

Press release**Schwedischer Forschungsrat - The Swedish Research Council****Ingela Björck**

12/05/2008

<http://idw-online.de/en/news292636>Research results
Environment / ecology, Medicine
transregional, national**Mobile phones affect memory in laboratory animals**

Can radiation from cell phones affect the memory? Yes, at least it does so in rat experiments at the Division of Neurosurgery, Lund University, in Sweden. Henrietta Nittby studied rats that were exposed to mobile phone radiation for two hours a week for more than a year. These rats had poorer results on a memory test than rats that had not been exposed to radiation.

The memory test consisted of releasing the rats in a box with four objects mounted in it. These objects were different on the two occasions, and the placement of the objects was different from one time to the other.

The actual test trial was the third occasion. This time the rats encountered two of the objects from the first and two of the objects from the second occasion. The control rats spent more time exploring the objects from the first occasion, which were more interesting since the rats had not seen them for some time. The experiment rats, on the other hand, evinced less pronounced differences in interest.

Henrietta Nittby and her supervisor Professor Leif Salford, believe that the findings may be related to the team's earlier findings, that is, that microwave radiation from cell phones can affect the so-called blood-brain barrier. This is a barrier that protects the brain by preventing substances circulating in the blood from penetrating into the brain tissue and damaging nerve cells. Leif Salford and his associates have previously found that albumin, a protein that functions as a transport molecule in the blood, leaks into brain tissue when laboratory animals are exposed to mobile phone radiation.

The research team also found certain nerve damage in the form of damaged nerve cells in the cerebral cortex and in the hippocampus, the memory center of the brain. Albumin leakage occurs directly after radiation, while the nerve damage occurs only later, after four to eight weeks. Moreover, they have discovered alterations in the activity of a large number of genes, not in individual genes but in groups that are functionally related.

"We now see that things happen to the brains of lab animals after cell phone radiation. The next step is to try to understand why this happens," says Henrietta Nittby. She has a cell phone herself, but never holds it to her ear, using hands-free equipment instead.

Henrietta Nittby can be reached at phone: +46 (0)46-173922 or cell phone: +46 (0)70-57 92 731; e-mail Henrietta.Nittby@med.lu.se

Pressofficer Ingela Björck; ingela.bjorck@info.lu.se, +46-46 222 7646