<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker/Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.30pm</td>
<td>Isabella Samuelson - ‘Careers in scientific publishing’</td>
</tr>
<tr>
<td>3.45pm</td>
<td>Sarah Williams –’12 years in ion channels - transitioning from academia to CRO research’</td>
</tr>
<tr>
<td>4.00pm</td>
<td>Giles Yeo - ‘Working as a scientist in media’</td>
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<tr>
<td>4.15pm</td>
<td>Jane Sugars - ‘Academic-related careers’</td>
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<tr>
<td>4.30pm</td>
<td>Felipe Serrano - ‘Looking for scientific excellence: The odyssey’</td>
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<tr>
<td>4.45-5.00pm</td>
<td>Panel/Discussion</td>
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<tr>
<td>5.00pm</td>
<td>Panel/Discussion</td>
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<tr>
<td>5.15pm</td>
<td>Wrap Up/ Thanks – Giles Yeo</td>
</tr>
<tr>
<td>5.30pm – 6.30pm</td>
<td>Networking, Pizza, Canapes, Drinks</td>
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</tbody>
</table>
Career Paths in Cardiovascular and Metabolism – making the connections

PUBLISHING, CONTRACT RESEARCH ORGANISATIONS, COMMUNICATIONS, MEDIA and START-UPS
Co-Chairs: Lucan Pantaleao, Isabella Inzani and Alice Williamson

Isabella Samuelson
Careers in scientific publishing
Careers in scientific publishing

Isabella Samuelson,
Associate Editor, Nature Metabolism
11.03.2022
My background

- MSci Biological Sciences (Biology of Cells) University College London (UK)
- MRes University of Cambridge (UK)
- PhD in Metabolic and Cardiovascular Disease University of Cambridge (UK)
- 2020 Associate Editor Nature Metabolism
Nature Metabolism

- Launched in January 2019
- 12 issues per year, online-only, as soon as ready
The editorial team

Christoph Schmitt
*Chief Editor*

Isabella Samuelson
*Associate Editor*

Ashley Castellanos
*Associate Editor*

Alfredo Giménez-Cassinas
*Associate Editor*

Yanina-Yasmin Pesch
*Associate Editor*
What do *Nature Metabolism* editors do?

- **Filter**
- **Enhance**
- **Amplify**
Journal content

“Front half”
Commissioned content

- Editorials
- Correspondences
- Comments
- Viewpoints
- Perspectives
- Reviews

“Back half”
Research papers

- Letters
- Articles
- Matters Arising

100%  20%  80%
REVIWES journal editor  Research journal editor
What do *Nature Metabolism* editors do?

How we spend our time

- **Manuscript handling**
- **Keeping on top of the field**
- **Special projects**
- **Other tasks** (administrative, training, etc.)

Daily tasks:
- Emails
- Finding reviewers
- New submissions
- Circulations

Weekly tasks:
- Back from review
- Resubmissions
- Team meetings
- Accept checks
- Appeals
- Meeting authors
- Outreach
- Front half ideas
What makes a good editor?

• Enjoys reading, is keen to read more broadly, including new fields
• Able to think critically about a variety of subjects, including new fields
• Good time management and attention to detail
• Communicates clearly and tactfully, but firmly if needed
• Good networker, enjoys interacting with other scientists and attending conferences
• Editorial experience not required
Perks of the job

• Learning something new every day!
• Exposed to (cutting-edge) research long before its published
• Permanent job “in science”
• Comparatively regular and flexible working hours
• Working from home
• Travelling to conferences and institute visits
Not-so-great things about being an editor

- We reject way more papers than we accept: dealing with criticism, negativity, appeals
- Negative decisions can have serious consequences for researchers
- Workloads can vary
- Conference travel
- Limited career progression after Senior/Deputy Editor
Main employers in academic publishing

