Featured Customer Profile

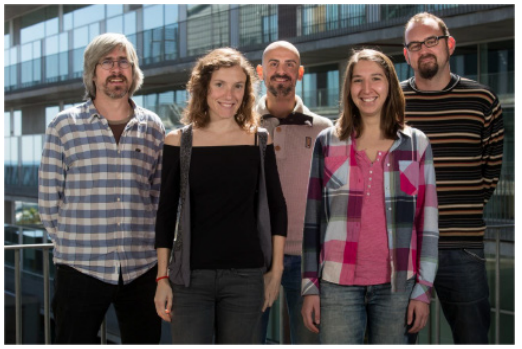
A Minute with Dr. Ferran Casals

Dr. Ferran Casals, Head of the Genomics Core Facility at the Universitat Pompeu Fabre (UPF) in Barcelona, graciously answers a few questions about his work, his views on the future of Next-Generation Sequencing (NGS), and… his team's love for chocolate.

Dr. Casals enjoys working at the UPF, a modern international public university whose principles are based on rigorous instruction and research since 2010. UPF is committed to outstanding research, within three main fields of knowledge: Social sciences and Humanities, Communication and Information technologies, and Health and Life sciences.

In 2018, Dr. Casals' laboratory is collaborating with researchers at the Department of Experimental and Heath Sciences at UPF. Their aim is to implement new approaches and methodologies of genetic analysis such as single-cell sequencing, as well as developing new protocols for library preparation. They are also researching on somatic variant detection, the analysis of degraded samples, such as those from the Spanish Civil War, and the improvement of bioinformatics pipelines for Copy Number Variation (CNV) detection from NGS data. His latest research work in this area was published in 2017, "*Detection of genomic rearrangements from targeted resequencing data in Parkinson's disease patients.*" Other areas of collaboration include research in the areas of chromosomal sequences of diverse Indian populations to understand the demographic history of humans, and the study of the genetic origin of primary immunodeficiencies.[1] Dr. Casals is excited about NGS as it is an area of continuous development with with quickly evolving technologies which enables previously difficult analysis, such as the transcriptome characterization of single cells, now feasible.

However, Dr. Casals admits that sometimes new methodologies are out of reach and collaboration between companies can be difficult. As a core lab, they are happy to have contributed to the achievements of the researchers. In particular, there is great satisfaction of acting as a link between genomics and medical labs as accessing the genomics science is sometimes complex for labs performing medical research.



The Genomics Core Facility Team (left to right): Ferran Casals, Raquel Rasal, Roger Anglada, Núria Bonet, and Marc Tormo

As a long time user of Roche products, such as the LightCycler® instrument, SeqCap EZ Target Enrichment, and KAPA Library Preparation, Dr. Casals is an advocate of the quality and support afforded from Roche. To that end, he is hopeful to start his next cancer research project using the new SeqCap EZ Human Oncology Panel.

In the future, Dr. Casals believes that we will see promising advances in terms of long-read sequencing (single-molecule or synthetic reads), and in the improvement of library preparation from small amounts of DNA or RNA which will enable single-cell sequencing or sequencing of old and degraded samples.

As we thanked him for his time, we also asked him how his team celebrated new discoveries. "Everything is always celebrated with chocolate", he replied.

[1] Find other collaborations and information at:
https://www.upf.edu/web/sct-genomics/research

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