and Biochemistry of the University of Buenos Aires, within the area of Kinetic Studies of Drugs and Pharmacology and Preclinical Toxicology. The levels achieved, not only in knowledge advances but also in equipment assure the quality in the contribution to the study of new molecules with pharmacological actions on the Central Nervous System and Cardiovascular.

Cooperation / liaison / exchange

In the pharmacological area, sporadic contributions are done with the CEFYBO and IFEC (Córdoba), mainly in the setting up of new techniques, the searching of bibliography or teaching activities in postdegree courses.

In the area of natural products, research activities are carried out, human resources formation and academic integration with the Institute of Drug Chemistry and Metabolism (IQUIMEFA) which functions within the Faculty of Pharmacy and Biochemistry.

There is a close collaboration between some research lines of ININFA and working groups of the Department of Pharmacology of the Faculty of Pharmacy and Biochemistry, highlighting the antiviral therapy.



National and international recognitions

- Modesto Carlos Rubio. Corresponding Member, Royal Academy of Pharmacy, Cataluña (Spain), 2011. Carolina Ghanem Young Scientist Travel Award, American Society for Pharmacology and Experimental Therapeutics, Experimental Biology, CA (USA), 2010.
- María Fernanda Podestá; Lorenzo López; Juan Ramiro Codagnone; Margarita López; Alicia Brusco; Silvia Wikinski; Analía Reines. "Glutamate-dependent hipocampal synaptic remodeling decreases cell adhesion molecules expression: correlation with an experimental model of depression", Award to the best Society-Poster, I Joint Meeting on Neuroscience (IRCN), Huerta Grande, Córdoba (Argentina), 2009.
- ► Mariano Saborido. *Movement Disorder Society Travel Grant to attend the* 13th International Congress of Parkinson's Disease and Movement Disorders, Paris (France), 2009.
- ▶ Verónica Bisagno. *Travel Award of National Institute on Drug of Abuse (NIDA-NIH) y CPDD (College on Problems on Drug Dependence), Early-career investigator*, NIDA-Mini Convention, Chicago (USA), 2009.







Institute of Biological Chemistry and Physic-Chemistry "Alejandro C. Paladini" (Instituto de Química y Fisicoquímica Biológicas "Alejandro C. Paladini" – IQUIFIB)

The Institute of Biological Chemistry and Physic-Chemistry (IQUIFIB) was created in 1983 by an agreement subscribed between CONICET and the University of Buenos Aires.

From its beginning until June 15, 2001, IQUIFIB was ruled by senior researcher Alejandro C. Paladini, who had been also director of the Department of Biological Chemistry of the Faculty of Pharmacy and Biochemistry of the University, where the new institute was created. During his administration, Dr. Paladini worked assessed by a committee of senior and main researchers of the Institute and by two representatives of the other categories of researchers, among them Dr. Juan Pablo Colombo Rossi.

In the year 2001, senior researcher Patricio J. Garrahan took over the direction. Then, in 2004, Dr. Juan Pablo Colombo Rossi was appointed Deputy Director of IQUIFIB. In 2005, the Institute of Biological Chemistry and Physic-Chemistry was incorporated to the group of research units of double dependency under the Framework Agreement subscribed between the University of Buenos Aires and the National Scientific and Technical Research Council (CONICET). In accordance with the legislation in force, a public contest was called upon in order to fulfill the position of Director of the Institute. Therefore, senior researcher Dr. Juan Pablo Colombo Rossi was appointed by Resolution (CS) No. 4206/08.

IQUIFIB is oriented to basic research in Chemistry and Physic-Chemistry of biological systems, as well as to the training of human resources in these areas. Since 1983, it has been developing several research lines in biology and biochemistry: structure and physic-chemistry of proteins, receptors and biological signal transduction, neurochemistry and neurobiology, and metals in biological systems. All of them with application field in health and curative technology.

The Institute comprises all the orientations of the Department of Biological Chemistry of the Faculty of Pharmacy and Biochemistry of the University of Buenos Aires; orientations that already shared premises, instruments, and teaching and scientific staff, thus favoring the institutional integration of this unit as an institute. Furthermore, under the Department of Biological Chemistry already worked a functional unit of CONICET: the Centre for the Study of Pituitary Hormones (CEHIP).

The institutional goals that arise from these circumstances emphasize the promotion and developing of disciplines belonging to the Biological Chemistry and Physic-Chemistry. In this context, the knowledge obtained from scientific research directly goes to the training of students, new professors and researchers. The production is also turned into many publications in specialized magazines at a national and international level. A staff of over 150 people contributes to develop scientific researches and maintain a library which offers the main updated publications, of the area of interest.







Director Juan Pablo Francisco Colombo Rossi

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

Scientific field / research areas

Currently, there are thirty two groups in the Institute working in the following research areas:

- ▶ Biophysics.
- ► Hormonal Biochemistry.
- ► Pathogenic Biochemistry.
- ► Vegetal Biochemistry.
- ► Neurochemistry and neurobiology.
- Membrane transport processes.
- Proteins.

Services / technological supply

The researchers provide asistance and services, which are offered through the Secretary of Science and Technology of the Faculty of Pharmacy and Biochemistry.

The IQUIFIB uses the services of the Lanais-Pro (Laboratorio Nacional de Investigación de Servicios en Péptidos y Proteínas, UBA-CONICET) that offers proteins sequencing and purification to the scientific community and industry. It has advanced sequencing and mass spectrometers, with suitable staff for the required analyses.

Cooperation / liaison / exchange

Scientific cooperation relationships between the members of the Institute and researchers from developed countries are translated into their outstanding role in top international meetings, as participants as well as organizers.



IQUIFIB is positively compared with institutes from other countries. The research issues developed are, in many cases, complementary to others from other local institutes, thus boosting joint works and experience exchange.

National and international recognitions

It is regarded as "center of excellence" in the assessment of the Third World Science Academy (TWAS) with venue is in Trieste (Italy).









Institute of Drug Chemistry and Metabolism (Instituto de Química y Metabolismo del Fármaco – IQUIMEFA)

The Institute of Drug Chemistry and Metabolism was created in 1983, by an agreement between the University of Buenos Aires and the National Scientific and Technical Research Council (CONICET), it is located at the Faculty of Pharmacy and Biochemistry of the University. Initially, IQUIMEFA worked thanks to the material and human resources from the Departments of Pharmacognosy, Medicinal Chemistry, Drug Quality and Stability Monitoring. When it was created, Dr. Jorge D. Coussio was appointed Director of the Institute, and Dr. M. A. Enero and Dr. F. Stefano were appointed members of the Commission of the Representatives.

The creation of the Institute was fostered aiming both at the promotion of applied and multidisciplinary research in order to develop the pharmaceutical area within the Faculty of Pharmacy and Biochemistry and CONICET, and at training of researchers, professors and technicians in the area.

In the year 1999, the Vasodepressor Systems Program (PROSIVAD) was incorporated to IQUIMEFA by Resolution No. 716/99, hence adding other research lines and planning and putting into practice projects of joint research.

In May 2002, the National Laboratory of Magnetic Resonance (LANAIS-RMN) was incorporated to IQUIMEFA by Resolution No. 630/02.

In 2003, IQUIMEFA and its researchers' team won the Annual Award in Pharmacology Berbardo Houssay, granted by the Center of Studies for the Development of Argentine Chemical-Pharmacological Industry (Centro de Estudios para el Desarrollo de la Industria Químico-Farmacéutica Argentina – CEDIQUIFA).

The Institute of Drug Chemistry and Metabolism is part of the group of research units of double dependency pursuant to the Agreement subscribed between the University of Buenos Aires and CONICET in August 2005. In the year 2008, a public contest was called upon so as to fulfill the position of Director, resulting designated Dr. Graciela Ferraro by Resolution (CS) No. 4384/08.

In IQUIMEFA, applied and multidisciplinary research is fostered in order to develop new drugs through scientific research development related to extraction, insulation, purification, production and analysis of biologically active substances, its precursors and metabolites as drug sources. Other areas of interest are mechanisms involved in the cardiovascular physiology and physiopathology.

Since its creation, IQUIMEFA has grown in number of researchers, in research grants and equipment; its research lines have been incremented and deepened. It has also widened its consultancy services and technological supply.









Director Graciela Ester Ferraro

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

Scientific field / research areas

At present, twenty five research projects are being developed, which are funded by CONICET, UBA and ANPCYT, and they include the different research areas developed in the Institute.

Research lines are framed in the disciplinary fields belonging to medicinal sciences, Biochemistry and Engineering applied to non endemic diseases, health and curative technology, vegetal production and food technology.

Services / technological supply

Several public and private institutions use the Institute's services, thanks to the development of technology and the transference it carries out, as well as the technical advice it provides. The referred institutions are mainly laboratories of pharmaceutical products, among them: Federal Administration of Public Revenues (Agencia Federal de Ingresos Públicos - AFIP), Agreed SA, Akapol, Ariston SAIC, Aryl SA, Aseprofar SA, Asprius Technology Argentina SA, Bacon SAIC, Baliarda SA, Bioquim SA, Bioservicios SRL, Domínguez SA, DOSA SA, Erpa SA, Glenmark Pharmaceuticals SA (former Servycal SA), Inmunolab SA, Klonal SRL, Krolton Pharma, Laboratorio Farmacéutico Argentino, Laboratorio Incaico SA, Laboratorio Landó, Laboratorios Naf, Lamar SRL, Lando SACI, Madaus & Co. SA, Merck Corporation, Mertens SA, Pablo Cassará SRL, Productos Farmacéuticos Dr. Gray SRL, Química Ariston SAIYC, Romage SA, Rovafarm Argentina SA, Sidus SA, Szama SA, Vannier SA.

Cooperation / liaison / exchange

At an international level, research groups working in related issues exchange interns between specialized centers: University of Illinois (USA); University of Roma (Italy); University of Kaiserslautern (Germany); University of London (England); University of Concepción (Chile).

Coordination of Web CYTED 306 RT 0278 "Development Promotion of non-traditional agroindustries dedicated to Ibero-American vegetables resources" which are part of



research groups of fifteen countries of Latin America.

National and international recognitions

- 2009. Félix de Azara Award: Argentine Species of Hybanthus spp vs/ sources of bioactive compounds, Faculty of Pharmacy and Biochemistry, UBA.
- ▶ 2009. Best Work 1st. Congress of Basic Research, Early Programming on alterations on the nitric oxide renal system and vascular induced by Zinc deficiency, Argentine Cardiology Society.
- 2009. Rosenbau Award: Best Work published in the "Revista Argentina de Cardiología", Argentine Cardiology Society,
- 2010. Dr. Eduardo Braun-Menéndez Award: to the best work about Basic Research on Arterial Hypertension, XXX^o Argentine Congress on Cardiology, Argentine Cardiology Society.
- 2010. Award to the best Basic Research: XXI^o Argentine Scientific Congress of Medicine Students, Faculty of Medicine, UBA.
- ▶ 2010. Félix de Azara Award 2010 (Accesit) for the work "Insecticide Activity of Hibanthus parviflorus".
- ▶ 2010. Félix de Azara Award to the Research Work: "Sesquiterpene lactones insolated of species of medicinal Argentine flora: potential therapeutic agents for the Chagas desease and the Leishmaniasis".

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Institute of Biochemistry and Molecular Medicine (Instituto de Bioquímica y Medicina Molecular - IBIMOL)

The Institute of Biochemistry and Molecular Medicine (IBIMOL) was created in the year 2011 by merging the Program of Free Radicals (Programa de Radicales Libres – PRALIB) belonging to CONICET and the Institute of Cardiovascular Pathophysiology (Instituto de Fisiopatología Cardiovascular – INFICA), an institute of UBA. IBIMOL's work is structured within three faculties of the University of Buenos Aires: Faculty of Pharmacy and Biochemistry, Faculty of Medicine and Faculty of Veterinary Sciences.

