

Postdoctoral positions available in Genome Biology lab at INGM

The Institute:

Istituto Nazionale di Genetica Molecolare (INGM) is a growing research institute that focuses on preventive molecular medicine, tumor associated infectious diseases, RNA biology and Epigenetics. Based within the campus of the IRCCS Ospedale Maggiore of Milan, it provides a dynamic and highly interactive research environment strongly connected with the clinic and translational medicine.

Description:

A three years Wet and Bioinformatics Postdoc positions are now available at INGM, Milano, in the laboratory of Genome Biology, headed by Dr. Beatrice Bodega.

Our work is focused on the understanding the impact of Transposable elements in human genome regulation, in particular in human T lymphocytes and cancer biology.

Non-coding regulatory RNAs (ncRNAs) represent a cell specific source of key epigenetic players involved in cell identity and differentiation; interestingly among the non-coding fraction of the human genome, 69% is represented by DNA repeats. A plethora of potential regulatory functions for expressed repeats have been assayed using data generated by the ENCODE and FANTOM consortia. These studies indicate a functional role for repetitive DNA, in particular Transposable Elements (TEs) in cell identity by means of repeat-encoded, ncRNA-mediated mechanisms. Very recently, L1s have been described as chromatin associated RNAs, regulating chromatin accessibility and the transcription of a subsets of specific genes in mESCs, suggesting a novel ncRNAs like function.

In the current project, with the use of integrated multi-omics approaches (RNA-seq; whole genome sequencing, chromatin RNA-seq, imaging-based approaches) we intend to decipher at high resolution TEs dynamics in the tumor microenvironment in order to define a tumor specific transcriptional signature that possibly contributes to the cell-cell networks between malignant and immune cells within tumor ecosystem. Moreover, we aim to identify novel and non-coding transcript that represents an original resource to find targetable RNA molecules in the tumor immunology field.

Qualifications:

Potential candidates should hold (or about to obtain) a PhD, or three years after degree experience, in cell and molecular biology or computational biology. We expect our new team members to be highly motivated, creative and committed to pursue a carrier in science.

Given the collaborative and multidisciplinary nature of the project, excellent communication skills and understanding of cancer biology, epigenetics and transcriptomics are also strongly recommended. Salary will be commensurate with experience. International mobility will be considered a major plus.

Please apply submitting CV, a motivation letter describing your background and interest in our research and names of at least two referees to Dr. Beatrice Bodega (bodega@ingm.org).