- Springer Nature: London, New York, Berlin, Shanghai
- Elsevier (Cell, Lancet, Trends): London, Boston, Amsterdam, Beijing
- PLoS: San Francisco, Cambridge (UK)
- AAAS (Science): Washington, Cambridge (UK)
- EMBO: Heidelberg, US
- Frontiers: Lausanne
- MDPI: Basel
The story behind the image

Chameleons are well known for their potential to change colour but recent research on panther chameleons is the first to find two layers of crystal containing cells, each with a potentially different purpose. Researchers from the University of Geneva have speculated that the deeper crystal containing cells may help with the regulation of temperature, whilst the more superficial layer of colour changing cells could be responsible for camouflage or mating displays.
Editors of the Nature Portfolio believe in the transformative power of science and its potential to drive positive change in the world.

As members of the scientific community, we are committed to supporting the research enterprise by enhancing, curating and disseminating research that is rigorous, reproducible and impactful. We work to promote openness and transparency as well as the highest standards in research culture.

We provide an independent forum for reporting and discussing issues concerning research and the community, and we engage with researchers at all stages of their career to understand their needs and advocate for positive change.

We believe that science should represent everyone. As such, we recognize that it is our responsibility to work towards overcoming inequities and to foster a culture of diversity and inclusion in our communities.
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Sarah Williams
12 years in ion channels - transitioning from academia to CRO research
WHAT IS A CRO?

A CRO (contract research organisation) is a life sciences company that provides support to the pharmaceutical, biotechnology, and medical device industries in the form of research services outsourced on a contract basis. Charles River is a global CRO which provides a wide range of services during pre-clinical development of new drugs.

1 https://en.wikipedia.org/wiki/Contract_research_organization
2 https://www.criver.com/about-us
I work in the biology department at Chesterford Research Park which is a Charles River Discovery site

- As a discovery site we provide drug discovery services covering a spectrum from small, single discipline projects to fully integrated programs
- Some of the activities involved in getting a drug ready for clinical studies are shown below
Senior scientist at Charles River who specialises in ion channel research
• Worked in ion channels for 12 years, 6 of them have been in CROs
• Things I love about my job - I get to use my experiences to research a wide range of topics and disease areas
• One thing I don’t enjoy - we may only be involved in a small part of the drug discovery process and might not know what happens to work after we’ve finished it
• Enjoy running, triathlons, baking, recently dog training!

2007 – 2010
BSc in Biochemistry
University of Southampton

2010 – 2014
PhD in Medicine
University of Southampton

2014 - 2015
Postdoctoral research
Brandeis University (USA)

2016 - 2018
Metrion Biosciences
(small CRO)

2018 - now
Charles River
ABOUT ME

How did I end up a CRO?

During my postdoc I started looking for opportunities outside of academia

• I enjoyed problem solving, developing different techniques = I was looking for a lab-based role
• I didn’t enjoy researching something which didn’t progress, and I wasn’t interested in running my own team
• Found a job listing at Metrion Biosciences for a scientist with experience in manual patch clamp
  • This job played to my experiences from my PhD/postdoc even though the subject area was different
  • Day to day the job was similar to academia, designing experiments to answer the questions – the questions just might be different
  • Moved to CRL to gain experience in automated patch clamp/experience drug discovery in a larger company
LIFE AS A SENIOR SCIENTIST AT CRL

A snapshot of the activities

- Keeping Up To Date With Latest Science
- Presenting and Sharing Results
- Mentoring
- Project Management
- Lab Work
- Study Design
- Networking
- Personal Development
- Proposal writing
- Report Writing
- Conferences
DID MY ACADEMIC EXPERIENCES HELP?

