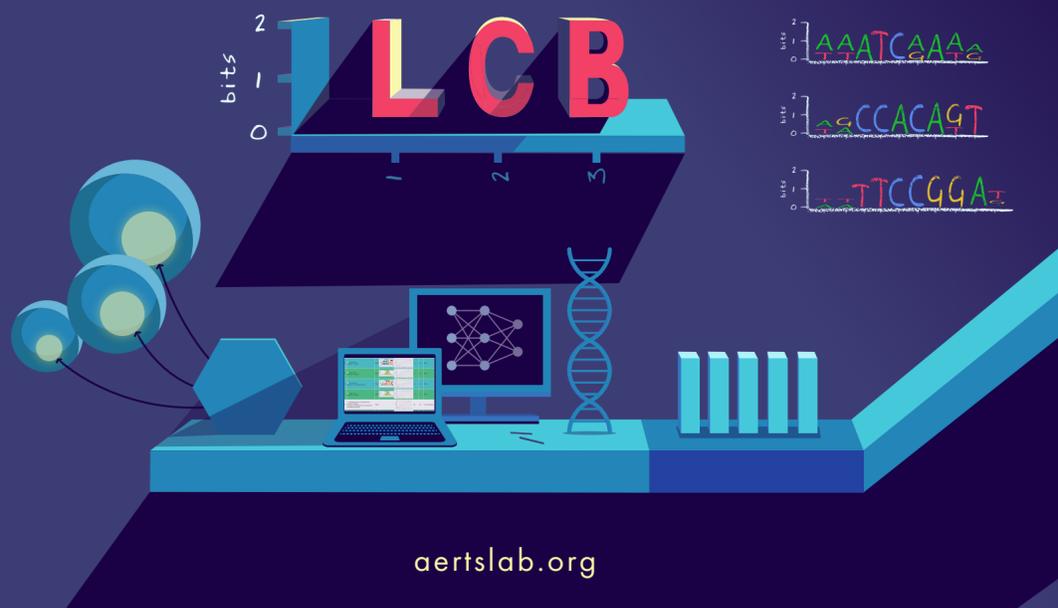


ERC funded Postdoc position @ Aerts lab

(Deep) learning
the genomic regulatory code

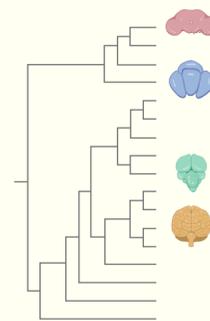


Deciphering the genomic regulatory code underlying cell type identity using **single-cell technology** and **artificial intelligence**.

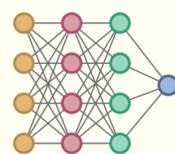
- You will develop new AI strategies to learn the genome syntax using large-scale single-cell multi-ome atlases as training data.
- You will unravel the diversity of neuronal cell types in the brain of various species (octopus, birds, mammals) through comparative genomics.
- You will work very closely together with our wet-lab for data generation and experimental validations.
- You will use your AI models to generate synthetic enhancers with new functions, and to functionally interpret non-coding genome variation (health and disease).



Apply deep learning to study all cell types of the fruit fly in the context of the multi-omics Fly Cell Atlas flycellatlas.org



Unravel the diversity of neuronal cell types in the brain of various species (octopus, birds, mammals) through comparative genomics



Engineer new deep learning strategies to learn genomic syntax

Recent scientific contributions from the lab:

SCENIC & cisTopic

HyDrop

DeepMEL & DeepFlyBrain

Janssens, Aibar & Taskiran, Nature 2022

Li & Janssens, Science 2022

Davie & Janssens, Cell 2018

Aibar et al., Nat Methods 2017

Bravo et al., Nat Methods 2019

PROFILE

PhD (or MSc with research experience) in AI, CS, Bio-eng, or Bioinformatics with strong interest in genomics.

INTERESTED?

Send your CV and motivation letter to stein.aerts@kuleuven.be

<https://aertslab.org/#join-us>

