Barrow Researchers: Say 3D Films Like Harry Potter Movie May Help Scientists Understand the Brain

PHOENIX, July 13, 2011—Researchers—working in the 3D arena of the brain—will tell this week about recent measurements at Barrow Neurological Institute say 3D movies not only provide great entertainment, but might also help us to better understand how our brains fonction.

Neuroscientists, led by Dr. Howard Chudler, PhD, and Dr. David Chudler, PhD, have spent years examining the connection between vision and the brain. A recent study by the team involved using some of the world’s leading glasses, including Polarized and Tilted APLIQ glasses and PolarPro lenses, to help fully understand what the brain becomes when it is subjected to many simple visual experiences.

Dr. Chudler points out that magicians are not only magicians, but also 3D movies, which can be used to train the brain to understand aspects of 3D movies that are not only simple, but also complex. In the study, volunteers were given a computer-generated image, and asked to find a hidden object in it. The volunteers were then asked to find the hidden object, and were told that the object was hidden in a different part of the image.

By studying what happens when the brain looks at an object such as a 3D movie, the researchers can determine what the brain can actually see from the data it receives.

"When we are processing a visual stimulus, we are able to track and understand the actual brain processes," said Dr. Chudler, who directs the Laboratory of Brain Imaging at Barrow Neurological Institute. "This study reveals how the visual cortex processes the image.

Dr. Chudler’s team believes that those brain processes are vital in understanding how the brain actually interprets the image. "The brain extracts information from the images that it processes," said Dr. Chudler. "This information can then be used to understand how the brain actually processes the image.

3D technology is also of interest to scientists, said Dr. Chudler. Because recent studies suggest 3D entertainment systems are potentially dangerous to the brain, "3D movies are a great way to see what the brain is doing," said Dr. Chudler.

In conclusion, "3D movies are a great opportunity to study the brain's response to images," said Dr. Chudler. "These studies will help us to better understand how the brain processes images, and how these images are actually interpreted by the brain.

About Barrow. Barrow Neurological Institute is internationally recognized as an institution in neurological research, diagnosis and treatment. It is a non-profit educational and research hospital that specializes in neurosurgery, neurology, neurotechnology, neuroscience and functional magnetic resonance imaging. Barrow is one of the few places in the world where the brain can be studied in vivo (i.e., while it is still in the body) and then subsequently analyzed to understand how it works.

Dr. Howard Chudler is the director of the Laboratory of Brain Imaging at Barrow Neurological Institute. For more information, please visit www.barrowneuro.org.

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Barrow Neurological Institute is located at 3141 N. Central Ave., Phoenix, AZ 85012, just 1.5 miles from downtown Phoenix. For more information, please visit www.barrowneuro.org.

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