



## ESSKA-AFAS PAU GOLANO RESEARCH FELLOWSHIP REPORT

London (United Kingdom)

Fellow: Francesc MALAGELADA

The ESSKA-AFAS Pau Golano Fellowship was enormously meaningful for me. When I was a medical student in 1999, there was an elective subject, Arthroscopic Anatomy, that had a reputation for being difficult and having a very low pass-rate. This didn't dissuade me from enrolling, and the first day of class I realized that the lectures were truly exceptional, compared to the rest of my subjects. The quality of teaching and the audio-visual materials were extraordinarily impressive. The enthusiasm of the professor was also something I had never seen at the University of Barcelona. That professor was Pau Golano, and he changed my life. I learned his strict work-ethics, and learned to aim for excellence in every aspect of life, and not just clinical work. Under his influence, I developed an interest in orthopaedics, and eventually became Pau's intern in the anatomy lab, where I could enjoy the luxury of personally learning from him. He was a role-model and a mentor to me, and to many others. We all admired his principles. Fast forward 15 years, and it is an honour to receive the ESSKA-AFAS Pau Golano Fellowship Grant.

I started in London with Mr James Calder, and one of our first conversations was about Pau and his carefully prepared lectures—to which Mr Calder contributed, and which he tweaked with Pau. Then I was introduced to the rest of the team, of which Dr Jo Stephen was by far the most active. She oversees and directs much of the research that is being undertaken at Fortius along with Mr Calder. Without her help my research project would have been difficult to start, and probably impossible to finish! Research needs thinking 'outside-the-box', careful planning, and meticulous execution, all of which require a great deal of paperwork. It can easily collapse, unless some basic principles are followed. There is a need for discipline, clearly defined goals, patience, and some understanding of academic politics. The team at Fortius helped me navigate all these hazards, without event.

The topic of Kager's fat pad was intended to be my area of investigation. There is not much known about this fatty structure adjacent to the Achilles tendon, but it seems obvious now that it plays a role in the patho-physiology of heel disorders. After formulating a hypothesis and before embarking on lengthy procedures, an Ethical Committee proposal must needs be written and approved. Once we got the 'all clear', the fun could begin! Cadaveric dissection was a large part of my project and I tried to apply the teachings of Pau in my work. Biomechanics is an area in which Fortius and the Bioengineering lab at Imperial College excel, and until this Fellowship it was a field largely unknown to me. I was exposed to futuristic and robotic-looking devices that were created to investigate specific joints of the human body. Cadaveric ankles were mounted into a machine that would replicate loading forces and enabled measurements of pressure-changes within the Kager's fat pad, by means

of a sensor introduced under ultrasound guidance. After a long day in the lab, I often felt physically and mentally exhausted, but also proud of what I had achieved.

For the duration of my fellowship Mr Calder continued his clinical work and operating sessions. He opened the doors of his clinic and operating theatre to me, which was highly appreciated. Lab duties permitting, I was able to observe him performing surgery and better understand his decision-making process for his patients, who number many high performing athletes. At Fortius one could meet with other visiting surgeons and researchers from all over the world; from Hong Kong, Sweden, Australia, Egypt, Greece and so on.

To quote a character from one of my favourite shows: *"The only time success comes before work is in the dictionary"*. This saying fits the team at Fortius and Mr Calder like a glove. Unbelievable amounts of hard work are required to achieve their results, and to be recognized as a world-leading institution in the field of foot-and-ankle and sports orthopaedics. But it is also true, at Fortius, that after hard-work comes good fun. We were invited to local restaurants for dinner or tea, after a hard day in the lab or a long meeting. These occasions brought us closer to the team, and we could discuss other things than ankle-anatomy and techniques. A succulent Lebanese meal in High Street Kensington would foster conversation about world cuisine, travel, football or footballers some of whom had been treated by Mr Calder himself.

My fellowship resulted in two papers for publication, one on the histology of the Kager's fat pad, and another on the anatomy and the pressure changes experienced at the junction between the Kager's fat pad and the Achilles tendon. The study was accepted for podium presentation at the ESSKA's Congress in Glasgow in May 2018. During the congress we also had the privilege to see Mr Calder becoming the Chairman of ESSKA-AFAS. No doubt he will bring years of glory to the Society.

I will be forever grateful to ESSKA and the AFAS Section, in particular to Dr Pereira, Dr Haverkamp, and obviously Mr Calder and Dr Stephen at Fortius. They gave me the opportunity to learn and enjoy with them while continuing to honour the reputation of our esteemed Pau Golano, as well as ESSKA's core-values and principles.

ESSKA would like to thank



for supporting the scientific segment of the  
ESSKA-AFAS Pau Golano Research Fellowship.