

Organ-on-a-Chip Technologies Network Event Report 2018.

Overview

Following the Organ-on-a-Chip Technologies (OOACT) Network Launch Event in London on 6 & 7 September, this report identifies key priority areas for the Network to help deliver the following aims:

- Develop a vibrant multidisciplinary research community, bringing focus to the varied Organ-on-a-Chip and In Vitro model research activity in the UK;
- Facilitate inter-disciplinary and inter-sectoral research collaborations, to develop the next generation of organ-on-a-chip research solutions;
- To train, support and inspire the next generation of outstanding leaders in organ-on-a-chip research.

The report has been informed by:

- 1 Summary of group discussion points (see Appendix 1) arising from the Network Event on 7 September. This summary report was circulated for comment to all OOACT members to help identify network priority areas.
- 2 Launch event survey to evaluate its success and improve future events. This was sent via SurveyMonkey to all OOACT members that attended the event.

Findings

Discussion summary

Eight network members returned comments to the discussion summary document.

PART A: important aspects

Feedback supported all issues stated. Exceptions were that two respondents thought it wasn't too early for model validation or a Centre for Doctoral Training (CDT).

The issues receiving the most support were:

- Breaking down barriers between different disciplines to ensure everyone sees themselves as OOAC researchers, including computer modelling of OOAC devices
- Clarity on the breadth of work covered under the term organ-on-a-chip
- Improve access to further funding opportunities for successful pump-prime projects

PART B: Specific “to do” ideas

All ideas were supported with the following identified as priority areas:

- Deliver a training day, enabling network members to see existing commercially available technology platforms and discuss incorporating their own research/model systems.
- Industry partners could offer early career researchers the opportunity to sit within industry for 1-2 days to experience the industrial perspective
- Advertise available facilities and equipment that might be useful across the network
- Funding for travel bursaries and lab rotation
- Disseminate information on current models and technology platforms in different areas
- Partner with existing meetings/societies for future network meetings

Launch event survey

30 % (17 /56) launch participants completed the survey and results can be found via this link:

<https://www.surveymonkey.com/results/SM-6PWCBTTZL/>

Summary of responses are as following:

Organisation: Majority of participants were happy overall with the venue, access, pre-event information, special requirements and lunch - table layout and labelling at lunch could be improved

Sessions found most useful are ranked as follows (1 = most useful)

- 1 Networking sessions
- 2 Industrial overview
- 3 Research talk session
- 4 Inaugural talk

Comments included: more informal talks to generate discussion, small group discussions were productive, stimulating and useful to create new contacts.

Sabbatical: potential applicants: 35% = Yes, 29%= Not sure, 35%=No

Networking: 70% of participants made contact with a potential OOAC network collaborator and 29% were not sure.

Other comments: lunch time session was a good opportunity to network in a relaxed, attractive environment; more focussed networking – short presentations from research groups re: research interest experience; more research talks and more time for questions.

Action plan

An outline action plan has been produced from network ideas generated at the launch meeting on 7 September 2018 (see Appendix 1 – PART B).

Network action plan

- Communications - website development, on-line platforms (1 – 4)
- Capacity building - training, resources, knowledge sharing (5 – 11)

