



Sojourn of experiments

A Malaysian medical undergraduate on a research stint at Harvard University is discovering that there is so much to be gained in clinical science. > 8 & 9

Cherish-ing her stint at Harvard

A local student gets a chance to carry out research at one of the world's top varsities and leaves an impression on her mentor and teammates for her drive and diligence.

BY REBECCA RAJAENDRAM

educate@thestar.com.my

NOTHING could distract her when *ER*, *House* or *Grey's Anatomy* were aired on TV. She was more than a fan, says Cherish Cheong Chiu Wern. In fact, "it was an addiction" that she had for the medical dramas. "It was the craze back then, and I would take my spot in front of the TV before the given time slot to make sure I didn't miss even a second of it," recalls Cherish.

And even after so many years, the 23-year-old still watches reruns of the series.

While she was drawn to the diverse cast of doctors, interns and hospital personnel and their on-screen lives and relationships, the teen then had little interest when the characters discussed their patient's health and medical issues.

However over the years, Cherish had a fascination for their work and how they coped with it. That sparked her interest in medicine and it was just a matter of time before she enrolled for a medical degree in UCSI University (UCSI).

"My decision to pursue medicine was solely mine" says the Malacca girl whose older brother is also a doctor.

Within the walls of her faculty, she shone and Cherish and three others were shortlisted for a stint at Harvard University (Harvard) in the United States. The final interview was a skype interview conducted by Harvard Medical School Professor Dr Gordon H. Williams and she aced it.

After completing her second year at the UCSI, the medical undergraduate was all set for the

Harvard Medical School's Global Clinical Scholars Research Training Programme.

"I was a little intimidated," says the 23-year-old of her first few days at the prestigious university.

"I think it is only normal to feel that way when you are among experts who've contributed so extensively in their respective fields."

She soon discovered that she couldn't have asked for a better team to work with at the Division of Endocrinology, Diabetes and Hypertension at the Harvard's Department of Medicine.

"The group of people are so obliging, accommodating and supportive."

Although an undergraduate, they've treated her as an equal.

Cherish says she is amazed to find research work so stimulating.

Sharing findings

"It is more than just sitting and running experiments. The research community here (in Harvard) constantly holds discussions, workshops and conferences to share their findings with the other laboratories."

Her time is spent in researching the hormone aldosterone and its receptor mineralocorticoid receptor (MR), which is found on many tissues including the kidneys.

The hormone plays an important role in maintaining blood pressure in our bodies.

"We have been particularly interest-

ed in both aldosterone and MR because in the past two decades, studies have shown

that they contribute to the development and progression of cardiovascular diseases," she adds.

Cherish has been specifically working on adrenal glands since it produces the hormone.

She hopes to gain more information in how aldosterone is regulated in the body and ultimately, to find a new range of therapeutic treatments.

Having no prior research experience, she says her first few months in the laboratory was mainly spent "getting comfortable with the different equipment and apparatus".

Her work so far been gruelling as each set of experiments takes about six to eight hours per day to complete. The persistent researcher has done more than 70 sets to date.

Out of that 70, she says only 30 produce usable data.

"As you can see, I have been unsuccessful many times," she adds.

Still, she doesn't see these repetitive attempts as a failure.

"Most researches take a long time because there is a need to repeat them until we get consistent (and credible) results," she adds.

Then, there is always the time factor. For this young enthusiastic researcher, there simply isn't enough hours in a day! She makes it a point to get back to the laboratory on weekends to complete her experiments.

"Some say I spend way too much time in the lab, but I have never felt more at home than being here.

"I can honestly say that I look forward to coming to the lab every single day," says Cherish whose parents, both retired teachers, have been her inspiration.

"My parents have always encouraged me to take on challenges. They are also my role models when it comes to work ethics and positive values."

She shares that the hardest part of carrying out research is the frustration when you can't obtain the results you are hoping for.

"What makes it even worse is not knowing where the problem is!"

"It is this unpredictable nature of research that can drive you up the wall, but nothing beats that feeling when you finally get the results you want.

"It is addictive and I guess this is what drives researchers forward."

Teamwork counts

As in all jobs and projects, Cherish knows that teamwork and mutual respect are necessary especially since the team is working towards a common goal.

"This is what I feel makes Harvard one of the best institutions in the world."

Although she has some knowledge on the practical elements of modern medicine, Cherish is a novice when it comes to the

research aspects of her field.

Her mentor Harvard Medical School Prof Dr Gordon H. Williams describes his mentee as "terrific" when she conducts her research.