PRALIB was created in the year 1995 in the Department of Physiochemistry of the Faculty of Pharmacy and Biochemistry of UBA by a researcher team that since 1980 has been developing researches in the free radicals field with high scientific production and international recognition. Its first director was Dr. Alberto Boveris (Deputy Directors: Dr. César G. Fraga and Dr. Susana Puntarulo) followed by Dr. César G. Fraga. INFICA was created in the year 1992 as a laboratory belonging to the Department of Pathology of the Faculty of Medicine of UBA and it grew doing research in the cardiovascular area, being approved as a UBA institute in the year 2007 under the direction of Dr. Ricardo Gelpi. In the same year, a INFICA branch was created in the Faculty of Veterinary Sciences which functions in the Department of Surgical Diseases directed by Professor Carlos Lightowler. In this branch, cardiovascular research lines are developed and transgenic animals are reproduced and maintained. The coincidences and complementarities between the research lines of both groups, PRALIB and INFICA, justified the creation of IBIMOL, as an institutional frame to boost scientific and academic activities. It is currently directed by Dr. Susana Puntarulo.

IBIMOL's working lines focus on biochemical and medical researches. The work includes molecule characterization and interactions involved in physiology and pathology, with special emphasis on cardiovascular and metabolic diseases. As the participation of free radicals and antioxidants is the conceptual focus, cell physiology, energy production and inflammatory processes are studied in an integrated manner. Likewise, relevant compounds for human health are characterized (specially of vegetal origin) and direct molecular interactions (cell damage) and indirect (intracellular signaling) in which they are involved.

Along the years, postdegree courses of national and international relevance have been organized, which have been sponsored by UNESCO and other international organizations. There are collaborations with prominent research groups of universities, other regional research centers and American and European centers. It could be also highlighted that the institute holds liaisons with hospitals of the Autonomous City of Buenos Aires, not only regarding clinical but also basic research for cardiologists. It should be noted that the Master in Biomedical Sciences, in collaboration with the Faculty of Pharmacy and Biochemistry, the Faculty of Medicine and the University Alberto Ludwigs (Freiburg, Germany) has Dr. Boveris and Dr. Gelpi as Director and Deputy Director respectively. The research team of PRALIB has been essential to the foundation of the South American Group of Free Radicals, which has been in charge of the coordination of biannual congresses about free radicals in the region since 1999. IBIMOL was designated host institution of the VIII Meeting of the Group in 2013.

University of Buenos Aires. Research Institutes 2012





Director Susana Puntarulo

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

Faculty of Medicine

Faculty of Veterinary Sciences

Scientific field / research areas

Development of biochemical and medical researches based on molecule characterization and interactions involved in physiology and pathology, with special emphasis on cardiovascular and metabolic diseases. Within this framework, research is actively carried out on free radicals reactions in biological systems, especially in mammals, and its application in human pathology and medicine. Research lines include:

- Production of free radicals and excited states in biological systems, including photochemistry and phototherapy.
- ► Chemical reactions of free radicals with macro molecules (lipids, proteins and nucleic acids) and the associated cellular signaling.
- Protective action of enzymes and natural substances with antioxidant capacity.
- Participation of nitric oxide in pathological situations: hypertension and vascular pathologies, diabetes, neuropathologies, among them:
- Mitochondrial function and energy extraction and use by cells.
- ► Physiopathology and protection mechanisms in the ischemic cardiopathology.
- Physiopathology and pharmacology of ventricular remodeling postinfarction.

IBIMOL has forty seven researchers-professors. Nineteen of them are members of the Scientific Research Career at CONICET, and forty one are professors at the University of Buenos Aires, including eighteen thesis students/interns. Scientific production of its members exceeds thirty annual publications in international refereed journals and as chapters in books by invitation. The equipment used is property of the corresponding Faculties of the University of Buenos Aires and CONICET. It should be noted that there has been a recent acquisition of two equipments: a MRI and an EPR, both acquired by the beneficiary institutions UBA and CONICET, and situated in the Faculty of Pharmacy and Biochemistry.



Services / technological supply

IBIMOL has a specialized library with complete collections of Free Radical Biology and Medicine, and of Free Radical Research. It also has incomplete collections of Photochemistry and Photobiology, Antioxidants, and Redox Signaling.

Researchers provide services and counseling, among them: EPR and RMI services to scientific society and industry.

Cooperation / liaison / exchange

Scientific collaborations with the University of California, Davis (USA); University of Cádiz (Spain); Southern University of California, Los Angeles, California (USA); University of Santiago (Chile); University of New Jersey (USA); the National Sciences Academy (Slovak Republic); and the Institute Alfred Wegener (Germany), among others.

National and international recognitions

Academic experience of several members include national and international recognitions and distinctions through memberships in societies and scientific committees, apart from invitations to participate as speakers in scientific events.





Institute of Argentine and American History "Dr. Emilio Ravignani" (Instituto de Historia Argentina y Americana "Dr. Emilio Ravignani")

The Institute of Argentine and American History "Dr. Emilio Ravignani" stems from the split up of the Institute of Historical Research of the Faculty of Philosophy and Letters of the University of Buenos Aires created in 1921. Later on, the Institute of Historical Research changed its name when it adopted the name of its first director, Emilio Ravignani, who was in charge until late 1946.

In the year 2007, as part of the normalization institutional process of research units of the University, the Institute was approved as Institute for Scientific and Humanist Research and for Technological Development of the University of Buenos Aires by Resolution (CS) No. 2221/07. Recently, The Superior Board of UBA approved its transformation into an Executive Unit of shared dependency between the University of Buenos Aires and CONICET, and was incorporated to the group of institutes under the Framework Agreement subscribed on August 4, 2005.

The Institute of Argentine and American History gathers researchers who are also professors at the Faculty of Philosophy and Letters of UBA and other universities of the country. The staff of researchers comes from both UBA and CONICET. If student thesis, student and support researchers are taken into account, the staff is over a hundred members. This number is increased with interns of the University of Buenos Aires, CONICET and the National Agency for the Promotion of Science & Technology (ANPCyT).

Research activities are developed within Research Programs and Work Groups, supported by documentary and bibliographic data. Exchange and collaboration are strengthened by events where texts which are being elaborated are discussed, and where members of the institute and guest researchers participate, at national and international level.

Scientific research activities developed in the Institute are complemented with support services for research, among them, the following stand out: its vast library and the laboratory for digitalizing the Recovery and National Historical Heritage Preservation Project. This project aims at detecting and preserving documentary collections held by institutions and individuals who lack of means to assure its preservation and security.

Diffusion tasks are carried out by a six-monthly newsletter of the Institute of Argentine and American History "Dr. Emilio Ravignani", an electronic data service Clio, and the Institute's blog (http://institutos.filo.uba.ar/ravignani/). Recently, a dossier has been published with the works of the Congress for the Bicentennial in a special issue of the Institutional Newsletter.









Director Jorge Gelman

Res. (CS) No. 4864/05

Venue Faculty of Philosophy and Letters

Scientific field / research areas

Research activities of the Institute are developed within the following programs:

- XIX Century Argentine History.
- XIX Century Rural History.
- ► American Social and Economic History.
- Latin American History.
- Argentine Histography History.

Services / technological supply

- ▶ Laboratory of image digitalization: digitalization assistance to several institutions.
- ▶ Library and documentary file for public search.
- ► Sporadic assessment on historical problems to public organizations, media and diverse entities.

Cooperation / liaison / exchange

There are more agreements and other forms of relations with several universities from Latin America and Europe.

National and international recognitions

- ▶ Newsletter of the Institute of Argentine and American History "Dr. Emilio Ravignani". Award granted to History and Social Sciences Research Journals. Compromiso Foundation, Ford Foundation.
- ► Newsletter of the Institute of Argentine and American History "Dr. Emilio Ravignani". Award of the Banco de la Ciudad de Buenos Aires Foundation, under an agreement with CONICET.
- ▶ José Carlos Chiaramonte. Bernardo Houssay Award to Scientific and Technological Research in the category Award Scientific Experience, in the Social Science and Humanistic Area, SECYT, 2005.
- ► Luis Alberto Romero. Fellowship John Simon Guggenheim Memorial Foundation, 2005.
- ▶ Jorge Gelman. Fellowship John Simon Guggenheim Memorial Foundation, 1999.
- ▶ José Carlos Chiaramonte. Fellowship John Simon Guggenheim Memorial Foundation, 1982.











Institute of Technology and Engineering Sciences "Hilario Fernández Long" (Instituto de Tecnologías y Ciencias de la Ingeniería "Hilario Fernández Long" - INTECIN)

The Institute of Technology and Engineering Sciences "Hilario Fernández Long" (INTECIN) was created in early 2007 (through Board of CONICET Resolution No. 0080/07 and UBA Superior Board Resolution No. 1964/07) responding to special situations regarding development of scientific and technological activities of the Faculty of Engineering of the University of Buenos Aires. Pursuant to current regulations, Dr. Hugo Sirkin was appointed Director by Superior Board Resolution Nº 6064/09, prior public background contest.

Research activities performed in INTECIN are related to basic knowledge and technological development in every branch of Engineering. INTECIN comprises fifteen laboratories and an associated lab, all of them grouped in eight general areas. Seventy researchers are part of the Institute, twenty five of them are following the Professional Career of Scientific Researcher of CONICET.

INTECIN contributes both to the training of highly qualified researchers and technicians and to graduate and postgraduate education, as well as to the transfer of knowledge to the productive sector. In its laboratories, around thirty scholars perform their activities and a large number of students carry out their final graduation work.

INTECIN was created with the mission of improving current activity of research and development, and of expanding their scope to reach those areas of highest social demand, consequently, creating appropriate tools so as to allow a simultaneous developments in those directions becomes necessary. This double dependency institute is a major means to encourage existent scientific and technological activity, bolster interdisciplinary production, form and consolidate work groups in those areas in which they do not exist or are not consolidated, and boost technological transfer.

The Institute takes part in activities oriented to favor and strengthen the development of research lines of every laboratory comprising it, as well as the possibility to generate technological transfer to third parties. Among the recent developed activities, stands out the Sixth School of Microelectronics, Technology and Applications (Sexta Escuela de Microelectrónica, Tecnología y Aplicaciones – EAMTA 2011), to which about two hundred students assisted and in which twenty eight scientific works were exposed. In the framework of that event, four courses were delivered at the same time; one of them was Basic Design of Integrated Circuits (ICs), another one on Advanced Design of Digital and Analogical ICs, and another on Basic Sciences Applied to Microelectronics. Nano Engineering 2001 can also be highlighted, which was a meeting of researchers of the faculty and representatives of different companies interested in such subject. Regionally and internationally, INTECIN has collaborated through presentations and proposals with two major events: Nano Mercosur and the International Workshop on Materials and Structures.









Director Hugo Sirkin

Res. (CS) No. 4864/05

Venue Faculty of Engineering

Scientific field / research areas

- ► Area of Mechanical Engineering: Advanced Materials and Archaeometallurgy.
- ► Area of Naval Engineering: Naval Hydrodynamics.
- ► Area of Civil Engineering: Welding and Mechanical Behavior of Metallic Materials; Polymers and Composite Materials; Granular Composite Materials; Numerical Methods in Engineering.
- Area of Device Engineering: Tunnel Effect and Associated Phenomena In Metal-Oxide-Semiconductor Structures (MOS).
- Area of Information and Communication Technologies: Complex Systems; Internet: routing protocols, and its topology models; Data Networks Traffic; Ad-hoc Networks: routing protocols.
- Area of Materials Engineering: Biomaterials for prosthetics; Applications of Biocompatible Materials; Physiochemistry of Ceramic Materials; Amorphous Solids; Magnetic Materials.
- ► Area of Process Engineering: Geophysics; Industrial Microbiology; Reservoirs and Applied Mathematics.

Services / technological supply

In the areas mentioned, there exist research groups with enough training, experience, and tools to carry out specific studies, studies on technological developments on demand, and technical support.

Cooperation / liaison / exchange

Nationally: University of La Plata, University of San Martín, University of Quilmes, National Technological University, National University of Mar del Plata, National University of Entre Ríos, Catholic University of Salta, University of San Luis, UNICEN, University of Tucumán, University of Santiago del Estero, University of Córdoba, UNCuyo, UNS, CAC and CAB CNEA, INTI, INTEMA, CINI, INIFTA, INVAP, Ministry of Foreign Affairs, Ministry of Defense, City of Buenos Aires. Chemical Engineering Pilot Plant, of Research and Technological Development Center for the Plastic Industry,



Bariloche Atomic Center, Argentine Geological Mining Service, Center of Technology of Mineral Resources and Ceramics, Multidisciplinary Training Laboratory for Technological Research, Micromed System, Orthopedic and Traumatology Unit (Hospital Italiano and Hospital Austral).

