**EASTBIO Thematic Training meetings – Understanding the rules of life   
Meeting 1 – New techniques, ancient problems**

**Hosts**: Danielle Jordan (U of Aberdeen), Lorenzo Croce (U of Aberdeen), Guiyun Qiu (U of Edinburgh)

**Date**: 25 January 2022, 9:45-17:00 (starting from 10:00)

**Venue**: Online via Microsoft Teams [Click here to join the meeting](https://teams.microsoft.com/l/meetup-join/19%3ameeting_OTA5ZWFiZDYtNWY2MS00NDdiLWFkMDgtNDE2M2ZjMTEzODgw%40thread.v2/0?context=%7b%22Tid%22%3a%228c2b19ad-5f9c-49d4-9077-3ec3cfc52b3f%22%2c%22Oid%22%3a%22a15b2419-f29d-4984-8e0b-4c031b11f812%22%7d)

**Meeting description**:

This meeting will introduce novel techniques applied to general biology research. We invited three speakers to this meeting introducing optogenetics in neuroscience, omics sequencing and CRISPR editing in molecular cell biology. The talks will showcase how these techniques have transformed our understanding to nature biology, especially in resolving ancient problems. The speakers will also share their outlooks to those techniques with their extensive experience within the field. Finally, a student-led debate will shine light on the ethical controversy over genetically modified organisms.

**Meeting schedule**:

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| 10.00-10.10 | *Welcome* |
| 10.10-11.00 | Breakout Chats |
| 11.00-12.00 | Talk on optogenetics by Prof. Patrick Degenaar (University of Newcastle) |
| 12.05-13.05 | Talk on omics sequencing:  How genomics and transcriptomics techniques have transformed biology (and how they can transform your PhD)  by Dr. Edward Wallace (University of Edinburgh) |
| 13.05-14.35 | *Lunch break* |
| 14.35-15.35 | Talk on CRISPR:  CRISPR/Cas9, deep learning prediction of editing outcomes and its applications in disease modelling  by Dr. Thomas Naert (University of Zurich) |
| 15.30-15.45 | *Screen break* |
| 15.45-16.50 | Student-led debate   * Should we genetically engineer agriculturally relevant organisms or human consumption? * Should we genetically engineer organism for release into their natural environment? |
| 16.50-17.00 | *Closing Remarks* |

For further queries, email Danielle Jordan [d.jordan.21@abdn.ac.uk](mailto:d.jordan.21@abdn.ac.uk); Lorenzo Croce [l.croce.21@abdn.ac.uk](mailto:l.croce.21@abdn.ac.uk); Guiyun Qiu [G.Qiu-1@sms.ed.ac.uk](mailto:G.Qiu-1@sms.ed.ac.uk).