



EU Marie-Curie Initial Training Network



TRANSPOL

A European Research Training Network at the interface of
Cell/Molecular Biology and Membrane Physics

Topic: Transport and Signalling mechanism in Polarized Cells

Call: FP7-PEOPLE-ITN-210

Proposal Number: 264399

Project13, title:

The roles of Ras or nitric oxide in protection from Parkinson's disease related LRRK2-induced neuronal degeneration: Effects on neuronal polarity

Type of position: Early Stage Researcher (ESR)/ PhD position

Reference Code: TRANSPOL-P13

Eligibility: To this position applies a mobility rule. The respective candidate must not have worked for more than 12 months in Germany within the last three years. Furthermore, the candidate needs to be in his/her first four years of his/her research career. The four years are counted from the date a degree was obtained which formally entitles to embark on a doctorate.

Starting date: The position is open by 1st February 2011

Duration: 36 months

Salary: According to the Marie Curie-ITN rules: around 36000 Euro/year plus monthly mobility allowance of 500 Euro/month

Short description: This project focuses on the role of the small G-protein Ras, for which we have shown that it protects from neuronal degeneration in models of Parkinson's disease. Furthermore, Ras stimulates neuriteogenesis and axon-like structures, in vivo. The goals of this project are to test 1.) whether activated Ras (considered as an "intracellular anti-apoptotic protein") protects from toxic mutant (R1441C) leucine repeat rich kinase 2 (LRRK2)-induced neuronal death. 2) if toxic LRRK mutants interfere with Ras-induced neuronal polarization (axon formation). These experiments will be performed together with Gillardon/ Boehringer and SILANTES/ Munich (for SILAC approach). The project will also analyze the effects of nitric oxide NO on membrane tension (collaboration with Roux), trafficking (collaboration with Erdmann) and synapse formation.

Job Requirements: Experimental background in cell biology, biochemistry, molecular biology methods. Experience in proteome mass spectrometric analysis is welcome but not essential.

Host Institute: Department of Biochemistry II, Molecular Neurobiochemistry
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How to apply:

please send the following documents via e-mail to the
TRANSPOL coordinating office: transpol@rub.de.

- Clearly indicate the project you are applying for by referring to the Reference code of this job offer
- Description of your Master thesis or of other research experience and publications, if available
- Letter of motivation (research interests, reasons for applying to this program and project, respectively)
- A complete CV
- Certified copies of University Diploma or Master certificates
- Proof of proficiency in English language
- Two letters of recommendations

Deadline for application: April 29th

For further information: Please visit
http://www.ruhr-uni-bochum.de/mol-neurobio/RUB_Design/Biochemie2en.htm
or contact

Prof. Dr. R. Heumann: rolf.heumann@rub.de

Alternatively, contact the TRANSPOL coordinating office:
transpol@rub.de



Key references:

Chakrabarty K, Serchov T, Mann SA, Dietzel ID, Heumann R. **Enhancement of dopaminergic properties and protection mediated by neuronal activation of Ras in mouse ventral mesencephalic neurones.** European Journal of Neuroscience, Vol. 25, 1971–1981 (2007).

R. Heumann, C. Goemans, D. Bartsch, K. Lingenhöhl, P.C. Waldmeier, B. Hengerer, P.R. Allegrini, K. Schellander, E.F. Wagner, T. Arendt, R.H. Kamdem, K. Obst-Pernberg, F. Narz, P. Wahle and H. Berns: **Transgenic Activation of Ras in Neurons Promotes Hypertrophy and Protects from Lesion-Induced Degeneration.** J Cell Biol. 151(7), 1537-1548 (2000).