

***Press release PloidyNet:***

'PloidyNet': The impact of chromosomal instability on health: Molecular causes and consequences of aneuploidy' – A Marie Curie Initial Training Network.

We are pleased to announce the kick-off of PloidyNet, a Marie Curie Initial Training Network (ITN) financed by the European Commission's Seventh Framework Programme in the context of People-Marie Curie Actions. PloidyNet brings together 9 academic and 3 industrial partners throughout Europe, to train 11 young promising scientists in the field of aneuploidy over the next four years.

In each cell division, cells duplicate their genetic information. This information is encoded on the chromosomes and needs to be faithfully distributed over both daughter cells in a process named chromosome segregation. When chromosome segregation is flawed, the emerging daughter cells acquire unbalanced chromosome content, a state known as aneuploidy. This state, on its turn, is a hallmark of cancer cells, seen in more than two third of all cancers. Aneuploidy appears to have detrimental consequences for the physiology of normal cells, inhibiting rather than stimulating cell proliferation, but cancer cells seem to benefit from aneuploidy suggesting that cancer cells have acquired mutations that help them cope with aneuploidy. Although it is clear that aneuploidy can contribute to cancer, the molecular consequences of aneuploidy and how it contributes to malignant transformation remain elusive.

The scientific challenge of PloidyNet is thus to determine and compare the molecular consequences of different levels of aneuploidy. To accomplish that, we combine the expertise of some of the key labs in Europe with experience in this field, including the labs of René Medema (Netherlands Cancer Institute, Amsterdam, the Netherlands), Floris Fojer (European Institute for the Biology of Ageing, UMCG, University Groningen, the Netherlands), Geert Kops (University Utrecht, the Netherlands), Stephen Taylor (University of Manchester, UK), Bill Earnshaw (University of Edinburgh, UK), Erich Nigg (University of Basel, Switzerland), Zuzana Storchova (Max Planck Institute for Biochemistry, Martinsried, Germany), Rocio Sotillo (EMBL Monterotondo, Italy), Charles Swanton (London Research Institute, UK), Guido Zaman (Netherlands Translational Research Center, NTRC, Oss, the Netherlands), Olaf Hardt (Miltenyi Biotec, Bergisch Gladbach, Germany) and Bernard van Vliet (Syncom, Groningen, the Netherlands).

PloidyNet will train a total of 9 PhD students (early stage researchers) and 2 postdocs (experienced researchers) who aim at consolidating their research experience in the field of aneuploidy. PloidyNet students will benefit from the vast and proven expertise of the participating labs, and will thereby be exposed to ground-breaking aneuploidy research, and state of the art techniques in several model organisms. In addition, but no less important, a significant part of their training will be provided by the industrial partners, offering these researchers, at the beginning of their scientific careers, the possibility of making informed decisions about their future in either academia or in industry.

More specifically, PloidyNet researchers will get technical training through the engagement in an individual research project, but also through the participation in workshops and dedicated courses organized by the institutions that are part of this network. All investigators and trainees will meet at a yearly conference to exchange and discuss results, thus fostering healthy, collaborative interactions with other labs and enabling the creation of a scientific network for the future. In sum, with PloidyNet we believe we can make a significant and systematic contribution to the formation of future leaders in the field of aneuploidy.

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