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5th European Summer School on Industrial Biotechnology

Functional metagenomics: from nature to biochemical functions

Hamburg, 3-6 July 2023

Time	Monday, July 3: <i>Finding genes and enzymes</i>
08:30	Registration
09:00	Welcome and Introduction (Wolfgang Streit/Marina Lotti/Jürgen Pleiss)
09:15	Talk 1 Rolf Daniel (Göttingen) "Metagenomics to explore and exploit the hidden microbial potential and diversity"
10:00	Talk 2 Pablo Pérez-García (Hamburg/Kiel) "An <i>in vitro</i> and reporter-strain coupled pipeline for the discovery of plastic-degrading enzymes"
10:45	Coffee Break
11:00	Talk 3 Andrew Pickford (Portsmouth) "Characterizing plastic-degrading enzymes: from biophysics to bioreactors"
11:45	Talk 4 Jürgen Pleiss (Stuttgart) "Digitalization of metagenomics"
12:30	Lunch break (Mensa)
13:30	Participants' intro: 3 min presentations by students
15:00	Lab course: Hands-on Metagenomics
18:30	Beer/Pretzel and sundowner at terrace of botanical garden
Time	Tuesday, July 4: <i>Mining the sea</i>
09:00	Arrival and organizational matters
09:15	Talk 5 Manuel Ferrer (CSIC Madrid) "Best using metagenomic data to bring enzymes to industry and consumers"
10:00	Talk 6 Ruth Schmitz (Kiel) "Interbacterial relationships: From biofilms to jellyfish"
10:45	Coffee Break
11:00	Talk 7 Erik Borchert (Geomar, Kiel) "Hidden ecological functions of the marine Plastisphere"
11:45	Lunch break (Mensa)
12:45	Poster session
14:15	Lab course: Hands-on Metagenomics / computational tools
19:30	Beer at Hofbräu Wirtshaus Esplanade
Time	Wednesday, July 5: <i>Finding plastic-active enzymes and others</i>
09:00	Arrival and organizational matters
09:15	Talk 8 Peter Golyshin (Bangor) "Polyester-degrading enzymes from microorganisms inhabiting hot vents"
10:00	Talk 9 Federica Bertocchini (CSIC, Madrid) "Plastic degradation by wax worm PEases"
10:45	Coffee Break
11:00	Talk 10 Ren Wei (Greifswald) "Mechanism-Guided Discovery and Engineering of PET Hydrolases"
11:45	Lunch break (Mensa)
13:00	Excursion to European XFEL
18:30	Workshop Dinner at "Zum Alten Lotsenhaus"/Övelgönne
Time	Thursday, July 6: <i>From (meta) genomes to applications</i>
09:00	Talk 11 Victor Guallar (Barcelona) "What's next? AI modelling in enzyme bioprospecting and engineering"
09:30	Talk 12 Stephan Kolkenbrock (Altona Diagnostics) "Mining Metagenomes for RNA- and DNA-directed DNA Polymerases"
10:00	Coffee Break
10:15	Talk 13 Karl-Erich Jaeger (Düsseldorf/Jülich) "Bacterial chassis for monitoring and production of valuable compounds"
10:45	Talk 14 Rainhard Koch (formerly Bayer) "Use of enzymes in applied research"
11:15	Final discussion & farewell for ESSIB participants
12:00	Lunch (Mensa)