

# **Diverse Amine dehydrogenases for the biocatalytic synthesis of amines**

**Carine VERGNE-VAXELAIRE**

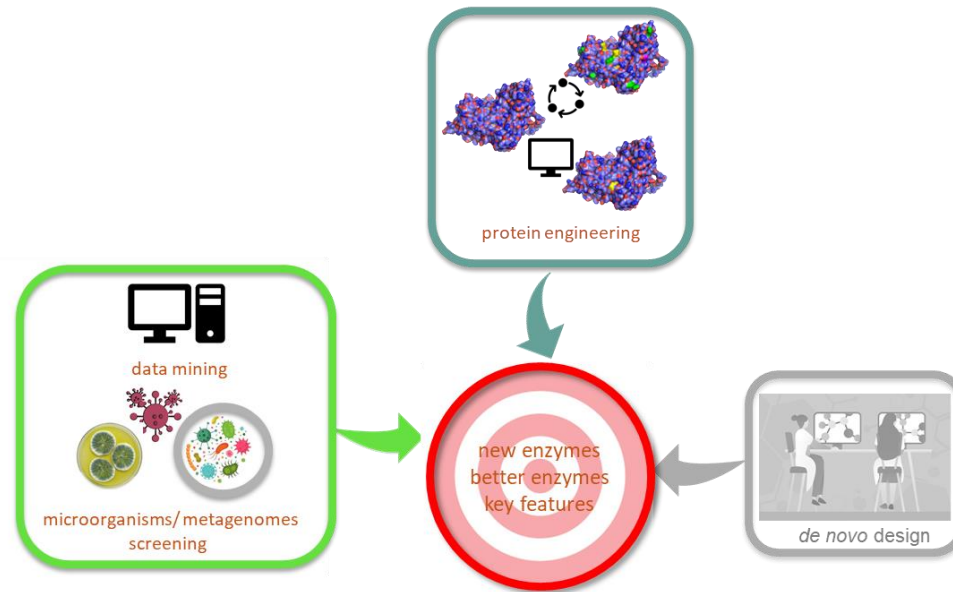
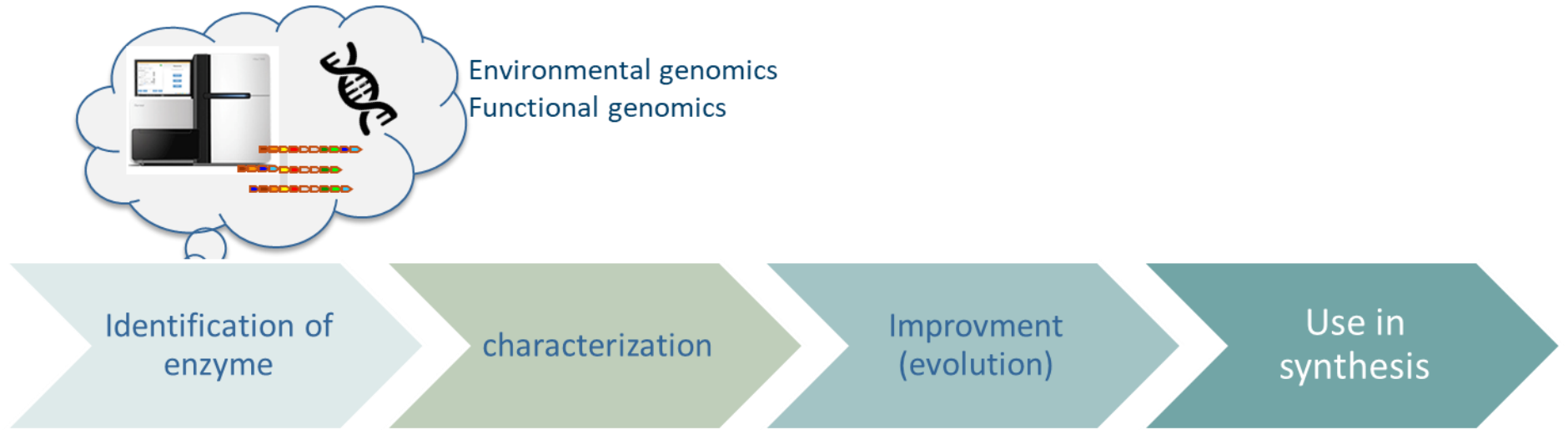
Genoscope – EVRY

