August 2, 2017

Dear Colleague,

I am seeking to recruit a motivated postdoctoral fellow to my laboratory to contribute to our studies on Programmed DNA Elimination.

If you know of individuals that are or will be looking for a postdoctoral position, could you please pass this information on to them.

We primarily use the large nematodes of pigs, *Ascaris suum*, and horses, *Parascaris univalens*, to study programmed DNA elimination and are currently exploring the development of other organisms (e.g., copepods) as models for DNA elimination.

We are located in a new state-of-the-art space in the highly collegial Department of Biochemistry and Molecular Genetics at the University of Colorado School of Medicine in Denver. We have recently initiated a 5-year, $20 million program in RNA, The RNA Bioscience Initiative for which I am one of the directors. The CU Medical School and our Department is a great place to do science ([http://medschool.ucdenver.edu/biochemistry](http://medschool.ucdenver.edu/biochemistry)) and Denver, Colorado is a great place to live.

A flyer describing the position with links to additional information and how to apply is attached.

Sincerely,

Richard E. Davis, Ph.D.
Professor
Biochemistry and Molecular Genetics
Co-Director, RNA Bioscience Initiative (RNAbio.co)
Postdoctoral position
PROGRAMMED DNA ELIMINATION

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Genome maintenance and stability are essential, and an organism’s genome rarely changes. But a few organisms undergo programmed DNA elimination, a developmentally regulated process that eliminates specific DNA sequences from the genome. In a group of parasitic nematodes (Ascaris and related genera), 15-90% of the genome is eliminated in the somatic lineages during the 3rd through 5th cleavage (4 to 16 cell stage), while the germline genome remains intact. Both repetitive and unique sequences (1000-2000 genes depending on the species) are lost during DNA elimination. DNA elimination results in chromosome breakage and the loss of chromosome fragments as well as the generation of new chromosomes. We have developed comprehensive genome and transcriptome assemblies and other tools for analysis of nematode DNA elimination. Areas under investigation include

- How genome regions are marked for retention or elimination
- How break regions are identified and the mechanism of chromosome breaks
- How eliminated chromosome regions are selectively lost from holocentric chromosomes
- The contributions of epigenetic factors including histone modifications and non-coding RNAs to DNA elimination

For additional information on the DNA elimination and our research, see http://140.226.65.22/Davis_lab/index.html

For information on how to apply for the postdoctoral position, see http://140.226.65.22/Davis_lab/postdoc_position.html

Relevant Publications


Relevant Reviews
