I am a postdoc working in the lab of Prof. Erhard Hohenester in the department of Life Sciences at Imperial College London in collaboration with Dr. David Hulmes from Lyon. Our interests lie in the structural determination of extracellular matrix (ECM) components, their mechanisms of interaction and signalling. Specifically, I am trying to understand the role of the different molecules that form collagen fibres during homeostasis and disease. Fibrillar collagens are synthesized as procollagens of which the N- and C-propeptides present globular domains that maintain molecular solubility. After cleavage of the propeptides, the mature collagen is no longer soluble and the fibrils begin to form. At the C-terminus, the C-propeptide is cleaved by the metalloproteinase bone morphogenetic protein 1 (BMP-1) involving the adaptor and enhancer molecule procollagen C-proteinase enhancer protein 1 (PCPE-1). Recently, I have obtained the crystal structure of the complex between the C-propeptide from procollagen type III and PCPE-1. The crystal structure revealed the mechanism of enhancement of BMP-1 cleavage of procollagen mediated by PCPE-1.

Excited about our results, we wanted to share them with the scientific community in the extracellular matrix field. And what a better occasion than in the biennial meeting of the American Society for Matrix Biology held at St. Petersburg, Florida the past 13th to 16th of November 2016. As ~~being~~ a member of the International Society for Extracellular Matrix, I was aware of the magnificent program of travel awards that the society offers 4 times a year for junior scientist until 5 years after their PhD. Being eligible by the scheme, I decided to present my case, and it was accepted! So I could attend ~~to~~ my first meeting in the U.S. in one the biggest conferences in the field of extracellular matrix.

The biennial meeting “The ECM microenvironment: A regulatory force in aging and disease” started with the concurrent trainee led sessions, an initiative that enabled young PhD. students and post-docs to organize, lead and invite both junior and senior researchers to participate and present their latest results. Afterwards I had the pleasure to assist to the ASMB award talks where Victor Tagliabracci as a Junior Investigator Awardee introduce me to the amazing world of the extracellular kinases, a new field in extracellular matrix that clearly is growing fast. The Iozzo Awardee Thomas Barker, described from an engineer point of view, in a magnificent lecture, the extracellular mechanotransduction in fibrosis. The Senior Investigator Awardee Renato Iozzo gave an inspiring talk about the not yet clearly understood mechanism of autophagy promoted by different extracellular matrix proteins; indeed a new area of research worth keeping track of. Finally, the day was closed with the Keynote lecture of Judith Campisi that personally helped me to better understand how the extracellular matrix plays a role in cellular senescence.

The conference was followed by excellent plenary lectures and concurrent sessions that covered a wide range of areas from metabolic diseases, fibrosis, ECM proteomics and structure, basement membranes, proteases, mechanobiology … I was amazed to attend to so many lectures where worldwide experts, in that varied range of research areas, presented their latest results. The ASMB meeting has been personally an excellent platform to acquire a better and wider picture of the current research in the extracellular matrix field, and equally important let me interact with both junior and senior researchers setting the bases for possible future collaborations. I am profoundly grateful to the ISMB for conceding me the International Travel award and I encourage young scientist to apply to this wonderful scheme.