

Diverse Amine dehydrogenases for the biocatalytic synthesis of amines

Carine VERGNE-VAXELAIRE

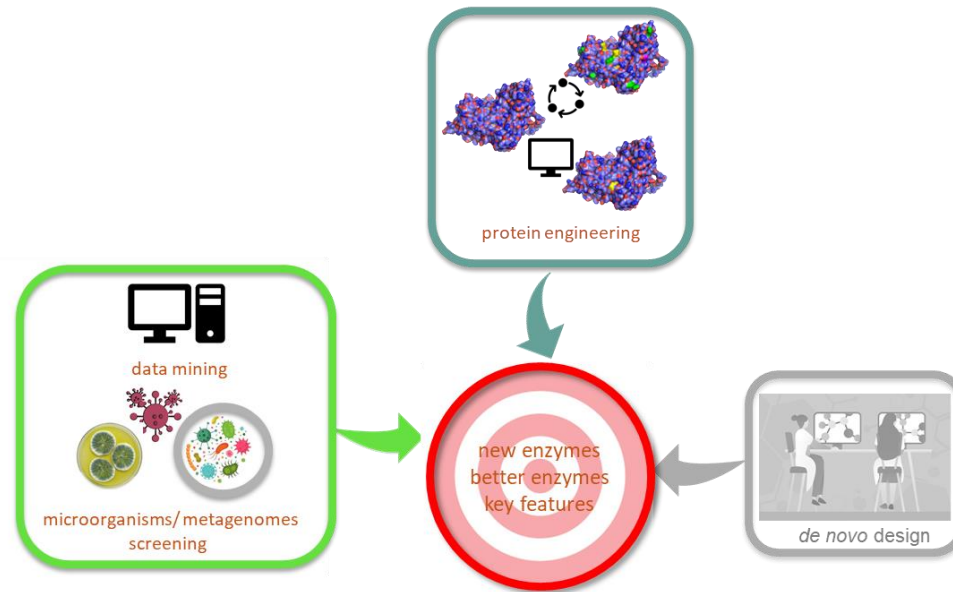
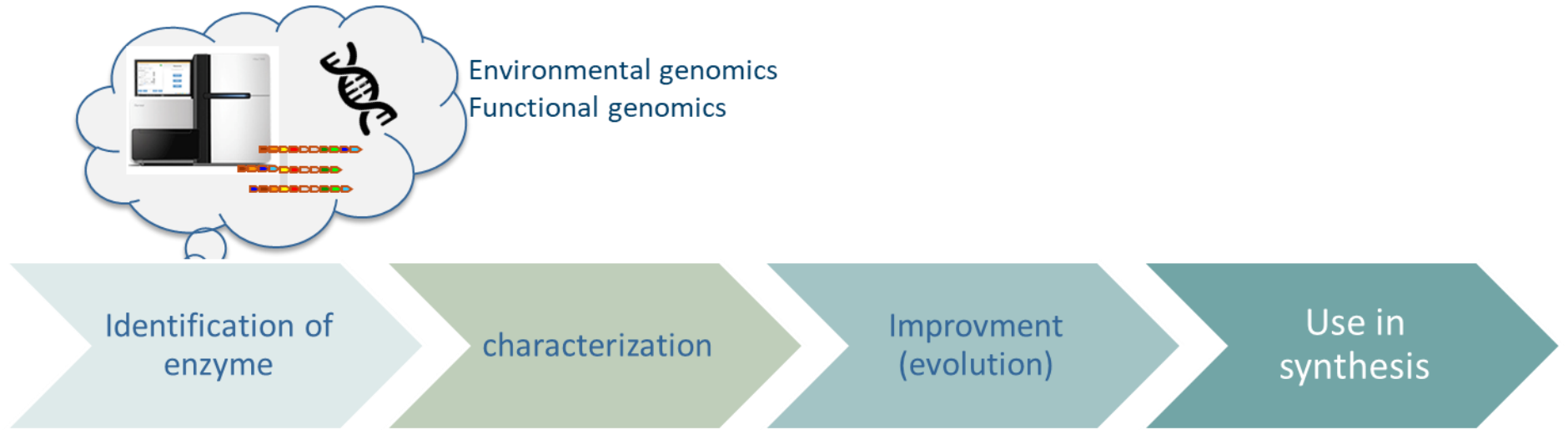
Genoscope – EVRY

