

## Feature Article

# The Society of Biochemistry and Molecular Biology of Uruguay (SBBM)

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Uruguay is a small country, geographically, but also in population (about 3,000,000 people). It was born as an independent country at the beginning of the 19th century, so it is also young. It was conceived as a buffer state between the two giant neighbors that came to be Argentina and Brazil. It was born and developed as a consequence of several local civil wars that destroyed the unity of the Spanish speaking community. In addition, unity was also spoiled by the tough imperial policy of two European countries (UK and France) against the decadent Spanish Empire, because they extended the Napoleonic wars across the ocean into South America.

The 20th century began with the last big civil war in Uruguay and the country became divided into the capital (Montevideo) and the remainder, with an agronomical economy, constituting what was a major drawback until now, with half of the population living in Montevideo and the other half dispersed in small cities with very few people, living from cattle rearing and agriculture with an economy based on 'latifundio' (large, run-down landed estates that can reach 100,000 hectare or more in size). But, the geographical location between Argentina and Brazil permitted this little country also to gain some advantages from both, especially from the cultural point of view.

Biological research began, mostly, as a result of visionary persons' individual efforts. Professions, like medicine, veterinary or agronomical sciences, were developed as a necessity to solve practical problems to improve the main production of the country. They became the seed for the development of science and research. We will mention the initiative of a self-made man directed exclusively to basic sciences, Clemente Estable, a primary school teacher, interested not only in biology but in philosophy, art and education. He obtained a Fellowship to learn neurobiological research with the master of his time, Santiago Ramón y Cajal (a Spanish Nobel Price

Laureate). After several years of profitable study he returned to Uruguay with a self-imposed mission: to introduce basic science to his people and to found an institution devoted to basic biological research. This institution, now known as the Instituto de Investigaciones Biológicas Clemente Estable (IIBCE, Clemente Estable Institute for Biological Research), was born in the third decade of the 20th century as a small laboratory, but in 1950 was moved to its present position, and one of its former Departments became the Department of Biochemistry directed by a woman named M. I. Ardao (which was also pioneering for this time). It was an official demonstration of the interest of the country in so modern and profitable a discipline, because in the School of Medicine and the School of Chemistry there were movements that also finally developed similar biochemical education and research departments. In the 1950s, the School of Chemistry developed a two-month full-time biochemistry course for professors interested in this discipline. They invited Professor Guzman Barron (a Peruvian biochemist living in Chicago, USA) to develop the course. This was the seed of what later became the Department of Biochemistry of the School of Chemistry. The School of Medicine in a similar move invited Professor Totter (USA) who shared research with the Uruguayan Professor E. Prodanov, one of the founders of the School of Medicine Biochemistry Department. Almost simultaneously, in 1960 some of the attendees of this course founded the first Uruguayan Society of Biochemistry and were thereafter destined to be the leaders of several biochemistry laboratories in different Schools of the University, or the IIBCE. We will mention some of them: E. Prodanov, C. Scazzocchio, C. Estable Puig, W. DeAngelis, A. de Betolaza, M. Calcagno, G. Martínez, G. Freire, E. Lasalvia, I. Korch C. M. Franchi and M. I. Ardao. Other important contributors to biochemical research were R. Caldeiro-Barcia and J. Brovetto.

The first Uruguayan Society of Biochemistry had almost 50 members who developed several events related with its constitutional goals. But when, in 1973, a dictatorship was installed in Uruguay, the University was closed and several professors went abroad, not only to continue their work but

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many of them also to save their lives, because they were opposed to the dictatorship. The young Biochemistry Society was almost defunct. Many cultural centers were closed. The IIBCE remained open because its founder, Clemente Estable, was a very prestigious person, respected and loved by the Uruguayan people. The IIBCE remain untouched – with some individual exemptions – and was a refuge for maintaining scientific research. During this dark period, the researchers that remained in Uruguay tried to maintain an active biology community and founded the Uruguayan Biology Society in 1983. The ending of the dictatorship in 1985 marked the return of many Uruguayan scientists, many of whom had conducted biochemical research abroad. The re-constituted Uruguayan Society of Biochemistry was made a Section of the Uruguayan Biology Society, and it has grown fast since then. Since 1985 until now, there were various important developments, like the strong impulse that R. Ehrlich gave to updating molecular biology and also his contribution to establish a modern school of science. The onset of a new national program of Master's and PhD degrees (PEDECIBA, the first President was Roberto Caldeiro-Barcia) contributed also to help grow biochemical and molecular biological research, together with other disciplines. Another remarkable development during this time was the foundation of a Laboratory of Basic Oncology and Molecular Biology (LOBBM) at the School of Medicine to which the Department of Biochemistry, directed at that time by E. Prodanov, contributed largely. A strong laboratory of Free Radicals directed by R. Radi was associated with the Department of Biochemistry and the LOBBM is now an international centre of reference on the subject. The same happened with A. Nieto who gave strong support to immunology throughout the School of Chemistry. Since its beginning, the Biochemical Society, renamed The Society of Biochemistry and Molecular Biology of Uruguay (SBBM), encouraged its members to hold annual meetings, one year together with the Society of Biology (which holds biennial meetings) and one year by itself. It is now associated with the

Pan-American Association of Biochemistry and Molecular Biology (PABMB) and the IUBMB. The SBBM also encourages international meetings and courses in our country, inviting several foreign professors, who are leaders in their field of research, from Latin America, USA and Europe. As examples we will mention the 'V Meeting of the Society of Free Radical Biology and Medicine – South American Group, V International Conference on Peroxynitrite and Reactive Nitrogen Species' to be held at Montevideo in September 2007, or the 'First International School of Biochemistry, Molecular and Cell Biology: 7th International Calcium and the Cytoskeleton Meeting' to be held in October–November, 2007, both in Montevideo. These activities receive the support of international agencies such as: SFRRI, LPI, IUBMB and EMBO among others. A new Institute was formed in 2006, the Pasteur-Montevideo, supported by Pasteur-Paris, thanks to important input from R. Ehrlich and G. Dighiero. It will be devoted also to biochemistry and molecular biology, among other disciplines. Numerous laboratories have widened the research scope of the SBBM that now includes parasitology, neuroscience, neurochemistry, cell biology, proteomics, genomics, plant biochemistry and others. It is not possible to mention in this short article the whole population of laboratory leaders of the SBBM, and the excellent research they are doing. This can be easily understood if we mention that the last Meeting of the SBBM (December 2006) was attended by more than 200, and 12 symposia were held in 2 days, demonstrating a sustained growth for a small country like ours.

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