External seminars – ELLY TANAKA

Laboratoire de l'invité/Laboratory of the speaker
IMBA – Institute of Molecular Biotechnology of the Austrian, Academy of Sciences

Invité par/Invited by **Eglantine Heude**

Date **December 8, 2025**

Titre de la présentation/Title of the presentation
Interpreting the axolotl genome to decipher limb development, regeneration and evolution.

Résumé/Short abstract
As early branching examples of tetrapods, salamanders are a valuable models for understanding how limb development evolved, how limb development occurs, and how it can regenerate. In recent years we have implemented genome sequencing, single cell transcriptomics, genetic fate mapping and molecular genetic perturbation to start addressing these issues at the genomic and molecular level. I will address gene regulatory elements involved in limb development in an evolutionary context, and mechanisms of limb regeneration related to positional memory and scaling.

Mini-CV/Short CV
Elly Tanaka received her AB at Harvard, her PhD at UCSF and post-doctoral work at University College London. She became groupleader at the Max Planck Institute of Molecular Cell Biology and Genetics Dresden then Professor at the TU Dresden and since 2016 Senior Group Leader at the Institute for Molecular Pathology, Vienna. Since April 2024 she is Scientific Director of the Institute of Molecular Biotechnology (IMBA), Vienna. She is interested in how to reconstitute and regenerate complex tissues. She uses natural models of regeneration such as the axolotl, as well as patterning processes in embryonic stem cell derived organoids.