Isidre Ferrer has received offers to teach at a university in Gambia and to help physicians in rural India to diagnose and treat diseases of the nervous system. But his next mission is to travel to Lunsar, a town in northern Sierra Leone, where Ferrer is due to start the pathology service at the St John of God Catholic Hospital.

To collaborate in international projects is one of the things that most pleases Ferrer, a world leader in neuropathology, and he plans to devote himself to such projects once he has retired. He is Professor of Pathology at the University of Barcelona and chairman of the Institute of Neuropathology at the Bellvitge University Hospital in Bellvitge, Spain.

"When I went to college I did not know whether to study medicine or humanities because I really enjoy history and art. At that time I chose medicine and, looking back, I was right. It is good to have science as a profession and reading about history and art as a hobby," Ferrer told The Lancet Neurology in his office at the Institute of Neuropathology while drinking a cola, one of his main vices along with chocolate.

"While studying medicine I became interested in the brain and the diseases affecting it. In trying to identify and understand the substrate that triggered those pathologies, I found myself studying neuropathology." However, his time at university was anything but typical. "I was a revolutionary man," he recalls, laughing. It was the mid-1970s, a time of great social change in Spain, and Ferrer was directly involved in meetings and demonstrations in defence of social rights.

"I had a very practical training. I spent evenings attending patients in several hospitals in Barcelona. I was also self-taught. At that time there were very few neuropathologists in Spain.... I spent many hours at the microscope and reading books...but I had good teachers as well." One was Carmen Navarro, formerly head of the Neuropathology Section at Vall d’Hebron Hospital in Barcelona. "Once everyone had left and her lab was empty, we discussed clinical cases and did our stains until very late. That is where I felt the strong desire to devote myself to neuropathology."

"Ferrer has an exceptional working capacity and two rare qualities: he solves problems quickly and in a practical way and he can work out what is truly important. He spends all the time needed with what is really important and, thus, he works more effectively than many of us do," says Navarro.

At first, his neuropathology unit focused on the diagnosis of diseases using Golgi’s method because "it was effective and very cheap. I was the only one in the lab and the only funding I had was my own salary," he then moved into histology and the comparative study of neurovascular diseases. At present, he leads a team of 25 researchers investigating the early stages of neurodegeneration and senility, the physiological relation between senile cellular changes—such as energy failure—and abnormal protein aggregates, and neurodegenerative disorders such as Alzheimer’s disease, Parkinson’s disease, and prion diseases. To do these studies, he has driven the creation of brain banks. He helped to establish a bank of nervous tissue at the Bellvitge University Hospital and is now helping with a paediatric brain bank at Hospital Sant Joan de Déu, Barcelona.

"He was one of the first neuropathologists who realised that morphology alone is not enough to study atypical dementias and started to dig himself deep into modern molecular biological techniques," says Gavor Kovacs, from the Institute of Neurology at the Medical University of Vienna, Austria. "He has made major contributions to the description of phenotypes and the understanding of selective vulnerability and of pathogenetic issues like deregulation of RNA and protein processing and lipid metabolism in the cell.

When he is not busy at work, Ferrer loves to sail. As a child he had a boat in Sant Pol de Mar, a village 50 km north of Barcelona, where he used to spend holidays. Ferrer is also an expert diver but he would not like being stranded on a desert island because he would miss undercooked potato omelette—one of his favorite foods—and his family, friends, and books.

Over the years, Ferrer has not lost his passion for literature and art. In scientific meetings, when everybody is resting or having a drink, he usually sneaks off to explore the city’s museums and, at one time, he even carved small stylised Giacomettian human figures. "He is calm, with a good sense of humor, polite and considerate with people," says Kovacs. Navarro adds that "he is a person with a high power of attraction".

Of all his achievements, Ferrer is most proud of "having conveyed to doctors and researchers that a disease begins when it starts at a biological level, not when the first clinical symptoms appear. Classic neuropathology has helped to categorise neurological diseases by increasing our knowledge of the morphology and basic biochemical changes of the nervous and muscular systems, says Ferrer, but the future is molecular neuropathology. "It is a key discipline able to take advantage of modern omics and apply them to the analysis of neurological diseases. In the coming years, these tools will enable us to deeply understand neurodegenerative disorders such as Alzheimer’s disease and Parkinson’s disease that lack a counterpart in other species."

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