Silvana Lobo

Project title: *CTNNA1 in Hereditary Diffuse Gastric Cancer: unveiling 2nd hit mechanisms and somatic alterations*

Duration	*12 weeks*
Short Bio	*Silvana has a bachelor degree in Biology and a master in Molecular Oncology. She enrolled in her PhD in February 2021 aiming to study the impact of CTNNA1 germline variants in Hereditary Diffuse Gastric Cancer (HDGC). She wants to fully disclose the disease spectrum associated with CTNNA1 germline variants, understand variant-type causality associated with cancer development and find molecular alterations that can be used to improve prognosis and therapy of CTNNA1 germline variant carriers with HDGC. She is developing in vitro and in vivo study models allied to a strong clinical component to achieve this aim.*
Home Institution	*i3S - Instituto de Investigação e Inovação em Saúde*
Host institution	*Hôpital Pitié-Salpêtrière, Assistance Publique – Hôpitaux de Paris and Sorbonne University*
Project description	*HDGC predisposes to Diffuse Gastric Cancer (DGC) and Lobular Breast Cancer. Within the scope of my PhD, we have confirmed an association of CTNNA1 truncating variants to early-onset DGC. CTNNA1 is a tumor suppressor gene that encodes for aE-catenin. aE-catenin impairment can disrupt normal function of both adheren-junction and actin cytoskeleton complexes, leading to tumor initiation/development. With this fellowship, we wanted to unveil molecular alterations occuring in CTNNA1 variant carriers. For that, we collaborated with Dr. Patrick Benusiglio from Pitié-Salpêtrière Hospital in Paris. I extracted DNA/RNA from normal and tumor tissue; performed genomic/transcriptomic analysis on DNA and RNA, respectively. The learn know-how from this project is helping us to understand mechanisms underlying DGC initiation in CTNNA1 germline variant carriers.*
Personal statement	*This was an ambitious project that was possible to achieve with*

	the EJPRD fellowship. This fellowship allowed me to travel to a new country and to collaborate with different researchers, experts in the scope of the project we wanted to develop. This was imperative for the success of this project, which is extremely important under the scope of ERN-GENTURIS, because it facilitated the exchange of knowledge and material to be used throughout. The EJPRD fellowship has also allowed me to expand my scientific horizons while acquiring new skills, complementing my bench-lab experience.