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### Moms with healthy bodies—kids with strong minds?

Exercise for mom might prove beneficial for junior's mind, according to a recent study in mice. Research over the past decade has shown that limited neurogenesis continues to take place in the brains of adult vertebrates, specifically in the dentate gyrus, a region of the hippocampus closely linked with learning and memory.

Studies have shown that physical activity can enhance this process in mice, and Gerd Kempermann and colleagues at the Max Delbrück Center for Molecular Medicine (Berlin, Germany) recently attempted to determine the impact of exercise by pregnant mice on brain development in their pups. In their study, embryos from animals given access to a running wheel from the earliest stages of pregnancy showed relatively reduced levels of hippocampal cell proliferation; however, cell proliferation in the hippocampus increased significantly after birth, resulting in a 40% increase in total granule cells relative to pups from control animals (*Proc. Natl. Acad. Sci. USA*, 7 March). This increased proliferation was apparent from shortly after birth and appeared to subside by the time of weaning.

The authors have yet to ascertain the significance of these findings with respect to actual hippocampal function in the young animals. They strongly caution against prematurely extrapolating these findings to humans but hope to better understand the potential relevance of this phenomenon through future studies.

### Second thymus found in mice

Mice commonly have more than one thymus gland, according to a research team that found small, previously unidentified thymus glands in the necks of laboratory mice. Although these results are not entirely unexpected, they may have important implications for the interpretation of immunology studies.

The thymus, located in the thoracic cavity near the heart, is where T lymphocytes undergo their final stage of development. Previous studies in mice have shown that removal of the thymus does not completely eliminate T-cell development, leading some researchers to suggest that the skin and gut may be alternate sites of T-cell development. Although they are often seen in human fetuses, cervical thymus glands are considered rare in adult humans and thought to be associated with pathologies.

During the course of immunological experiments, Hans-Reimer Rodewald of the University of Ulm (Germany) and his colleagues noticed small lymphoid-like organs in the necks of mice that they could not decisively identify as lymph nodes. They found that the mystery organs expressed thymus-specific genes and, when transplanted into mice deficient in T cells, produced functional T cells that contributed to an antibody response to hepatitis B antigen (*Science*, doi: 10.1126/science.1123497). The number of cervical thymi varied by strain.

Researchers often remove the thoracic thymus in mice to study the immune system in the absence of T cells. The possibility that thymectomized mice retain the ability to produce T cells in a cervical thymus suggests that many previous studies may have to be reanalyzed.

### Guilty verdicts in SHAC trial

On 2 March a federal jury in Trenton, NJ, convicted the animal rights group Stop Huntingdon Animal Cruelty USA (SHAC USA) and six of its members of using their website to incite violence against individuals affiliated with the contract research firm Huntingdon Life Sciences (HLS). The charges included animal enterprise terrorism, stalking, and conspiracy. Each defendant could be facing a jail term of at least 3 years and a $250,000 fine; sentencing is scheduled for June.

Prosecutors charged that Philadelphia-based SHAC USA used the internet to organize a 5-year campaign of threats, harassment, and vandalism against employees of the East Millstone, NJ firm, as well as companies that did business with HLS. SHAC USA members maintained that their actions were protected under the First Amendment.

This is the first case to be tried under the Animal Enterprise Terrorism Act, which was enacted in 1992 and expanded in 2002.