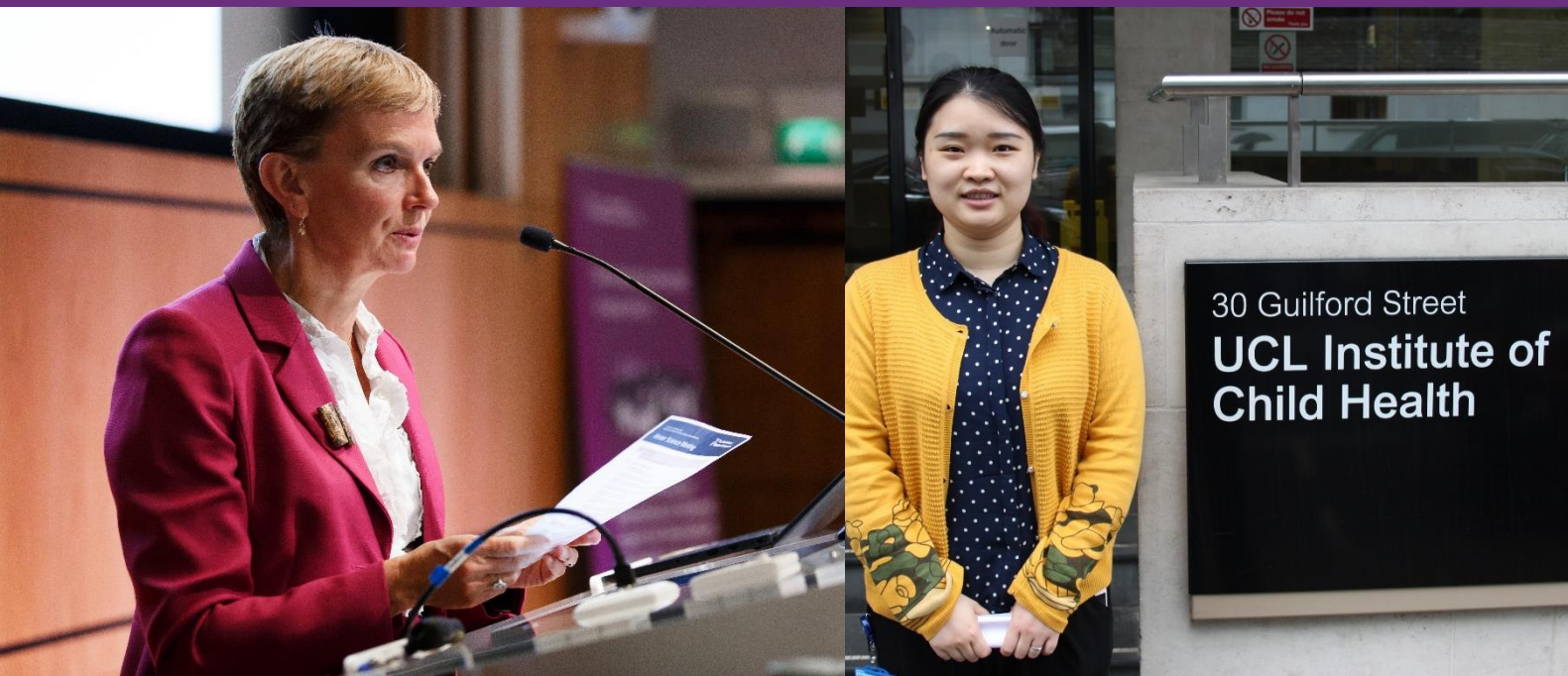


# Newton International Fellowships

## Meet the scientists



### The collaborating pair

**Dr Yu Deng was awarded a two year Newton International Fellowship in 2016 to work alongside Academy Fellow Professor Ros Smyth FMedSci.**

**Dr Yu Deng** was previously a researcher at one of China's top children's hospitals, the Children's Hospital of Chongqing Medical University.

