

Case Study: Digital Engagement

Using digital channels to respond to public questions about stem cell research

At a glance

Strategic PE Aim	Aim 1: To reach beyond Cambridge to raise awareness about stem cells on a national and international level
Date	July 2017 - present
Audience	Adults, Patients, BAME individuals ages 16-24
Reach	3,115 views, 10 YouTube films 103,260 Impressions, 1,513 Engagements, 6,780 Media Views, 19 tweets 7,800 Instagram impressions, 26 posts Across three projects; 1. Laboratory-grown blood cells: transfusion of the future 2. #openupstemcells 3. #blackgirlinscience
Project lead	1. Dr Cedric Ghevaert, Principal Investigator 2. EuroStemCell 3. Oluwaseun Ogundele, Research Assistant
Researcher participation	8
Collaborators	1. Dr Andy Gilson, the University of the West of England, Blood donor Public Advisory Group, NHS Blood and Transplant Communications 2. King's College, University of Edinburgh, German Stem Cell Network, Institut Pasteur, IMBA, DanStem, and Stammzellnetzwerk.NRW
Cost	1. £1,101.60 2. Free 3. £1,850.52

Project Aims

- To experiment with public-driven content design
- To raise awareness about stem cell research using accessible formats
- To build trust in researchers through representative role models
- To strengthen our partnerships with charities and networks to increase the reach of our content
- To collaborate internationally on joint initiatives and awareness days

Summary

Since July 2017 we have been experimenting with a range of digital initiatives to engage online audiences with stem cell research. We wanted to test how creating content in response to areas of public curiosity could affect the quality and impact of our work. We also wanted to celebrate the diversity in our research community, being mindful of the role models we share online, and the impressions we give of life in research. Some projects have been solo ventures while others have been part of wider collaborative campaigns. The target audiences have also been broad, from patients and donors to members of underserved groups such as 16 – 25 year olds from the BAME community.

Project 1: Laboratory-grown blood cells: transfusion of the future, 2018

Led by group leader Cedric Ghevaert and his ambition to share his latest research on the production of red blood cells and platelets from stem cells in the laboratory, this project was shaped by the voices of blood donors. With Cedric's research having the potential to revolutionise transfusion medicine, he wanted to know what the public felt about this emerging technology, before it is introduced in the clinic. Working with a Public Advisory Group from the NIHR Blood Transfusion Research Unit, based in Bristol, he canvassed public questions to be answered by his team in a series of short films for social media, including;

- Why do people need blood transfusions?
- Why do we need laboratory grown blood cells?
- What are laboratory grown blood cells and how are they produced?
- How do laboratory grown blood cells work?
- How do lab grown blood cells differ from normal blood cells?
- Where do laboratory grown blood cells come from?
- How will laboratory grown blood cells be used?
- What other potential benefits do laboratory grown blood cells have?
- Can laboratory grown blood replace blood donation?
- Are laboratory grown blood cells cloned cells?
- Can laboratory grown cells be sold to commercial companies?

The group, consisting of 4 blood donors and 1 interested member of the public, reviewed early edits of the films, and gave feedback on the structure and terminology to improve the clarity of the researcher's answers. In February 2018, the individual question + answers were released over a 9-week period under the banner of #FridayFilm, with a final compilation hosted on YouTube and the EuroStemCell website. We worked with the NHS Blood and Transplant Communications team throughout to promote the content to relevant communities including patients and donors.

Project 2: #openupstemcells, 2019

Building on our experience collaborating with the public to tailor our digital content, we took the opportunity to scale our impact, working in partnership across Europe. #openupstemcells was a digital engagement action designed and led by public-facing organisation, EuroStemCell, of which Cambridge Stem Cell Institute is a member. The project had three phases.

- Phase 1 - online canvassing of public questions on stem cell research and clinical applications through Twitter, in association with European Researchers Night – September 2019
- Phase 2 - filming of informal research-led responses to public questions
- Phase 3 - release of film content as part of Stem Cell Awareness Day – 9 October 2019

Four researchers took part in the project, providing 90 second filmed answers to the questions below. The films were designed to be produced quickly and easily on a smartphone or a basic camera, with film production led by public engagement seed fund awardee, Oluwaseun Ogundele (Project 3.), supporting her skills development in digital content creation.

