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# JÜLLER MÜLLER

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CV

PARTICIPANT AT:

## CODING AND NON-CODING FUNCTIONS OF THE GENOME BARCELONA CONFERENCE ON EPIGENETICS AND CANCER



**October, 29<sup>th</sup>-30<sup>th</sup>, 2015, Barcelona**

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**Jürg Müller**, Group Leader and Senior Faculty at Max Planck Institute of Biochemistry, Munich, Germany

Jürg Müller studied biology at the University of Zürich where he received his PhD in 1991. For his post-doctoral studies, he joined the laboratory of Peter Lawrence at the MRC Laboratory of Molecular Biology in Cambridge. Jürg Müller has led his own research group since 1996, first at the Max Planck Institute for Developmental Biology in Tübingen and then at the European Molecular Biology Laboratory in Heidelberg. Since 2010 he is at the Max Planck Institute of Biochemistry in Munich. His lab studies the role of chromatin in transcriptional regulation, using biochemistry and genetic approaches in *Drosophila*.

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ABSTRACT

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### **Heritability of Polycomb-repressed chromatin**

Polycomb group (PcG) proteins form conserved multiprotein complexes that maintain cell fate decision in animals and plants by repressing developmental regulator genes in inappropriate cells. Among the best-understood target genes are the HOX genes where the PcG machinery is required for the long-term heritable silencing of these genes (1). The mechanisms by which the PcG machinery silences gene transcription and permits this silencing to be heritable are not well understood but they involve both the covalent and non-covalent modification of chromatin at target genes (2-5). Here we will present work that addresses (i) how the histone modification H3-K27me3 may contribute to inheritance of repressed chromatin, and (ii) the molecular basis of how PcG protein complexes assemble at specific sites in the genome.

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