Giulia Mottadelli

Project title: In vitro modelling of Hirschsprung disease: potential of generation and characterisation of enteric nervous system progenitors

Duration	5 months
Short Bio	I'm a Paediatric surgeon at the end of my residency program. I'd never had during the residency any chance to work in a research Lab or do basic science during my studies. I wanted to experience and to learn about basic research and laboratory work to be able to integrate my clinical and surgical everyday work with knowledge from research.
Home Institution	Department of Paediatric Surgery, Umberto Bosio Center for Digestive Diseases, The Children Hospital, Alessandria
Host institution	Surgery and Stem Cell Section, UCL Great Ormond Street Institute of Child Health
Project description	My project was based on an in vitro model of Hirschsprung disease (HSCR). HSCR is one of the most common intestinal congenital dysmotility and is caused by an incomplete development of the enteric neural system during the embryologic development. Its importance resides in the fact that it has a huge impact on morbidity and mortality in paediatric population. We used an in vitro HSCR model obtained from mouse pluripotent stem cells to study whether an affected cell line is able to differentiate in mature enteric neural system in vitro.
Personal statement	This fellowship granted me the ability to work in a research laboratory that carries top level research projects in paediatric care. I was able to learn how to perform basic science research, to develop my own project and to perform every part of it. I was personally involved in every step of the project, and I learned different laboratory techniques that I can now use in my home institution to develop further the research started abroad. I will be able to develop a new project based on what I learned and discovered during my period abroad and to bring this knowledge to my colleagues here at my home institution.

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