Barrow scientists make headlines for their research on fixational eye movements

Susana Martinez-Conde, Ph.D., director of the Laboratory of Visual Neuroscience, and Stephen Macknik, Ph.D., director of the Laboratory of Behavioral Neurophysiology at Barrow Neurological Institute at St. Joseph's Hospital and Medical Center, are featured on the cover of the August issue of Scientific American for their research on fixational eye movements. The pair was also featured in a recent issue of the Wall Street Journal.

"Scientific American is considered by many to be the Rolling Stone magazine of science," says Dr. Macknik. "It is a honor in our career to be featured in such a prestigious publication."

Drs. Martinez-Conde and Macknik authored an article describing the history of fixational eye movement research and the investigations they have conducted at Barrow. For decades, researchers have debated the purpose of fixational eye movements and particularly of microsaccades, the largest and fastest of fixational eye movements. Recent research conducted by Dr. Martinez-Conde and her team at Barrow has shown that microsaccades produce visibility when a person’s gaze is fixed on an object. Microsaccades may also help reveal a person’s subliminal thoughts. Fixational eye movements are responsible for driving most of our visual experience and without them humans would become blind to stationary objects.

“We are thrilled to have our research highlighted in Scientific American,” says Dr. Martinez-Conde. “Fixational eye movements have long been debated and our research has proven that they do serve a very important purpose.”

Barrow is world-renowned for its outstanding neurological and neurosurgical care. The center is routinely recognized as one of the top 10 neuroscience centers in the nation by U.S. News and World Report. The research conducted by Drs. Macknik and Martinez-Conde is funded by the Barrow Neurological Foundation.

Scientific American is the oldest continuously published magazine in the U.S. and has been bringing its readers unique insights about developments in science and technology for more than 150 years. The magazine publishes 15 foreign language editions and has a total of more than one million copies in circulation worldwide.