

## Interview with Dr. Felipe L. Assis

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*In this edition, the "Conexão Ciência" journal interviews the biologist and virologist Felipe L. Assis. He is currently a researcher at the FDA (Food and Drug Administration) in the United States. His interview is an inspiration for those who need to overcome challenges in their daily work and study. Felipe had his master's dissertation and doctoral thesis at the Federal University of Minas Gerais (UFMG) awarded for their relevance and quality. The biologist Felipe has a trajectory of international success in the research and had as the starting point the activity of teacher. So read it, enjoy it, and realize how you can overcome the obstacles to your academic, professional, and personal goals.*



*Virologist and molecular biologist with recognized merit for his work in the areas of Human, Veterinary and Environmental Virology.*

*A young scientist, black and simple in origin, who has always sought to challenge his own limits and the limits often imposed by society. He received the awards of Best Masters Dissertation and Doctoral Thesis of the Microbiology Department of the Federal University of Minas Gerais in the years of 2012 and 2016, respectively, for the recognized merit of his research.*

*Dr. Assis is the author of 32 articles published in the last 9 years, a remarkable scientific productivity among Brazilian scientists. He is currently developing his studies at one of the most important research and regulatory agencies in the world, the Food and Drugs Administration (FDA) in the United States.*

*A great researcher and teaching enthusiast and believe that knowledge is the best way to achieve freedom.*

- 1) **Working all day and traveling to study at night, a story very common to most of our readers. Show our readers that it is possible to get out of this difficult routine and reach the world's largest food and drug regulatory agency, the US FDA (Food and Drugs Administration)**

It really is not at all easy to divide yourself between work and study. Unfortunately, several students end up giving up the university course due to this difficulty. When I think of the opportunity I am having here at the FDA, I see clearly that the way to this achievement would be even more difficult, perhaps impossible, without the family support of friends and the encouragement of teachers truly committed to the training of their students. The good news is that such a grueling routine, which demands enormous willpower, ends up strengthening those who can overcome this obstacle, and prepares us for the challenges faced by those who choose to pursue their studies after graduation. To conclude, I believe that a successful career involves recognizing, within your field of action, the area that interests you most, defining a professional goal and setting the goals to achieve it and of course stay focused.

- 2) **Was your experience as a teacher, an area that was sometimes very undervalued in Brazil, important for this successful trajectory? Tell us a little about the role of the teaching experience in this walk.**

My first teaching job was in the public school in Contagem / MG, when I taught for children, young people and adults. I had just graduated from a bachelor's degree, but I had no concrete experience as a teacher until then. My passion for this profession certainly began at that moment. This and all the other experiences that I had as a teacher certainly added a lot of value to my training, but I believe that the most important of them was Responsibility, not only responsibility with schedules and norms, but responsibility for the formation of students. So I have always tried to prepare myself as best I can to be the best teacher my future students can have.

- 3) **You received awards for the best master's dissertation and doctoral thesis at UFMG in the years of completion. Many of our student readers are in the process of writing the Conclusion of the Course Work (TCC) and many teachers intend to do masters and doctorates. Tell us a little bit of the secret to success in your searches.**

The truth is that winning these awards has never been a goal. I believe that being part of a motivated and committed research group was what gave me the right environment for the development of quality jobs.

So, these awards recognized not only my efforts, but the commitment of a whole group that has been carrying out excellence works for more than 20 years.

- 4) **Speaking a little about your international trajectory, initially in France, tell us about the difficulties and facilities of a Brazilian researcher in that country.**

I believe that the difficulties of each researcher may be different depending on the region of France where he is, his domain of the local language and scientific culture of the institute where he is. Marseille was a very welcoming city, mainly because it is an important tourist itinerary of the South of France. A beautiful place with a very heterogeneous community, and even if I did not speak the local language I managed to "find a way" well with English alone. The greatest difficulty was adapting to the scientific culture of the institute in which I found it to be a very competitive culture, very different from the collaborative culture I was accustomed to in Brazil. But this should not be taken as a rule, as I know other colleagues who have had experiences different from mine in other institutes. The greatest facilities are undoubtedly the excellent structure of universities and high investments in science and development of new technologies in that country.

