Organ-on-a-Chip Technologies Network

ECR Newsletter December 2021

ECR Christmas poster competition

It's festive season! So to celebrate we are having an online poster session on gathertown. Snuggle up with a mince pie and some mulled wine in front of your computer and present and view your research posters (this is super last minute so do reuse any posters you might have already made, or just join for a chat we are keeping this pretty informal). Take part and be in the running to **WIN THE POSTER PRIZE**

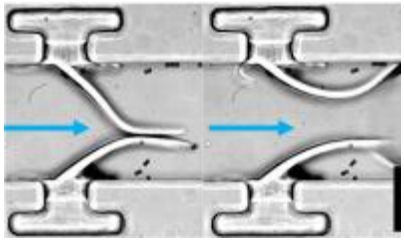
But first tell us what date would work for you. We are looking to hold a 1h event for you to discuss your research in an informal setting and we want as many of you there as possible. **FILL IN THE DOODLE POLE** to let us know your availability **BY 8th DECEMBER** and we will set the date and let you know.

ECR updates:

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.

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



Who are you? I'm Dr Zoe Schofield, a Research Fellow at the University of Warwick.
https://www.organonachip.org.uk/people/zoe-schofield

What is your organ?
I am developing a venous model to understand deep vein thrombosis.

What is your chip?
I have developed a simple chip venous model for my PhD. It is the first device to integrate flexible valves to better mimic the venous environment.

Why?
Deep vein thrombosis is a dangerous condition where blood clots form within the deep veins. The clots can detach causing pulmonary embolism accounting for 1-2 deaths per 1000 people annually in the UK. However, there are currently no models that allow the study of thrombus initiation and propagation in real-time. I aim to address this challenge with the development of a unique DVT *in vitro* model.

Tips on chips: Share your microfluidic tips. Email Paul or post on the ECR forum.

A tip on tips I'm using microfluidic devices for real time cell imaging. Pipetting into the open wells is super tricky while on the microscope. This week's revelation: Use western blot gel tips, bend the end a little, hey presto pipetting without moving the chip is ten times easier!

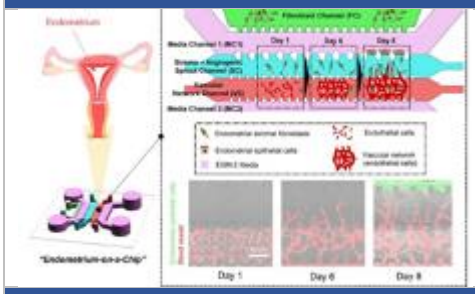
Question of the month:

Each month we will throw out a question to you and post some of the best answers in the next issue.
This month's question:

"Online lab books Yay or nay? What are you using?"

Let us know ON THE ECR FORUM or send in a question you'd like asked next month

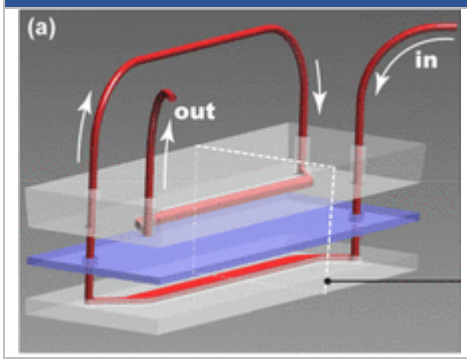
Chip of the month:



Every month we will highlight an interesting/ unusual / lesser known chip.

This month:
The endometrium on chip! From Ahn et al.

Updates in the field:



Worried about sorption?

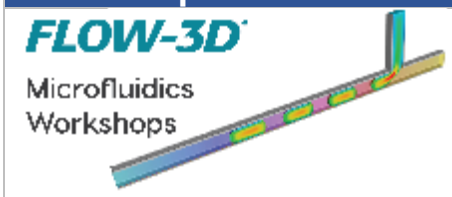
Is PDMS really the problem? What about your tubing? A new study by Winkler and Herland shows that the problem of PDMS isn't as bad as most have made out, and you could be overlooking your tubing.

Opportunities:

Heads up! FRAME will be accepting applications for their **Summer Studentships** in January 2022 (for 6-10 week projects with £1000 of consumables and £250 per week salary)

Start getting your applications ready now!

Workshops:



Need to brush up on your CFD skills? FLOW-3D is a free software (to academics) for fluidic modelling. And they are holding training workshops check them out here

Meetings:

MPS World Summit Virtual Pre-Event: Systems Engineering of MPS
What: Mini conference with short talks, posters and a keynote from Donald Ingber
When: 9th Dec 2021, 9 am – 1 pm EST
Where: In your PJs in front of your computer
Is it free?: Yes

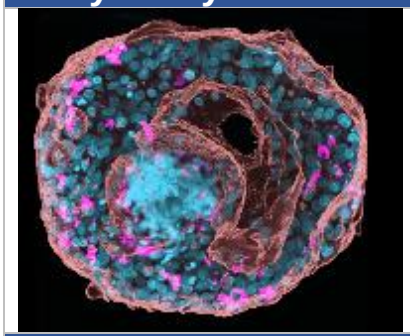
For your ears:

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

Because things are starting to get festive, this months podcast recommendation is from the back catalogue of the Naked Scientists on the Science of Christmas

Also available on iTunes, Spotify, or wherever you get your podcasts.

For your eyes:



Check out the winners of the Scottish Microscopy Group competition

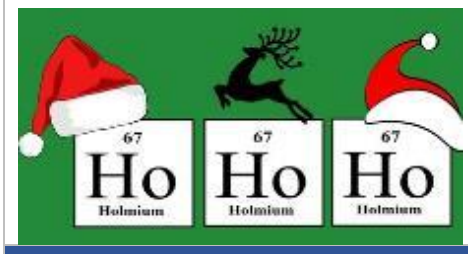
And just for fun..

Got time to kill?
No?
Ok.
Want to procrastinate instead?

Well why not make it productive procrastination. **Play this online game** and help solve the Multiple Sequence Alignment problem

Bad Joke of the Month

A biologist grew human vocal chords from stem cells in the lab…
The results... speak for themselves!



Bonus Christmas fact

Why is Rudolph's nose red? Well reindeer have 25% higher vascular density in their noses than humans. This helps to warm up air before it enters the lungs and sometimes gives their noses a rosy glow
https://www.bmj.com/content/345/bmj.e8311

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**.