18 OCT 2021 | ISSUE 26

SCISOC SPOTLIGHT

BY THE CAMBRIDGE UNIVERSITY SCIENTIFIC SOCIETY

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DEPARTMENT OF GENETICS

RESEARCH FOCUS:

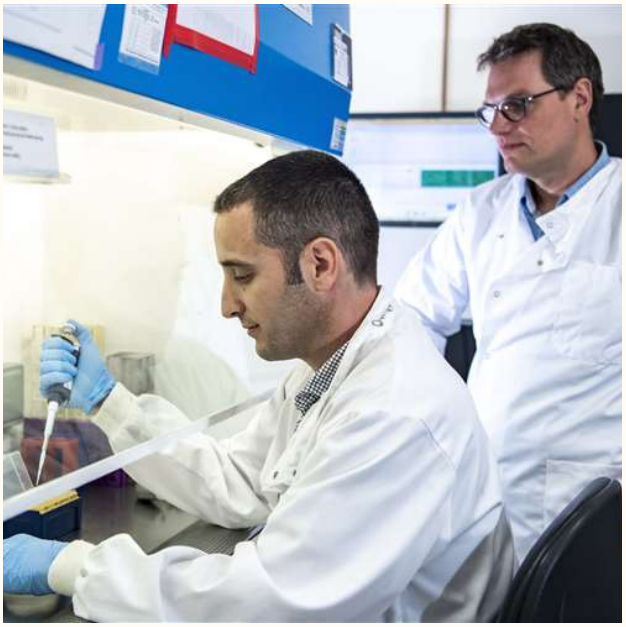
MOLECULAR GENETICS

I am a molecular geneticist who has done pioneering work on **RNA biology**. I developed new technologies that led to **genome-wide analyses of microRNAs**, now a diagnostic tool. I discovered the **piRNA pathway** in C. elegans, which controls fertility and transposons in germlines of animals. I demonstrated that RNA pathways can lead to a multigenerational, truly **epigenetic memory in C. elegans**, a first in animals. I also developed C. elegans into a host pathogen model identifying a **new class of RNA-modifying enzymes, Tutases**, that restrict RNA viruses in animals. Finally, I developed revolutionary tools to determine **RNA structure in living cells.**

WHY RESEARCH?

I have always enjoyed **figuring out how things work**. I remember being fascinated with structural colour and have never really recovered from discovering romanesco cauliflower. **I like math**. **I don't like having a boss**.

"Truly ground-breaking research is more likely done in a 'shed'."



ONE PIECE OF ADVICE...

Be **sceptical** of flashy research buildings. **Truly ground-breaking research** is more likely done in a "shed".