

Post-doctoral position - miRNAs and non-coding RNAs – (BC:73476)

We are seeking a post-doc to join the project “*microRNAs degradation dynamics in human cancer*” funded by AIRC and coordinated by Dr. Francesco Nicassio at the Center for Genomic Science of IIT@SEMM (<https://www.iit.it/it/centers/cgs-semm>), located in Milan and one of IIT's national research nodes.

The candidate will join the “microRNAs and non-coding RNAs” team led by Dr. Francesco Nicassio, which exploits a combination of high-throughput genomic approaches, *in silico* analysis and sophisticated experimental models to deconvolute the modes and the mechanisms of transcriptome regulation by non-coding RNAs.

The Center benefits from state-of-the-art technological platforms in molecular/cellular biology and genomics; furthermore, it benefits from close ties with other IIT centers and surrounding institutions (IFOM and IEO), located at the Campus.

We are looking for a scientist with experience in the molecular biology, biochemistry and cell biology to be hired on AIRC funds to follow this proposal. He/She will be responsible for analysis of decay in human cancer cells by specific oncogenic lesions. He/she will exploit genome editing (CRISPR/cas9), RNA labeling, next-generation sequencing, single molecule imaging and biochemical approaches to characterize the mechanistic details of miRNA degradation. Prior experience with microRNA biology and related approaches is preferred but not required. Candidates should have a **PhD degree** with or without post-doctoral experience and a **background in molecular and cellular biology, gene regulation and cancer**.

Project Background

Levels of miRNAs are frequently altered in human tumors with pathological consequences. Nevertheless, we still do not fully comprehend the causes of these alterations. Overall, the levels of miRNAs in cells are determined by the sum of two processes: biosynthesis, which generates new miRNA molecules, and decay, which clears old miRNAs. However, while the mechanisms controlling miRNA biogenesis have received much attention, very little is known about how miRNAs are turned over. We recently developed new tailored approaches to study miRNA decay dynamics in mammalian cells (*Marzi, Ghini et al. Genome Res 2016*).

Our leading hypothesis is that mechanisms involving miRNA degradation contribute to miRNA regulation in cancer.

We propose to apply our approaches to models of human cancer in order to i) clarify the role of miRNA decay dynamics in the regulation of miRNA function and expression in human cancer and ii) investigate the critical mechanistic steps associated with this process.

Applications will be accepted until the position is filled but please apply by **January 15, 2017**.

Please submit a CV (max 3 pages), two reference letters (or referee name) and a very brief research statement (max 1 page) both to applications@iit.it and Francesco Nicassio (francesco.nicassio@iit.it) quoting “**POST DOC SEMM 73476**” in the subject field of your e-mail.

Please note that this position is contingent on budget approval

In order to comply with Italian law (art. 23 of Privacy Law of the Italian Legislative Decree n. 196/03), the candidates are asked to provide their consent to allow IIT to process their personal data. We inform that the information provided will be used solely for the purpose of assessing candidates' professional profile to meet the requirements of Istituto Italiano di Tecnologia. Data will be processed by Istituto Italiano di Tecnologia, with its headquarters in Genoa, Via Morego, 30, acting as the Data Holder, using computer and paper-based means, observing the rules on the protection of personal data, including those relating to the security of data. Please also note that, pursuant to art. 7 of Legislative Decree 196/2003, candidates may exercise their rights at any time as a party concerned by contacting the Data Manager.

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