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By Monica Crespo

With the beginning of the New Year, numerous advancements in medicine and science have been made, but many questions remain unanswered. For years, scientists have wondered about the brain. However, there is still not enough knowledge to understand how such a vital organ functions. This lack of knowledge does not mean that no progress has been made in the field, but that there is still much more to learn. Researchers like Dr. Seppo Ahlfors and Dr. Maria Mody, who work at the Martino's Center for Biomedical Imaging, are currently attempting to find some answers by using the latest technology.

Although one would typically think that only a biologist or neuroscientist would be interested in studying the brain, in reality, scientists from all fields have come together in the effort of taking "baby steps" to understand the human brain. Dr. Ahlfors, for example, was trained as a physicist, but works in biological-related research. As an undergrad, he started working in a lab, working with magneto-encephalography. After studying in Helsinki, he went to New York to make his post doc, where he met Dr. Maria Mody, his wife. He decided to move to Boston and work in the Martino's Center in Mass General Hospital, centering his efforts in the imaging of the brain. By combining different imaging techniques that complement each other, like magnetoencephalography (MEG), electroencephalography (EEG) and functional magnetic resonance imaging (fMRI), he wants to find out how thoughts flow and identify the differences of that flow in a malfunctioning brain, as well as the causes of these differences. He studies the sensitivity of the sensors of these imaging devices and analyzes the data using other researchers in neuroscience.

Dr. Maria Mody started studying psychology and communication as an undergraduate. She got especially interested in communication and later on got a Masters in communication media. She got a PhD in communication sciences and disorders, where she got to work researching stuttering. Dr. Mody decided to become a speech language pathologist as a result of her experiences while she was getting her Ph.D. As she continued studying speech and language, she wanted to understand the reasons for speech and language difficulties, which lead her to work on neuroscience. She studied people who had their speech-language cognition impaired and observed how some kids had cognitive problems, even when they didn't have brain damage. All her previous research got her interested in comparing languages and understanding how the human body gets

adapted to communicate, and went to Paris to study spoken language in children. Dr. Maria Mody currently works at the Martino's Center and her research focuses on language and reading. By using different advanced brain imaging devices, she performs experiments to study communication development, disorders, and the plasticity of the brain. In order to perform these studies, she compares the brain activity in children and adults, as well as in people with and without disorders like dyslexia. More detailed information concerning Dr. Mody's area of research can be found at <http://www.nmr.mgh.harvard.edu/lrrl/>. There, you will be able to find out more about their current research and the advanced equipment they use, as well as other information related to the functioning of the brain.

There is a need for science professionals from all fields to work in a joint effort to finding answers to questions that awaken people's curiosity, especially in biological fields. Therefore, although deciding a major is an important and significant decision, it does not mean you are limiting yourself to work or research in what is typically related to that field. A major will not define a career path, but rather provide the tools needed to approach the same problems in different ways. Dr. Ahlfors, a physicist, and Dr. Maria, a psychologist, combined their efforts in the search for answers to a common problem. MIT offers a vast realm of possibilities to its students; simply getting informed of the available opportunities will allow the students here a chance of finding what could probably end up as being their passion. Do not be afraid of trying out new things; biomedical research might interest you, and your contribution could lead to the better understanding of something as fascinating as the functioning mechanisms of the brain.