Internationally: University of the Republic (Uruguay); University of Santiago (Chile); Pontifical Catholic University of Valparaíso (Chile); National University of Colombia, Manizales (Colombia); Universidade Estadual de Campinas, Pontifical Catholic University of Río Grande do Sul, Universidade de São Paulo and Universidade Federal de Goiás (Brazil); Complutense University of Madrid, Polytechnic University of La Coruña, National Microelectronics Center, CENIM-CSIC, Public University of Navarra (Spain); University Paris VI Pierre et Marie Curie, University of Paris Sud XI, Grenoble Institute of Technology (France); University of Oxford, University of York (England); University of New Mexico (USA); Université Libre de Bruxelles (Belgium); Instituto Superior Técnico of Lisbon (Portugal); University of Perugia, University of Lecce (Italy); Riga Technical University (Latvia); University of Budapest; University of Sidney; Leibniz Institute, Dresden (Germany); Polytechnic of Montreal (Canada); University of Strasbourg; Technical University of Denmark (Denmark).









Center for Pharmacological and Botanical Studies (Centro de Estudios Farmacológicos y Botánicos - CEFYBO)

Originally, this research unit was called Center for Pharmacological Studies and Natural Principles (Centro de Estudios Farmacológicos y de Principios Naturales - CEFAPRIN) and was set up as an institution for scientific research and superior training of human resources dependant of the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas - CONICET). The Institute was created on December 1974 by Resolution No. 869 in response to the existent needs and to the unanimous submittal presented by the Advisory Committee on Pharmacology of CONICET.

Between 1975 and 1982, while being set up and established, the institute was located in the venues of Obligado and Monroe, and a reduced group of researchers worked in the Darwinion Institute and in the Faculty of Medicine itself (Center of Cardiological Research and Physiology Institute). In a later stage lasting from since 1982 to 2005, it was located in Serrano Street in Villa Crespo neighborhood. In 1989, CEFAPRIN became the Center for Pharmacological and Botanical Studies (CEFYBO). Its Directors were: Dr. Juan A. Izquierdo (1974-1980), Dr. Álvaro L. Gimeno (1980-1985), Dr. Enri S. Borda (1985-1989), Dr. Martha A. Fernández de Gimeno (1989-2000), and Dr. Ana María Franchi (since 2000).

In 2005, CEFYBO merged with the Center for Bioenergetics Research (Centro de Investigaciones Bioenergéticas - CIBIERG), and it was moved once again, now to the Faculty of Medicine of the University of Buenos Aires. That same year, the Center for Pharmacological and Botanical Studies was included in the group of research units of double dependency, in the framework of the agreement signed between the University of Buenos Aires and CONICET. By Superior Board Resolution No. 6062/09, Dr. Franchi was appointed Director for the new period.

Its institutional objectives are directed towards the promotion and development of research on physiology, pharmacology, pathology and botany, fundamentally of a basic scientific nature; likewise, said goals aim to train researchers, scholars and specialists in said areas.

The Center for Pharmacological and Botanical Studies carries out interdisciplinary researches which improve the development of pharmacology and similar sciences in the country. Scientific-technological activities strengthen through scientific plans and programs being set up directly or jointly with public or private organizations. On the other hand, it responds to requests and elaborates reports on its subject area for duly qualified organizations on demand.

CEFYBO has a history of prolific relations with Argentinian organizations devoted to research in the same scientific field, as well as with similar foreign organizations and with international institutions working on the development of pharmacological studies. Such efforts result in recognitions by national and foreign organizations and institutions.







Director Ana María Franchi

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

Within the field of Medical, Biological and Veterinary Sciences, the following lines of research are developed: Applied Microbiology, Ovarian Physiology and Physiopathology, Immunopharmacology, Reproduction and Metabolism, Physiopathology of pregnancy and labor, Neuroimmunoendocrinology, Epilepsy and study of signs, Retinian neurochemistry and experimental ophthalmology, Tumor Immopharmacology, Cellular and molecular Immunology, Molecular endocrinology, Reproduction: spermatozoid interaction, Neuropharmachology, Action mechanisms of for trypanocidal drugs, Physiopathology of inflammatory processes.

Within the scientific field of Agrarian Sciences, Earth, Water and Atmosphere Sciences, and History, Anthropology and Geography, activities include: *Weather and Vegetation, Ethnobotany, Vegetable Growing and Morphogenesis*

Services / technological supply

- ► CEFYBO provides with technical assistance and support in the areas of Pharmacology, Reproduction, Immunology, Oncology, Endocrinology and Ophthalmology.
- Library.
- Specialized laboratories.

Cooperation / liaison / exchange

It maintains cooperation and exchange relationships with: National University of Tres de Febrero (Universidad Nacional de Tres de Febrero), National Parks Administration (Administración de Parques Nacionales), Cooperation Project between Argentina and Hungary – SECYT-NKTH.

National and International Recognitions

- Jawerbaum, Alicia. Joseph Hoet Research Award, Diabetes & Pregnancy Study Group. European Association for the Study of Diabetes, Warsaw (Poland), 2010.
- Higa, Romina; Capobianco, Evangelina; White, Verónica;
 Jawerbaum, Alicia. John Stowers Award, Diabetes &



Pregnancy Study Group. European Association for the Study of Diabetes, Warsaw (Poland), 2010.

- Sterle, Helena; Paulazo, Alejandra; Klecha, Alicia; Cremaschi, Graciela; Barreiro Arcos, María Laura. Argentine Society of Physiology (Sociedad Argentina de Fisiología), Argentina, 2010.
- Rubinstein, Roxana; Albarracín, Romina; Genaro, Ana María; Wald, Miriam. Argentine Society of Diabetes (Sociedad Argentina de Diabetes), Argentina, 2010.
- ▶ De Laurentiis, Andrea. *Young Investigator Award Institute Joint Workshop of the Joint Research Conference*. University of Jerusalem (Israel), 2010.
- Sander, Valeria; Fernández, Diego; Chianelli, Mónica; Silberman, Dafne; De Zavalía, Nuria; Belforte, Nicolás; Salido, Ezequiel. For the work *Therapeutic effect of melatonin in experimental uveitis (Efecto Terapéutica de la Melatonina en la Uveítis Experimental)*. Argentine Society of Ophthalmology (Sociedad Argentina de Oftalmología), Argentina, 2010.
- Arenas Rodríguez, Pastor. Recognition to his contribution in the field of Continental Ichthyology. Division of Vertebrates Zoology, Faculty of Natural Sciences and Museum of La Plata (Facultad de Ciencias Naturales y Museo de La Plata), Argentina, 2010.











Institute of Cellular Biology and Neurosciences "Professor Eduardo De Robertis" (Instituto de Biología Celular y Neurociencias "Profesor Eduardo De Robertis" – IBCN)

The history of the Institute can be tracked down to 1922, year of the approval of the project of Professor Lacaste for the creation of an Institute of Compared General Anatomy and Embryology located in the Faculty of Medical Sciences of the University of Buenos Aires. Said Institute, founded within the Department of Histology and Pathological Anatomy, was directed subsequently by doctors Pedro Rojas (1922-1932), Manuel Varela (1933-1946; 1955-1957), José Porto (1946-1955), Eduardo De Robertis (1957-1973; 1973-1981), Amanda Pellegrino de Iraldi (1982-1983), and Jorge Pecci Saavedra (1983-1988).

In 1959, Dr. De Robertis boosted the study of ultrastructure of cells and tissue, which led to the acquisition and use of the first electronic microscope in the University of Buenos Aires. In 1969, Dr. De Robertis asked the Dean of the Faculty of Medicine, Professor Mario Brea, to change the Institute's name, due to the importance of the studies carried out on structure and function of cells. On July 12, 1973, the Controller Delegate of the Faculty of Medicine approved the change of name to Institute of Cellular Biology (Instituto de Biología Celular – IBC). In 1992, it received its current name: Institute of Cellular Biology and Neurosciences "Professor Eduardo De Robertis".

In 1988, the resolution through which several Institutes of the Faculty of Medicine had been created was annulled, including IBC, which continued under the dependency of the First Academic Unit of the Department of Cellular Biology and Histology of the Faculty of Medicine. On December 7 2006, by Resolution No. 1346, the Superior Board of the University of Buenos Aires decided to incorporate the Institute of Cellular Biology and Neurosciences "Professor Eduardo De Robertis" to the group of institutes of double dependency UBA-CONICET. In April 2008, the public contest for the position of Director of this shared Institute took place, appointing Dr. Herminia Alicia Brusco by UBA Superior Board Resolution No. 5057/08.

IBCN's scientific production is reflected in more than a thousand publications in international journals. Its researchers have received national and international recognitions. More than a hundred doctoral thesis and around fifty licensee and master thesis show how active the training of human resources is, without leaving aside the scientific relationship within the Faculty of Medicine and with other national and international centers. Academic and scientific activities complement each other with the specialized services provided by the Institute.

Six laboratories have been set up in the Uriburu area of the Faculty of Medicine, and the Animal Experimentation Room was remodeled and it now includes ten rooms for behavioral experiments with rodents; those are indicators of how widely has the infrastructure of the Institute been expanded. During 2011, two new research groups were incorporated and other four groups are now waiting for approval. Such inclusions not only widen the academic staff of the Institute, but they also increase the scientific level providing with new methodologies and experimental models.







Director Alicia Brusco

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

Cellular Biology and Neurosciences researches conducted by different research groups within the following areas:

Developmental Neurobiology, Molecular Embryology, Neurochemistry, Neuropharmacology, Neuroplasticity, Neurobiology of Learning and Memory, Neuroprotection, Neurotoxicity, Neuropathology, Epilepsy, Depression.

Services / technological supply

The progressive increase of scientific and technical quality of IBCN nourishes it as a reference center for the studies in Cellular, Molecular and Ultrastructural Biology in the different branches of Neurosciences. Since 1992, academic and scientific activities complement with a service to third parties through LANAIS – MIE: National Research Laboratory and Electronic Microscopy Services (Laboratorio Nacional de Investigación y Servicios de Microscopía Electrónica), Technological High-Level Service (servicio tecnológico de alto nivel – STAN) UBA-CONICET.

Cooperation / liaison / exchange

Williams Patterson University, New Jersey (USA); CNRS/ CONICET University Claude Bernard, Lyon (France); University of Strathclyde, Glasgow (United Kingdom); Clemente Estable Institute and Pasteur Institute, Montevideo (Uruguay); Universidade Federal de Rio Grande do Sul and Universidade Federal de Rio de Janeiro (Brazil); Dr. Iván Izquierdo in Porto Alegre (Brazil); Karolinska Institute and Umeå University (Sweden); University of Auckland (New Zealand); Burnham Institute, La Jolla, California (USA); Department of Zoology, Miami University, Oxford (USA); Interdisciplinary Institute of Cellular Biology (Instituto Interdisciplinario de Biología Celular - IMBIC), La Plata (Argentina); Molecular Devices Laboratory, INQUIMAE (Argentina); Canadian Institutes for Health Research (CIHR), McGill University, Montreal (Canada); ECOS-SUD Project, University Louis Pasteur (France); Millenium Project (Chile); Cornell University, New York (USA); INSERM Epilepsy



Laboratory, Dr. Chauvel, Marseilles (France); University of California (USA); Medicinal Chemistry, Prof. Dr. Luis Bruno-Blanch, UBA (Argentina).

National and International Recognitions

IBCN researchers have received numerous national and international awards and distinctions from different organizations: Argentine Scientific Society (Sociedad Científica Argentina); Scholarships from John Simon Guggenheim Memorial Foundation; International Brain Research Organization; Silver Jubilee Award from the Internacional Foundation for Science; National Academy of Medicine (Academia Nacional de Medicina); Cherny Award; The World Academy of Sciences for the Advancement of Science in Developing Countries (TWAS); Antorchas Foundation; National Ministry of Health (Ministerio de Salud de la Nación); International Biographical Centre; Advisory Council of the American Biographical Institute; American Society for Neurochemistry; International Society for Neurochemistry; KONEX; Editorial Boards of the Journal of Neurochemistry, Neurochemical Research and Neurochemistry International.