Her inquisitive mind has also impressed Prof Williams.

"She is always trying to find the next answer to questions that keep popping up while carrying out her research."

Even at the lab meetings, he says, Cherish is constantly bringing up new questions while presenting her data to the other laboratory members.

"This doesn't mean she isn't trying to find things out on her own. On the contrary, it reflects her ability to see beyond the obvious conclusions of a single experiment or study – a skill that is vital for any good researcher.

"From my perspective, she is a prototype of what you would like to have (in a researcher) and she has a budding career in clinical science," adds Prof Williams.

However, there is a slight snag in her plans to pursue a career in the field.

"The problem lies in the system," says Prof Williams who explains that when Cherish returns to Malaysia, she will need to complete another three years of her medical course.

This will then be followed by two years as a houseman and another two years as a medical officer.

"That's seven years away from doing research work," he says.

Prof Williams says that the years of practical work is important for any medical doctor, but there should be some leeway to allow those wanting to pursue research to chase their dreams.

For Cherish, the year-long stint has been incredible.

"What I've done and accomplished personally and academically in the past months have been tremendous.

"The experience is once-in-a-lifetime, the people here are amazing and the knowledge I have gained, invaluable."

She commends her mentor for her deep interest in the field.

"With Prof Williams, you know that your questions will never go unanswered and your problems will never go unresolved. He is always willing to share his experience and insights.

Cherish is also thankful to her "lab mates" for their guidance and support.

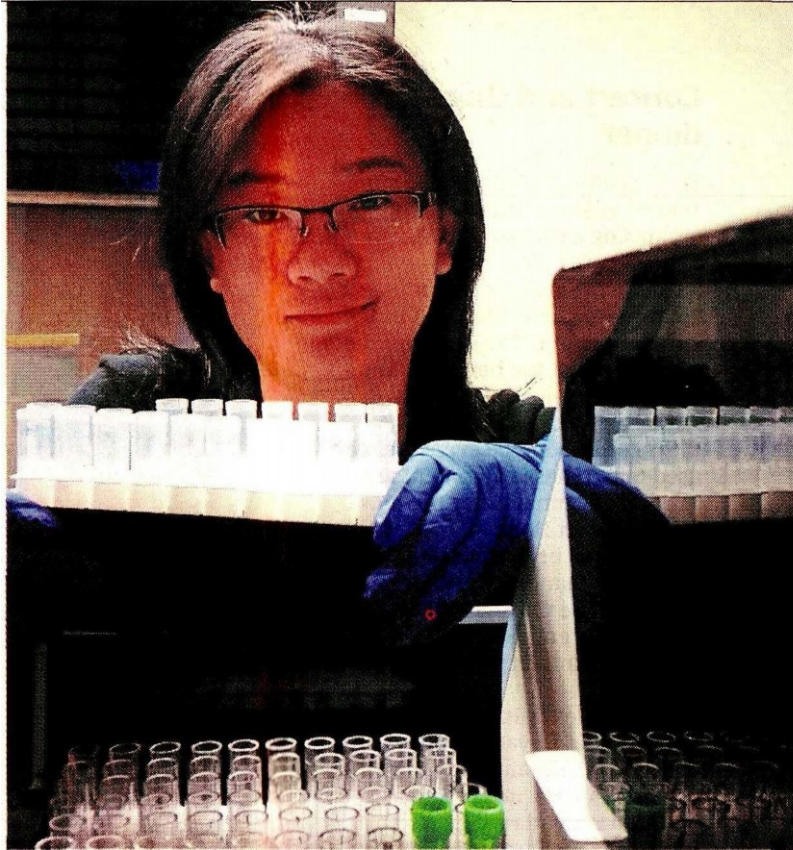
While it is uncommon for undergraduates to conduct research, Cherish feels that the

trend is fast picking up.

"I definitely do believe that Malaysia is moving towards that, and with universities emphasizing on research and collaborating with universities abroad, we will certainly see a surge in interest among students for research."

There is also a possibility that her work, together with that of her fellow researchers ,

will be published in a high-impact journal.
She is hoping to submit her findings before
her return to Malaysia next month.
No small feat for an undergraduate!



Multiple experiments:
It takes a long time for a research to be completed, says Cherish as tests have to be repeated for consistent and credible results.



Proud mentor: Prof Williams is full of praise for Cherish who is constantly applying her knowledge and presenting new data.



Eye for detail:
Cherish's time has been spent on researching the hormone aldosterone found in the adrenal gland.