The questions answered in the films were:

- Why do you use stem cells in your research?
- How can I participate in a clinical trial?

- Can stem cells cure patients with diseases?
- How long does it take to get from the Lab to the Clinic?
- Can I use my baby's cord blood to treat my illness?
- What can umbilical cord blood stem cells be used for?
- How can studying stem cells help us understand developmental disorders such as autism?

The films were released consecutively each week during the month of October on EuroStemCell social media channels, and shared by partner Institutions across the network. A repository of all the films is now freely available on eurostemcell.org, a hub for people looking for reliable information on stem cell therapies and current research.

Project 3: #blackgirlscience, 2019

This ongoing public engagement seed fund project aims to promote diversity in STEM subjects and improve awareness of research careers amongst BAME individuals aged 16-24. The project is driven by Research Assistant Oluwaseun Ogundele, with Institute support for training and recording equipment.

Through her YouTube, Instagram and Twitter accounts Seun shares her own journey as a young black female working as a stem cell researcher at the University of Cambridge. Her primary format is long-form YouTube film releases *@seuninscience*, where she provides practical advice on the University experience, job searching, writing applications and preparing for interviews to inspire BAME individuals to apply to institutions like Cambridge ('Getting into Cambridge'). She also shares her daily life as a stem cell researcher, looking after her cells and analysing her samples ('Day in the life of a Research Scientist'). Her motivation comes from personal observations of the lack of representation of black females in research. This format allows for immersive interaction with the target audience, with followers encouraged to comment and respond to discussion prompts. The accompanying Instagram and Twitter accounts enable additional content to be shared, and real time interaction with followers via Instagram stories and polls.

The project is ongoing, with two film releases and an upcoming contribution to International Women's Day and University central communications team "Women in STEM project".

Who did we reach?

Our digital campaigns were promoted extensively on our own social media accounts, with the scale of our reach enhanced by working in partnership to promote to specific audience channels.

On Twitter *Laboratory-grown blood cells: transfusion of the future* campaign received 62,175 Twitter impressions, 6,720 media views, and 1191 engagements, with 1,671 views of the full film compilation on YouTube.

In contrast, the Institute-led contribution to #openupstemcells films was more limited (41,085 Twitter impressions with only 322 engagements and 60 media views) although the wider EuroStemCell campaign reached 34,474 unique users across UK, US, Austria, Denmark, Germany and France. To date the Institute films have a combined 646 views on YouTube, with our film 'Can stem cells cure patients with diseases?' doing especially well with 2.1k impressions (partial views) and 244 complete views over a short period of time.

Thinking more closely about demographics, #blackgirlscience targets the 91% of 16-24 age groups who are active users of social media (RSPH-2017). This target group use digital platforms to obtain,

exchange and update information in real time, with content readily available and updateable to respond directly to their comments or needs. [@seuninscience](#) films have received 798 views on YouTube, with 84 likes, whilst each of the Instagram posts (26 to date) reached an average 200 people with 300 impressions.

Outcomes

For the public:

- Public given platform to ask direct questions of stem cell research and co-develop digital content
- More reliable and relevant information is available for online audiences, particularly on clinical trials and therapeutic applications of stem cells.
- Accessible content provides clear up-to-date answers direct from research community
- BAME audiences able to directly engage with a BAME researcher, and share experiences and questions.

Comments from [@seuninscience](#) followers:

- *'Looking forward to hearing more about your experience! Thanks for sharing.'*
- *'So amazing to see a black woman in STEM! Very inspiring. Looking forward to more videos!'*
- *'I want to see your daily routine!'*
- *'Oh my God I love this.... This video makes me want to do this job.'*

For researchers:

- 3 Principal investigators, 2 Postdocs and 3 Students took part across the three projects.
- Researchers valued having public input into the design of new film content and believed this would improve the accessibility and relevance of their science and engagement.
- The profile of individual participants was increased as well as their capacity to provide clear, concise answers to challenging questions beyond their narrow research field.
- Researchers gained technical skills in digital content production, filming, editing, and use of social media.

