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**McGovern Institute Researchers: Humans Use Their Brains
Differently to Recognize Other Humans**

– Principal Investigator Nancy Kanwisher and Researcher Galit Yovel Author “Face Perception: Domain-specific, Not Process-specific” Published in *Neuron Magazine* –

– Research Identifies Area in the Brain Used Solely for Face Recognition –

CAMBRIDGE, Massachusetts – December 2, 2004 – The McGovern Institute at MIT, a leading research and teaching institute committed to advancing understanding of the human mind and communications, announced today that Nancy Kanwisher, one of its Principal Investigators and colleague Galit Yovel have authored a paper published in the December 2nd issue of *Neuron Magazine* strongly indicating that humans use their brains differently for recognizing each other than for recognizing other kinds of objects.

How the brain works – how it is organized – and why – are among the oldest questions in neuroscience. The McGovern Institute’s researchers explore these questions with an eye to how this understanding could help answer important health, technology and communications questions.

Yovel and Kanwisher’s article, “Face Perception: Domain-specific, Not Process-specific” reveals findings from their latest collaborative research that the area of the brain engaged in face perception (the fusiform face area or FFA) functions specifically to identify faces. When people make similar kinds of discriminations on images other than faces (e.g. on pictures of houses) the brain relies on different neural pathways.

“An age-old question in neuroscience is whether the brain is one big general purpose machine, with many shared systems, or a connection of specialized systems, each designed to analyze just one kind of information,” explained Galit Yovel. “The answer from our new research is that the brain has a very specific tool that it uses just for recognizing other human beings.”

The new results for face recognition contrast interestingly with the Kanwisher lab’s finding (published last month in *Neuron*) that our ability to understand the meaning of numbers, thought by many researchers to be situated in a different specialized brain region, does *not* in fact appear to have its own specialized brain area. Thus, some complex mental functions are computed in their own specialized brain regions, and other complex mental functions must share brain machinery across multiple tasks.

“It is a deep question for future research to discover why some functions get their own brain area, and others do not. We don’t know if it is the evolutionary significance of the task, or the amount of time we spend doing the task in our daily lives, or some other factor, that determines whether that task is computed in its own specialized region of the brain,” says Kanwisher.

If you would like to discuss Drs. Yovel and Kanwisher’s findings and their paper, please contact Derek Beckwith or Lyn Chamberlin at 978-443-0400.

About the McGovern Institute at MIT

The McGovern Institute at MIT is a research and teaching institute committed to advancing human understanding and communications. The goal of the McGovern Institute is to investigate and ultimately understand the biological basis of all higher brain function in humans. The McGovern Institute conducts integrated research in neuroscience, genetic and cellular neurobiology, cognitive science, computation, and related areas.

By determining how the brain works, from the level of gene expression in individual neurons to the interrelationships between complex neural networks, the McGovern Institute's efforts work to improve human health, discover the basis of learning and recognition, and enhance education and communication. The McGovern Institute contributes to the most basic knowledge of the fundamental mysteries of human awareness, decisions, and actions.

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