**Professor Ros Smyth FMedSci** is an Honorary Consultant Respiratory Paediatrician and Director of the UCL Great Ormond Street Institute of Child Health, where her laboratory is based.

### Dr Yu Deng

#### How did you hear about the Newton International Fellowship scheme?

In 2014, when Professor Ros Smyth first visited our hospital, there was a collaboration between the UCL Great Ormond Street Institute of Child Health and our children's hospital in Chongqing Medical University. I talked to Ros about my research and sent her my CV. In 2015, she asked me to write a research proposal for a potential application to the Newton International Fellowship scheme. After looking at the proposal, she recommended that I apply to the Newton International Fellowship scheme.

#### What did you think of the application process?

The whole process was amazing. First I developed the proposal, which gave me good experience in writing in English, and Ros gave me some excellent suggestions for my project. I then collected several supporting statements; from my department, my university, and professors from around

the world. During this process, I gained recognition from leaders in the field, and having these leaders look through my application was great – the whole process was a learning experience.

**Do you have any words of advice for applicants to the scheme?**

Ros and I knew each other beforehand, so that made applying easier. She helped contact the experts in our area, even the president of my university and hospital. So maybe it would be beneficial if the applicant and the UK sponsor started to build a relationship before applying to a Fellowship.

**Can you tell us about your research project?**

The title of my project is 'Investigating the role of neutrophils in RSV induced epithelial damage'. RSV stands for respiratory syncytial virus, which is the leading cause of young children's respiratory tract disease. It is a very common pathogen, but it can cause life-threatening bronchiolitis and pneumonia.

Every year 200,000 children die globally and there are no vaccines or drugs to treat it.

As far as we know the current animal models are not a real host for RSV, so they are not fit for purpose. Tissue samples from patients are usually very small and hard to obtain, particularly from children, so we are eager to develop a model of primary human cells. Once the model is set up, we can increase our understanding of the mechanisms of neutrophils transepithelial migration during RSV infection and discover strategies for the prevention and protection from RSV.

**What made you want to become a researcher?**

I think this began during my time working as an intern in a children's hospital. Every time a patient recovered, I asked myself, could I have done better? But there are too many unknown mechanisms that determine the prognosis of the patient.

So, after my first degree in medicine, I took the opportunity to do a PhD and experience medical research and after I got a PhD I returned to clinical medicine, using my spare time to do research in respiratory infection. During this process I had practical involvement with patients, but I thought I needed more time to investigate the mechanisms that caused these infections in the first place. So I decided again that I wanted to continue as a researcher.

**How do you think this Fellowship will affect your future career?**

The Newton International Fellowship will take two years, and I think that's the perfect time to develop and produce quality research. You've given me the opportunity to move to the UK and work with the leaders in my area, which is wonderful. After two years, I will go back to China and become a clinical doctor again, my research experience will improve my clinical work and my clinical work will inform my continuing research.

**Do you think this Fellowship has helped you create collaborations?**

I first met Ros in 2014. Before I applied for the Newton International Fellowship, we seldom had much contact with each other: no real connection. After applying for this Fellowship, we connected with each other much more often - we emailed every day! And now the President of my hospital and chief of my ward want to send colleagues to her institution after me. So this Fellowship has given us a very real development in working collaboratively.

## **Professor Ros Smyth FMedSci**

**Where you aware of the scheme before?**

I wasn't aware of the scheme until I noticed it advertised in an email from the Academy. Because I had recently visited Chongqing and had met Dr Deng, as China was a participating country in this call, I thought it would be an ideal opportunity for her to apply.

**What do you think of the Newton International Fellowship scheme?**

I think it has been superb. Dr Deng is an excellent fellow; she has really taken advantage of the science environment here; she has learnt a great deal and she has also contributed greatly with her hard work.

**Would you host another Newton International Fellows applicant in the future?**

I'd be delighted!