Laboratory of Bioremediation, Biocatalysis and Synthetic Metabolism

Biocatalysis team



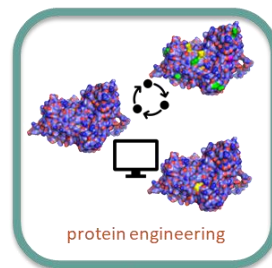
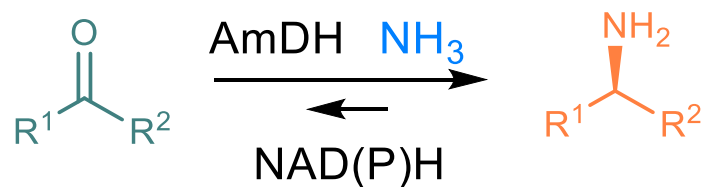
# Biocatalysis within Genoscope \_ Finding new enzymes



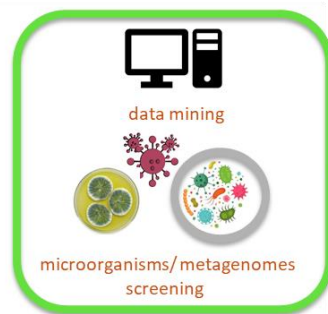
# Biocatalysis within Genoscope \_ Finding new enzymes



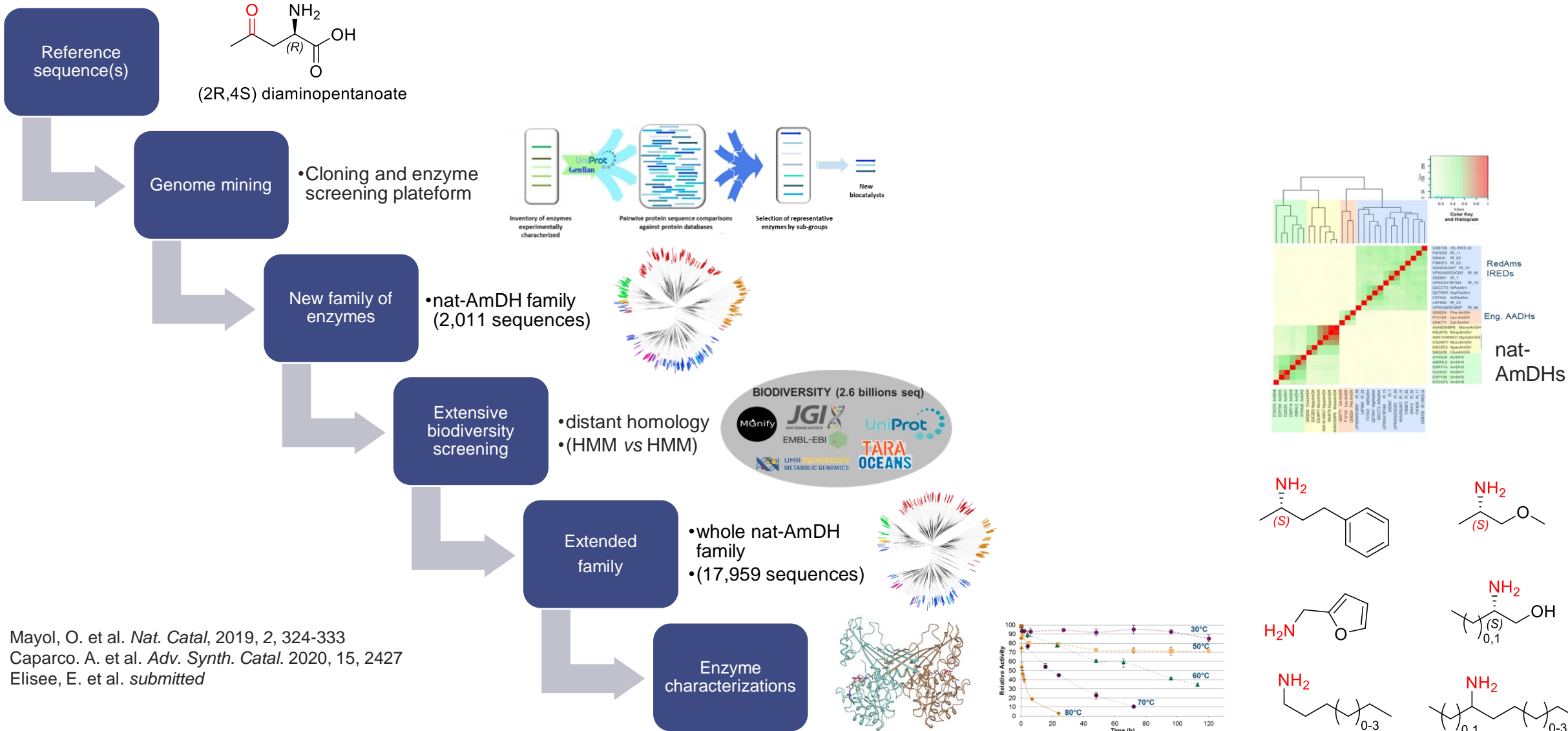
Environmental genomics  
Functional genomics