- 5) **Tell us a little about the experience in the United States.**

This story began in an unusual way. My counselor in Brazil received a phone call and when she hung up, she came to ask me if I would like to do a postdoctoral in the USA. It was a big surprise, as I was writing a report and request for extension of the postdoctoral project in which I was working at that time. I asked her why I was being nominated for that position, and she told me that they needed a person with my characteristics and abilities. I often say that great opportunities appear to those who are prepared. I have decided to emphasize, and I have been here since March 2017. It has been a wonderful experience, a clash of both cultural and professional reality.

- 6) **Give tips to those young students who want to go to one of these countries, to prepare properly, to succeed, and to avoid more complicated obstacles.**

Well, the first step is to learn a second language. If the student does not yet have a certain destination, such as France, I suggest the English that, in the academic environment, is universal. The second step is to rank yourself as a potential candidate. The best way for me to prepare properly is to treat all stages of training seriously, avoiding the shortcuts and facing

the challenges that most are avoiding, as this will bring a differential that can be decisive in your career.

**7) You have a greater number of publications than many experienced researchers in a short academic career. Give our readers tips on how you got these numbers, so they can also publish your searches.**

I think the volume of publications that I have accumulated during my career so far is the result of a lot of work, focus and, as I said before, the result of a collaborative scientific culture that I found within a very motivated and creative research group. In addition, I had the opportunity to work on highly relevant projects, pioneers and coordinated by equally productive advisers who stimulated scientific dissemination. The tip I would give is not to attach to the publication number, but rather in its quality and relevance. Try to innovate in approaches whenever possible, pay close attention to what few are paying attention to, since there may be something interesting, relevant and with potential for publication.

**8) We know that you cannot specifically talk about your virus research at the FDA because of confidentiality issues. But can you tell us why study viruses, why the United States and the FDA? Also talk a little about your future plans, if you intend to be a researcher, teacher or both careers?**

My choice for viruses came in 2009 during the first class of the Microbiology Specialization course, and the main reason was curiosity. During that lesson I realized how little I knew about the "virus world". That class, taught by Prof. Flavio da Fonseca, was so impressive that the following week I applied for a vacancy in the laboratory of Virus at UFMG, where I then studied Master's and Doctorate. The United States is a great scientific power, which provides the researcher with all the necessary conditions for the development of his research. The FDA is among the great research institutes in the country, and it was here that a great opportunity presented itself to work on a project of very high relevance. When I think about the future, I find myself doing research and teaching, whether in Brazil or abroad.

**9) In these wanderings across Europe and North America, what areas of your field do you indicate as promising for the coming decades? Why?**

Virology has been gaining more and more notoriety worldwide, mainly due to the great impact of viruses on public and veterinary health. So there is a constant interest in developing more effective vaccines for several of these diseases. In addition, studies using viruses in the treatment of some types of cancer, have shown promising results. I believe that soon this approach will be a reality. I bet a lot also in the Phagoterapia, that is the use of virus (bacteriophages) in the treatment of bacterial infections. This approach has been little explored until the last decade but has been growing gradually. I think it will soon be a reality to find more Phage-based products on the shelves of pharmacies, noting that some products are already available in some countries.

**10) Send a message to our readers of encouragement to embark on the academic field, from teaching to high level research.**

Science brings me a great personal satisfaction and provides me to meet many people of diverse cultures and realities. In addition, I also had the opportunity to meet several interesting places both inside and outside Brazil. It is true that academic life is quite challenging, but it is at the same time very gratifying if this choice is taken with maturity and awareness. There is no short-term return in science, everything takes time and a lot of dedication. But the scientific advances achieved by the fruit of each student's effort and resilience make it all worthwhile. So for those who have a questioning spirit they can rest assured that the academic field is their place. By opting for this area, try to avoid shortcuts and seize every opportunity that comes up, be ethical and responsible. Always keep in mind that no knowledge should be kept for you, and as important as generating knowledge is sharing it.

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Co-editor of Conexão Ciência Journal.*