TrendsTalk
Focus, Prioritize, Collaborate
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Malaria remains one of the most important parasitic diseases in Thailand, where all human malaria species (Plasmodium falciparum, Plasmodium vivax, Plasmodium malariae, and Plasmodium ovale) have been found. In Thailand, the seasonal dynamics of malaria transmission is strongly influenced by the presence of multiple species of Anopheles mosquitoes, which in turn influences vector control interventions and national surveillance programs. Dr Jetsumon Sattabongkot Prachumsri (Figure 1) is the Director of the Mahidol Vivax Research Unit (MVRU), established in March 2011, at the Faculty of Tropical Medicine, Mahidol University, Thailand. Jetsumon began her malaria research in 1985 and is interested in malaria epidemiology, surveillance, and transmission. She has published more than 175 papers under Sattabongkot J. and Prachumsri J. In this short interview, Jetsumon highlights the importance of finding one’s niche, prioritizing time, and establishing mutually beneficial collaborations.

What motivated you to become a scientist?
I would like to be a medical doctor but I could not pass the exam to go to medical school in Thailand and my next choice was to study sciences. After completing my undergraduate study, I continued with the Master in Science program at Mahidol University. After that, I got a job at the Armed Forces Research Institute of Medical Science (AFRIMS) in Bangkok, which is an overseas laboratory of the Walter Reed Army Institute of Research (WRAIR) located in Bethesda, USA. At AFRIMS/WRAIR, my research was related to new product development, such as new drugs, new vaccines, or new diagnostics for malaria. Thus, I began to work closely with malaria patients in Thailand and later in other countries, such as China and Korea. To see patients from all age groups inspired me to think how could I help and make a better life for them, because malaria has more impact on populations with limited resources. I went back to complete my PhD at Mahidol University after working for a few years and I was the first employee to be supported by AFRIMS as part of the PhD program.

What does your lab focus on?
My lab has focused on understanding malaria transmission, especially in Thailand and other Asian countries, where there are different patterns of transmission compared with other regions. Although our work is not limited to Plasmodium vivax, we have done a lot more work on its biology, including the gametocyte and liver stages of the parasite. We would like to understand how this type of human malaria parasite can stay dormant in the human liver for such a long time. This characteristic of the parasite impacts the strategy to eliminate this species from endemic areas.

How can established scientists best serve as mentors to young researchers, both male and female?
We can mentor the younger generation by sharing experiences with them when there are chances, such as at international conferences if there is a proper session set up specifically for this type of knowledge sharing. The more common practice, I think, is mentoring through collaboration in a big project where the junior researcher can be a co-investigator and help lead a small project as part of the big one. If we are in the same place, mentoring can occur during the morning coffee or during a break, to discuss new ideas of research, scientific or administrative problems that the junior investigator has encountered. There are experiences that can be shared with the younger generation; they can learn from our past experiences, such as how to submit grant proposals to different funding agencies, how to budget properly, resource sharing among groups, and so on.

What advice would you give young scientists planning to start their own lab?
I am now mentoring five junior faculty members at my institute. Some of them already have families and have just started setting up the new lab. My advice to all young scientists is to prioritize and use their time wisely between family and science and everyone can do this if they plan well.

At the beginning, the most efficient way to succeed in your own lab is to do most of the research yourself so that you will understand better how to interpret your data and spend less time dealing with scientific and administrative staff. I found that some young scientists when they start their own lab rush into having a big team or postdoctoral fellows. What they rush into does not expand their knowledge in science but increases the time spent on administration. Although administration is an important factor in doing good science, young scientists should start by using the administrative system from their mentor; this will give them more time to focus on science and be more competitive in their own area of research. As you progress in your research or scientific career, your administrative skill will have to increase too. Otherwise it will be more difficult to manage a big research
team. I always told my junior faculties to enjoy their time as an independent scientist with a small team for a few years before thinking about a bigger team, because they will have to prepare for a new grant proposal, write manuscripts, and do the research. The more you can do this in short time, the faster you can move to the next level of your career. So be focused at first, and explore wider areas of research when you become more senior.

Do you think you encountered any extra hurdles as a female scientist?
A lot of western female scientists have more complicated issues if they have a family (husband and children) but I think that, in Asian culture, we are luckier because the family support system is still available in most places. I married before I completed my PhD and have three lovely boys who now are grown up. I have very good family support, which played an important role in career development in my early stages as an investigator.

Naturally, having children was a hurdle, as they required I spent my time with them and, even with an excellent support system, there are things that only the mother or the parents can do. But it was only for a short time, about 5–6 years, that I could not spend as much of my time as I would like on my work. I think that, with new technology, all women can now do more. I was not worried that I had to compete with men in my area of research, but rather tried my best to do what I can do well and to identify clearly my niche and my interests. I think this is important whether you are a man or a woman. I have high self-esteem; therefore I am not easily intimidated by anyone, rather vice versa, even by male scientists. If you are Buddhist, the most important thing is what you think and not what everyone else thinks about you. I am highly confident in myself and this Buddhist lesson applies to me very well. So you may think this is the way I overcame any extra hurdles, but I do not see that women scientists face more hurdles than the men, although others may do so. Some men may even think in the opposite way, as now there are more funding programs that give higher priority to women scientists than to men.

**Collaboration is now the foundation of research. For some early career researchers, especially women, it might be intimidating to make that first move and initiate conversation that might lead to collaboration. How did you manage this?**
I think that it is not the gender that impacts on collaboration, but what we can offer to create benefits for both sides. If we can identify what we have and what we need from our potential collaborators, then the discussion can be initiated. With progress in online communication, many scientists can initiate the discussion online even before meeting in person. I think this can be a good tool for junior scientists, who may be less confident, to use this channel to start. Meeting in person will be better, of course, at a conference if possible. To meet in person at the conference, you will have to be brave and directly tell other scientists of your intention to collaborate and why you are interested in doing so. You will have to be very focused on what you need. Be prepared to be denied, but then you will learn who may be a good collaborator in the future from their response or personality. Collaboration for me is similar to looking for a good friend, as we will have to trust each other to work together. I always welcome any new collaboration if I am interested in what is being proposed and both sides will benefit by working together even if we have never worked with each other before. Then the continuation of the collaboration from the first study to the next will be determined by how successful it was and it may be terminated if it did not go well.

In summary, collaboration is when two or more groups work together and all groups can benefit from it (does not have to be equally beneficial). This means that everyone has something to offer, such as the personnel to do the research or the resources to support a technique. The one who initiates the idea is important but the one who can do the work is as important as the idea owner. Finding a collaborator with common interests is key to accomplish the shared goal(s) of the research. Understanding the strengths and weaknesses of your collaborators will reduce your frustration and help you better plan for collaborations on any study.

**What can institutions do to support women in science?**
We do not have much of an issue with this in Thailand as we have more female than male scientists and we do not have the issue of men receiving priority over women. Some funders now take into account that women may have short breaks early in their careers due to maternity leave, and so on.

For married women scientists with kids and without family support, institutes can support such staff by setting up a good nursery for children before they reach school age. This is very important, not only for women in scientific careers, but also in all lines of work, as we need more children to populate our next generation, before societies all over the world become elderly!

**If you were not a scientist, what would your alternative career be?**
Good question! All my colleagues always compliment me on how good I am at problem solving when it comes to administration, logistics, and personnel issues. So I guess if I was not a scientist, I could have a good career in human resource management, which is in fact quite popular nowadays.

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