Institute for Cardiologic Research "Professor Dr. Alberto C. Taquini" (Instituto de Investigaciones Cardiológicas "Profesor Dr. Alberto C. Taquini" – ININCA)

The Institute of Cardiologic Research (ININCA), initially called Center of Cardiologic Research Foundation "Virginio F. Grego", was created by a resolution passed on June 13, 1944, under dependency of the Dean of the Faculty of Medicine of UBA and with appointed Director Professor Alberto C. Taquini. Recently, the Executing Unit ININCA UBA-CONICET has been allocated in ININCA by UBA Superior Board Resolution No. 5025/08, in the same venue of the Faculty of Medicine.

The Institute was uninterruptedly directed by Professor Taquini since it was created until his death in 1998. Along 54 years, Dr. Taquini provided an admirable and disinterested labor, developing a vast activity in the fields of cardiology and arterial hypertension, from the point of view not only of care but also of basic research.

Professor Taquini was part of the team that discovered angiotensin in 1939, directed by Dr. Bernardo Houssay and composed of doctors Fasciolo, Muñoz, Braun Menéndez and Leloir. When the Physiology Institute founded by Houssay stopped working, ININCA continued with the same spirit, maintaining the excellence regarding lecturing, care and research.

Such features make the Institute stand out as a first class university center in its specialty; for that reason, the Faculty of Medicine called for a public contest for the position of Director and, since March 2002, when the new Director took office, a reactivation plan of care section was set up and the research area related to CONICET was reactivated.

In the subsoil where it is located, there are three vivarium for the work with rats Wistar, Spontaneously Hypertensive (SHR) and Wistar Kyoto (WKY) rats, various lineages of knockout mice (apoE-/-; ob/OB, and lacking gulolactone); and an area for behavioral studies in animals. In another area there is an hypopressure chamber of great size and versatility, which was specially built for this Institute thanks to a support action of OEA. The ground floor was remodeled last decade, it has a reception, eight doctor's offices furnished with PC for ambulatory care, standard and disabled bathrooms, and a waiting room. In the ground floor also works the University Center for the Study and Treatment of Arterial Hypertension.

This Institute was specifically created for the development of research in the field of cardiology with the objective of interrelating basic with clinical research; since then, it has incorporated notorious developments in such area of knowledge, recognized both in the national and international level. The Institute is comprised of professional and non-teaching staff from UBA, researchers from CONICET, scholars and members of the career of support personnel.







Director José Milei

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

Within Biological and Health Sciences, the following lines of research are developed:

- Study of cellular and molecular mechanisms of the inflammatory answer associated to the injury caused by ischemia/reperfusion.
- ► Metabolic syndrome in rats: biochemical-clinical and echocardiographic aspects.
- Study of molecular mechanisms regulating the process of trophoblast invasion.
- ► Tisular adaptation to hypobaric hypoxia.
- Analysis of mechanical activity and its response to hypoxia and re-oxygenation.
- Activity of Mitochondrial nitric oxide synthase and respiratory enzymes.
- Psychological profile and cognitive disorders of hypertensive patients.
- Assessment of bajoreflex function in elders through noninvasive pressor test.
- ► Effect of different antihypertensive treatments on carotid barochemoreceptors in Spontaneously Hypertensive (SHR) rats.
- Biochemical and ultrastructural mechanisms of the production of hibernating myocardium.
- Preatherosclerotic coronary artery lesions in the sudden death of lactating infants and unexpected stillbirth.
- Psychosocial stress and psychophysiological disorders in adults and senescents.
- Molecular mechanisms of atherosclerosis.
- Volume of isolated cardiomyocites under the effects of hypoxia.
- Experimental perinatal asphyxia.

Services / technological supply

Outpatient care centers: Medical Clinic, Cardiology, Arterial Hypertension, Neurology, Nutrition, Nephrology, Mental Health and Smoking Cessation Program (for individuals and companies), Cardiac Arrhythmia Center, University Center of Chagas Disease.



Ten laboratories with their corresponding lines of research: Heart Rate; Hypoxia and Cellular Respiration; Experimental hypertension, Atherosclerosis and Ischemia–reperfusion; Histopathology and Immunohistochemistry; Biology of Membranes; Social Psychology and Health; Cytoarchitecture and Neuronal plasticity; High-performance liquid chromatography (HPLC), and Glycoimmunobiology.

Cooperation / liaison / exchange

Specific agreements between the Faculty of Medicine of UBA with the Consiglio Nazionale delle Ricerche and the Universities of Milan, Ferrara and Perugia (Italy); Inter-university Cooperation and Scientific Research Program of the University of Malaga, the Autonomous University of Madrid and the Complutense University of Madrid (Programa de Cooperación Interuniversitaria e Investigación Científica de Universidades de Málaga, Autónoma y Complutense de Madrid).

National and international recognitions

- 2009 Annual Award "Doctor Luis Güemes", Pathology of Carotid Body (Patología del cuerpo carotídeo), Faculty of Medicine (Facultad de Medicina), UBA.
- First Prize "Dr. Ángel Papeschi". 12th Argentine Congress of Gerontology (XII Congreso Argentino de Gerontología), 2010.
- Young Investigator Program Award. International Brain Research Organization and Italian Society of Neuroscience, 2011.

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Institute for Biomedical Research (Instituto de Investigaciones Biomédicas - INBIOMED)

The Institute for Biomedical Research (INBIOMED) resulted from the merger of the staff of two Institutes for Scientific & Humanistic Research and for Technological Development of the University of Buenos Aires (Institutos de Investigación Científica, Humanística y de Desarrollo Tecnológico de la Universidad de Buenos Aires): the Institute for Reproductive Research (Instituto de Investigaciones en Reproducción – IdIR) and the Institute of Molecular Research in Hormonal, Neurodegenerative and Oncologic Diseases (Instituto de Investigaciones Moleculares de Enfermedades Hormonales, Neurodegenerativas y Oncológicas – IIMHNO).

The Institute for Reproductive Research was created in 1966 under the name of Center for Reproduction Research (Centro de Investigaciones en Reproducción - CIR) through Resolution No. 2228/66 of the Board of Directors of the Faculty of Medicine of the University of Buenos Aires, within the area of the 2nd Department of Histology and Embryology. In the context of institutional normalization of research carried out in the University, the Institute for Reproductive Research is recognized as an Institute of the University of Buenos Aires on May 9, 2007, by UBA Superior Board Resolution No. 2145/07, appointing Dr. Adriana Seilicovich for the position of Director.

The Board of Directors of the Faculty of Pharmacy and Biochemistry and the Board of Directors of the Faculty of Medicine suggested the creation of the Institute of Molecular Research in Hormonal, Neurodegenerative and Oncologic Diseases to the University of Buenos Aires after Resolution No. 5042/05 of the Superior Board of the University of Buenos Aires was passed, which highlighted the need to boost the institutional development of research. The creation of the Institute of Molecular Research in Hormonal, Neurodegenerative and Oncologic Diseases, bearing the acronym IIMHNO, was approved by UBA Superior Board Resolution No. 2032/07, appointing Director Dr. Ernesto Podestá.

By initiative of the directors of IdIR and IIMHNO, the creation of a sole Executing Unit of double dependency UBA-CONICET was suggested to the University of Buenos Aires and to the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas - CONICET) to coordinate together the research groups of both Institutes. Based on such background, the creation of the Institute for Biomedical Research was approved by UBA Superior Board Resolution No. 3193/11 on September 14, 2011, and by Resolution No. 2779/11 of CONICET on September 19, 2011, thus including INBIOMED as a shared research institute under the Framework Agreement between the University of Buenos Aires and CONICET. On November 9, 2011, the dissolution of IdIR and IIMHNO was decided by UBA Superior Board Resolutions No. 3578 and 3577 respectively.

INBIOMED is located in the dependencies of the Department of Cellular Biology and Histology and the Department of Biochemistry of the Faculty of Medicine of the University of Buenos Aires. The public contest undertaken for covering the position of director resulted in the appointment of Dr. Ernesto Podestá.

University of Buenos Aires. Research Institutes 2012





Director Ernesto Podestá

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

Cellular Biology, neuroendocrinology, human genetics, immunology of reproduction, neurodegenerative and oncologic endocrine diseases. Current research lines:

- Regulatory mechanisms of neurodegenerative, oncologic and neurotoxic events.
- ▶ Hormonal regulation of cell proliferation and differentiation.
- ▶ Interrelation between protein tyrosine phosphatase, acyl-CoA synthetase and acyl-CoA thioesterase in the induction of mandatory intermediary proteins in hormonal regulation of steroidogenesis and oncologic processes.
- ► Hormonal regulation and functioning of phosphate tyrosines in the synthesis of steroids.
- ► Interaction between ubiquitin and growth-related protein involved in cell-cycle control.
- Molecular mechanisms in response to oxidative injury of renal proximal tubule.
- ► Characterization of protein phosphatases.
- ▶ Role of Glycosylation in intracelular traffic and operation of L-leucine carrier in *S. cerevisiae*.
- ▶ Use of yeast model to teach sciences.
- Influence of gonad steroids in the pituitary response to proapoptotic factors.
- Anti-inflammatory and anti-apoptotic mechanisms of melanocortins and metabotropic agonists of glutamate in glial cell.
- ▶ Immunological base of antitumor immune response.
- Immunotherapy for glioblastomas.
- Role of estrogens in the response of system Dopamine-Prolactine to endotoxemia.
- ➤ Testicular immunoregulation and autoimmunity: testicular immunopathology in a model of experimental autoimmune orchitis.
- Molecular mechanisms involved in testicular immunoprivilege.
- ► Role of nitric oxide in germ cell apoptosis and in autoimmune orchitis.



- Study of the impact of environmental toxins on testicular structure and function.
- Human genic recombination and in other vertebrates. Sex chromosomes.

Services / technological supply

Detection of mutations that predispose to hereditary cancer. Indigent patients from public national, provincial and municipal hospitals. Processing and analysis of biopsies of human testicles for diagnosis purposes.

National and international recognitions

- ► Ernesto Podestá. President of the Argentine Society for Biochemical Research and Molecular Biology (Sociedad Argentina de Investigaciones Bioquímicas y Biología Molecular), 2004-2006.
- ► Ernesto Podestá. Editor of the *Journal Of Endocrinology*, Great Britain, 2011.
- ► Adriana Seilicovich. President of the Argentine Society of Endocrinology and Metabolism (Sociedad Argentina de Endocrinología y Metabolismo), 2003-2005.
- Adriana Seilicovich. President of the Argentine Society of Clinical Research (Sociedad Argentina de Investigación Clínica), 2008.

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Institute of Medical Microbiology and Parasitology (Instituto de Microbiología y Parasitología Médica - IMPaM)

The creation of the Institute of Medical Microbiology and Parasitology (Instituto de Microbiología y Parasitología Médica - IMPaM), derived from the initiative of UBA and CONICET researchers from the department of Microbiology, Parasitology and Immunology of the Faculty of Medicine, aims to strengthen and assure the institutional support to research projects in such area of specialty. IMPaM intends to guarantee a sustained and harmonic growth of its research groups through producing scientific research, training human resources, transferring technology, and providing specialized support services to the community.

The Center of Mycology of the Faculty of Medicine, precedent to IMPaM, was created in 1948 and it became dependant on the Department of Microbiology since 1958. Its first Director was Professor Dr. Pablo Negroni, who was succeeded by Professor Dr. Ricardo Negroni and Dr. María de Elías Costa. Since 2001, the position is held by Physician Jorge L. Finquelievich.

Dr. Armando Parodi took over the management of the Department of Microbiology in the late 1950s. The work of Dr. Parodi and his collaborators led to the discovery in 1958 of the virus causing Argentine Hemorrhagic Fever. Studies would then reach the scope of diagnosis, treatment, and prevention of the disease under the direction of Dr. Nora Nota, Dr. Lucía de Guerrero, Dr. Mercedes Weissenbacher and Dr. Guadalupe Carballal. It is worth mentioning that in the late 1980s Dr. Weissenbacher created the National AIDS Reference Center, today another well-known research institute of the University of Buenos Aires.

