Post doc scholarship in Sensory Biology

Placement: Department of Biology
Ref No: V2017/1067
Duration: 24 months
Starting time: September 1, 2017
Last day for applying: July 31, 2017
For further information please contact: Prof. Ronald Kröger, Department of Biology, Lund University, Sölvegatan 35, 223 62 Lund.
E-mail: Ronald.kroger@biol.lu.se

Tasks
We have discovered that dogs can sense weak infrared radiation with their cold nose tips. Specialized nose tips with naked and wet skin, called rhinaria, occur in many mammalian species. They are cold in terrestrial carnivorans (members of the order Carnivora), but warm in herbivorous perisso- and artiodactyls. Coldness of the rhinarium seems to be a precondition for high sensitivity to radiating heat.

The limits of the heat sense in dogs are still unknown. The scholarship holder is supposed to train dogs on our specialized setup with the method we have developed for this particular sensory task. Trained dogs are then to be used in experiments designed to investigate the limits of sensitivity as well as spatial and temporal resolutions of heat sensing in dogs. We work with privately owned dogs and exclusively employ operant conditioning with positive reinforcement. Work is also performed on wild canids, such as red foxes, dingoes, and gray wolves. Collaborating local zoos give us access to these species. Cats may be included in the future.

The scholarship holder will be placed in the Mammalian Rhinarium Group (Prof. R. Kröger) at the Department of Biology of Lund University. This group is embedded in the Lund Vision Group, a large and vibrant consortium of several senior and junior research groups. This guarantees a fascinating and stimulating work and study environment in sensory biology. Infrared radiation and light are different parts of the electromagnetic spectrum, so that there are many common interests.

The Mammalian Rhinarium Group works also on anatomical, morphological, and molecular aspects of temperature sensing in mammals. Thermobiology of mammals is an interesting field and dogs have many fascinating adaptations for tolerating low temperatures, dissipating excess body heat, and keeping the rhinarium cold. The wide range of addressed questions offers the opportunity to gain knowledge in adjacent fields of science. For further information, please, contact Ronald Kröger on ronald.kroger@biol.lu.se.

Qualifications required
Applicants must have doctoral education in a suitable area for conducting postdoctoral research in sensory biology. This may include engineering and physics. Other preconditions are the ability to handle dogs and other animals as well as the willingness to care for them while they are in our custody. A driver’s license valid in the EU is advantageous because we may perform experiments in the field. Applicants have to show high scientific potential and have to be able to work both independently and in a team.

Applicants must have been awarded their PhD no earlier than five years before the application deadline (this may be adjusted based on, for example, documentation of parental leave or military service).
Other
Lund University encourages both men and women to apply for the position.

Information regarding post doc scholarships at Lund University
• The scholarship amounts to 23,000 SEK/month and is paid monthly.
• The scholarship follows the regulations laid down by the University Vice Chancellor (PE 2013/356).
• The scholarship is intended for the holder’s own education/professional development and does not constitute remuneration for work or other service that has been carried out or will be carried out on behalf of the University.
• The scholarship does not give any entitlement to sickness benefit, parental allowance, holiday pay or pension.
• The host faculty/department and the scholarship holder shall draw up in writing an agreed plan for the studies/development.
• The Scholarship holder is to be informed about the length of the stay, assured social conditions, and continual review of the scholarship holder’s development.
• The Scholarship holder is to be informed about insurance covering the scholarship holder and the need to check his/her own insurance requirements.
• The scholarship holder is to be treated equally to students/researchers in the same situation but with different sources of funding.
• The scholarship holder is to be assured and to contribute to a good working environment.
• The Scholarship holder is to be informed about the risk of possible retrospective taxation in Sweden in cases where the scholarships are administered/paid out by LU and the scholarship holder gains employment at LU shortly after the period of the scholarship.
• There may be a risk of the scholarship holder being taxed in his/her home country; the scholarship holder should investigate this before the period of the scholarship.

Application
The application should include:
(1) A personal letter stating the reasons for wishing to conduct research on the chosen topic and within the host group/institution (max one page)
(2) An explanation of the aims and main findings of the applicant’s PhD and previous postdoctoral research, and any specific skills acquired (max one page)
(3) A curriculum vitae (max three pages)
(4) A list of publications
(5) Addresses of two referees who can provide letters of recommendation.

The expected starting date is September 1, 2017.

Application stating the reference number V2017/1067 should be sent to:

ronald.kroger@biol.lu.se