Laboratory of Bioremediation, Biocatalysis and Synthetic Metabolism

Biocatalysis team



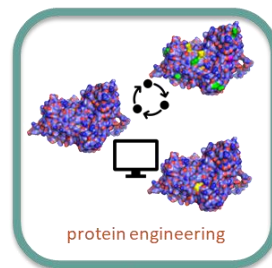
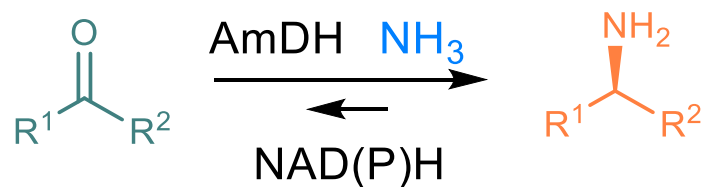
Biocatalysis within Genoscope _ Finding new enzymes



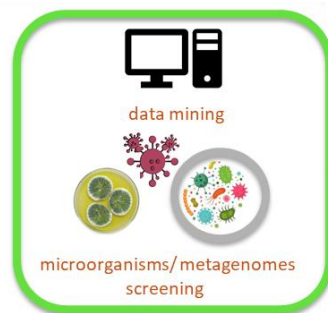
Biocatalysis within Genoscope _ Finding new enzymes