In 1965, the Committee for the Integral Study of Chagas Disease was created, its head venue worked in the Department precedent to IMPaM. Dr. Stoppani and Dr. Rosembaum joined this initiative, fostering researches on said type of parasitosis. After Dr. Parodi passed away, Dr. Stella González Cappa assumed command of the team.

In the 1970s, under the direction of Dr. Nota, the program of Immunology and Virology (Programa de Inmunología y Virología - PRIMVI) dependent of CONICET was created, which also was located in this Department. Dr. José Oubiña, who joined in 1977 and had a background of research of respiratory viruses, founded the Laboratory of Viral Hepatitis. Said laboratory is currently recognized as a Center for the Study of Viral Hepatitis.

Dr. Daniel Sordelli joined in 1989 and boosted the development of the area of Bacteriology, which today involves six independent research groups. During the 1990s, a great number of researchers was trained under the direction of those researchers with a large background in the department predecessor to IMPaM. A score of those young researchers is today part of IMPaM staff.







Director María Cristina Cerquetti

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

Aspects related to diseases caused by microorganisms and parasites with regional occurrence in Argentina and border countries as well as others of global distribution and importance that affect the national community as well.

Services / technological supply

IMPaM has thirty eight laboratories for the work with bacteria, fungi, and parasites with biosecurity levels 1 and 2 (BSL-1 y BSL-2). Some of those laboratories are adapted to culture tissue, others to work on molecular biology and others to perform routine tasks of the laboratory of Microbiology and Parasitology. IMPaM is setting up a modern vivarium to keep animals and work with them in biosecurity 1 and 2 levels (ABSL-1 y ABSL-2). The Institute has its own specialized library in subjects of Microbiology, Parasitology and Infectology.

IMPaM researcher's experiences are at service of the community. Through its Micology Center, it offers a vast expertise in methodologies for the diagnosis of mycotic infections.

Likewise, IMPaM through its Research Laboratory on Mechanisms of Resistance to Antibiotics, provides with High Standard Technology services for determining bacterial DNA sequences for the diagnosis and surveillance of infections in patients with hereditary diseases, specially focused on cystic fibrosis. The laboratory receives numerous samples, not only from Argentina but also from border countries. Moreover, it offers methodologies of high sensitivity (culture and PCR) for the diagnosis of strongyloidiasis in immunocompromised patients, or patients considered immunocompromised due to their underlying pathology.



Cooperation / liaison / exchange

Researchers trained in IMPaM maintain relationships with researchers of world renowned organizations: Harvard University, Boston (USA); Columbia University, New York (USA); Centers for Disease Control and Prevention (CDC), Atlanta (USA); Münster Universität, Münster (Germany); Universidad Complutense, Madrid (Spain); Università di Sassari, Sardinia (Italy); Centro Studi Fegato, Trieste (Italy); University of Nagoya (Japan).

These relationships benefit thesis students of the Institute, who can thus have access to short duration work stays in top-level laboratories.

National and international recognitions

Due to its recent creation, IMPaM has not yet received institutional recognitions, but its researchers, with background in international activities, have become scientific ambassadors: it is worth mentioning Dr. Daniel Sordelli exercising the presidency of the International Union of Microbiological Societies between 2008 and 2011.







Institute for Biomedical Research on Retrovirus and AIDS (Instituto de Investigaciones Biomédicas en Retrovirus y SIDA - INBIRS)

Recently created, the Institute for Biomedical Research on Retroviruses and AIDS (INBIRS) replaces the National Reference Center for AIDS (CNRS). The HIV/AIDS epidemic affects every sector and dimension of society, posing a challenge that transcends the health sector and has considerable economic and social repercussions.

The National Reference Center for AIDS (CNRS) was created in this context and has been serving the biomedical and scientific-academic communities, and also the community at large with renowned quality for more than twenty years, positioning itself as an institution of national and international leadership. This Institute works in close collaboration with the AIDS and Sexually Transmitted Diseases (STD) Office from the National Ministry of Health of Argentina (Ministerio de Salud de la Nación) and with different NGOs that face this public health problem.

Transcending borders and through its regional positioning, the CNRS was established as a Collaborating Centre for the Pan American Health Organization - World Health Organization (PAHO-WHO), with the ability to establish scientific links with world renowned institutions. An effective response to the HIV/AIDS epidemic requires a sustained commitment to ensure that interventions and strategies from health services improve over time. In this regard, it is essential to ensure the quality of practices are carried out for the diagnosis, monitoring and treatment of the infection, as well as of the developed research.

With no budget from the National Administration, the Institute has applied for and received grants from different institutions and/or national organizations (CONICET, UBA, SECyT, Public Health) and international organizations (SAREC, UNAIDS, PAHO-WHO, NIH, NMRCD), which has favored the scientific and technical growth of its members.

INBIRS combines human resources, infrastructure and materials, thus strengthening scientific research, providing expertise and encouraging interaction between researchers, academic institutions and governmental and non-governmental community organizations.

Much of the progress in scientific production and healthcare was achieved through a process of modernization of the infrastructure, developed in 1999: a renovation of facilities and laboratories, an optimization and computerization of communications and incorporation of high level technology. Today, the INBIRS has 600 m2 of laboratories for molecular biology and processing of biohazardous materials. The biological safety area, built in accordance with international standards, contains laboratories levels I, II and III, being the two last ones equipped with HEPA filtration systems and negative pressure.









Director Horacio Salomón

Res. (CS) No. 3597/11

Venue Faculty of Medicine

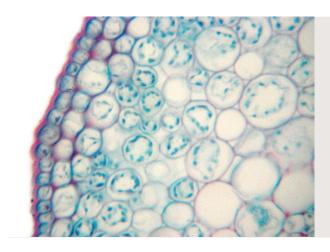
Scientific field / research areas

The main lines of research in development are:

- Biological and molecular aspects of viral variants of HIV-1 circulating in Argentina.
- ► HIV characterization studies and resistance to antiretroviral treatment in various susceptible populations.
- ▶ Immunity and Immunopathogenesis in infections by HIV-1.
- Biological and molecular aspects of the human immunodeficiency virus. Population study among MSM: a search for innovative prevention strategies. Study of viral fraction associated with erythrocytes in the evolution of HIV-1 infections.
- ▶ HIV-Hepatitis C, Hepatitis B co-infection.
- Immuno-endocrine interrelations in patients co infected with TB and HIV.

Services / technological supply

It provides support for public health institutions nationwide, regards both technical and professional aspects as well as the training of specialized human resources: highly specialized studies on the epidemiology HIV/AIDS in Argentina, knowledge on topics of diagnosis of HIV and other human retroviruses, guidelines and criteria for the interpretation of laboratory results, development of quality assurance programs for laboratory diagnosis and monitoring of HIV infection.



Cooperation / liaison / exchange

INBIRS continues the activities developed by the CNRS in the training of human resources through courses and workshops for laboratory personnel on diagnosis of HIV infection, biosafety and quality control. Also, advising public laboratories of Uruguay, Paraguay and Chile.

Various international agreements allowed the implementation of molecular methods for the diagnosis and characterization of HIV-1. They have become especially relevant in infections that take place in pediatrics. By extension and deepening of technological modernization, the institution has accompanied the development of methodologies for monitoring the infection.

INBIRS has established internal and external quality control programs, developing manuals for all laboratory procedures and control systems. These programs allowed the participation of CNRS in multicenter international clinical trials, thus encouraging the collaboration amongst groups.









Institute of Genetic Immunology and Metabolism (Instituto de Inmunología, Genética y Metabolismo – INIGEM)

The Institute of Genetic Immunology and Metabolism (INIGEM), located in the Clinical Hospital "José de San Martín" of the University of Buenos Aires, comprises LANAIS-Cito, the Laboratory of Oxygen Metabolism (Laboratorio de Metabolismo del Oxígeno - LMO2), the Medical Osteopathies Section of the Endocrinology Division of the Clinical, the Laboratory for Sensory Research (Laboratorio de Investigaciones Sensoriales – LIS), the Laboratory for Genetics and Molecular Biology of the Microbiology, Immunology and Biotechnology Department of the Faculty of Pharmacy and Biochemistry, and the Laboratory of Lipids and Lipoproteins of the Clinical Biochemistry Department of the Faculty of Pharmacy and Biochemistry.

The creation of INIGEM responds to the need to establish a unit integrating every traslational aspect which allows basic science discoveries to be applied in prevention, diagnosis and treatment of diseases within University Hospitals. It therefore aims to put together the experience accumulated by the member laboratories in the application of basic universal mechanisms to the field of health, such as those provided by Genetics, Immunology, and Metabolism.

This proposal entails an intensification of the collaboration between member groups round major issues, such as cancer diagnosis and treatment, metabolic and cardiologic diseases, diabetes and autoimmune pathologies (thyroid, gastrointestinal and liver diseases), infectious, neurodegenerative, and neurosensory diseases.

As regards training of human resources, the development of the Institute aims at placing young professionals in a thematic area which has yet to be explored able so as to create knowledge and transfer of knowledge in the field of health. In this way, INIGEM will be the natural environment to hold the recently created Clinical Research Residency, which is as well supported by CONICET. Also, it is an venue of excellence for master students of biomedical disciplines, such as the Internacional Master in Biomedical Sciences jointly delivered by the University of Buenos Aires and the University of Freiburg, Germany, and it is a place for starting and orienting scientific activities in the areas of Health and Medicine, both for residents in the university hospitals and for students in their last year of college.

Including health professional in scientific-technological activities imposes an interdisciplinary exchange by means of seminars, symposiums, conferences, events and publications oriented to the permanent dissemination and debate regarding progress and results. Also, it aims to foster the development of new technologies transferrable through patents and/or new aplications tending towards socio-econimic growth and population safeguard.

INIGEM has sensitive and appropriate equipment for the studies it develops, although it is yet far from being at the same level similar international organizations are, which is another achievable aim thanks to its common facilities for the shared use of equipments and techniques.

University of Buenos Aires. Research Institutes 2012





Director Héctor Manuel Targovnik

Res. (CS) No. 4864/05

Venue Clinical Hospital "José de San Martín"

Scientific field / research areas

Immunology, Genetics, Metabolism.

Interdisciplinary approach of basic and applied research in Sensorial Processes, Cognitive Sciences, Psychophysics, Perception, Vision, Chemical Senses, Sensory Evaluation of Food, Speech Perception, Voice analysis and Neurosensorial Pathologies.

Services / technological supply

- Asistance, development, training and laboratory for the productive sector.
- ▶ Development of vaccines and bacterial adjuvants.
- Assistance services to the general population.

Cooperation / liaison / exchange

Collaboration in projects and publications with researchers and other research centers working in related fields.

Internationally: TFH-Berlin University of Applied Sciences, University of Kiel, and University of Dresden (Germany); Gunma University (Japan); Pitié-Salpétrière Hôpital (France); Free University of Brussels (Belgium); Université Paris-Est Créteil (France); Indiana University School of Medicine; Universidad Albert Ludwig, Freiburg (Germany).

Nationally: Institute of Cardiovascular Physiopathology, UBA; Department of Pharmacology, Faculty of Medicine, UBA; Department of General and Oral Biochemistry, Faculty of Dentistry, UBA; Department of Nutrition, Faculty of Biochemistry, UBA; Department of Histology, Faculty of Dentistry, UBA; National University of Río Negro; National University of Rosario; National University of Santa Fe; National University of Tucumán.

National and International Recognitions

▶ Leonardo Fainboim, Patricia Lucía Casavalle, Claudio Vedire, María Eugenia Inzaugarat, Alejandra Claudia Cherñavsky. *Annual Award "Florencio Fiorini" Progresses in Pediatrics*, Florencio Fiorini Foundation, 2011.



