Profile

Murat Emre: bringing it all back home

See Articles page 969

The young Murat Emre had a plan: to learn everything he could about the brain, to apply that knowledge clinically for the good of mankind, and to serve his country. Emre is founder and chair of the Behavioural Neurology and Movement Disorders Unit at Istanbul University, Turkey, and an internationally renowned leader in his field. It is safe to say his plan was a success.

So how was the plan formed? Emre grew up in the largely agricultural town of Eregli, in central Turkey, the son of a self-employed businessman. However, his father's interest stretched far beyond business. He loved literature, poetry, and especially the movies, says Emre: "He built two movie theatres in our small town…One of the theatres was open-air and our house was next to it, so I would sit on the balcony and watch the movies." His father also had a strong passion for medicine: "He wanted to study medicine, but didn't have the chance." When Emre was just 12 years old, his father died—too young, says Emre, for his father's passion to influence his own career choice. That said, two of Emre's older brothers are also doctors, and the other is an engineer. Wherever the scientific influence came from in Emre's family, it was strong.

The decision to study medicine was never in question; nor was the decision to focus on the brain. "I was fascinated with the brain", says Emre. So much so that at the age of 15 Emre began some experiments. He formed the hypothesis that memories were dependent on the fact that brain cells do not divide. With the help of a university professor, Emre attempted to induce rats' brain cells to divide with a carcinogen, to see if the rats would forget a learned route through a maze. "Rather naive in retrospect", says Emre, but still not your average high-school student experiment.

But then Emre was not an average student. He graduated from Istanbul University Medical School at the top of his class, and was offered residency positions in every department. He decided instead, however, to do his military service, which is obligatory in Turkey. "You can postpone it until a certain age", he explains, "but I wanted to get it out of the way." Always thinking of the bigger plan, Emre spent his free time in the military applying to research institutes, and was offered a scholarship at Zurich University, Switzerland.

Emre joined the neurophysiology department with the idea that he wanted to learn the fundamentals of neuron biology. However, after a year studying the synapses of Mauthner neurons in the tench, he realised he was suited to a broader perspective. He moved fields to train in clinical neurology, later becoming involved in clinical research and drug discovery.

"New molecules were being discovered, [such as] dopamine agonists, and we were testing them", says Emre. "Also in those years…the prospect of a first medication for Alzheimer's became available. They were exciting times." Emre's interest in Parkinson's disease and Alzheimer's disease was piqued, and he decided, somewhat ambitiously, to focus on both.

To get the best training, Emre went to the best people: first to David Marsden—"the best in movement disorders"—at the National Hospital for Neurology and Neurosurgery, Queen's Square, London, UK, and then to Marsel Mesulam—"the best person in the field of dementia"—when he was at Harvard University, Boston, MA, USA. Both placements were "very conscious decisions", says Emre, true to form.

Having picked the prize fruits of global research and academia, it was time for Emre to return to Istanbul. "I decided to come back for two reasons: the first was egoistic, the second was idealistic", says Emre. "Egoistic, in that I always felt I would be more comfortable at home. Idealistic in that I thought, well I've tried to do something for the world; now I can try and do something for my country."

Setting up the Behavioural Neurology and Movement Disorders Unit at Istanbul University is one of Emre's proudest achievements. "The same academic achievements in Switzerland, or the UK or USA would also be valuable", says Emre, "but doing it from here is more valuable, with the less developed infrastructure, with all the difficulties we have to struggle with."

He has every right to be proud. From his department, Emre has led research that contributed substantially to the notion that Parkinson's disease dementia is a separate condition (it had been thought that the dementia might be concurrent Alzheimer's disease). He also led the first drug trial for the specific treatment of Parkinson's disease dementia. The results of a trial with a second drug, memantine, are published in this issue.

Emre's career plan has clearly been a resounding success, but has he ever wavered in his commitment? "I sometimes have bad days, especially when I see a few patients one after the other who are in bad shape who I can't help much", he says. But, he adds, these bad days and difficult patients are his motivating force for continuing with research: "I always had two main motivations in medicine: one is to understand how things work, the second is to help. The beauty of medicine is that you can combine both."

Ruth Williams