Environmental genomics
Functional genomics



Goal : new templates from biodiversity



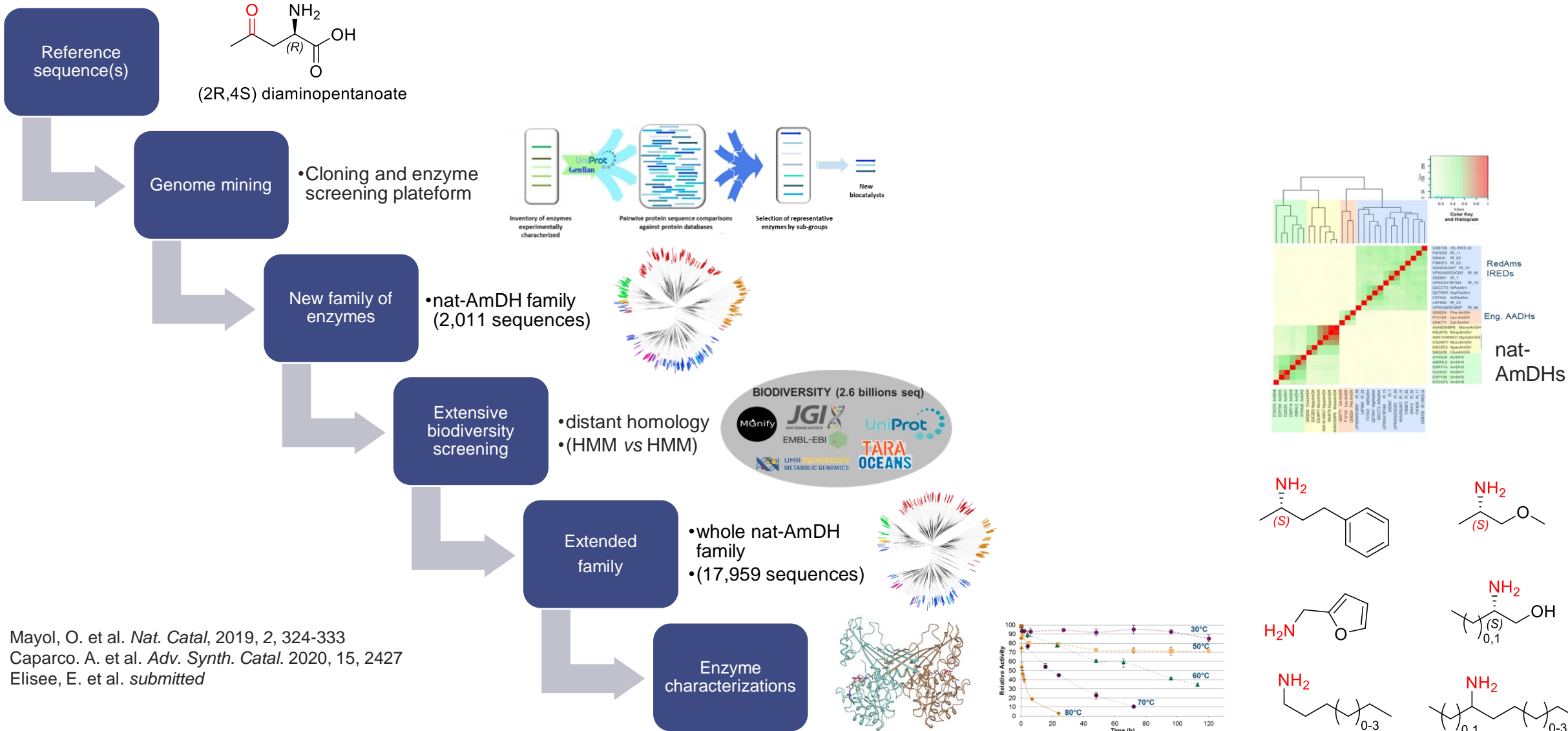
data mining

microorganisms/metagenomes
screening



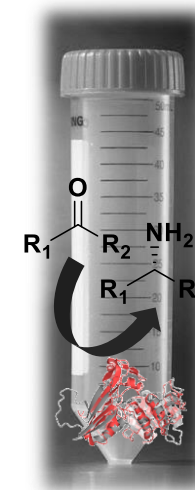
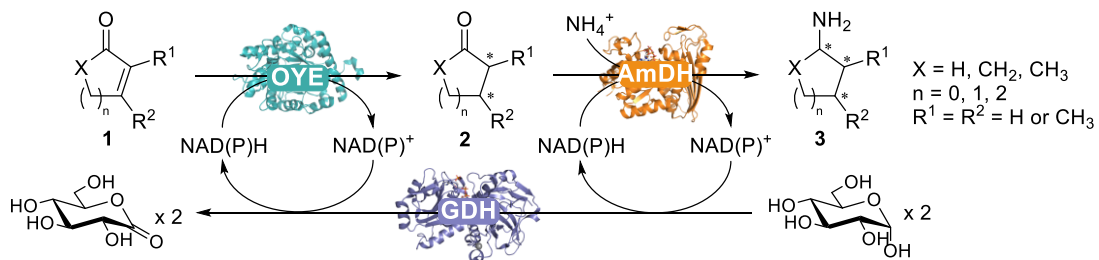
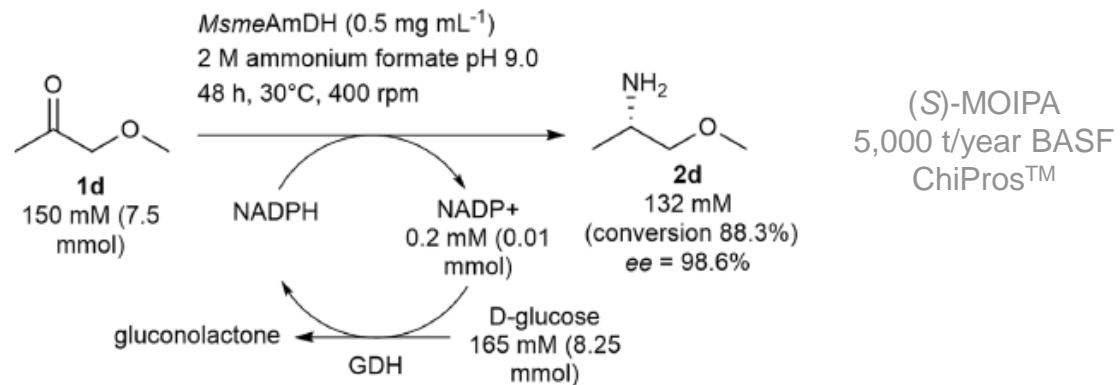
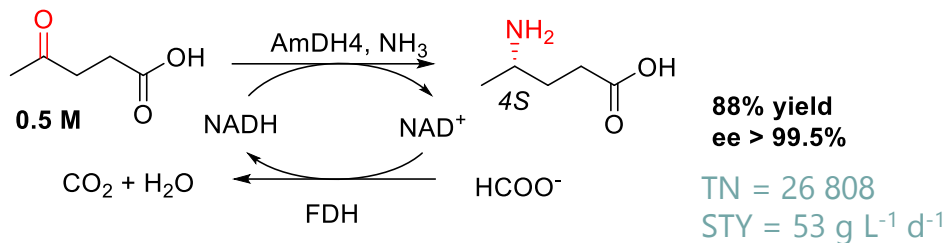
de novo design

(meta)genome mining approach



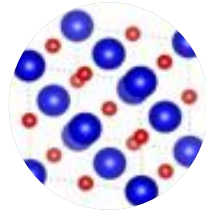
Mayol, O. et al. *Nat. Catal*, 2019, 2, 324-333
 Caparco, A. et al. *Adv. Synth. Catal.* 2020, 15, 2427
 Elisee, E. et al. *submitted*

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:

