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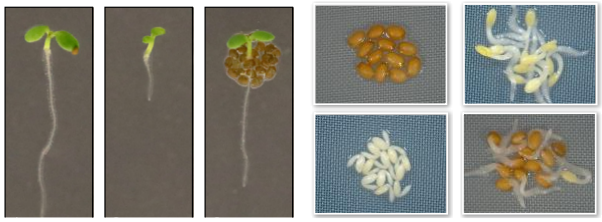

# Postdoctoral and PhD student position in Control of Seed Germination

## Luis Lopez-Molina laboratory, May 2022 (University of Geneva, Switzerland)

Applications are invited for a postdoctoral position (3 years + possibility of extension) and a PhD student position (5 years) to investigate the signaling processes underlying the control of seed germination in the model organism *Arabidopsis thaliana*.

**Background:** Plants maintain their embryos in a metabolic inert and highly resistant state within the seed. The decision to germinate and to transform the embryo into a seedling is an irreversible developmental transition and a crucial process in the life of the plant. This event is tightly regulated by epigenetic and signaling pathways in response to environmental cues and involves developmental interactions between the embryo and the surrounding endosperm, a tissue unique to flowering plants. We study the molecular genetic pathways underlying the control of seed germination taking place in the endosperm and the embryo. Please visit our website for more information.

We are looking for talented, creative and highly motivated team members with a strong interest in signal transduction and plant developmental processes. The candidates have a demonstrated expertise in molecular biology, molecular genetics, biochemistry or imaging techniques (postdoc candidates: first-author paper in a major international journal). A background in plant developmental genetics or epigenetics is an advantage. Good communication skills and fluency in spoken and written English are required. The successful PhD student candidate will be embedded in the Molecular Biosciences program (https://lifesciencesphd.unige.ch/).

To apply, please send a single pdf including CV with research experience, motivation letter stating your research interest, copies of your degrees and contact details of 2-3 references to Luis Lopez-Molina (luis.lopezmolina@unige.ch). Review of applications will begin immediately until positions are filled. Starting date is negotiable and intended to be September 1, 2022.

Geneva offers a safe and high quality of life and is referred as the world's most compact metropolis with a vibrant cosmopolitan and cultural life. Our department offers a creative scientific environment with access to state-of-the-art technologies.

5 publications related to possible projects (for more publications click here):


- De Giorgi et al (2021) The Arabidopsis mature endosperm promotes seedling cuticle formation via release of sulfated peptides. *Dev Cell*. 2021 56(22):3066-3081
- Iwasaki M et al (2019). Non-canonical RNA-directed DNA methylation participates in maternal and environmental control of seed dormancy. *Elife*. 8:37434
- Piskurewicz et al. (2016). Dormancy-specific imprinting underlies maternal inheritance of seed dormancy in Arabidopsis thaliana. *Elife*. 5:19573
- Lee et al. (2012). Spatially and genetically distinct control of seed germination by phytochromes A and B. *Genes Dev*. 26(17):1984-96.
- Lee et al. (2010). A seed coat bedding assay shows that RGL2-dependent release of ABA by the endosperm controls embryo growth in Arabidopsis dormant seeds. *PNAS* 107(44):19108-13