**How would you explain the main findings of your paper in lay terms?**

Reproductive traits are economically important and are regulated by a variety of internal and external factors, which have not yet been fully figured out. In China, it has been estimated that an additional piglet per litter would increase the economic benefit by about 500 ¥ (~$75). Therefore, it is necessary to better understand the mechanisms underlying sow fertility. In this study, we have demonstrated that SMARCA2 is significantly associated with the litter size traits of sows, and that the number of piglets per litter of sows with a high level of SMARCA2 is increased by 50% compared with that of sows with a low level of SMARCA2. More importantly, we also found that SMARCA2 is regulated by a novel fine-tuned system involving multiple crucial RNAs and proteins that all play a role in the regulation of sow fertility.

**Were there any specific challenges associated with this project? If so, how did you overcome them?**

One of the challenges in this project was the association analysis (the establishment of a statistical model) and construction of a heterozygous mimic luciferase system. We were really new to this field at first, and we were under time pressure when COVID-19 broke out. I consulted everyone I knew who was working in a similar system and asked for their advice. Luckily, after multiple discussions with my workmates and supervisor, we succeeded in overcoming these challenges and finished related experiments using several methodologies that had not been considered before.

**When doing the research, did you have a particular result or ‘eureka’ moment that has stuck with you?**

Actually, there was one particular result while working on this project. We confirmed that a novel adenylate number variation in the SMARCA2 3'-UTR can influence the expression levels of SMARCA2 by regulating the stability of its mRNA, which is further involved in litter size traits in the sow populations we studied. Interestingly, we also noticed that SMARCA2 mRNA in pigs with a heterozygous genotype for this variation (11A/12A) is more stable than that in pigs with homozygous genotypes (11A/11A and 12/12A). In addition, association analyses showed that the litter size traits in sows that carry 11A/12A are significantly higher than those in sows with 11A/11A or 12/12A. Unfortunately, the potential mechanism is still not fully understood; this is now the main aim of our ongoing project.

**Why did you choose Journal of Cell Science for your paper?**

During my PhD, I often read the articles published in Journal of Cell Science. To our knowledge, Journal of Cell Science is one of the highest quality journals publishing selected original research in all areas of cell biology. Besides, Journal of Cell Science has a good reputation in the field of biology in China. For these reasons, we chose Journal of Cell Science for our paper.

**Have you had any significant mentors who have helped you beyond supervision in the lab? How was their guidance special?**

My supervisor Professor Qifa Li and co-author Lu Liu were essential during this project. As head of the lab, Qifa Li is the most critical and optimistic person I have ever met. He likes sharing his excitement about a new findings or wild ideas, and he never tired of answering all my questions. In addition, he supported me throughout my PhD and helped me acquire scientific techniques. As for Lu Liu, he helped me a lot during this project, especially with the experiments and bioinformatics analysis.

**What motivated you to pursue a career in science, and what have been the most interesting moments on the path that led you to where you are now?**

Since senior high school, I often assisted teachers in biology courses and helped them prepare for class. During that time, I read lots of...
papers in the literature and became addicted to science, especially biology, and planned to pursue it as a career. For me, the most interesting moments of this career path are when I find something new and work hard to get it published; when our work gets a positive evaluation from editors, reviewers and readers; or when I get the chance to give a presentation at an international conference.

Who are your role models in science? Why?
If I have to select one person as my role model in science, it must be Albert Einstein. When I was about 10 years old, I heard about his life story for the first time and I was deeply impressed by his great scientific achievement in theoretical physics. His relentless pursuit of knowledge and his wild imagination about unknown fields really explains how to become an excellent scientist.

What's next for you?
I’m currently working hard to finish up my postdoctoral research work. After that, I may attempt to participate in more sophisticated and practical fields, but I will still take my current fields further, rather than give them up. At the same time, I am working towards becoming a lecturer in the university where I’m currently working.

Tell us something interesting about yourself that wouldn't be on your CV
Apart from my passion for science, I have a lot of hobbies in daily life, including sports such as basketball, mountain climbing, swimming and others. I do love to watch NBA games with my family, friends and colleagues. I’m also addicted to scientific movies and novels, such as 20,000 Leagues Under the Sea and Interstellar, which I think might help to broaden my mind in scientific life. Sometimes, I also play PC games for relaxation, such as LOL, COD and NBA2K. Recently, I got started with photography and hope to commemorate beautiful moments of my family life in the form of photos. By the way, I took the photo of myself for this interview.

Reference