

Undergraduate Research Newsletter

Summer Edition (Issue 4), June 15, 2009

**June 17, 12:00 pm
Lower Herrick**



We will be welcoming President Jonathan Veitch to the summer research community. There will be an opportunity to share your own research with him and the other students, as well as hear him speak.

Lower Herrick, includes lunch!

Treating Epilepsy



What does this 500 gallon plastic tank have to do with treating epilepsy? Alex Wertheimer (Biology '10) built a Morris water maze with it for his work in Kerry Thompson's lab. Not strictly a maze, the tank will be filled with murky water (colored with non-toxic white paint) that just covers a single, clear, circular platform. A swimming rat searches for this hidden platform while monitored by the video camera overhead. Once it learns to find the platform over several trials (using cues from the walls to discern direction) the platform is removed and the rat is tested for how long it takes to learn that the platform isn't there anymore. This standard test is used to test hippocampal function as it relates to spatial learning and memory and will tell them about the recovery of rats after an epileptic seizure.



Margaret Leith (Music '10) is working with temperamental stem cells, in the same lab as Wertheimer. Her goal this summer is to induce stem cells to turn into neurons which hyperproduce the neurotransmitter GABA. The idea is to put these neurons in the brains of epileptic rats because there is an established link between GABA deficiency and epilepsy. Previous research has shown a benefit from giving the rats GABA-producing undifferentiated stem cells, but the cells end up randomly throughout the body. If she can make neuron cells then it is easier to keep the cells in the brain exclusively. "I really, really like it," she says of her research, especially because, although she is working with rats, this work is very applicable to human treatments for epilepsy.



If you want to see your research featured here, contact mstewart@oxy.edu

Weekend Ideas

More events at departments.oxy.edu/urc/about/calendar.htm

- June 18-June 28, 2009** Los Angeles Film Festival
Westwood Village
Buy Tickets online at
<http://www.lafilmfest.com/2009/>
- June 19, 2009** Dave and Busters
Contact ResLife for details
- June 20-21, 2009** Pasadena Chalk Festival
10:00 am-7:00 pm 280 E Colorado Blvd.
FREE!
www.pasadenachalkfestival.com/
- June 21, 2009** Make Music Pasadena
1:00-8:00 pm Free music in various locations throughout Pasadena
www.makemusicpasadena.org

Don't forget that stipend checks come out Friday, 6/19!

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