

Program International Week on Technology Applied to Biological Systems 11-15 of March 2024

15. February – 1. March 2024

Elaboration and submission of a bibliographic revision by students

During the week from 4th to 8th of march – Mr Vuk Savkovic, Hochschule Merseburg (DE), on 'Directed evolution and rational design as powerful tools in protein engineering' (online Seminar 1,5 hours); 'Searching for the most efficient enzyme variant (known so far) for a particular biochemical transformation' (online workshop 2 hours)

Monday 11 March 2024

- 9:00-9:15** Breakfast -Welcome
9:15-9:30 Opening session
9:30-11:00 Ms Kristel Sniegowski, KU Leuven (BE), on 'Basic molecular techniques to identify wild yeast isolates and the search for POF genes '
11:00-11:15 Break
11:15-12:45 Ms Vesna Jerkovic/Charlotte Saussez/Aur lie Semoulin, HELHa (BE), on 'Bacterial transformation: theoretical and practical aspects '
12:45-14:00 Lunch break
14:00-18:00 **Workshop I** - Ms Kristel Sniegowski, KU Leuven (BE), on 'Detecting POF genes in yeast isolates with PCR and gel electrophoresis '- laboratory
Workshop II - Ms Vesna Jerkovic/Charlotte Saussez/Aur lie Semoulin, HELHa (BE) on 'Bacterial transformation '- laboratory
18:00-19:00 Break
19:00 Social activity
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Tuesday 12 March 2024

- 9:00-10:30** Ms Julia Weiss, UPCT (ES), on 'Plant genetic engineering '
10:30-11:00 Ms Paulien Leemans, UAntwerp (BE) – 'Gene regulation in prokaryotes'
11:00-11:15 Break
11:15 -12:45 Ms Iris Cornet, UAntwerp (BE)– 'Process optimization in industrial biotechnology using recombinant microorganisms.
12:45-14:00 Lunch break
14:00-18:00 **Workshop I** - Ms Paulien Leemans/Iris Cornet, UAntwerp on 'Investigation of heat shock effects on the gene expression in *E. coli* – Part 1: RNA extraction (RNA integrity and purity) and reversed transcription '- laboratory
Workshop II - Ms Julia Weiss, UPCT (ES), on 'Binary plasmid isolation and analysis '- laboratory
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Wednesday 13 March 2024

- 9:00-10:30** Mr Marcos Egea Guti rrez-Cortines and Ms Julia Weiss, UPCT (ES), on 'Molecular pharming strategies'
10:30-11:00 Ms Rita Pacheco, ISEL (PT) – "Small molecule drugs- Design and Drug Discovery"

- 11:00-11:15** Break
11:15 -12:45 Working time (academic room)
12:45-14:00 Lunch break
14:00-18:00 **Workshop I** – Ms Paulien Leemans/Ms Iris Cornet, UAntwerp – ‘Investigation of heat shock effects on the gene expression in E. coli – Part 2: qPCR and data analysis’ - presentation – laboratory & computer room
Workshop II – Mr Marcos Egea Gutiérrez-Cortines UPCT (ES), on ‘Usage of publicly available tools: sequence data bases and construct design for CRISP/Cas’ – informatic lab
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Thursday 14 March 2024

- 9:00-10:00** Mr Alberto Gila Navarro, UPCT (ES), on ‘Yeast one and two hybrid system-applications’
10:00-10:30 KU Leuven students (BE), on “How introducing biocatalytic reduction reactions into the pharmaceutical industry (bachelor thesis)” – online
10:45-13:30 **Workshop I** - M Rita Pacheco - ‘Inhibition of Acetylcholinesterase activity-Dose- Response relationships’ – laboratory
Workshop II - Ms Kristel Sniegowski, KU Leuven (BE), on ‘Evaluating the quality of a Sanger sequence, database search with sequences for identifying Fungi’ - *informatic lab*
13:30-14:30 Lunch break
14:00-18:00 Group work/tutorials
18:00-20:00 Guided tour of Cartagena
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Friday 15 March 2024

- 9:00 -12:00** Visit to company “BIONET”
12:00-12:30 Ending session
12:30-14:00 Break
14:00 Group work (optional)
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Monday 15 April 2024

Online group presentations by students

