Interview: Maria Mota – Executive Director, iMM João Lobo Antunes, Portugal



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The iMM (Instituto de Medicina Molecular) is a leading Portuguese private non-profit research institute that offers a vibrant scientific environment, aiming to nurture innovative ideas in basic, clinical and translational biomedical research. Maria Mota approaches her fifth year of leadership at IMM, where she has made it her intention to emphasize the importance of showing curiosity, strengthening ties with the government on research, and ensuring Portugal's molecular research projects bring value to the scientific community.

Please introduce to our readers about your role as executive director of the institute.

As executive director, my first objective was creating a board of directors to help with the running of the iMM. I am ultimately responsible and accountable for overall decisions, and the board was installed to help with the growth of the institute. We have proliferated which requires more organization and efficiency. We now have a President (Maria Carmo-Fonseca) with significant experience and Bruno Silva-Santos. Together we discuss what we have achieved, enabling a strategic outlook, and we then decide on priorities for what we can accomplish and where we want to position the institute in 10 years' time. Once a year we also interact with international scientists who do not necessarily work in Portugal but have a connection with the country and who come and visit. Before these visits, we get a chance to concentrate on the vision for iMM and what type of fields and situations within the institute we want to develop.

We are the most significant biomedical institution in Lisbon, and we strive to stay connected to medical schools and Universities. We have the most curious scientists with the best portfolios who are continually asking critical unanswered questions in their fields. We meet twice a year with these researchers and discuss ways in which the institute can stay connected with Portuguese society. We also have 32 research groups, each led by a specified group leader, who interact directly with the board. These groups have the freedom and autonomy to pursue unanswered questions in their fields. These group leaders are evaluated every four years and deliver personal presentations on what they have achieved and what they want to meet in their area. These presentations are scrutinized by three to five experts from around the world, who will help me decide on whether to promote them or improve their role as a group leader. Finally, I strive to create the perfect environment for these research groups, to keep their full focus on research while the board worries about the administrative side. In essence, we operate a cycle of recruitment, evaluation, environment creation, and research by example.

What is the institute’s positioning in Portugal’s scientific ecosystem?

I would like to think we are the best in Portugal and I want the iMM to be considered an excellent biomedical research center not only on a national level but as a force to be reckoned with on an international level.

What are the main pillars of the institute’s research?

We are not traditionally divided into scientific pillars because we are so diverse. When we last created our strategy for the next five years of research, the board decided on 12 lines of research. However, these lines are not independent of each other and will overlap to ensure that ideas are shared and developed across the board. For example, one line of research is on cancer while another is on aging. However, these are not necessarily mutually exclusive. We see our pillars more regarding molecular biology, physiology and clinical groups concentrating on performing clinical trials.

Could you share your partnership collaboration strategy?

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We have integrated the opportunities from the Horizon 2020 budget into our structure. The integration has given Portugal—as a mid-level player in the research and development sector—a chance to interact with the bigger players in the industry around the world. We have been able to build relationships with other countries, for example in infection and immunity; we have teamed up

our research with the prestigious Francis Crick Institute in London and the Pasteur Institute in Paris.

At first, I was unsure of what results we would achieve, however now I am confident that this networking tool has been a success and has created fantastic opportunities for our students to visit and interact on such a large scale. Furthermore, this tool can be universal, and our students can have access to the iMM wherever they are without a problem. Now, the vast majority of our publications collaborate with foreign institutions.

What extent are iMM and other institutes open to collaborating with pharmaceutical companies?

There has been a sea change in the perception of pharmaceutical companies because our researchers are always asking questions which now delve into this area. Many want to see an outcome from their discoveries, and they hold these companies in high esteem as a way to achieve this. We have one group leader, a chemist, who brought with him the connections needed to bridge the gap between scientists and the pharma companies. The results of his actions created an environment in which scientists were granted access to ask for advice on how to approach these companies.

The success of this collaboration is made in evident in the following cases: we have been successful in attaining a European Research Council grant—which also offers the opportunity to apply for Proof of Concept grant—for which there has been a lot of interest. Ten years ago, this would not have happened, however, nowadays researchers are more open to the situation and see it as a robust opportunity.

Nonetheless, we lack the communication skills in approaching these immense corporate companies. My generation research as the core value and it felt like we were incapable of going further with our ideas. We did not have the skills needed to communicate with these companies; it will be interesting to see what the future brings.

How do you create stronger links between science and entrepreneurship?

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Firstly, we need to focus on creating a unique pack of researchers who understand that it is possible to bridge the gap and use the tools provided for communication, for instance, a translator, to provide stronger connections. I hope our new communications officer can help do that for us as it is vital if we want to bridge this gap. When people and employees are more comfortable, they communicate well and say the right things which provide for better reception and progress. It is

difficult to interact with a wall, and for us that wall is international companies. We may speak the same words but not necessarily the same language.

What is the government doing to support innovation in Portugal further?

This is a difficult subject at the moment. The right intention is there, but things are slow to build up momentum. iMM is a private institute and created as a non-government organization, but three of its founders are public and so use public money. Consequently, despite the nature of the organisation being private, we rely on the government in some ways, which can allow for bureaucracy. The real problem is attaining grants from the government but not being able to spend them for one to two months due to waiting and it is impossible to work in these conditions. The government needs to help create even more interest for science. The government could point in the direction of science and how crucial its development is.

I understand we use a lot of money from the public sector, but the evaluation process of how we spend and when we spend is too much. The problem arises when these rules creep into how private money is spent, and this can lead to a very delicate situation. It is imperative that the government improves its stance on science, and it must stop insisting that science is the future but allocating a small percentage of budget financing to this end. To make strong progress in the future, the allocation of the budget could be more generous and consistent.

What will drive the research focus in Portugal?

Chasing questions is our motto slogan – but the questions will always be there in science. Our issues used to be on fundamental processes, but they are being mixed with questions that can affect direct human health. We must consider investing more in the idea of a society advisory board. Our researchers are the new generation, and they need support to consistently provide answers to our questions. The majority of the time, the issue centers on how the molecule drives the mind of a parasite but now the situation has become more mixed, and we are asking questions on why we cannot kill clever parasites. The research focus is changing and diversifying for the future, and we are headed in the right direction.

What keeps your motivated in your role?

I have always been driven by my curiosity, and I am addicted to obtaining results! I am excited and passionate about innovative concepts and enjoy seeing discoveries for the first time. When we are at the top of the table, discussing and making connections, sometimes we can see the surface connections but to delve deeper requires more research. We have recently reinvestigated an old paper—Nobel Prize research project from early 1900, and with new technology and a future focus,

we can reveal new perspectives and drive discovery.

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