

Top scientist's industry move heralds stem-cell shift

Stephen Minger tells *Nature* why he is leaving academia.

[Daniel Cressey](#)

Stephen Minger will head GE Healthcare's new stem-cell research division.

King's College, London

Stephen Minger is one of the leading stem-cell scientists in the United Kingdom, known for his work both as a researcher and as a high-profile public advocate for the field. He gained one of the first UK licences for the derivation of human embryonic stem cells, and generated the first human embryonic stem-cell line in the country.

In September, he will leave his post as director of the Stem Cell Biology Laboratory at King's College London to take up a new role at GE Healthcare, the medical technologies company headquartered near Amersham, UK.

GE Healthcare announced on 30 June that it had struck a deal with biotechnology company Geron, based in Menlo Park, California, to develop drug-screening tests using cells derived from human embryonic stem cells. The project was widely touted as proof that the burgeoning field of stem-cell research was ready for broader applications in industry. Minger, who will lead that effort as head of GE Healthcare's Research and Development for Cell Technologies division, spoke to *Nature* about the job — and the future of stem-cell technologies.

Why are you making the move to industry?

I decided to move from King's to GE for the simple fact that it was a tremendous opportunity to take our academic, basic science research and really move it to a completely different level — to take stem cells and actually make parts from them, but also at the same time to avail myself of all the technology within GE.

Tell us more about the work you hope to be doing at GE Healthcare?

The basic idea initially is to develop cell lines derived from embryonic stem cells for drug screening and predictive toxicology.

One of the problems with big pharmaceutical companies and their development pipeline is that a number of compounds can go fairly far, even into clinical trials and in some cases even into licensing, where those drugs can begin to show unpredicted toxicological effects in humans. Most of the screening is done using animal cells — for example, rat liver cells — or is done using human tumour-cell lines that don't faithfully represent true primary human cells. In many cases, even if the screens do use human primary cells there are huge problems with the inconsistency of results.

The power of using embryonic-derived cells is consistency, both in terms of quality and genetic background. It allows you to reproducibly use the same population of cells week in, week out.

If you take a drug into the clinic and then it has to be withdrawn either from clinical trials or from licensing, you're looking at losing hundreds of millions if not billions of dollars. So we're really trying to reduce the costs of drug development.

Isn't this work that you could have done in an academic environment?

It's not so much that the work couldn't be done academically. It's about trying to garner the resources to be able to scale the work up, and to work more efficiently, running a very large group of scientists, engineers and cell biologists. It would be very difficult to do within an academic setting. I had no real interest in leaving academia but when you weigh everything up, it became almost impossible to say no.

Do you think your move is part of a growing trend towards commercializing stem cells?

It is clear that the field is maturing. If you look at the number of academic research groups who are pursuing this work, it's ten times what it was five or six years ago.

Whether or not other academic researchers will want to do what I am doing is really an individual decision, but I think it does represent a slight shift away from the research being at a really basic level, and moving towards commercial and clinical applications.

Do any of your colleagues think you're selling out by making this move?

I've yet to hear anyone say, "I think you're selling out". If anything, I feel like I'm taking advantage of an opportunity that will hopefully enhance the field and help develop tools that will support the entire stem-cell community.