



**Biotechnology and  
Biological Sciences  
Research Council**

## Thematic Research Training 2020-2021

### Clean Growth

#### New Enzymes: Nature VS Synthetic

Tuesday, June 8<sup>th</sup>

#### Session Description

In this Clean Growth thematic meeting we are going to explore a range of different synthetic strategies for the design of completely new or improved natural enzymes. We will begin our event with a talk from Prof Rebecca Goss (University of St Andrews) who will tell us how biosynthetic pathways can be redesigned to advance the synthesis of small molecules. We will then be hearing from Dr Tracey Gloster (University of St Andrews) who will give us an overview of the process of finding and characterising new enzymes. We will then continue with a talk from Prof Dominic Campopiano (University of Edinburgh) who will introduce us to the industrial applications of biocatalysts and tell us more about what role directed evolution plays in the development of enzymatic cascades for the synthesis of complex molecules. Then we will be joined by Dr Ross Anderson (University of Bristol) who will discuss the current advances in *de novo* enzyme engineering and tell us how computational tools aid in this process. After the lunch break we will close off the day with Dr Anca Pordea's talk on cofactor recycling using artificial metalloenzymes.

#### Session Schedule

Times	Sessions
9.30-9.45	Welcome
9.45-10.15	"Redesigning Biosynthetic Pathways" - Prof Rebecca Goss, University of St Andrews
10.15-10.30	Q&A
10.30-11.00	"Characterisation of New Enzymes" - Dr Tracey Gloster, University of St Andrews
11.00-11.15	Q&A
11.15-12:00	<b>Break</b>
12.00-12.30	"De Novo Enzyme Design" - Dr Ross Anderson, University of Bristol
12.30-12.45	Q&A
12.45-14.00	<b>Break</b>
14:00-14:30	"Industrial Biocatalysis" - Prof Dom Campopiano, University of Edinburgh
14:30-14:45	Q&A
14.45-15.15	"Design for Artificial Metalloenzymes" - Dr Anca Pordea, University of Nottingham
15.15-15.30	Q&A
15.30-15.45	Optional discussion

**Local organisers, contact details:**

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