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**Thematic Research Training 2020-2021**

**Clean Growth group**

**Session 1: Biology at the extremes**

**8th December 2020, 10:00–16:00**

To join the session, click on the Zoom link: <https://ed-ac-uk.zoom.us/j/83531140392>

Password: eastbiocg1 (*please do not share details outside EASTBIO*)

**Session Description:**

In this event, the Clean Growth group shall be exploring the application of extremophiles within biotechnology. Throughout the day, we will introduce the concept of extremophiles, as well as how they are identified and characterised. This will also include the logistics of their distribution to researchers via microbial repositories, such as NCIMB. Following this, we will engage in a workshop concerned with how to extract useful information from these extremophiles through genome mining. After lunch, we will explore the different applications of extremophiles within biotechnology, and later we will focus in more detail on a specific example – biomining. To close off the day, we will lead a discussion on extremophiles and synthetic biology as a link to the second thematic meeting, followed by an optional social event.

**Session Schedule:**

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| **Times** | **Sessions details** |
| 10:00 - 10:15 | Welcome |
| 10:15 - 10:30 | **General Discussion/Meet & Greet** |
| 10:30 - 11:00 | “Introduction to Extremophiles and Microbial Repositories” – Dr Jude Huggan, *NCIMB* |
| 11:00 - 11:15 | Dr Jude Huggan NCIMB Questions and Discussion  |
| 11:15 – 11:25 | **Transition Discussion** – Connor Trotter, *University of Edinburgh* |
| 11:25 - 11:40 | “Genome Mining for Novel Antimicrobial Compounds” – Dr Alba Iglesias Vilches, *Institute of* *Integrative System Biology* |
| 11:40 – 12:15 | **Workshop**: “How to identify genes of interest through genome mining techniques” – Dr Alba Iglesias Vilches |
| 12:15 – 13:15  | Lunch break |
| 13:15 – 13:40  | **“**Application of Extremophiles in Biotechnology” – Dr Natasha Nicholson – *Heriot-Watt University* |
| 13:40 – 13:50  | Dr Natasha Nicholson Questions and Discussion |
| 13:50 – 14:20 | **“**Using Microbes to Mine Elements: Experiments on the Space Station” – Prof. Charles Cockell, *The University of Edinburgh* |
| 14:20 – 14:35 | Prof. Charles Cockell Questions and Discussion |
| 14:35 – 14:45  | Coffee Break |
| 14:45 – 15:00  | **Discussion** “Extremophiles and Synthetic Biology – A Primer for Session 2” – Connor Trotter & Anna Zolotariof |
| 15:00 – 16:00  | **Optional Networking Event**  |

**Local organisers’ details**:

* Dr Stephen Wallace: Stephen.Wallace@ed.ac.uk
* Anna Zolotariof: az57@st-andrews.ac.uk
* Connor Trotter: Connor.Trotter@ed.ac.uk

Email EASTBIO if you have further queries, at enquiries@eastscotbiodtp.ac.uk