MEDIA RELEASE

8 July 2021

ASSOCIATE INVESTIGATOR AT THE ARC CENTRE OF EXCELLENCE IN SYNTHETIC BIOLOGY SECURES A JOHN TEMPLETON FOUNDATION GRANT

Dr. Pierrick Bourrat, Associate Investigator at the ARC Centre of Excellence in Synthetic Biology has been awarded a John Templeton Foundation grant worth over AUD $1,000,000.

The John Templeton Foundation serves as a philanthropic catalyst for discoveries relating to the deepest and most perplexing questions facing humankind. They support research on subjects ranging from complexity, evolution, and emergence to creativity, forgiveness, and free will. Dr Bourrat successfully applied for the John Templeton Foundation's Science of Purpose Funding Initiative. This initiative seeks to identify and fund the development of novel theoretical, philosophical, or scientific concepts useful for advancing the study of goal-directed, goal-seeking, or goal-suited phenomena in nature.

Dr Bourrat has been working with the ARC Centre of Excellence in Synthetic Biology for the past six months developing research in philosophy of synthetic biology. The John Templeton Foundation grant will support research to explain major transitions in evolution. Major transitions are events during which individuals at one level of organisation interact in ways that produce new individuals at a higher level of organisation, such as the transition from unicellular to multicellular organisms. This research aligns with the aims of the Centre of Excellence to build synthetic organelles, organisms, and communities, which will help us to understand the ways in which major evolutionary transitions occur.
Dr Bourrat says 'This grant will help me understand the major transitions in evolution. I aim to provide a new model of how new levels of biological individuals emerge in evolution. I will work in collaboration with biologists from different backgrounds (both theoretical and experimental). Synthetic biologists have a great understanding of the different molecular pathways within the cells and one of their aims is ultimately to build new organisms. In other words, they want to do what nature has done many times during the major transitions. My hope is that their knowledge can be translated into this new model.' Further information about the project can be found at this website https://www.biologicalpurpose.org/.

The ARC Centre of Excellence in Synthetic Biology was established in 2020 with the goal to provide 21st century solutions to global agricultural, food production, manufacturing, healthcare and environmental challenges. The centre brings together 9 Australian universities and a range of partners, such as biotech start-ups, government departments, international university and research facilities, medium to large business and industry bodies. Together they aim to create an environmentally sustainable processing industry, leading to significant rural investment, jobs and new export opportunities.

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