

Faculty of Dentistry, Oral & Craniofacial Sciences:
Q&A with Professor Paul Sharpe, Head of the Centre for Craniofacial & Regenerative Biology

Meet Professor Paul Sharpe, Head of the Centre for Craniofacial and Regenerative Biology. Trained as a developmental biologist, his research at King's focuses on studying the function and properties of dental stem cells.

How long have you worked at King's?

I've been with King's for 26 years now – I was recruited to create the department. It started from nothing, but it's got bigger and bigger, and then changed to a centre. Now we have a team of around 100 researchers!

What areas does the Centre explore?

We want to understand how the face and head develops. Then we can use this information to create treatments for diseases – whether they're genetic or caused by bacteria. Being able to screen for these is important too.

Everyone has their own interest and wants to solve a different challenge. I work predominantly on teeth, but others work in areas like hearing, palate disorders, birth defects and bone.

So is there anything exciting going on at the moment?

We're hoping to launch a clinical trial later this year on a new way of treating tooth decay. Currently, if you have an infected tooth, a dentist drills the decay away, then gives you a filling. Instead, we're putting a molecule in there that stimulates the tooth tissues to regenerate, so it refills the hole itself!

What impact do you think research at King's making?

Well, there's the scientific impact which helps improve knowledge in the field. But there's also the effect on health, this is a much longer term thing. It's difficult to go from a discovery to a treatment as most of them fail.

As well as ways of generating new teeth, we've got groups looking at other areas like how to restore hearing. Our research also helps to inform the public. For example, if a child is born with a facial deformity, we can help parents understand its cause and what can be done.

Would you say the Centre's research influence teaching within the faculty?

It does – we're trying to make that greater by making sure new dental students are taught about our discoveries and understand why studying genetics and developmental biology are important.

Our students are going to be using new techniques and their patients might ask questions. For example, companies can take stem cells when a child loses a tooth. Parents want to know whether this is worth doing, but often the dentists don't know.

Do you think students are aware of the different career paths in dentistry?

People join a course believing they're going to be a dentist. But there is a career in academia, working in dental schools, or hospitals like King's carrying out research. We try to get them in the lab

to show them what it's all about – if we don't encourage these people there won't be anyone to teach the next generation.

For more information on the Faculty of Dentistry, Oral & Craniofacial Sciences or to republish this Q&A please contact Laura Shepherd, Communications at the Faculty on laura.2.shepherd@kcl.ac.uk