Monday, April 19, 2004
from 8:00 a.m. to 2:00 p.m.
LSU Health Sciences Center

KEYNOTE LECTURE: 9:30 a.m.
1st Floor
Medical Education Building (MEB)
Lecture Room B
1901 Perdido Street

Registration: 8:00-9:00 a.m.
2nd Floor, MEB or 8th Floor
LSU-Lions Medical Research Center
2020 Gravier Street
Poster Set-up: 8:00-9:00 a.m.
Poster Viewing: 11:00 a.m.-1:00 p.m.
8th & 9th Floor
LSU-Lions Medical Research Center
2020 Gravier Street
Light Lunch/Awards: 1:00-2:00 p.m.
8th Floor Conference Room
LSU-Lions Medical Research Center
2020 Gravier Street

Members of the Greater New Orleans Society for Neuroscience chapter are invited to submit abstracts and participate in the event.

Deadline for abstract and registration submission is April 5, 2004.

Contact Z. Davis at 599-0831 or e-mail: zdavis@lsuhsc.edu

Carla J. Shatz, Ph.D.
Nathan Marsh Pusey Professor and Chair,
Department of Neurobiology,
Harvard Medical School, Boston, MA
Member of the National Academy of Sciences

“Brain Waves and Immune Genes in the Brain Wiring”

Connections in the adult CNS are highly precise. In the visual system, retinal ganglion cells connect to target LGN neurons in adjacent, non-overlapping eye-specific layers. During development, retinal inputs are intermixed and the layers emerge as axons from the two eyes remodel. Remodeling requires ganglion cell action potentials, which are endogenously generated in utero long before rods and cones are present: ganglion cells fire spontaneously and synchronously, generating “waves” of activity that sweep across retinal domains. Waves are also required for regulation of gene expression by LGN neurons, including Class I major histocompatibility complex (MHC I). In mice lacking cell surface class I MHC, or CD3 zeta, development of the retinogeniculate projection is abnormal and adult mice have supranormal hippocampal LTP and lack LTD. Thus, these molecules are required for normal activity-dependent structural and functional synaptic modifications. These observations indicate that long before visual experience, nerve cell function is essential for activity-dependent gene expression and for the initial structural remodeling that leads ultimately to the adult precision of connectivity.

Dr. Shatz will be the guest of the Neuroscience Center and Department of Cell Biology and Anatomy, School of Medicine.