Introducing the RegMedNet Award for Cultivating Excellence

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It is undoubtedly an exciting time to be working in *Regenerative Medicine*. This ground-breaking field presents the opportunity to revolutionize modern healthcare and offers promise for the treatment and cure of a multitude of diseases and conditions. This fast-paced and ever-evolving sector has the potential to not only improve but also save countless lives across the globe. While there is great hope for this area, there is, however, still a great deal of work to be done and challenges to overcome before many regenerative therapies can be used routinely in the clinic. The wide array of opportunities has not gone unnoticed and each day, more and more people are dedicating their lives to the field. As it continues to develop and expand, we feel it is important to celebrate and honor the people working tirelessly in the field at all levels and stages of research.

With this in mind, in 2017, RegMetNet [1], in partnership with *Regenerative Medicine*, launched the Award for Cultivating Excellence (ACE), this year sponsored by Biological Industries (Kibbutz, Israel). The aim of the award is to recognize research teams/laboratories around the world that are making invaluable contributions to the field, not just with headline-making research and award-winning facilities but also by driving and promoting career development, collaboration, public engagement and education. It is work such as this that will support the longevity and future of the field, so that it can one day meet the potential many have anticipated since its inception.

How were the winners chosen?

We offered the opportunity for people around the world to nominate any and all research groups/laboratories they felt met this high bar of excellence. Specifically, we were looking for research groups/laboratories that demonstrated they:

1. Promote and nurture the education and career development of PhD students and postdoctoral fellows through specific programs, initiatives and providing a range of opportunities to broaden their range of experience and skill base, e.g., collaboration, opportunities for conference attendance (allowing networking and broadcasting of their work), among others.
2. Provide opportunities, accessibility and training to undergraduates in the laboratory to positively promote careers in research and regenerative medicine, e.g., final year research projects, work experience, placements, lecturing, among others.
3. Continually explore new methods for collaboration with other laboratories and research groups, e.g., data sharing, open dialogues, joint projects, involvement in internal and external initiatives in the field, conference attendance, participation in boards and committees, among others.
4. Offer useful contributions to the advance the field of regenerative medicine as a whole, e.g., provide useful tools/resources to the wider scientific community, novel ideas/areas of research, studying an unconventional theory/area that is struggling to gain recognition and funding, experimental reproduction for validity, lecturing, peer review, active roles on journal editorial boards, among others.

5. Participate in external communication and outreach to promote the field of regenerative medicine to the general public, e.g., press releases, altruism, patient advocacy, offering learning resources, educational programs and initiatives, highlighting potential for translation to the clinic and benefit to the patient.

In order to select a winner from a shortlist of the top nominees, an international panel of experts was assembled who evaluated the finalists based on the five pre-determined criteria outlined above. The ACE judging panel consisted of *Regenerative Medicine* Associate Editor Glyn Stacey (International Stem Cell Banking Initiative, UK), Kevin McCormack (California Institute of Regenerative Medicine, CA, USA), Maneesha Inamdar (Jawaharlal Nehru Centre for Advanced Scientific Research, Karnataka, India) and *Regenerative Medicine* Editorial Board member Alain Vertes (NxR Biotechnologies, Basel, Switzerland).

The winner of the 2017 Award for Cultivating Excellence

Following careful consideration by the expert judging panel, the inaugural winner of the ACE was the Cells for Sight research team from University College London (UCL, UK), led by Julie T Daniels. Cells for Sight was established with the aim of researching, developing and delivering novel, safe and effective cell-based therapies and anti-scarring strategies for patients with blinding eye disorders such as corneal and conjunctival disease.

“What impressed me most about the entry from UCL was the level of enthusiasm in their description of what they did. It felt like this was something they did, not because they had to, but because they really wanted to and because they felt it was an important, even essential, part of their work”, explained judge Kevin McCormack, also commenting on the high standard and global nature of the nominations received.