- ▶ Jorge Gurlekian. Award to the best work "Índice de perturbación, de precisión vocal y de grado de aprovechamiento de energía para la evaluación del riesgo vocal", IV Latin American Congress of Laryngology and Phonosurgery, Buenos Aires, 2011.
- ▶ Laura Schreier. Argentinean Representative of the Program Reaching Out to the World Translation Project Committee of Clinical Chemistry, AACC, 2010.
- Pérez, Hernán; Alippe, Yael; Kersting, Sofía; Elguero, María Eugenia; Converso, Daniela; Carreras, María Cecilia; Poderoso, Juan José. Young Investigator Award, Society for Free Radical Research (SFRR), Brazil Meeting, 2011.
- Seijo, Mariana; Mastaglia, Silvina Rosana; Brito, Graciela Mabel; Keller, Guillermo Alberto; Somoza, Julia Isabel; Diez, Roberto; Di Girolamo, Guillermo; Oliveri, Beatriz. 2° Gunther Fromm Award in Clinical Research, XXVII Annual Meeting of the Argentine Association of Osteology and Mineral Metabolism, 2011.







Research Center on Porphyrins and Porphyrias (Centro de Investigaciones sobre Porfirinas y Porfirias - CIPYP)

The Research Center on Porphyrins and Porphyrias (CIPYP) is the first and only unit in Latin America devoted to the study of prophyrias, associated pathologies, and cancer. It was created on August 22, 1978, by a Resolution of the Board of CONICET as CIPYP program under the direction of Dr. Batlle, and it worked in the Department of Biological Chemistry of the University of Exact and Natural Sciences of the University of Buenos Aires. Its predecents go back to the 60's, which was a favorable period for the training and development of researchers, when Dr. Batlle was granted the first initiation scholarship in the porphyrins group by CONICET, which made possible to said group to stablish itself as a steady and well-known work group inside and outside the country.

Nowadays, CIPYP develops its research, teaching and patient-care activities in the new laboratories located in the Clinical Hospital "José de San Martín" of the University of Buenos Aires. Since 2005, it is part of the groups of research units acknowledged as shared institutes, in accordance with the Framework Agreement signed by the University of Buenos Aires and CONICET. In 2009, by UBA Superior Board Resolution No. 6061/09, Dr. María Victoria Rossetti was appointed Director of CIPYP. During the period 2007-2011, the team under the direction of Dr. María Luján Tomaro, working in the Faculty of Pharmacy and Biochemistry, became a Linked Group (Grupo Vinculado).

The creation of knowledge in the area of Biological and Biomedical Chemistry, traning of human resources and care services are coordinated with a continued and efficient collaboration with professionals and municipal, national, and private medical care centers in the country, depicting a long history in basic and applied research in the area.

CIPYP holds a consolidated international recognition. CIPYP is considered a reference center in the continent and one of the most important in the world in its specialty thanks to its significative contributions to scientific knowledge and development of new therapies for the treatment of porphyrias and cancer.

The studies on the development of eight original treatments for porphyrias are of great trascendence, particularly those researches on lead poisoning. In the 80's, important works were published on Enzyme replacement therapy which gained international recognition and awards such as the Spanish Royal Academy of Sciences Award, the National Award for Culture in Arts and Medical Sciences, the Centenary Award "Ramos Mejía", and the Award "Alicia Moreau de Justo", among others.

The genetic studies over acute and cutaneous porphyrias meant a major breakthrough for diagnosis. Thanks to them, dozens of new mutations were made identifiable in acute intermittent porphyria, late cutaneous porphyria, variegate porphyria, coproporphyria, protoporphyria erythropoietic, and new polymorphisms associated with hereditary hemochromatosis. The Argentine Group of Porphyrias, a multidisciplinary group from CIPYP, provides integral support for porphyric patients and their families.

University of Buenos Aires. Research Institutes 2012





Director María Victoria Rossetti

Res. (CS) No. 4864/05

Venue Clinical Hospital "José de San Martín"

Scientific field / research areas

Biological and Biomedical Chemistry: metabolism of human and experimental porphyrins, porphyrias and pseudoporphyrias, associated pathologies and cancer. Current lines of research:

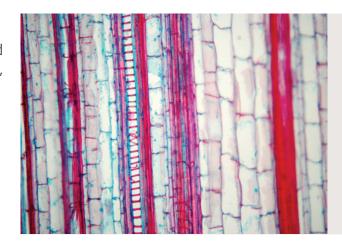
- ▶ Heme Metabolism.
- ► Human porphyrias.
- Experimental Models.
- ▶ Porphyrins and Neoplasias.
- Molecular Biology of Porphyrias.
- Cellular Defense Mechanisms.

Services / technological supply

Multidisciplinary Care Team for the Porphyric Patient, in collaboration with doctors of the Hospital "Ramos Mejía". CIPYP's staff of researchers, technicians and professionals is highly trained to use fluorometric equipments, atomic absorption and high-performance liquid chromatography spectrometers, and to develop molecular biology techniques, necessary both for research tasks and for diagnosis of symptomatic patients and latent carriers of every kind of porphyria.

Cooperation / liaison / exchange

Nationally: General Acute Care Hospital "José María Ramos Mejía"; Infectious Diseases Hospital "Francisco Muñiz"; Pediatric Hospital "Professor Juan P. Garrahan"; Children's Hospital "Pedro Elizalde"; Clinical Hospital "José de San Martín"; Gastroenterology Hospital "Dr. Carlos Udaondo"; Orthomolecular Medicine Research Center (Centro de Investigaciones de Medicina Orthomolecular); IQUIFIB, UBA-CONICET; National Academy of Medicine (Academia Nacional de Medicina); Department of Biodiversity and Experimental Biology (Departamento de Biodiversidad y Biología Experimental), FCEN-UBA; Department of Organic Chemistry (Departamento de Química Orgánica), FFYB-UBA; IDEHU, UBA-CONICET; Molecular Biology Lab and Department of Chemistry, Faculty of Exact, Physico-Chemical and Natural Sciences, National University of Río Cuarto (Universidad Nacional de Río Cuarto).



Internationally: Porphyrias Unit, Hospital "12 de Octubre", Madrid (Spain); Erasmus MC, University Medical Center; Rotterdam (Netherlands); University College, London Medical Schools (UK); Faculty of Biology, Autonomous University of Madrid (Universidad Autónoma de Madrid) (Spain).

National and International Recognitions

- ▶ Dr. Batlle: Annual Award of the National Academy of Medicine, 1981; Award Siete Flamas de Excelencia Profesional, World Organization of Nations, 1985; National Award on Arts and Medical Sciences, National Ministry of Culture, 1988; Argentinian Female Scientist Award in the International Women's Year, Argentina Study Center, 1989; Award "Dr. Alicia Moreau Justo" in the category Outstanding Woman in Science, 1994; Trébol de Plata Award 2001-2002 to Argentinian Female Scientific, Rotary International, 2002.
- Dr. Casas, Dr. Di Venosa, Dr. Rodríguez and Dr. Batlle: Award Fundación René Barón, Argentine League of Fight Against Cancer (Liga Argentina de Lucha contra el Cáncer), 2007.
- ▶ Dr. Casas, Dr. Di Venosa, Dr. Rodríguez and Dr. Batlle; Lic Mamone: Award Teodoro Ovsejevich, Fundación Konex, 2010.

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Institute for Medical Research (Instituto de Investigaciones Médicas – IDIM)

The creation of the Institute for Medical Research (IDIM), first as a program and then structured as Executory Unit of CONICET, responds to the proposal of promoting the interaction between research and training and care, so as to improve the specific perspective of each practice as well as that of research groups belonging to each area, giving priority to training human resources.

IDIM is part of the Institute of Medical Research "Alfredo Lanari" (Investigaciones Médicas – IDIMAL), which is part of the University Hospitals and has been created more than fifty years ago. It is named after his founder, Professor Dr. Alfredo Lanari, who was a Superior Researcher of CONICET. It stands out due to its research teams whose work covers almost every medical specialty, including basic and clinical research projects.

The Institute also has an interesting advantage: it is a base of medical care and research located in a venue in which postgraduate courses are offered, thus being a hospital training unit as well as a postgraduate unit with training of medical residents, biochemists, and doctoral and postdoctoral scholars. Many of its researchers are members of the Committees of Teaching and Researching and Ethics Committees, providing unique conditions for the development of programs of professional training, research projects and clinical trials.

IDIM is venue of one of the most prestigious scientific societies of the country: the Argentine Society of Clinical Research (Sociedad Argentina de Investigación Clínica); and it is also venue of the Journal Medicina, the only indexed argentine medical journal.

The Institute was created on September 23, 1999, through Resolution No. 1894. Its firsts authorities were: Director Dr. Samuel Finkielman and Deputy Director Dr. Felisa Molinas. Since June 2003: Director Dr. Felisa Molinas and Deputy Director Dr. Carlos José Pirola.

Pursuant to the Framework Agreement executd in 2005 between the University of Buenos Aires and CONICET, the Institute for Medical Research was included as a shared institute of double dependency between the two organizations. In 2008, as a result of a background public contest, Dr. Carlos Pirola was appointed Director of IDIM by UBA Superior Board Resolution No. 4205/08. Dr. Basilio Kotsias assumed the position of Deputy Director.

The current proposal is oriented to encourage interdisciplinary research projects, strengthening cutting-edge groups in basic research with clinical application and making use of forefront technologies, thus increasing the relationship with the productive sector through technological and services supply, making the most of the human resources trained in IDIMAL and IDIM. In this way, the academic level and scientific production can be improved and work efficiency and obtaining new funding sources can be favored.







Director Carlos José Pirola

Res. (CS) No. 4864/05

Venue University Hospital Institute of Medical Research

"Alfredo Lanari"

Scientific field / research areas

The structure of the research laboratories of the Institute for Medical Research is the same as when it was created, organized according to the different medical specialties, such as Immunology, Hematology, Microbiology, Metabolism, Endocrinology and Cardiology.

Nowadays, work lines are developed by groups working in different research areas: Departments of Genetics and Molecular Biology of Complex Diseases; Clinical and Molecular Hepatology; Molecular Cardiology; Molecular Biology of Trypanosoma cruzi; Experimental Nephrology; Molecular Biology and Apoptosis; Experimental Neurophysiology; Experimental Endocrinology; Hematology Research; Ion Channel Lab; Experimental Psychology; Pulmonary and Study on animal behavior Lab.

Services / technological supply

Consultancy, development of special techniques of diagnosis or dosage of drugs through sophisticated methods. Vivarium enabling the offer of special strains of rodents of unique characteristics in the country. Technological services and various services based in RIA, ELISA, HPLC or tecniques of Molecular Biology: Angiotensin-converting enzyme I; plasma renin activity; genotypification of risk allels in different human diseases and pharmacogenetics; genotypification of species.

Cooperation / liaison / exchange

AGREEMENT INSERM-CONICET (2009-2010) in the context of the cooperation program: Dr. Felisa Molinas (IDIM CONICET) and Dr. Wiliam Vainchenker (INSERM U790, Institut Gustave Roussy, France).

The Institute receives grants from different public and private organizations such as UBA, CONICET and ANPCYT of which FONCYT has financed several projects, including one that was carried out by the Internationally Consolidated Group 2010, category V.



National and International Recognitions

- Best research work (trained researcher category): "El factor de transcripción inducible por hipoxia modula el contenido hepático del DNA mitocondrial en un modelo experimental de esteatosis hepática inducido por dieta rica en grasa", 2009.
- Montuori Award. "Avances en Biomedicina Molecular: demostración de la participación del sistema de la hormona liberadora de tirotrofina (TRH) en el desarrollo de la hipertrofia ventricular izquierda (HVI) de la rata, utilizando un sistema de sobreexpresión e inhibición en vivo", Foundation Dador, 2009.
- Award to the best clinical research work: "Señales de sobrevida inducidas por el complejo IL-6/IL-6 SR en el linaje megacariocítico. Influencia de la mutación JAK2V617F", XIX Argentine Congress of Hematology, 2009.
- Accesit Bernardo Houssay for the work "Tripanosoma cruzi, mecanismos moleculares de obtención de nutrientes del hospedador", Argentine Society of Biology (Sociedad Argentina de Biología), 2010.







Research Institute on Animal Production (Instituto de Investigaciones en Producción Animal – INPA)

The creation of the Research Institute on Animal Production (Instituto de Investigaciones en Producción Animal – INPA) derived from the need of the Faculty of Veterinary Sciences of the University of Buenos Aires to foster the development of researches so as to achieve the aims of the Food Strategic Plan and the Plan of Science, Technology and Innovation (Argentina 2020). The creation of INPA as a research institute of double dependency UBA-CONICET became official through UBA Superior Board Resolution No. 5391/2012 and CONICET Resolution (D) No. 3753/2012. After the corresponding public contest, Professor Alicia Fernández Cirelli was appointed director.

The Research Institute on Animal Production coordinates different areas of the Faculty of Veterinary Sciences related to such subject. Researchers of different areas of Animal Production, Food, Pharmacology, and Basic and Environmental Sciences are part of the Institute, where activities of research and training of human resources are carried out.

Among the main objectives of INPA it can highlight: a) to develop scientific researches in the field of veterinary sciences; b) to foster new approaches oriented to sustainable animal production; c) to train and improve the training of researchers, professionals and technicians through postgraduate courses, in the highest possible level; d) to transfer research results to the different interested groups; e) to contribute to the improvement of scientific-academic quality of institutions and areas related to farming and livestock production; f) to place INPA in a local, national and international context, fostering the relationship with networks and exchange with other centers, organizations and work groups dealing with the subject.

INPA researchers actively participate in the following postgraduate courses: Doctorate (A Category, CONEAU Resolution 434/08); Master in Water Management (A Category, CONEAU Resolution 093/12); Master in Animal Health, Master in Animal Production and Master in Animal Reproduction (the last two have been recently created).







Director Prof. Dr. Alicia Fernández Cirelli

Res. (CS) No. 4864/05

Venue Faculty of Veterinary Sciences

Scientific field / research areas

Currently, the following lines of research are developed in INPA:

- ► Farming and livestock production systems: environmental behavior of microcontaminants, potential risks and technologies of remediation.
- ► Livestock production in areas where arsenic is naturally abundant. Transfer from environmental matrix to agrofood chain.
- Arsenic accumulation through fodder and macrophyte species in rural environments. Development of monitoring and phytoremediation techniques.
- ► Rational use of veterinary pharmaceuticals. Concentration and level of antimicrobial residue in goat and sheep milk.
- ▶ Improvement of animal production systems.
- Animal reproduction: Energetic metabolism in porcine gametes.
- Extensive breeding systems for cattle: Detection Techniques of Subclinical Endometritis.
- ▶ Fish-catching production and aquaculture.

Services / technological supply

INPA has a diverse and important infrastructure that offers a wide range of services, as well as technical support in its domain areas:

- ▶ Ten laboratories for sample preparation.
- Five apparatus laboratory.
- ► Field equipment.
- Fifteen offices with fully IT furnishing.
- ▶ Library of the Master in Water Management.
- ► Farmyard and handling facilities for practices with animals.
- Central Vivarium.
- Central library.



Cooperation / liaison / exchange

Regarding cooperation, INPA holds scientific relations with foreign centers, universities and organizations, namely: Institute of Water Resources Management, Hydrology and Agricultural Hydraulic Engineering (WAWI), Leibniz University of Hannover (Germany); Institute of Chemistry, University of Graz (Austria); Institut Català de Recerca de l'Aigua (ICRA), Catalonia (Spain); University of Barcelona (Spain); Association of Universities Montevideo Group (Asociación Universidades Grupo Montevideo – AUGM), MERCOSUR; Advanced Materials Research Center (Centro de Investigación en Materiales Avanzados – CIMAV), CONACYT, Mexico; Ibero-American Program of Science and Technology for Development (Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo – CYTED), Ibero-America.

Also, INPA develops cooperation activities with the industrial and husbandry sectors.





Institute of Polymer Technology and Nanotechnology (Instituto de Tecnología de Polímeros y Nanotecnología – ITPN)

The creation of the Institute of Polymer Technology and Nanotechnology (ITPN) was approved through UBA Superior Board Resolution No. 7123/13, including the new research institute to the group of institutes of double dependency, by virtue of the Framework Agreement between the National Scientific and Technical Research Council (Consejo Nacional de Investigaciones Científicas y Técnicas – CONICET) and the University of Buenos Aires.

The Institute of Polymer Technology and Nanotechnology resulted from the shared interest of various groups working together in the subject of polymers and nanotechnology in the University of Buenos Aires, trained in different disciplines but seeking common objectives. Its member's disciplinary background and training allow for a potential interdisciplinary and transdisciplinary approach, which is a consequence of each group director's academic training and their scientific background.

Its location at UBA will favor the training of human resources for their inclusion in the productive environment, in the scientific technological career or university lecturing.

Te main objectives of the institute are:

- i) To generate scientific and technological knowledge in the subject of Polymers and Nanotechnology applied to polymers, by means of the synergy resulting from the interdisciplinary nature of knowledge.
- ▶ ii) To develop products and processes to be transferred to the productive environment.
- ▶ iii) To cooperate with other institutes, in a national and international level.
- ▶ iv) To train human resources.

Scientific field / research areas

- ▶ Mechanical and fracture properties of polymers, nanocomposite and composites potentially applicable to different industries.
- ▶ Development of New Polymeric Materials and Nanotechnology of material for oil industry. Additives for concrete building materials.
- ► Characterization and synthesis of nanostructured materials. Synthesis, development, and characterization of nanostructured materials (technological and nanotechnological applications, such as the production of "polymers-nanoparticles/nanostructures" composites with functional properties intelligent polymer).
- ▶ Biotechnology, microbiology and biosynthesis applied to polymers: modification via Enzymatic Polymerization. Obtaining bacterial nanocellulose.
- ▶ Uses of biocompatible and biodegradable polymers: Controlled liberation materials for adsorption.
- Rheology applied to fluids and polymers.
- Structuring of natural polymeric materials: Food Technology / Strategies to replace Trans fat in manufactured products.

Services / technological supply

► Thermal characterization services: Differential Scanning Calorimetry (DSC), Thermogravimetric precision balance (TGA), Dynamic mechanical analysis (DMA).



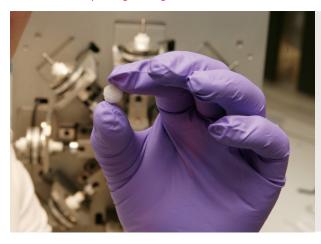




Director to be appointed (coordinator: Analía Vázquez)

Res. (CS) No. 4864/05

Venue Faculty of Engineering



San Martín (UNSAM); National University of Rio Cuarto (UNCR); INTA; INTI.

Internationally: University of Perugia and University of Salento (Italy); Budapest University of Technology and Economics (Hungary); Universidade da Coruña (Spain); University of Sydney (Australia); Leibniz Institute of Dresden (Germany); Utah State University (USA).

National and international recognitions

- ▶ Lidia Herrera. Award of the Honorable Argentine Senate (Distinción del Honorable Senado de la Nación) for her project "Alternatives to Trans-Fat" ("Alternativas a las grasas trans"), VSP-703/11, Buenos Aires, 2011. Honored Student Award, American Oil Chemists' Society, 2003 and 2008.
- ▶ Leandro Ludueña, Vera Álvarez, Analía Vazquez. Award to the beast Research Work in Post Graduate Category (Premio al mejor Trabajo de Investigación en la Categoría Postgrado), Tercer Encuentro de Jóvenes Investigadores en Ciencia y Tecnología de Materiales, Entre Ríos, Argentina, 2010.
- ► María Soledad Commisso, Viviana Cyras, Analía Vázquez. Honorary Mention for tutoring the work "Evaluación de películas bicapa para envases totalmente biodegradables", Argentine Center of Engineers (Centro Argentino de Ingenieros – CAI), 2007.
- ▶ Leandro Ludueña, Analía Vazquez, Vera Álvarez. 2006 Sábato Institute Award to the best Graduate Career Thesis: Obtención de nanocompuestos de matriz polimérica biodegradable y arcilla comercial, INTEMA, Polymer Division (División Polímeros), Faculty of Engineering, UNMdP.
- ▶ Morán, J.I.; Álvarez, V.A; Cyras, V.P.; Vázquez, A. Cellulose. Most downloaded paper in 2008: Extraction of cellulose and preparation of nanocellulose from sisal fibers, Volume 15, Issue 1, 2008; Pages 149-159.

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- ► Fourier transform infrared spectroscopy (FTIR) services.
- ► Conventional mechanical characterization services: uniaxial traction tests, uniaxial compression tests, three and four point bending tests, Charpy impact tests.
- ► Characterization services of fracture and fault mechanisms: determination of fracture parameters under quasi-static and impact loading conditions (K_{IC}, G_{IC}, Integral J, essential work of fracture). Analysis of fracture surfaces by optical and scanning electron microscopy, analysis by acoustic emission in situ during traction tests.
- ▶ Particles Crush Test.
- X-Ray Diffraction Analysis and polycrystalline samples analysis.
- ▶ Studies of correlation between crystalline structure and physical properties of nanostructured materials.
- ▶ Solid Fat Content determination by NMR.
- ▶ Determination of emulsion stability for new developments.
- ► Assistance in formulating new food products.
- ➤ Controlled release tests through the use of polymeric matrices in gel phase or Franz cell films. Depending on the active to be released, UV-Visible Spectrophotometric or conductometric techniques are used.
- ► Steam-water permeability of films.
- ▶ Assistance, special studies, technical support and laying out of fermentation processes with industrial microorganisms, optimization and control of such studies (Lab-scale fermentation of 5l with online control of pH, temperature and dissolved oxygen, and of 40L).
- ▶ Detection, isolation, counting and identification of contaminant microorganisms (in environments, during processes and in finished products).
- Antimicrobial effectiveness tests, determination of minimum inhibitory concentrations.

Cooperation / liaison / exchange

Cooperation Network Raices on Composite Materials and Polymer-matrix Nanocomposites, 2013.

Nationally: Institute of Science Technology and Engineering (Instituto de Tecnologías y Ciencias de la Ingeniería – INTECIN); Research Institute for Materials Science and Technology (INTEMA), UNMDP-CONICET; Faculty of Exact and Natural Sciences, UBA; National University of General









Institute of Hydrogen Technologies and Sustainable Energies (ITHES) (Instituto de Tecnologías del Hidrógeno y Energías Sostenibles – ITHES)

The Institute of Hydrogen Technologies and Sustainable Energies (ITHES) was recently created within the context of the framework agreement between the National Scientific and Technical Research (CONICET) and the University of Buenos Aires (UBA).

Its creation responds to the initiative of generating a specific environment for the development of alternative energies in order to diversify the national energy matrix.

The institute includes the Catalytic Processes Laboratory (LPC), the Group of Renewable Energies (GER) and the Instrumentation and Control Laboratory (LIC). The academic activities carried out at present by the member groups seek the development of alternative energies from the production of hydrogen and biodiesel, as well as their process automation.

The formation of degree and PhD students and researchers are within the scope of the groups that form the ITHES.

The academic activities are reflected in the technology transfer by means of providing services to enterprises, publications in specialized journals and patent generation. Within this framework, the research groups develop strong links with specialized centers both in the country and abroad.

The ITHES forms part of the research units gathered under the denomination of shared dual-belonging institutes, by virtue of the framework agreement subscribed by the UBA and CONICET in August 2005.

The activities carried out include the following research lines:

- ► Catalytic reactor modeling: diffussion convection reaction models.
- ► Fuel cell modeling: difussion convection reaction models; electrochemical models (kinetics: Butler Volmer, mass balance: Poisson Nernst Planck)
- ► Catalytic kinetics: mechanistic models (Langmuir Hinshelwood Hougen Watson, Mars van Krevelen)
- ► Catayist synthesis and characterization: nickel-based catalysts for hydrocarbon, etanol and glicerol reforming and autothermal reforming; tio-resistant nickel-based catalysts for reforming; nickel and copper-based catalysts supported in ceria for purification processes.
- ► Computational catalysis: catalyst study with DFT methodology.
- ▶ Obtaining of high value added products from biomass: hydrogen from glicerol (subproduct of the biodiesel), sustainable biodiesel production from waste materials.
- ▶ Liquid biofuel characterization: modeling and correlation of properties demanded by biodiesel quality standards; biodiesel quality determination; design and construction of biodiesel characterization equipment; bioethanol production from lignocellulosic wastes; production and characterization of biooils.
- Process instrumentation and control: automatic control communication network management; predictive-adaptice and multi-variable control; automatic control of hydrogen electrolythic generators; adaptive controller implementation.







