Position: Research Assistant/Senior Research Assistant Laboratory of Dr. Teresa Davoli Institute for Systems Genetics NYU School of Medicine, New Science Building 435 East 30th Street, New York, NY 10016

## **Research Project**

We are looking for highly motivated research assistants with great communication skills and collaborative spirit and love for science. The project will mainly focus on cancer genetics and aneuploidy as described below.

The maintenance of a normal complement of the genome is a requirement for the success of multicellular organisms. Aneuploidy refers to the presence of an abnormal (lower or higher than *euploid*) number of chromosomes or chromosome arms (segmental aneuploidy). Although detrimental at the organismal level, aneuploidy is extremely frequent (~90%) in human tumors (Beroukhim et al., 2010). Despite the fact that aneuploidy is so frequent in cancer, little is known about whether and how aneuploidy contributes to tumorigenesis and how aneuploidy could be targeted for cancer therapy.

We recently conducted a combined analysis of point mutation and copy number data in primary human tumor samples and demonstrated that the distribution and potency of cancer driver genes on each chromosome or chromosome arm can predict the frequency of whole chromosome or chromosome arm aneuploidy across cancers (Davoli et al., 2013). This suggests that the recurrent patterns of aneuploidy in cancer act as driver events during tumorigenesis. The goal of this project is to utilize experimental systems recapitulating specific patterns of aneuploidy in order to dissect the mechanism by which cancer-associated aneuploidy drives tumorigenesis. In addition, we plan to utilize these systems to identify synthetic lethalities and vulnerabilities associated with aneuploidy that could be explored for cancer therapy. https://med.nyu.edu/faculty/teresa-davoli

## Description of the Job

The Research Assistant will have the opportunity to receive training on the use of state-of-the-art cancer genetics approaches and will use molecular biology techniques, mammalian tissue culture, biochemical assays, immunostaining and microscopy to research the cellular and molecular pathways related to tumor aneuploidy. This position may require working with mice, including mouse models of human tumors, which will enable testing hypotheses that result from in vitro experiments. The Research Assistant will be fully engaged with the intellectual activities in the lab and be responsible for organizing, processing, and reporting data. **Starting date: after May 1st 2018** 

## **Basic Qualifications**

- 1+ years of related experience is preferred; A combination of education and experience may be considered.
- BS/MS in biological sciences strongly preferred.
- High level of initiative and motivation; ability to work independently and with a team.

## Contact

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