

CYRIL DEROY

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ABOUT

I have a PhD in Biomedical Engineering from the University of Oxford, specialized in the field of microfluidics. I am a multidisciplinary scientist with experience in cell culture, molecular biology, microscopy, and 3D-printing. I also co-founded Celerity Labs, a venture-backed company with the aim of simplifying lab build and operation.

EXPERIENCE

Postdoctoral Scholar Nov 2023 - Present
University of California, Berkeley, Prof. Amy Herr's Group *Berkeley, CA, USA*
Developing microfluidic methods to culture and characterize coral reef ecosystems, with the aim to develop prevention strategies against coral bleaching.

Scientific Consultant May 2023 - Sep 2023
Revena *Oxford, UK*
Assisted early-stage startups with proof-of-principle and proof-of-scale R&D. Developed lipid nanoparticles (LNPs) for applications in aquaculture (nutrient and vaccine delivery). Established formulation protocols for LNPs and performed material analysis using DLS, FTIR, UV-Vis and SEM. Additionally contributed to due diligence initiatives, conducting market assessments, analyses, and reports for biotech clients specializing in cellular agriculture and bioleather sectors.

Co-Founder & CSO Jul 2022 - Apr 2023
Celerity Labs *London, UK*
Backed by Entrepreneur First (joinef.com). Celerity helps biotech labs get setup as quickly and cost-effectively as possible. Managed a team of 5 people, led customer discovery and product development, established partnerships with suppliers and secured first customers.

Founder-in-Residence Oct 2021 - Jul 2022
Entrepreneur First *London, UK*
Incubated at EF, a talent investor and accelerator, where the ambitious come together to build globally important technology companies.

Market Risk Analyst Nov 2016 - Sep 2017
Natixis S.A. *London, UK*
Undertook research with respect to market risk management of the trading desks. Provided documentation and analysis of key risks and breaches.

Research Assistant Jul 2014 - Aug 2014
Columbia University, Dr. Qi Wang's Group *New York, USA*

Created a simplified computational model of the rat barrel cortex using NEURON to simulate the activity of neuronal networks. Assisted during experiments to record brain signals inside the rat barrel cortex.

EDUCATION

PhD, Bioengineering and Biomedical Engineering 2017 - 2021

University of Oxford, Prof. Edmond Walsh's Group

Thesis: Fluid-walled microfluidics for cell migration studies

Developed fluid-walled microfluidic technology for applications in cell migration. Designed circuits to study spatiotemporal sensing in bone marrow-derived macrophages and suicidal chemotaxis in *Pseudomonas aeruginosa*. This work resulted in the publication of 8 journal articles and was presented at 8 international conferences.

MEng, Bioengineering and Biomedical Engineering 2012 - 2016

Imperial College London, Thesis Supervisor Dr. Claire Higgins

Thesis: Isolating Dermal Papilla Cells for iPSC Generation

PUBLICATIONS

1. Oliveira, N., Wheeler, J. H., **Deroy, C.** et al. "Suicidal chemotaxis in bacteria", *Nature Communications*, 2022, 13 (7608).
2. **Deroy, C.** et al. "Assaying macrophage chemotaxis using fluid-walled microfluidics", *Advanced Materials Technologies*, 2022, 7 (9).
3. **Deroy, C.** et al. "Reconfigurable microfluidic circuits for isolating and retrieving cells of interest", *ACS Applied Materials & Interfaces*, 2022, 14 (22).
4. **Deroy, C.** et al. "Predicting flows through microfluidic circuits with fluid walls", *Microsystems and Nanoengineering*, 2021, 7 (93).
5. **Deroy, C.** et al. "Microfluidics on standard petri dishes for bioscientists", *Small Methods*, 2021, 5 (11).
6. Soitu, C., Stovall-Kurtz, N., **Deroy, C.** et al. "Jet-printing microfluidic devices on demand", *Advanced Science*, 2020, 7 (3).
7. **Deroy, C.**, Soitu, C. et al. "Using fluid walls for single-cell cloning provides assurance in monoclonality", *SLAS Technology*, 2019, 25 (3).
8. Soitu, C., Feuerborn, A., **Deroy, C.** et al. "Raising fluid walls around living cells", *Science Advances*, 2019, 5 (6).

CONFERENCES

SLAS International Conference	<i>San Diego - 25/01/20</i>	Podium Presentation
BioCHIP Berlin	<i>Berlin 07/05/19</i>	Podium Presentation
International Conference in Microfluidics	<i>Rome 09/04/19</i>	Podium Presentation
SLAS International Conference	<i>Washington D.C. 02/02/19</i>	Poster Presentation
4BIO Summit	<i>San Francisco 13/09/18</i>	Poster Presentation
BioMedEng18 Conference	<i>London 06/09/18</i>	Podium Presentation
SLAS Europe 2018	<i>Brussels 27/06/18</i>	Poster Presentation
Lab-on-a-Chip and Microfluidics	<i>Rotterdam 05/06/18</i>	Poster Presentation

AWARDS

Best Podium Presentation

1st People's Choice Award Art Competition 2018

iotaSciences PhD Studentship

ICLCTM Rome 2019

Sir William Dunn School of Pathology

University of Oxford

SKILLS & INTERESTS

Languages

Native *English & French*, Conversational *Spanish*

Computer Skills

Proficient: CAD, 3D-Printing, CNC Programming, Matlab, Office

Basic: Fiji, Inkscape, Figma, Python, C++

Welfare & Volunteering

Trained Peer Supporter, Welfare Officer, University Invigilator

Personal Tutor & Mentor

Interests

Tissue Engineering, Organs-on-a-chip, Cycling, Tennis, Skiing