Researcher, Cedric Ghevaert (Project 1): *'Making this movie was probably the most fun and rewarding challenge the group had to meet. It was, for most of us, probably the first time that we were confronted with the unexpected when the questions came from the public. Having to frame the answers using non-scientific language taught us to focus on the why, not the how. Our goal was simply to engage the ultimate stakeholder in our research: the public and patients. Ultimately that is what does and should give us motivation.'*

Researcher, Oluwaseun Ogundele (Project 3): *'My project is centered on organic and consistent engagement with young BAME, forcing me to differentiate how to speak and interact with different age groups, communicating personal commitment and interest in key topics. This has provided me the opportunity to develop experience of running projects, including developing skills in time management, preparation and prioritization. I plan to apply for a PhD position, and this public engagement project has enabled me to build networks and relationships, and further develop skills such a leadership, developing an inquisitive mind, taking initiative – all of which will enhance my employability – both within and outside academia.'*

Looking forward

We have proposed a second European-wide digital engagement campaign to EuroStemCell, focussed on sharing patient experiences and perspectives on research. This combined researcher-patient narrative aligns well to another of our strategic PE aims. Meanwhile, #blackgirlinscience is continuing to grow, as we support Seun in the development of her approach. The priorities for the coming year are to improve data capture and evaluation of our digital engagement initiatives, and develop a marketing strategy to improve the visibility of existing and new content, including hosting films on relevant partner websites e.g. patient charities. We want to better track the impact of our content on building trust and awareness, including better targeting and monitoring of demographics reached.

Film Links

Laboratory-grown blood cells: transfusion of the future

- Compilation film
https://www.youtube.com/watch?time_continue=6&v=TCKP0dn2uHk&feature=emb_logo

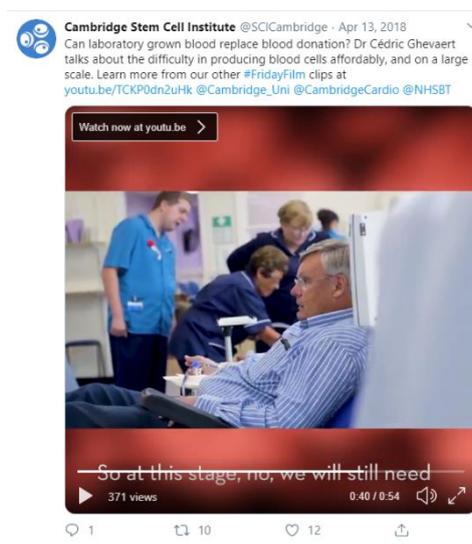
#openupstemcells

- Roger Barker- “Can stem cells cure patients with diseases?”
<https://www.youtube.com/watch?v=xSgsMbEmvmA>
- Roger Barker- “How can I participate in clinical trials?”
<https://www.youtube.com/watch?v=n0-CawY-Py0>
- Roger Barker – “how long does it take to get from the Lab to the Clinic?”
<https://www.youtube.com/watch?v=e95CV532SgE>
- Elisa Laurenti – “How do you use stem cells in your research?”
<https://www.youtube.com/watch?v=K4xb2ETUIJM>
- Elisa Laurenti – “What can umbilical cord blood stem cells be used for?”
<https://www.youtube.com/watch?v=OrffAarK-hk>
- Oluwaseun Ogundele – “Why do you use stem cells in your research?”
<https://www.youtube.com/watch?v=45S4sN1ApcE>
- Noemi Linden - “How can studying stem cells help us understand developmental disorders such as autism?”
https://www.youtube.com/watch?v=PIC2U_T76yY

#blackgirlinscience

- Main channel
https://www.youtube.com/channel/UCeky9avt81tiHJuqE_RGzrg
- Film 1: Getting into Cambridge
<https://www.youtube.com/watch?v=X5CtCUuMnPg>
- Film 2: Day in the life of a Research Scientist
<https://www.youtube.com/watch?v=vS85BnxZSCE>
- [Twitter](https://twitter.com/seuninscience)
<https://twitter.com/seuninscience>
- [Instagram](https://www.picbear.org/user/seuninscience)
<https://www.picbear.org/user/seuninscience>

Image Gallery



Project 1: Laboratory-grown blood cells Twitter posts #FridayFilm



Project 2: #openupstemcells call for questions



Project 3: @Seuninscience YouTube channel