Goal : new templates from biodiversity

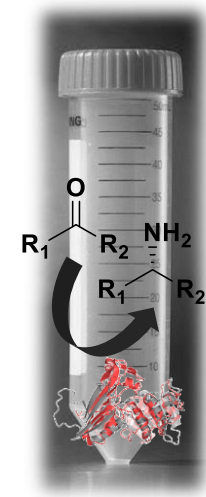
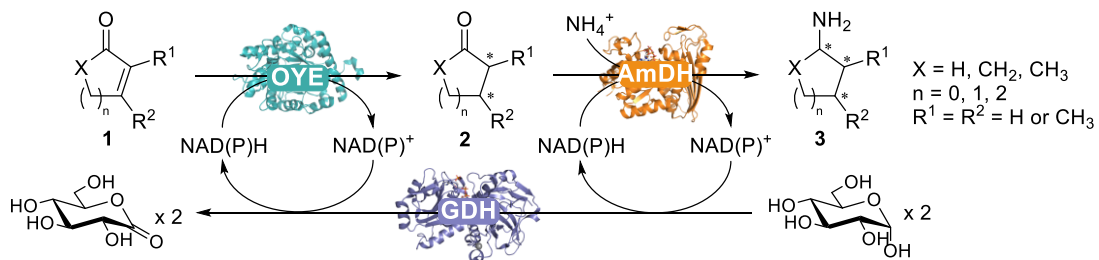
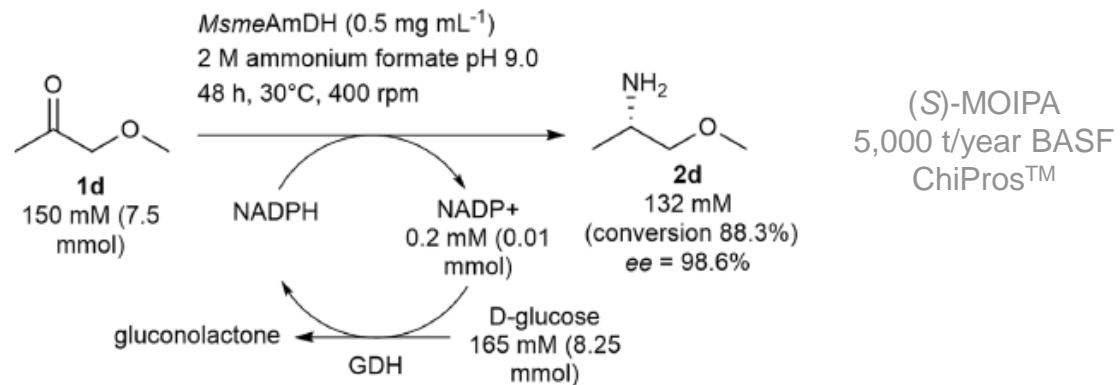
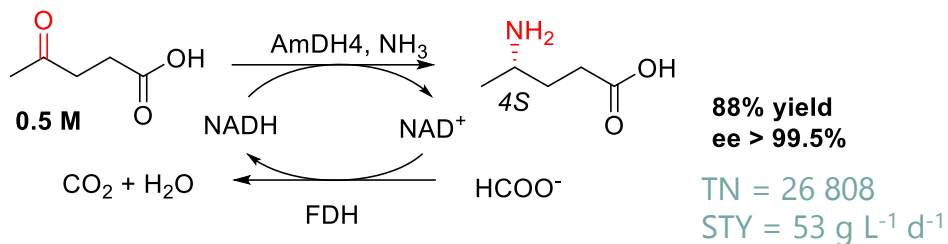


# (meta)genome mining approach



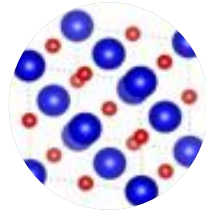
Mayol, O. et al. *Nat. Catal*, 2019, 2, 324-333  
 Caparco, A. et al. *Adv. Synth. Catal.* 2020, 15, 2427  
 Elisee, E. et al. *submitted*

# Nat-AmDHs in synthesis



Mayol, O. et al. *Catal. Sc. Technol.*, 2016, 6, 7421-7428  
 Ducrot, L. et al. *Frontiers Catal.* 2021, 1.  
 Jongking, E. et al. *ChemCatChem*, 2021, 14.

# Summary



New enzyme template for a product of interest  
*amine*



Industrial enzyme

Thanks to many people:

Fundings:

