



Two Postdoctoral Fellows:

Repeat Instability, DNA repair and Neurodegenerative Diseases

Seeking two postdoctoral fellows in the lab of Dr. Christopher E. Pearson. Research focus is on disease-associated repeat instability (ie repeat expansions). Expansion of repeats are responsible for numerous neurological, neurodegenerative, and neuromuscular disorders including myotonic dystrophy, Huntington's disease, and more recently has been found in some cases of amyotrophic lateral sclerosis (ALS). DNA repair has been shown to drive repeat expansions. Aim is to identify potential molecular targets, which modulate repeat-associated DNA expansions through the use of biochemical assays, mammalian cell culture, patient samples and transgenic mouse models. Modulation of such targets is a long-term therapeutic goal. Successful applicants will have opportunities to work on cutting edge research projects with translational and industry interests, gain leadership and project management skills, and present at international conferences.

Selected publications:

- López Castel A *et al.*, *Nature Reviews Molecular Cell Biology*, **11**:165-170 (2010).
 Cleary JD *et al.*, *Nature Structural and Molecular Biology*, **17**:1079-1087 (2010).
 Tomé S *et al.*, *PLoS Genetics*, **9**:e1003280 (2013).
 Panigrahi GB *et al.*, *Proceedings of the National Academy of Sciences U S A*, **107**:12593-8 (2010).
 Tomé S *et al.*, *Human Molecular Genetics*, **20**:2131-2143 (2011).
 Reddy K, *et al.*, *Journal of Biological Chemistry*, **288**:9860-9866 (2013).
 Reddy K, *et al.*, *Nucleic Acids Research*, **39**:1749-62 (2011).
 López Castel A *et al.*, *Human Molecular Genetics*, **20**:1-15 (2011).
 Seriola A *et al.*, *Human Molecular Genetics*, **20**:176-85 (2011).
 Panigrahi GB *et al.*, *Nature Structural & Molecular Biology*, **12**:654-62 (2005).
 Axford MM *et al.*, *PLoS Genetics*, **9**:e1003866 (2013).
 Zamiri B, *et al.*, *Journal of Biological Chemistry*, **289**:4653-9 (2014).
 Reddy K, *et al.*, *Nucleic Acids Research*, **42**:10473-87 (2014).
 Shlien A *et al.*, *Nature Genetics*, **47**:257-62 (2015)

See also:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1b9vt-uQxdz5L/bibliography/40485889/public/?sort=date&direction=ascending>

Interested candidates should apply to Dr. Christopher E. Pearson (cepearson.sickkids@gmail.com).



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