

The story of **SURGEON X**

The Public Engagement grant is to support events where aspects of microbiology are promoted to the public. Events eligible for support can range from pieces of art to popular music. The main criterion is that the work must in some way promote the science of microbiology.

Surgeon X is a comic book series published by Image Comics. Set against the backdrop of an antibiotic apocalypse in near-future London, SfAM has supported a number of *Surgeon X* events. Sara Kenney, director and author tells *Microbiologist* about the project.

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The year is 2036 and the world is in the midst of an antibiotic apocalypse – we have failed to find the political and financial will to discover new antibiotics. Bacteria have evolved resistance, and yearly deaths due to infections are now the biggest killer on Earth. Surgeon Rosa Scott, aka *Surgeon X*, and her microbiologist twin sister Martha are battling to save lives as the bedrock of medicine crumbles around them. This is the story of how the comic book *Surgeon X* brings to life this grim yet familiar near-future world.





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I've always told stories about science, mostly on TV. I've worked on the longest running science series in the world, *Horizon*, and the longest running medical drama series in the world, *Casualty*. But what I love about comic books is they allow you to be extreme; to create unusual characters; to go anywhere and say anything you want to say. I also found that while making science documentaries you usually only interview scientists. But the best science stories encompass ethics, sociology, politics, economics, history, psychology and so on, and that's what I wanted to include in *Surgeon X*.

When I was looking for obstacles for the protagonist, Rosa, the more I read about the antibiotic crises the more I realized that this was about one of the worst things you could throw at a surgeon. Having been funded by Wellcome Trust before, I wanted to talk to them to see if I could get a grant, but as a first-time comics writer I knew I had to have a good team around me. So I approached one of my comic heroes...

The legendary editor Karen Berger ran DC Comic's Vertigo imprint for 30 years. She has been an inspiration to many big name comic creators. She loved the concept and after reading some of my writing agreed to collaborate. Wellcome Trust awarded me the grant to proceed – but we needed to secure an artist. Karen had worked with the wonderful John Watkiss on Neil Gaiman's *Sandman*, one of the most iconic comic series of all time. I met with John and everything fell into place. Sadly John passed away in January 2017, but he worked tirelessly to finish all but the final 10 pages and his art is sublime.

For me, the science research was vital for making the stories a success. It makes the storyworld feel more authentic and believable. The comic was honed and refined by holding two workshops and constant interactions with experts for every bit of the story. I spoke to well over 50 academics from a wide range of disciplines. Rosa Scott has a little of all the female

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surgeons and scientists I met in her, although I can confirm none of the surgeons I spoke with had God-like tendencies to make decisions on who will live and who will die!

Surgeon X isn't just a comic. We also created a digital version available as a multimedia app. With over 180 pages of comic, 70 minutes of film documentary, 60 minutes of audio documentary and 25 minutes of animation the project took two years to complete.

Since creating the comic I've been funded by the Royal Society of Chemistry (RSC), Microbiology Society and Society for Applied Microbiology (SfAM) to create more content and run *Surgeon X*-themed events. I'm interested in hosting engagement events in non-typical science spaces such as comic cons, music festivals, libraries and perhaps even holiday camps. I believe there are so many opportunities for scientists, comic creators and audiences to interact in innovative ways.



In November 2017, I was awarded a Wellcome Trust Engagement Fellowship to explore this further.

Why am I doing this? Well I believe that an informed society leads to greater empowerment and democracy. I also believe that problems in science are never *just* solved by scientists. I think previous crises from flat earth (which is bizarrely coming back in fashion), climate change, BSE and anti-vaccination movements all illustrate this well. We need all our experts and also our artists and writers to explore and shine a light on these subjects. Stories help us to understand different perspectives and figure out who and what to trust.

This is nothing new – storytelling is what makes us human and it's how we make sense of the world. Stories guide our ethics and morals and help us to explore dark and dangerous places in exciting and entertaining ways. The Fellowship will allow me to dig down into this idea with a focus on comics.

I've always been a fan of comics or graphic novels (as some people like to call them). We have a rich and diverse culture of creating comics in the UK, yet I truly believe they are an underrated medium that deserves more recognition. Each page contains a story crafted with very few words. Having worked in TV, online and print I can tell you that writing for comics is a sublime exercise in storytelling. I'm a better writer for working in comics.

The art in comic books is diverse, inventive and often so wonderful that you can sometimes forget the words (and as a writer of course I hate to admit this)! When you buy a comic you take home a little art gallery in your bag, which you can delve into time and time again. What a privilege, and all for the price of a cinema ticket.

The careful combination of art and science in *Surgeon X* portrays a 'what if we do nothing?' world. It's a thought experiment if you like, on what we could face if we aren't able to organize ourselves. I hope this story will entertain, but also get people talking and thinking about the solutions. As we say in the comic 'we're all complicit' in the real-life version of this story...

Surgeon X is available at all good comic and bookshops. It's also available online in digital and print at Amazon and other book sellers. The app can be downloaded from the App Store or Google Play.

Website: www.surgeonx.co.uk

Twitter: [@surgeonxcomic](https://twitter.com/surgeonxcomic)

Facebook: facebook.com/surgeonxcomic



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