To highlight the achievements of Cells for Sight, the group was the subject of a month-long special feature on RegMedNet, featuring interviews with lab members and selected published research. Julie Daniels also hosted a webinar on RegMedNet entitled *“Challenges, perspectives and road to progress for early career researchers in regenerative medicine”*, which is now available to view on demand [2]. The group also received a year-long subscription to a Future Science Group title of their choice and 50% off open access fees for up to five articles published in *Regenerative Medicine*.

The lab of Richard Oreffo, the Bone and Joint Research Group, University of Southampton (UK), was the runner-up, with a judge’s special mention going to the lab of Ismail H Dilogu, Universitas Indonesia. Completing the five-lab shortlist were the groups of Jeremy J Mao from Columbia University (NY, USA) and Ngan Huang at Stanford University (CA, USA).

“Ismail Dilogu’s lab deserved a special merit for their very worthy and successful work under very difficult conditions, which was difficult to compare with labs in well-funded countries”, stated judge Glyn Stacey. *“They were highly commended for their efforts in training and public outreach”.*

Cells for Sight research focus

The Cells for Sight program is a collaboration between the research group of Julie Daniels at UCL Institute of Ophthalmology and clinicians at Moorfields Eye Hospital NHS Foundation Trust (UK). The research team is divided into three different areas: basic research, translational research and clinical manufacture.

Basic research

The group is studying the role of limbal melanocytes and their involvement with limbal epithelial stem cells (LESCs) which holds potential for the future development of tissue engineering and stem cell-based regenerative medicine of the ocular surface. Another project is focused on corneal stromal dystrophy and the derivation of an *in vitro* source of canine corneal stromal cells for future study of the inherited components of corneal dystrophies in dogs and to begin to determine the therapeutic potential of the cells. Aniridia-related keratopathy, a condition affecting the ocular surface in patients with aniridia, is also being studied. Using *in vitro* models of the aniridic cornea, the ultimate goal is to assess the impact of PAX6 on corneal cells and their interactions during homeostasis and disease.

Translational research

Current research is looking to standardize protocols for the production of stromal cell-populated real architecture for 3D tissues (RAFT) for the culture of epithelial cells in the research laboratory. In order to move toward clinical translation, the aim is to reproducibly manufacture cell-populated RAFT in compliance with GMP through the

development of robust standard operating procedures. Due to the demonstrated anti-scarring properties of corneal stromal stem cells (CSSCs) and evidence that they support the growth of limbal epithelial cells, another project aims to discover the best localization to isolate these cells. This project will lead to the development of tissue engineering techniques for the delivery of CSSCs to patients using a novel collagen-based GMP-compliant RAFT technology.

Clinical manufacture

The Cells for Sight stem cell therapy research unit, established in 2005, was the UK's first Medicines and Healthcare products Regulatory Agency (MHRA)-accredited cultured stem cell facility. The facility was rehoused in 2011 to a new, state-of-the-art, cleanroom suite at Moorfields Eye Hospital and was designed to support the manufacture of advanced therapy medicinal products (ATMPs) under MHRA 'Specials' and Investigational Medicinal Product licenses. The facility is also licensed by the Human Tissue Authority (HTA) for the procurement and testing of human tissues for human application.

Using autologous and allogeneic corneal LESC, Cells for Sight has manufactured and delivered tissue-engineered corneal grafts to patients affected with limbal stem cell deficiency. Cells for Sight have also partnered with The London Project (UK) to manufacture replacement retinal pigment epithelial patches from human embryonic stem cells, for patients with age-related macular degeneration. Additionally, the facility is used by academic, NHS (UK) and industry partners for contract manufacture.

Conclusion

We would like to offer our congratulations to the Cells for Sight team for winning the inaugural ACE. As a winner of this award, Julie Daniels will sit on our expert judging panel for the 2018 ACE and will help us find another deserved winner. Applications for next year's award will open in Spring 2018 and we look forward to receiving your nominations.

Financial & competing interests disclosure

Adam Price-Evans is an employee of Future Science Group Ltd and Managing Commissioning Editor of *Regenerative Medicine*. The author has no other relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript apart from those disclosed.

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