

Hi everyone,

The equinox has passed and the days are officially getting longer, and it's almost time to use the fertility of spring as an excuse to tuck into far too many chocolate eggs. Get clued up on the science behind your chocolate eggs here: [Egg-cellent Enzymes: Science in Chocolate Eggs](#)

But first! Spring into spring with the April ECR newsletter and find out what is going on in the world of Organ on a Chip.

Yours Scientifically,
Paul, Luana, Matthew and Nomty



ECR Newsletter April 2022

ECR events:



The ECR Summer Poster competition event

Do we really have to remind you!?

It's the ECR poster event from 3 -5pm on the **22nd July**

Whether you want to present or just turn up and see what others are doing **Registration deadline is the 1st of July**. But why wait? Register [here](#) now!

Poster submission deadline is 18th July.



Submit your images!

Bragging rights, moneys and a subscription to Lab on Chip all to win.

Deadline this month! : 28th April

Submit here:

<https://www.organonachip.org.uk/imagecomp/>

Researcher Spotlight: Every month get to know a new Network ECR



Who are you? Hi, I'm [Jake Samuel](#), a PhD candidate at Imperial College Chemistry Department

What is your organ? Small Intestine

What is your chip? : Double channel PDMS chips with an integrated polymer membrane. I am also exploring additive manufacturing approaches to produce thermoplastic-based devices for high throughput, low-cost fabrication. In the future, I hope to produce integrated sensing and imaging capabilities to produce a model that can be used to study lipid transport and gastrointestinal permeability of drugs.

Why? Pre-existing models of lipid and lipid soluble drug transport are not predictive of what is happening in the living gut. Animal models of lipid transport, such as the lymph fistula model, are limited due to differences in gastrointestinal physiology. In vitro models of lipid transport fail to recapitulate the architecture of the cellular microenvironment and do not produce the dynamic mechanical forces that occur in the human gut. Using a microfluidic model allows us to grow epithelial cells with physiologically relevant phenotypes, study lipid transport in a high throughput manner and tightly regulate the parameters associated with cell culture.

Tips on chips: Share your microfluidic tips. Email [Paul](#) or post on the [ECR forum](#).



Need an oxygen permeable cap. Or a cap with tubing connectors?

Just cast the screw thread of your bottle (or whatever you want the cap for) in PDMS and plasma bond to a thin (<1mm) PDMS lid for an O2 permeable lid, or a thicker piece of PDMS with punched holes if you want integrated tubing with your lid.

Question of the month:



Last month:

To pump or not to pump? That is the question.

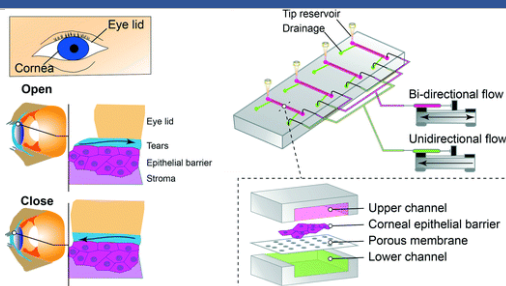
Forget expensive pumps Matthew Hockley points us toward [Pumpy McPumpFace \(A.k.a NanoJ-Fluidics\)](#) an open-source LEGO-based pump.

This month:

Help Pranav Vasanthi out. Blocking Bubbles are the bane of his life!

Any tips on how to get rid of or stop bubbles in cell culture under flow? Get on the [FORUM](#) and join the discussion.

Chip of the month:



“Blinkin hell”! it’s a blinking eye on chip!

Take a peek at the [Multi-corneal barrier-on-a-chip to recapitulate eye blinking shear stress forces](#) from Rodi Abdalkadera and Ken-ichiro Kamei.

Coming up:



This Month: Organ Modelling UK

Coming up soon. [Register here](#)

What: Conference talking Organ-on-a-Chip, Tissue-on-a-Chip & Organoids

When: 21st -22nd April

Where: London, or if you like join virtually.



Using Emulate Chips? Or want to?

Well join [The Emulate London User Group Meeting](#)

It's a one-day event intended for those new to Organs on a Chip as well as seasoned users of Emulate's technology.

April 28, 2022

MICROPHYSIOLOGICAL SYSTEMS WORLD SUMMIT

May 30th - June 3rd, 2022

The inaugural Microphysiological Systems World Summit.

Be part of a new worldwide summit. Registration deadline is this month!

What: Only a mega new international conference on MPS and OoaC

When: May 30th - June 3rd

Where: Jazz, voodoo, beignets and crawfish.. It can only be New Orleans!

Register: [Here](#) by 30th April

There are also hosting hands on [training workshops](#)



Tell us what you have been up to!

Share your achievements, papers, awards or whatever you like with the community.

Post on the [NEW ECR FORUM](#) or email the [ECR group](#).

Opportunities:



Got an idea, but no money to get it off the ground?

[AFRUK pilot studies](#) grant applications now open!

For your ears:

Learn during those long hours in the lab and beat the boredom of pipetting with our picks from this month.

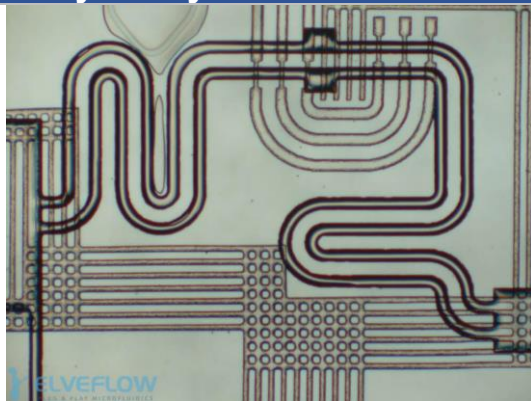


Need some career and science advice and tips (pun intended) from top researchers?

Check out

[The Lonely Pipette](#)

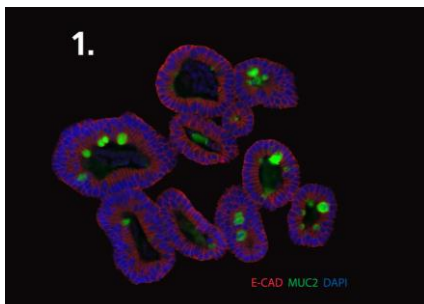
For your eyes:



Ever wanted some **Free Microfluidic Images** to make your presentations pop!

Check out [Free microfluidic images from Elveflow](#)

And just for fun..



Need a break?

Know stuff about organoids? Or are you just good at guessing?

Guess the organoid from these IF images on [this online quiz](#) and be in with a chance to win prizes.



Bad Joke of the Month

I went to the doctor to get a cognitive test. The cardiologist told me "you're not very bright but your heart's in the right place"



Punny Papers

We have a cracker this month, with almost every section title being a film pun. With titles like:

One Ion to Rule Them all: The Central Role of Calcium to Propagate Glutamate Toxicity

Eternal Dysfunction for the Mitochondrial Minds

The Wizard of ROS: Oxidative Stress

Read the review paper [Going the Extra \(Synaptic\) Mile: Excitotoxicity as the Road Toward Neurodegenerative Diseases](#) for about a dozen other puns.

Also, while we are at it:

Your Pun-Divided Attention Please: [How the Brain Processes Wordplay](#) explained.

Have your say!

Got any news or info you'd like added to the newsletter? Or would you like to organise an event for the Organ on Chip ECR group? Ping the ECR group an email at : paul.holloway@rdm.ox.ac.uk
Or get on the [NEW FORUM](#).