Director Dr. Miguel Ángel Laborde

Res. (CS) No. 4864/05

Venue Faculty of Engineering

Services / technological supply

- Contract CONICET Grencell (Spain) for the development of a H2 production process from bioethanol. 2003.
 Technical director: M. Laborde.
- ► Agreement FIUBA EEAOC (Estación Experimental Agroindustrial Obispo Colombres) for the development of joint research activities and the technological and personnel Exchange in the area of alternative fuels, 2006. Technical director: S. D. Romano.
- Agreement ENARSA CONICET for the construction and operation of a hydrogen production and purification prototype from bioethanol, 2007. Technical director: M. Laborde.
- Agreement CONICET Agro Roca for process optimization of the polysulfide production at Agro Roca S.A. Company, 2008. Technical director: F. J. Mariño.
- Agreement with the private sector to assess the possibility of producing biooil from bamboo cane, vinal wastes (wood, bark and roots) and measure the produced biooil properties, 2008. Technical director: S. D. Romano.
- ► Contract YPF CONICET for crude oil treatment, 2009, extended in 2010. Technical director: M. Laborde. Extended in 2013. Technical director: Norma Amadeo.
- ▶ Agreement between Italian universities of Ferrara, Pavia, Padova, Firenze and Argentinian universities: UBA, Universidad de la Patagonia y Universidad Nacional del Sur for the "Methodology development for the use of microalgae as a renewable source of biofuels" (Sviluppo di metodologie per l'impiego di microalghe come fonte rinnovabile di biocombustibile), 2009 – 2010. Funded by CUIA. Technical director from UBA's side: S. D. Romano.
- ► Contract FCEyNUBA FMRT for technical assessment of the Basic Technical Specification Tender for Public Works: "Ammonia plant grade II" for Fábrica Militar Río Tercero, property of the Dirección General de Fabricaciones Militares, 2011. Technical director: M. Laborde
- Participation in the writing of the National Hydrogen Plan, Energy Secretary, 2013. Technical director: M. Laborde.



Cooperation / liaison / exchange

With the following institutions: ENARSA e YPF (Argentina); ITAE-CNR (Italy); Universidad de Málaga, Universidad del País Vasco (Spain); Universidad de Poitiers (France); UNICAMP, UFRJ and ITN (Brazil); Universidad Central de Las Villas (Cuba).

National and international recognitions

- ► Interciencia Hydroquebec Reward 2005 on the Energy area.
- ► Hydrogen Ambassadors Contest. Hannover Fair, Germany, 2005.
- ▶ Dupont-CONICET Reward for the technological development 2009. Special mention.









Physiology and Biophysics Institute "Bernardo Houssay" (Instituto de Fisiología y Biofísica "Bernardo Houssay" – IFIBIO Houssay)

The Physiology and Biophysics Institute Bernardo Houssay is currently completing the formalities to re-start its activity. The Superior Board of the University of Buenos Aires has approved its creation, whereas approval of the National Scientific and Technical Research Council (CONICET) is expected. Until the formal election of an Institute Director, research activities are under the supervision of the current Director of the Department of Physiological Sciences, Professor Dr. Jorge H. Medina.

Research activities at the School of Medicine have begun early during the last century, with the outstanding work on pituitary physiology by Bernardo Houssay. Houssay was designated as the first full time Professor of the UBA and chief of the Department of Physiology in 1919, and succeeded in developing and internationally competitive Research Institute from which remarkable contributions have been done in the field of endocrinology and cardiovascular physiology by Houssay and his colleagues, notably Virgilio Foglia, Juan Carlos Fasciolo and Eduardo Braun Menendez among others. Houssay was awarded the Nobel Prize for Physiology and Medicine in 1947.

Research activities at the Institute of Physiology were severely affected during the last dictatorship to the point that it lost institutional category during the eighties. During the last decades, research at the Department of Physiology and Biophysics has regained international reputation with groups making relevant contributions in the fields of trans-membrane transport, pathophysiology of kidney diseases and neuroscience.

To honor a tradition of excellence research in the physiological sciences is why the current research staff of the Department of Physiology and Biophysics has proposed the (re) creation of the Institute of Physiology and Biophysics. The new Institute has the following aims:

- ▶ to foster research and human resources development in the fields of Physiology and Biophysics, with an emphasis on improving health care in Argentina;
- to feed the Department of Physiological Sciences with high quality Professors, with the ultimate aim of improving graduate and postgraduate teaching activities at the School of Medicine;
- to promote educational and translational activities with direct impact in the quality of life in our country.







Director to be appointed (coordinator: Dr. Jorge Medina)

Res. (CS) No. 4864/05

Venue Faculty of Medicine

Scientific field / research areas

- ▶ Role of aquaporins in cell volume regulation, cell proliferation and programmed cell death (Biomembranes Lab, Dr. Claudia Capurro).
- ▶ Role of aquaporins and TRP channels in kidney osmotic and mechanic sensing (Biomembranes Lab, Dr. Paula Ford).
- ▶ Biophysics and regulation of water transport trough aquaporins (Biomembranes Lab, Dr. Rosana Toriano).
- ► Addiction to nicotine (Behavioral and Cellular Neurobiology Lab, Dr. Ramon Bernabeu).
- ▶ Retinal neurogenesis and cell differentiation (Retina Neurobiology Lab, Dr. Paula Faillace).
- Alcohol addiction and withdrawal (Rhythm Neurobiology Lab, Dr. Rodolfo Cutrera).
- ► Corticostriatal circuit physiology and pathophysiology (Neural Circuit Physiology Lab., Dr. Gustavo Murer).
- ► Glial role in circuit development and regeneration (Neural Network Development Lab, Dr. Lorena Rela).
- ► Human motor control and motor learning (Action Physiology Lab, Dr. Valeria Della Maggiore).
- ► Shiga toxin and hemolytic uremic syndrome (Physiopathogeny Lab, Dr. Cristina Ibarra).
- ► Acute kidney failure patophysiology (Physiopathogeny Lab, Dr. Elsa Zotta).
- Serotonin control of cognition and behavior (Experimental Cognition Lad, Dr. Noelia Weisstaub).



- Mechanisms of neurodegeneration in amyotrophic lateral sclerosis and frontotemporal dementia (Neuronal Pathophysiology Lab, Dr. Lionel Muller-Igaz).
- Mechanisms of mental retardation and memory taking Drosophila as model (Genetics of Learning Lab, Dr. Rafael Pagani).
- ► Shiga toxin induced encephalopathy (Nervous Systems Pathophysiology Lab, Dr. Jorge Goldstein).
- Postnatal development of neural circuits in relation with schizophrenia (Animal Behavior Physiology Lab, Dr. Juan Belforte).
- ▶ Differentiation, proliferation and regeneration of kidney tubular epithelium (Biomedical Research Lab, Dr. Claudia Silverstein).









Institute of NanoBioTechnology (Instituto de Nanobiotecnología – NANOBIOTEC)

The Institute of NanoBioTechnology (NANOBIOTEC) is an initiative of the University of Buenos Aires and the National Scientific and Technical Research Council (CONICET) to promote the disciplines of Biotechnology and Nano-materials.

The Institute furthers the University's and CONICET's missions of scientific research, education, training, technology transfer and the advancement and dissemination of knowledge. It will serve to increase the quality of research in these areas by creating synergy between university scientists conducting research in the biotechnological and nano-materials sciences.

The members of the Institute are presently working across various disciplines for the development of tailor-made platforms aimed at the production and purification of enzymes, peptides and metabolites, and the introduction of structured nano-materials of pharmaceutical, sanitary, food or environmental interest, and their optimization in new drug delivery systems.

Exchanging their expertise in a common physical space, the union of all researchers in an Institute of NanoBioTechnology will be an important stimulus to promote strategic breakthroughs in the area, and guide the scientific work of the cluster toward solving problems emerging from the agricultural, veterinary, human health, environment and industrial sectors.

A major role of the Institute is to promote the education and training of students in biology, engineering, food technology, chemistry, pharmacy and the medical sciences. For this purpose, the community of researchers, composed of CONICET fellows with an UBA position, convenes a large range of postgraduate courses and trainings that provide with advanced Research Degrees (PhD and Magister) in their disciplines.

The second major goal of the Institute is the optimal use of human and material resources, by creating a common ground for interactions between the affiliated researchers, both through academic activities and research integration between their members. Expecting that these interactions will generate an entirely new perspective on fundamental aspects of biotechnology and the role that nano-materials can play in this field. For this purpose, the Institute will promote the development of initiatives that bridge the areas of (bio)separations, (bio)materials, (bio)encapsulation, materials sciences and molecular biology, which will allow training of a new generation of scientists in this multidisciplinary field. As an example, research lines that combine (systems) molecular biology and the science of biomaterials, both from a computational and an experimental point of view, will be encouraged. It is to be expected that the generation of an interface targeting materials to precise molecular structures and/or cellular processes, in a more selective and precise way, will increase significantly the contribution of both disciplines.

In summary, the Institute promotes the generation of new nano-bio-technologies that, in addition to their scientific and technological contribution, may guarantee state of the art academic and scientific training of their members and personnel, and the transfer of knowledge and expertise generated to society.







Director Clara B. Nudel

Res. (CS) No. 4864/05

Venue Faculty of Pharmacy and Biochemistry

Scientific field / research areas

The current main lines of research are:

- Development of integrated platforms for the expression and purification of recombinant proteins of commercial interest, using prokaryotic and eukaryotic biological systems.
- ▶ Production of secondary metabolites by in vitro culture of tissues and plant cells.
- Biofactories in insect cells and larvae.
- Genomic and functional studies of microbial genes and their expression products for pharmaceutical, foodstuff or sanitary applications.
- Integrated biotechnological processes for the treatment and recovery of soils contaminated with aliphatic and aromatic hydrocarbons and herbicides.
- Computational and experimental design of new polymeric transporters for the encapsulation, liberation and targeting of pharmaceutical drugs aimed at the treatment of diseases with a high social and economic impact.
- Design and synthesis of peptidic ligands for the purification of proteins by affinity methods.
- Biocatalytic processes.
- Development of new chromatographic bio-materials for the purification of proteins of commercial interest.
- The microbiology of extremophiles and their applications in biotechnology.

Services / technological supply

- Development of platforms for protein expression and purification
- Services of freeze drying (lyophilization) of biological products.
- Molecular methods for the identification of microorganisms.
- Quality control of proteins by isoelectric focusing.

Cooperation / liaison / exchange

Joint Research Projects with the Institute of Biomedical Research (IBR), University of Barcelona (Spain), and with Biosidus SA (Argentina).



Scientific collaborations with the Universities of Groningen and Amsterdam (Netherlands); the Alfred Wegener Institute (Germany); Planta Piloto de Procesos Industriales Microbiológicos (PROIMI, Tucumán, Argentina); IBR (Rosario, Argentina); Leloir Institute (Buenos Aires, Argentina); INTA (Castelar, Argentina); Faculty of Pharmacy, University of Santiago de Compostela (Spain); INEB Institute, University of Porto (Portugal); Council for Scientific and Industrial Research (Pretoria, South Africa); INTEMA (Mar del Plata, Argentina); Universidad Católica de Cuyo (San Juan, Argentina); Facultad de Ciencias, Universidad de Chile (Santiago, Chile); Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México (México DF, Mexico); Department of Chemistry, State University of New York at Oswego (Oswego, USA); Facultad de Ciencias, Universidad Nacional de Colombia (Bogotá, Colombia); Facultad de Química, Universidad Nacional Autónoma de México (México DF, Mexico); Instituto de Biología and Instituto de Química, Universidade Estadual de Campinas (UNICAMP, Campinas, Brazil); CITSE-CONICET (Santiago del Estero, Argentina); Universidade Federal do ABC (São Paulo, Brazil); Department of Biomedical Engineering, University of California (Davis, USA); CIDCA, CCT La Plata-CONICET (Argentina); Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba (Córdoba, Argentina).





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Superior Institute of Urbanism, Territory and Environment (ISU)

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Institute of Calculus (IC)

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Faculty of Exact and Natural Sciences

Center of Carbohydrates Research (CIHIDECAR)

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Center of Sea and Atmosphere Research (CIMA)

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Institute of Chemical Physics for Materials, Environment and Energy (INQUIMAE)

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Faculty of Engineering

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Faculty of Medicine

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