



One PhD Student (65% TVL-E13)

Research overview:

We are an RNA biology lab studying the fundamental principles governing the self-organization of an embryo and its disease implications. We focus on RNA regulatory elements (e.g: long non-coding RNAs, selective translation factors) that control the acquisition of cell fate and maintenance of cellular identity (*Cell Stem Cell* 2019, *EMBO Reports* 2019, *Circulation* 2015). We use a holistic approach that combines human pluripotent stem cell-based differentiation models, including organoids, genome engineering tools, and systems-wide methods such as eCLIP-seq and Ribo-seq.

To familiarize with the concepts we investigate and our approaches, please refer to:

1. Frank S,Kurian L, yIncT Defines a Class of Divergently Transcribed lncRNAs and Safeguards the T-mediated Mesodermal Commitment of Human PSCs, *Cell Stem Cell*. 2019 Feb 7;24(2):318-327.e8.
2. Ahuja G, Kurian L, Loss of genomic integrity induced by lysosphingolipid imbalance drives ageing in the heart, *EMBO Rep*. 2019 Apr;20(4):e47407.

Please visit <http://kurianlab.com/> to learn more about the group's interests and ongoing research.

Your responsibilities will include:

- generation of CRISPR/ Cas9 mediated knock out of a selected set of candidate RNA regulatory factors in human pluripotent stem cells
- investigate the mechanisms and processes controlling cell fate decisions using differentiation approaches, including organoid models
- biochemical analysis of protein-RNA interactions
- willingness to learn and integrate basic computational pipelines for RNA seq and eCLIP seq into your project workflow

Required skills and qualifications:

- M.Sc. or equivalent degree in developmental biology, biochemistry or computational biology, or a related field, completed with above-average grades
- experience and publication record in stem cell biology, RNA biology, or computational biology
- thorough conceptual understanding of developmental biology and RNA biology
- enthusiasm and motivation to learn new techniques and computational approaches
- ability and willingness to work in a collaborative team
- excellent communication in English (written and spoken)

Desired qualifications:

- hands-on experience in developmental biology, stem cell biology, RNA biology, or computational biology.
- experience in basic molecular biology and biochemistry

We offer:

CMMC, along with its partner institutes such as the Cologne Cluster of Excellence in Cellular Stress Responses in Aging-associated Diseases, Cologne Center for Genomics, and Max-Planck Institute for Biology of Ageing research, all located in the same campus, provides a vibrant scientific community. Therefore, the CMMC's Asso. JRG I in "**Developmental and regenerative RNA biology**" is

placed perfectly in an environment where fundamental research meets its cutting edge of translational science.

Your salary will be based on TV-L / TV-Ä.

Suitably qualified women could be given preferential consideration unless other applicants clearly demonstrate superior qualifications.

Please address telephone inquiries to Dr. Leo Kurian at +49 221 478-89692 or leo.kurian@uni-koeln.de

For further information, see <http://kurianlab.com/>

How to apply

Have we awakened your interest? Please submit your application (including a detailed CV, list of publications, two references and a brief statement of research interests) here online

www.uk-koeln.de/karriere/stellenangebote

or

<https://www.jobvector.com/jobs/biology-life-sciences/research-associate/phd-student-x-asso-research-developmental-regenerative-rna-biology-173036/>

Please send a direct email to leo.kurian@uni-koeln.de along with online application through the application portal.

We prefer online applications, but you also have the opportunity to apply via regular mail quoting the reference number reference number: 00002939