

Alice in Winterland

Through the Looking Glass of Life and the Life Sciences

By Dr Toh Han Chong

When a simple, earnest spirit animates a college, there is no appreciable interval between the teacher and the taught – both are in the same class, the one a little more advanced than the other. – Sir William Osler, 1905.

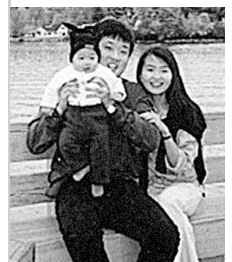
On one of those dark, freezing New England Friday evenings with the icy rain beating down on the big glass windows of Ellison 14, the cancer ward of the Massachusetts General Hospital, we finally finished our check out round in warm surroundings decked in holly. I was one of the ward clinical fellows and attached to our team was Alice T (her real name initialed), a Harvard medical student. Alice had followed us through seeing all the patients this evening and began asking about hypomagnesaemia and its treatment. Thankfully, I could answer that one. We then talked about the patients. One was Barbara E, the young staff nurse with refractory lymphoma who was undergoing experimental blood stem cell transplantation after failing many prior treatments. She had a 1 x 1 metre glossy photo of her cute 5-year-old son in front of her bed on the wall. Now that Barbara's prognosis was apparently poor, her ex-husband was fighting for custody of the child. He was never a great dad to begin with, according to Barbara. Another patient was Mohammed A, the babyface whale of a twentysomething Egyptian who had just graduated from a Boston college and was feeling upbeat about life before his Hodgkin's disease returned yet again with golf ball sized lymph nodes in spite of retreatment. He was a rich kid whose palatial Egyptian home had a dining table the size of a swimming pool and everything plated in gold. His parents had pleaded for the MGH oncologists to cure him at any cost.

So that evening, Alice saw a little of the human face of disease and also picked up some salt physiology in human disease. I said to Alice that I was hoping to get some research experience during my fellowship time in the United States. She then mentioned in her modest manner that she was part of an MD PhD programme and had just completed her PhD, publishing first author papers in Cell and Genes and Development. Suddenly this petite Asian American medical student whom I was giving a simple tutorial to appeared more like a life sciences Michael Jordan, having already made scientific slamdunks at her precocious age in the sexy stem cell field. Alas, my more memorable research experience as a medical student was to find out the name and details of the cute Eurasian medical student living in the hostel down the road. Over a decade later, I was to serendipitously bump into her best friend Maggie who told me she was delivering babies in deepest Africa as an obstetrician. Alice advised me that one year of research was a little brief for a strong scientific experience. "24-7" was the motto, she warned, 24 hours a day, 7 days a week, and no promises of reaping a rich harvest at the end of the day. Risky. It was like returning home to resume work as the proverbial *chwee kueh* seller in Tiong Bahru, having to meet the demands of long queues and waiting time for *chwee kueh*, and now I had to squeeze time in to do *chwee kueh* recipe-enhancing research to ensure that we remained at the leading edge of gourmet goodness? I also had an added privilege in teaching young *chwee kueh* seller wannabees to percuss the radish and palpate the flour properly. And if a huge hypermart with lower cost manufacturing base

selling much more *chwee kueh* appeared next door, graced with ladies in *cheong sams* ushering customers in, what would become of our humble stall?

The old art cannot possibly be replaced by, but must be absorbed in, the new science. – Sir William Osler, 1907.

So there I was, still deciding if DNA stood for "deoxyribonucleic acid" or "doubling national assets" when I read in the Straits Times Online that Singapore was pushing forward to become a topflight Life Sciences Hub. It all sounded exciting, including the promise that the nucleus of this hub would be a fun place to do science – La dolce vita in Buona Vista. I certainly hope Singapore will be able to pull its weight in this competitive upstream race on potentially choppy commercial waters filled with heavy-weight, established crews who may be bigger, hungrier, more experienced and more able to attract global talents into their boats. Blueprints to create a new breed of medical students like Alice appear to be under way to build up a life sciences youth squad. As the rain beat down on the MGH looking glass, a hazy view of the glistening Charles River became hazier, and a bare outline of that great academic powerhouse, Massachusetts Institute of Technology (MIT) was just visible. Concealed within the deceptively drab boxy buildings and prefab sprouts of MIT were some of the best and the brightest of several generations. Kooky or conventional, maverick, mainstream or just mad, the men and women of MIT represented energised Eveready Battery Bunnies to the American economy. Whatever their motivations, be it the hunger for fame and fortune, a childhood dream to cure cancer, a divine calling to clone that novel



Dr Toh and his family.

About the author:

Dr Toh Han Chong, BSc (London), MBChir (Cambridge), MRCP(UK), is a medical oncologist at the National Cancer Centre. He sometimes dreams of making a movie about the lives, loves and magical escapades of Singapore doctors entitled "Crouching Housemen, Hidden MO" and hopes to pick up an Oscar along the way. For now, he is content to treat cancer, change diapers and eat *chwee kueh*.

gene, the fear of being labelled an underachieving geek, MIT would reap a reputation as a lean mean patenting machine and for scoring spectacular technological goals on the world stage. Do they have a magic formula that we can learn from to ramp up our own technological ivory towers? Can we pull our own Eveready Battery Bunnies out of a hat?

Alice came to a fork in the road.

"Which road do I take?" she asked.

"Where do you want to go?" responded the Cheshire cat.

"I don't know," Alice answered.

"Then," said the cat, "it doesn't matter."

- Lewis Carroll, Alice in Wonderland

I asked Alice what she hoped to do when she graduated. She was not sure, either a paediatric haematologist, a full time scientist or a community physician. I imagine her Taiwanese immigrant parents to this New World must be pretty proud of her already. As we spoke, Ms Lieberman's temperature went up to 39 degrees centigrade. Time to review her for a full septic work up and antibiotics. For the moment, our roles were very clear, as Alice and I

agreed. Our Christmas hope was to help keep Barbara alive for as long as possible so that her son could continue to have a mother, his only real parent, and to help score a-hole-in-one in ridding Mohammed of his re-relapsed rubbery, golf ball-sized Hodgkin's Disease, and to tend to Ms Lieberman's fever and send her home soon.

It was late, and I was looking forward to seeing my wife and 8-month-old

baby boy at home after a long day. My Christmas wish for little Markus was that he would grow up healthy, blessed with a true spirit in a world driven more by hope than by fear. Outside the MGH main entrance, as I said goodnight to Alice who was going back to the Orkin lab to bottle-feed her stem cells, her toothy grin slowly disappeared into the misty silent night – just like the Cheshire cat. ■