My experiences in academia gave me a great foundation for working at a CRO

- Assay development – research about a target, assay type and how to set it up
- Resilience – how to cope with experiments not working, designing the next steps
- Collaborating – working with a team/across different disciplines
- Presentation – how to present data

What have I had to learn

- How to improve my time management
- When to say “No” both for my own workload or when a project isn’t going to work
SUMMARY

• My experiences in academia gave me a great foundation for working at a CRO
• For me, making the transition into industry was the best move I made
• I love working with people from a wide range of disciplines and using my knowledge to research multiple ion channels and targets

3 things I would have done differently:

• Collaborate more – making sure I had a good foundation in a wide range of disease areas/techniques
• Enjoy the research I was doing – some of the most important knowledge I have is from failed experiments
• Setting boundaries for myself - stricter working hours, looking after my mental health and work life balance (it’s ok to have a break!)
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Giles Yeo
Working as a scientist in media

NO SLIDES
Career Paths in Cardiovascular and Metabolism – making the connections

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Jane Sugars
Academic related careers
Career anchors

Careers service self-reflection toolkit
https://www.careers.cam.ac.uk/exploring-your-options/self-reflection-toolkit

Jobs.ac.uk
https://career-advice.jobs.ac.uk/resources/interactive-cpd-toolkit/
Variety
Autonomy
People
Creative
Pro-active
New challenges

Career path?
££
Using knowledge?
Multiple roles
Respect?
Sources of help

Online: jobs.ac.uk, Vitae, Graduate Prospects…

University: Careers service, training courses, opportunities

Mentors: schemes, networks, colleagues
Career Paths in Cardiovascular & Metabolism - making the connections

Dr. Felipe Serrano
11th March 2022
Looking for scientific excellence. The odyssey
Looking for scientific excellence. The Undergraduate.

1. Undergraduate Biology (University of Valencia, Spain)

2. Research Fellowship Congenic cardiopathies (Sao Miguel, Azores, Portugal)
3. **PhD Student**  
Mouse iPSC blockade by Gata4  
TDF from MEFs to Hepatocytes  
(Hospital La Fe, Valencia, Spain)

4. **Visiting PhD Student**  
Human fibroblasts transdifferentiation  
to Hepatocytes using miRNAs.  
(Harvard Stem Cell Institute (HSCI)  
Harvard medical school, Boston, MA)
5. Postdoc
IPSC derived SMC, NC-SMC, Marfan’s, LDS and TCS \textit{in vitro} disease modelling CRISPR/Cas9 (University of Cambridge, UK)
Looking for scientific excellence. Academia lessons. My experience

• Science is collaboration, the scientific community is a worldwide team.
• Science is a way of life! Not a usual job. You must be passionate and be prepared for change and failure.
• Your work can save lives in the future.

• Academic science is more about writing papers and getting grants than finding cures for diseases.
• Academia measures your scientific value for your papers and not for your scientific skills.
• In Academia the Scientists are not trained to lead a group, no manager skills are developed, so it is not unusual to find great scientists become terrible mentors or group leaders.
• Politics play an important role in your Academic career. Contacts are key.

My academic interests
• Working with some of the best scientists in the world and learn from them. ✓
• Become a professor at the University of Cambridge. ✗
• Become a scientific leader in a team focused environment that could help to cure human diseases. ✗
Looking for scientific excellence. From Academia to Industry AKA moving to the dark side…
Looking for scientific excellence. From Academia to Industry
AKA moving to the dark side…

Why did I move to the dark side?
High-quality science and great scientists focused on contributing to
improve human lives.
The start up adventure, different roles in a company.
Learning how to create and run a company since the very beginning.
High risk = High reward.
Not in UK for the good weather or food… so,
Better salary, company shares, more opportunities for career
development.

Mogrify Ltd. (Cambridge UK). Great not good.
3 senior scientist and 1 Principal Scientist set-up Mogrify’s labs in
Less than 3 years since we opened the labs. Currently, 80 employees
in the company.
Brilliant scientists in a great team environment.
Working in reprogramming health, pulmonology, ophthalmology
programs (gene therapies) immunology programs (cell therapies).
Raised over $40 million USD funding to date.
Fibroblasts

Conversion to alveolar epithelial cells

• Project goal: Feasibility study to convert fibroblasts to AT1/AT2 cells in vitro.
• Future goal: Trans differentiation of mouse myofibroblasts to AT2 cells in vivo.
Mogrify. Great facilities better people...