BCM Baylor College of Medicine
Department of Neurology

Neurology Grand Rounds

Sponsored by Baylor College of Medicine

Monday, December 15, 2008
12:00 noon
Blue Bird Auditorium, NB-137, Neurosensory Center

Systems-level neural repair: the case of vision

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Objectives:
At the end of this presentation, participants should be able to:

- Explain in broad terms what we need to understand and control in order to be able to achieve neuronal circuit repair.
- Describe in broad terms what perceptual deficits are induced by permanent lesions to different parts of the adult visual system.
- Describe up-to-date evidence for the effects of visual perceptual retraining following visual cortical injury.

References:

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3. Cowey A., Stoerig P. The neurobiology of blindsight. Trends in Neurosciences. 1991; 14:140-145.
4. Reinhard JAS, Schiefer U, Sabel BA, Kenkel S, Vontheim R, Trauzettel-Klosinski S. Does visual restitution training change absolute homonymous visual field defects? A fundus controlled study. British Journal of Ophthalmology. 2005; 89:30-35.
5. Sahraie A. Induced visual sensitivity changes in chronic hemianopia. Current opinion in Neurology. 2007; 20:661-666.
6. Baseler HA, Morland AB, Wandell BA. Topographic organization of human visual areas in the abscence of input from primary cortex. J Neurosci. 1999; 19(7):2619-27
7. Horton J.C. Vision Restoration Therapy: confounded by eye movements. British Journal of Ophthalmology. 2005; 89(7):792-4.
8. Rodman HR, Gross CG, Albright TD. Afferent basis of visual response properties in area MT of the macaque. II. Effects of superior colliculus removal. J Neurosci. 1990;10:1154-64.
9. Huxlin KR, Pasternak T. Training-induced recovery of visual motion perception after extrastriate cortical damage in the adult cat. Cerebral Cortex. 2004; 14:81-90.
10. Huxlin KR, Williams JM, Sullivan B, Hayhoe M. Training-induced improvements of visual motion perception after V1 cortical damage in humans. J Vision 2005; 5:708a. (paper to appear soon in J Neurosci)
11. Smirnakis SM, Brewer AA, Schmid MC, Tolias AS, Schüz A, Augath M, Inhoffen W, Wandell BA, Logothetis NK. Lack of long-term cortical reorganization after macaque retinal lesions. Nature, vol. 435, p.300-7, 2005.

Target Audience, Needs, Educational Methods, Activity Evaluation:
Physicians, residents, fellows, and other healthcare professionals need to be updated about new advances in the clinical and research areas for the diagnosis, treatment, and management of patients with neurological disorders. Educational methods will include lectures, case presentations, audio/video presentations, and questions & answer sessions. Participants will be asked to complete an activity evaluation.

Accreditation/Credit Designation
Baylor College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. Physicians should only claim credit commensurate with the extent of their participation in the activity.