



Laudation for Dr. Arnau Sebé-Pedrós

Group Leader
Centre for Genomic Regulations (CRG), Barcelona, Spain

Finalist of the Eppendorf Award for Young European Investigators 2022

by Prof. Reinhard Jahn, Max-Planck-Institute for Biophysical Chemistry, Göttingen
Chairman of the independent Eppendorf Award Jury

In recent years, rapid progress has been made in understanding the gene regulatory networks, which give rise to different cells and tissues during development of a multicellular organism. However, it is still miraculous how distinct transcriptional programs give rise to unique cellular phenotypes such as liver cells or neurons, with their specific properties being defined by many hundreds of distinct protein complexes cooperating with each other. Even less is known how such highly differentiated cell types originated, which types of genetic changes were instrumental, or whether certain cell types originated several times independently during evolution.

Addressing such questions requires not only a directed and intelligent use of the most sophisticated “omics” techniques available today but also sophisticated data mining, a lot of computation, and unconventional approaches. For instance, we all know that evolution cannot be understood by sticking to the model organisms such as *C. elegans*, *Drosophila*, or mice that we all use. However, I guess only few of us would have considered using “primitive” animals such as sponges or corals, jellyfish and the like as powerful resources for the study of molecular evolution. This is exactly what Arnau Sebe-Pedros has been doing,

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one of this year's finalists of the Eppendorf Young Investigator Award. Unfortunately, Arnau cannot be with us here today (and considering the present chaos in air traffic he may not have made it anyway), but I will briefly introduce him.

Arnau grew up in a tiny village outside Barcelona in Catalunya. He joined the University of Barcelona for his undergraduate and graduate studies, being interested in molecular evolution from the very beginning, and he joined the lab of Inaki Ruiz-Trillo for his PhD. He then moved to the Weizmann Institute in Israel, working for 3 ½ years with Amos Tanay, before returning as a Group Leader to the Centre for Genomic Regulation in Barcelona. From the beginning of his career, Arnau has been highly successful, publishing an impressive list of papers in the very best journals such as Cell and Nature Ecology and Evolution. His work show us in the most impressive manner that the application of modern-day single cell transcriptomics and other omics approaches can yield profound and unexpected insights into gene regulation and differentiation during the evolution of species.