Past, Present and Future of a Successful International Collaboration: An Interview with Prof. Dr. Marta Mollerach

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An Interview with Prof. Dr. Marta Mollerach

by Evguenia Alechine for JOSHA

Prof. Dr. Marta Mollerach is an Associate Professor of Microbiology at the University of Buenos Aires and an Independent Researcher of CONICET. She graduated in Biochemistry and obtained her PhD in the field of Microbiology. She has published 50+ scientific papers in peer-reviewed international journals and directed or co-directed six Master and nine PhD theses. She is currently the Secretary of International Affairs of the School of Pharmacy and Biochemistry and the Executive Academic Director of the International Master Program in Biomedical Sciences (IMBS).

She received me in her office, as always with an extremely professional, however, friendly look on her face.

How the collaboration between the University of Buenos Aires and Freiburg University started?

This collaboration has its origins in the tight relationship established more than 20 years ago between an Argentinean physician, Dr. Benjamin Koziner, and a German physician, Dr. Roland Mertelsmann, who worked together during their residency at the Memorial Sloan Kettering Cancer Center of New York. Afterwards, these two hemato-oncologists participated in the creation of two Foundations, one in Argentina (Arger) and another in Germany (Biothera), with the objective of contributing to the research and treatment of cancer, stimulating the scientific exchange between countries, and training both graduate and postgraduate students. These two foundations made possible that German residents perform their practical training at the University of Buenos Aires (UBA) and the Center for Medical Studies and Clinical Research (CEMIC). On the other hand, fellowships were awarded to researchers from the Schools of Medicine and Pharmacy and Biochemistry of UBA to perform

their research in Freiburg. The initial stages of the exchange showed great success and the potential of this cooperation. This was how Prof. Dr. Roland Mertelsmann imagined the Master Program, which took several years and hard work from many people to become possible. From the Argentinean side, this dream was accompanied by Dr. Alberto Boveris, who was the dean of the School of Pharmacy and Biochemistry at that time, and Dr. Daniel Turyn, the first Executive Academic Director of the Program. The existence of an International Master Program involving the Schools of Medicine and Pharmacy and Biochemistry of UBA and Albert-Ludwigs-University (ALU) became a reality in 2008 accounting, to date, for 79 graduates from different countries. Currently, the program is still successfully running and led by Prof. Cristina Arranz from UBA and Prof. Dr. Christoph Borner from ALU.

In your opinion, why Freiburg University trusted UBA for a collaboration of this magnitude?

UBA is a University funded in 1882 that holds a regional leadership position given its academic reputation, quality of teaching, and a strong research track. Four of the five Argentineans Nobel Laureates were students, graduates, and professors of UBA, being three of them involved in the area of Biomedical Sciences. Moreover, UBA is the first Latin American University included in the QS Global Ranking 2015. This year the University of Buenos Aires scaled 74 positions reaching #85 in the QS World University Ranking. From both my experience as a post-doctoral fellow abroad and from being a professor and researcher at UBA, it is evident that UBA provides a largely superior education than that from other countries. Its education system is based on the stimulation of a critic thinking as evidenced by successful graduates holding positions in the most prestigious institutes worldwide.

Is there an idea of expanding this collaboration to other Latin American or European Universities?

Even though we already receive students from various Latin American and European countries, we believe that a successful program will formally include institutions from other countries. We have already made some progress in this matter. In Germany, the University of Furtwangen signed an agreement within the ALU-UBA collaboration and we have already received students who attended individual modules within the Master Program. The courses attended will provide them credits accepted by the University of Furtwangen. This exchange also

induced other students from this University to apply for research internships in our affiliated labs as part of their education. It is amazing to see how students become immediately interested in this internships and also obtaining excellent results. To date, all the exchange students were fascinated with the research that is taking place at UBA as well as the lab directors with the work capacity of the students. Moreover, one of the undergraduate students generated results strong enough to be included in a manuscript submitted for publication. Also, professors from Furtwangen are actively participating in teaching some modules in Freiburg. On the other hand, we are also looking forward to extending this program to Uruguay with the participation of the Universidad de la República (UdelaR).

What does this students' exchange with the Universidad de la República de Montevideo entail?

For this exchange, Prof. Dr. Christoph Borner obtained financial support from the DAAD for a Project that we called TREAM (TRinational higher Education improvement in Latin AMerica) with the long-term objective of achieving a structured PhD program in Biomedical Sciences as an integral part of our current Master Program and involving the participation of the German ALU and the University of Furtwangen, and the Latin American UBA and UdelaR. During the current stage of the exchange, doctoral students from UBA already did research internships in UdelaR, and vice versa, as well as attending postgraduate courses at both Universities.

Do you think the recent political changes in Argentina will affect, to some extent, the collaboration with Germany?

We hope it won't happen. *(She laughs)* During the former government, there was a strong impulse towards Science and Technology, which started with the creation of the Ministry of Science and Technology. Also, there was a change towards the internationalization of higher education with special fomenting programs within the Ministry of Education. I believe that this was one of the positive things that occurred during the past years in Argentina, and we are confident that this path will continue to grow, as it only represents success to our country and our society.

Every year the IMBS invites Nobel Laureates to inspire the students by giving talks within the Annual Symposium. How do you make this possible? To which extent these meetings might be affecting the professional future of the students?

This was one of our first objectives, I would say dreams, since we started with this program. We imagined that every year the students will have a meeting with a Nobel Laureate in a private space, in addition to the multitudinous conference for all the faculty. Fortunately, we have been succeeding in this matter. At first, I saw it as an unrealistic objective, far from being feasible in a country like Argentina, which is far away from the main developed countries. At first, this dream was possible from personal contacts of the Professors engaged in the program. However, we have also contacted the Nobel Laureates directly explaining them the program and the aim of the meeting with the students and the symposium. We had a high response rate, and we have been accomplishing this dream every year. Regarding how these meetings might affect the professional future of the students, I believe it opens their minds by showing that anything is possible. However, I was never invited to join these meetings as they are private encounters with the students. *(She laughs)* Therefore, it will be better to ask one of our graduates.

Nobel Laureate visits in the IMBS Program

November 2009: **Dr. Harald zur Hausen**, Nobel Prize in Physiology or Medicine, 2008

October 2011: **Dr. Martin R. Zinkernagel**, Nobel Prize in Physiology or Medicine, 1996

October 2012: **Dr. Robert Huber**, Nobel Prize in Chemistry, 1988

November 2013: **Dra. Francoise Barré-Sinoussi**, Nobel Prize in Physiology or Medicine, 2008

November 2015: **Dr. Kurt Wüthrich**, Nobel Prize in Chemistry, 2002

November 2016: **Dr. Erwin Neher**, Nobel Prize in Physiology or Medicine, 1991

Then, I guess we should also arrange an interview with the students…

What can you tell us about the scientific discoveries that started within the IMBS?

All the thesis works that have been presented so far have shown an original and successful input to each field of research. The quality of the works is very high, and the majority of the results are also included in scientific papers published in high-impact international journals of which both the IMBS graduates and their directors are co-authors. Some of these papers are joint publications between UBA and the University of Freiburg.

Which is the main take-home message from the IMBS to the students?

Besides the academic knowledge, which is quite high as we have professors of excellence in each of the subjects, I believe the cross-cultural experience is very strong and affects them positively. Today's world problems, such as hunger, poverty, malnutrition, infectious diseases, and epidemics, are global and should be approached in a joint and interdisciplinary manner. When I say 'joint' I mean global. Being able to work side by side with people with different origins, language, cultural or professional backgrounds and speaking the same scientific language, which is English, unifies us and affects us positively.

Which are the advantages of an IMBS graduate?

Given that the Master is an intermediate degree, most of the students continue their education and pursue a PhD afterwards. However, they become already trained in taking short courses in different topics and, in Argentina, completing the IMBS program provides them the necessary credits for the PhD. Moreover, having worked already with a research hypothesis, learning how to approach the hypothesis as well as drawing conclusions from an experimental supervised research plan already provides the students all the necessary tools for a successful PhD. For those who are not planning to pursue a PhD, the IMBS Program trains them for a successful professional career in industry. In two years, our graduates are provided with an intense training that might take longer otherwise. Currently, more than 60% of our graduates have already obtained or are pursuing a PhD.

How different might your scientific career had been if you had had the possibility to join an International Master Program as the IMBS?

I believe I would have definitely applied for the program. After obtaining my Biochemistry degree, I was positive that I wanted to dedicate my life to research and teaching. I had the chance to do so, and I also had a 2-year experience abroad but only during my post-doc. Nowadays, I apply this approach with my PhD students so that they could have an experience abroad already during their doctoral training. I believe this kind of experiences provide more benefit the earlier you have them in your career path. It is likely that I had had a similar career path to that I had if I had the possibility to join an IMBS-like program as I would have done research and teaching anyway, but probably with a different timing. It is an experience that I definitely recommend to any graduate student who would like to pursue a career in academia.

Would you like to say something to the students that might be considering applying for the IMBS or in the lights of future collaborations with other countries or universities?

I believe there is still much work to do. The possibilities are opening on a daily basis, and there are plenty of options for both the students and us, as education providers engaged in what we are doing. We always try to have a personalized interview with each student to stimulate them with what the program can offer. However, my best advice would be to talk to our graduates. I am passionate and engaged with this program, but it's better to have the opinion of someone who has lived it from the inside, who received what the program has to give.

On behalf of the whole JOSHA Editorial Team, we would like to thank Prof. Dr. Marta Mollerach for her time and for kindly taking part of this interview.

Additional information

The International Master/PhD Program in Biomedical (IMBS) is a joint program between the University of Freiburg and the Faculties of Medicine and Pharmacy and Biochemistry of the University of Buenos Aires in Argentina. The aim of this program is to provide scientific knowledge and state-of-the-art experimental experience to current and emerging biomedical research areas with a focus on translational research and development. The IMBS offers a 2-year course for the degree "Master of Science (M.Sc.) from the University of Buenos Aires". For more information, please visit www.biomedmaster.org.