
MARIA ELENA TORRES-PADILLA

CV

PARTICIPANT AT:

**CODING AND NON-CODING
FUNCTIONS OF THE GENOME**
BARCELONA CONFERENCE ON
EPIGENETICS AND CANCER**October, 29th-30th, 2015, Barcelona**

Maria Elena Torres-Padilla, Group leader at the Institut de Génétique et de Biologie Moléculaire et Cellulaire (IGBMC), Strasbourg, France

Maria-Elena did her undergraduate studies at the Faculty of Sciences of the UNAM, Mexico and obtained her Ph.D at the Institut Pasteur in Paris in 2002. She was a postdoctoral fellow at The Gurdon Institute, University of Cambridge, UK between 2002 and 2006. She then worked as senior scientist with Laszlo Tora until 2008. She leads the team "Epigenetics and cell fate in early mammalian development" at the IGBMC in Strasbourg, France since december 2008. She holds an ERC-Starting Grant and became EMBO member in 2015.

B-DEBATE IS AN INITIATIVE OF:



MARIA ELENA TORRES-PADILLA**ABSTRACT**

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Epigenetic Mechanisms in Early Mammalian Development

Our lab focuses on understanding how early mouse development is regulated by chromatin-mediated changes in gene regulation, that is, by epigenetic information. In particular, we are interested in understanding how the transitions in cell potency and cell fate are regulated by chromatin-mediated processes. We use the early mouse embryo as a unique model system to study totipotency in vivo and the de novo establishment of chromatin domains, as well as how chromatin regulates cell fate decisions and the consequent generation of pluripotent cells in the embryo. Our recent work has focused on the molecular understanding of how individual cells transit from totipotency and pluripotency and viceversa, and has identified molecular mechanisms that regulate this transition. I will present an overview on our efforts towards understanding how heterochromatin impacts cellular plasticity and genome reprogramming in vivo.

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