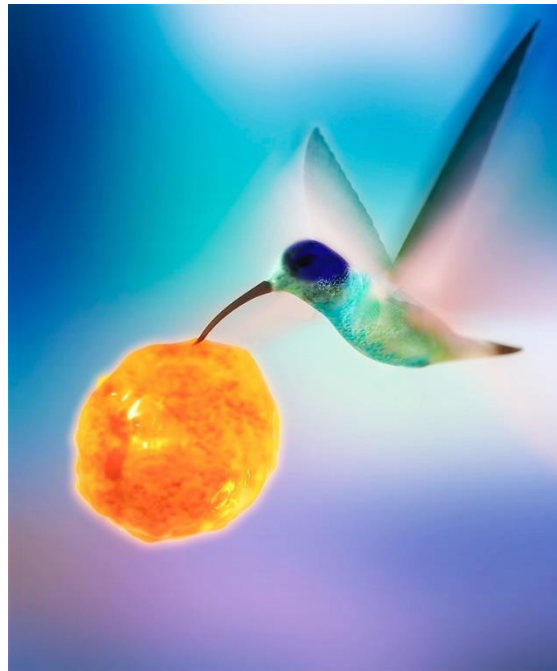


Café Scientifique Headingley

Monday 12 December 2022
Single Cell Surgery
By Paolo Actis



Outline: Our beauty is in our differences. This is true down to the level of individual cells and molecules that make up our body. I will present the development of innovative “surgical” technologies that enable the study of health (and disease) with the highest possible precision. These techniques will allow us to answer questions such as: “Why do a small portion of cancer cells resist to chemotherapy? How does a neuron neutralise the development of Parkinson’s disease?”

I will present the application of an electrical nanobiopsy platform capable of extracting genetic material and organelles from single cells in culture and its application to understand why a brain cancer called GBM is so deadly and what we can do to stop it. I will then discuss the implementation of a single-molecule nanoinjection platform that can inject biomolecules one at the time into living cells that can help us to clarify the mechanism of neurodegeneration in Parkinson’s disease.

Paolo Actis is an Associate Professor of Bionanotechnology in the School of Electronic and Electrical Engineering at the University of Leeds. Paolo graduated with a PhD in electrochemistry from the Grenoble Institute of Technology (FR). He then spent 4 years in California working on his tan at NASA Ames (USA) and UC Santa Cruz (USA) before crossing the pond again to lose his tan at Imperial College London and Bio Nano Consulting (UK). He joined the School of Electronic and Electrical Engineering Fellow at the University of Leeds in 2012.

Venue: The New Headingley Club, 56 St Michaels Road, LS6 3BG

Time: Room opens 7:30pm, the presentation begins promptly at 7:45pm

Entry: Donation please, for room hire and expenses: £4 at the door



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www.headingleydevelopmenttrust.org.uk