

**PRESS RELEASE**

Barcelona, 6<sup>th</sup> November 2018

## **Training the next generation of scientists in three-dimensional architecture of the genome**

- [ChromDesign](#) is a new European training network recruiting now 13 PhD candidates (Early Stage Researchers)
- ChromDesign PhD fellows will investigate how the genome organizes in 3D over time and its relationship to gene regulation in health and disease.
- The network is coordinated by the Centre for Genomic Regulation in Barcelona, Spain, and brings together three universities, six research centres, four companies as well as one funding and one publishing organization.

How does the three-dimensional architecture of our genes affect the differentiation of cells and development of diseases? This is the question behind the European Innovation Training Network "[ChromDesign – Chromatin and Design](#)". 13 young researchers performing their PhD thesis in Europe will tackle this question with the final goal of identifying novel features in the three-dimensional structure of genes, the so-called chromatin, which are responsible for the development of cells in health and disease.

"Deciphering not only the genetic code but its three-dimensional structure in health and disease will set the base for the development of new diagnostic tools, and the identification of novel therapeutic targets, which have the potential to be exploited to deliver new treatments for diseases like leukaemia," explains [Luciano Di Croce](#), ICREA research professor at the [Centre for Genomic Regulation](#) (CRG) in Barcelona and coordinator of this project. ChromDesign is an interdisciplinary project that will gather together universities, research centres and companies with different areas of expertise. "We are interested not only in the biological question but also in the way our results can be shared with the society. Designers and scientists will work closely together to implement original, attractive and efficient ways to communicate the project's complex scientific concepts to the broader society," Di Croce adds.

The **ChromDesign** Project, awarded with a 3,430,220.76 € budget, is a Marie-Sklódowska-Curie Innovative Training Network funded by the European Commission under the H2020 Framework Program. The project brings together researchers in Spain, Denmark, Switzerland, Germany, France, Italy, Belgium and United Kingdom, in the academic and private sector. **ChromDesign** opens today a call to recruit 13 PhD students in the different laboratories of the network.



CHROMDESIGN



### **3D-Genome: an emerging research field that requires new trained and specialised scientists**

Gene regulation is essential for cell development and differentiation. Alterations occur during ageing, and may cause several human diseases, including congenital malformations and leukaemia. It is now evident that to better characterize gene expression it is not sufficient only to understand the linear organization of the genome. The main focus of the network is to investigate how the genome organizes in 3D over time and its relationship to gene regulation in health and disease. We will address this challenge by using and developing technologies in four main areas of research: imaging, cell biology, genomics and computational modelling.

Moreover, in an integrated team-effort with the non-academic partners, we will focus on translating our results into clinical applications. In this framework, we will train a new generation of junior researchers at the interface of the different research areas and we will empower them with state-of-the-art technologies, to boost their career and the future of 3D genomics and epigenomics. The high-level training programme will include secondments, internships, and summer and winter schools, including modules with theoretical and hands-on sessions on different technologies, research integrity, open science and transferable skills, such as entrepreneurship, research management, science communication, outreach, and career related topics.

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### **NOTES TO THE EDITOR**

**ChromDesign website:** [www.chromdesign.eu](http://www.chromdesign.eu)

#### **ChromDesign partners:**

(Academic)

- [Centre for Genomic Regulation](#), Spain
- [University of Copenhagen](#), Denmark
- [ELISAVA - School of Design and Engineering](#), Spain
- [Friedrich Miescher Institute for Biomedical Research](#), Switzerland
- [Helmholtz Zentrum Muenchen](#), Germany
- [Institut Curie](#), France
- [Max Planck Institute for Molecular Genetics](#), Germany
- [Institute of Human Genetics \(IGH-CNRS\)](#), France
- [University of Montpellier](#), France (associated partner)
- [Milner Therapeutics Institute](#), United Kingdom (associated partner)

(Companies)

- [Istituto Europeo di Oncologia](#), Italy
- [Diagenode](#), Belgium
- [Surfrender](#), The Netherlands (associated partner)
- [Domestic Data Streamers](#), Spain (associated partner)

(Publisher)

- [EMBO Press](#), Germany (associated partner)

(Funder)

- [Fundació Privada d'Estudis i Recerca Oncològica](#) - FERO, Spain (associated partner)



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**About the Centre for Genomic Regulation (CRG):**

The [Centre for Genomic Regulation](http://www.crg.eu) (CRG) is an international biomedical research institute of excellence, created in December 2000. It is legally constituted as a non-profit foundation and has the participation from the Catalan Government through the Economy and Knowledge Department and the Health Department, as well as from the Pompeu Fabra University, and the Spanish Ministry of Economy and Competitiveness. Its mission is to discover and advance knowledge for the benefit of society, public health and economic prosperity.

The CRG believes that the medicine of the future depends on the groundbreaking science of today. This requires an interdisciplinary scientific team focused on understanding the complexity of life from the genome to the cell to a whole organism and its interaction with the environment, offering an integrated view of genetic diseases.

[www.crg.eu](http://www.crg.eu)

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