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A postdoctoral researcher position or staff scientist position is available in the laboratory of Dr. Xin Li, Associate Professor at the University of Rochester Center for RNA Biology, Genome to Therapeutics, Department of Biochemistry and Biophysics and Department of Urology, NIEHS Environmental Health Sciences Center ([zhaohua.urmc.rochester.edu](http://zhaohua.urmc.rochester.edu)).

Germ cells are the only cell type whose lifespan is not limited as they are reprogrammed with totipotency in the next generation. We want to understand the basic principles in germ cells that ensures the sustainability of a species from two unique angles. DNA is not the only information carrier. The first is through an RNA biology oriented approach. We strive to understand how various germ-line RNAs prepare and shape epigenetic information flowing across generations. The second focuses on comparative biology. We have established alternative model organisms, such as chickens and lizards, for studying germ cell biology.

We are adopting an interdisciplinary approach that includes genetics, epigenetics, cell biology, RNA biochemistry, reproductive biology, early embryology, evolutionary biology, and bioinformatics. Currently, our ongoing projects are centered on two related topics: PIWI-interacting RNAs (piRNAs) and sperm RNAs. piRNAs are a recently discovered type of small RNA that offers great promise in advancing our understanding of germ cell biology, whereas sperm RNAs may offer important insight into the transgenerational flow of epigenetic information. Finally, beyond infertility and contraception, what we have learned in germ cells can be applied to other cell types to promote regeneration or anti-aging. At the same time, understanding the mis-activation of some germline properties can offer insight into some diseases, such as cancer.

#### **REQUIRED QUALIFICATIONS:**

- A genuine interest in our research
- A Ph.D. or equivalent experience

The University of Rochester Medical Center ranks 36th nationally in medical research and 23rd in primary care, based on the 2020 US News and World Report. The University of Rochester was ranked one of the top 15 institutions in the nation for scientists to work at, according to The Scientist magazine's annual survey of "Best Places to Work for Scientists in Academia". Our Center for RNA Biology is a mecca for RNA researchers, with a long history of nurturing RNA biologists and discoveries. We offer a very collaborative, collegial environment that allows us to recruit the very best RNA researchers. Moreover, the city of Rochester is safe, beautiful, and affordable.

Please provide a cover letter describing your past projects and career goals. Please also describe what you hope to get out of this position and what you hope to bring to the Lab. Enclose your detailed CV with names and contacts of three references to [Xin\\_Li@URMC.Rochester.edu](mailto:Xin_Li@URMC.Rochester.edu).