Objective	Action	Lead	Deadline
1. Clarify work covered under the OOAC umbrella.	Developed in conjunction with OOAC journal review (see point 9)	HS	Jan 2019
2. Establish an online platform for potential collaborators to make contact/discuss issues/launch partner calls - particularly valuable when searching for project partners during sabbatical funding calls.	Launch Network Forum on OOACT Network's member's page. Members will be able to share information on resources, collaborative opportunities, jobs, funding articles and discussions.	JC	Dec 2018
	Review effectiveness of Forum among membership and make any required improvements.	JC	June 2019
3. Advertise training activities, equipment, funding opportunities (particularly post sabbatical) and facilities on OOAC website.	See point 2.		
4. Share information on current models and technology platforms in different areas.	See point 2.		
5. Deliver a training day enabling network members to see current commercial technology.	Incorporate into Learning and Collaboration Event: 8 & 9 April 2019.	HS/MK/JC	April 2019
6. Industry partners offer early career researchers 1-2 days industry experience.	Promote opportunities on OOAC member's webpage and via Network Forum (see point 2)		
7. Travel bursaries and lab rotation funding.	OOACT Network to allocate funding and establish application process for travel bursaries and lab rotation funding.	HS/MK/JC	May 2019
8. Set up working groups in different areas e.g. tissue specific or technological bottlenecks.	Establish areas requiring working groups with members at Learning and Collaboration Event 8 & 9 April 2019.		April 2019
9. Network to organise/edit a journal special OOAC edition i.e. Lab-on-a-Chip journal.	A recent organ-on-a-chip review was published in Lab on a Chip - Oct 2018. Start discussions with journal for future review opportunities.	HS	Jan 2019
10. Partner with existing meetings/societies for future network meetings.	Map out existing relevant meetings and societies to identify potential partnership opportunities for future network meetings. HS/MK/JC/deadline March 2019	HS/MK/JC	June 2019
Set up clinical panel to identify relevant problems to be tackled by the network and increase clinical collaborations.	Actions: Work with clinical panel members to develop and establish an effective clinical panel and identify the remit for the clinical ambassador role. https://acmedsci.ac.uk	HS/MK/JC	May 2019

Appendix 1

Organ-on-a-Chip Technologies Network – launch meeting/7 Sept 2018

Summary of group discussions

PART A – General thoughts about important aspects of network and focus

1. Organ-on-a-chip is a convenient brand but care must be taken to include the breadth of work covering *in vitro* models and microphysiological systems.
2. The key first step is communication – bringing members together. How do we include researchers who are doing useful work but might not consider themselves to be in this field?
3. Break down the barriers between engineers, life scientists, physicists, clinicians, industrialists – we should all think of ourselves as ‘organ-on-a-chip’ researchers not be pigeonholed into a single discipline!
4. Computer modelling of organ-on-a-chip devices and other model systems is valuable and should be included in the network
5. Models for different tissues are at different stages of development. Therefore it is too early for model validation in many models.
6. Too early for a dedicated Centre for Doctoral Training (CDT)? But can we have a virtual CDT providing PhD training and collaboration across institutions?
7. It would be useful to have an ‘organ-on-a-chip centre’ somewhere in the UK providing access to existing commercial systems etc.
8. How could we access mechanisms such that our seedcorn funding can progress to further funding if the initial project is successful?

PART B – Specific ideas for network to do/create

9. Can the website include a discussion forum/message board?
10. Can the website incorporate a ‘tinder app’ helping members to find collaborators?
11. The network could organise/edit a journal special edition on organ-on-a-chip (e.g. in the journal Lab-on-a-chip). The network could commission reviews in specific areas (e.g. tissue/disease types or technology platforms or development bottle necks).
12. Disseminate the information on the current models and technology platforms in different areas.
13. Set up working groups in different areas e.g. tissue specific or technological bottlenecks.
14. Partner with existing meetings/societies for future network meetings. (This could be both the main annual network meeting and smaller satellite meetings organised by network members)
15. Deliver a training day, enabling network members to see existing commercially available technology platforms and discuss incorporating their own research/model systems.
16. Use the website to advertise training activities (and to provide a write up post event)
17. Industry partners could offer early career researchers the opportunity to sit within industry for 1-2 days to experience the industrial perspective.
18. Set up a clinical panel to identify relevant problems to be tackled by the network and build new collaborations.
19. Advertise available facilities and equipment that might be useful across the network
20. Travel bursaries and lab rotation funding would be useful?
21. Set up way for early career researchers and PhD students to use the website to advertise their interest in being involved in pump priming sabbatical projects funded through the network (so if you are looking for someone for a project idea, you know where to start!)