

## - Curriculum vitae -

**Tibor Harkany**

### **a. Current position(s)**

- 2013-: University Professor and Head of Department, Center for Brain Research, Medical University of Vienna, Vienna, Austria  
2011-: Professor of Neurobiology, Karolinska Institutet, Stockholm, Sweden

### **b. Previous professional appointments**

- 2007-2013: SULSA Professor and Sixth Century Chair in Cell Biology, University of Aberdeen, United Kingdom (adjunct since October 1, 2011)  
2009-2010: Team leader, European Neuroscience Institute at Aberdeen – a member of the European Neuroscience Institute Network (ENI-Net; [www.eni-net.org](http://www.eni-net.org)).  
2009-2010: Senior scientist of the Karolinska Institutet.  
2005-2008: Associate professor (docent), Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden.  
2004-2005: Assistant professor (Forskarassistent), Swedish Research Council.  
2002–2004: Post-doctoral fellow, Division of Molecular Neurobiology, Department of Medical Biochemistry and Biophysics, Karolinska Institutet, Stockholm, Sweden.  
2001–2003: Research associate, Department of Medical Chemistry, Faculty of Medicine, University of Szeged, Szeged, Hungary.  
1999–2001: Post-doctoral fellow, Department of Animal Physiology, University of Groningen, Haren, The Netherlands.  
1998–2000: Scientific advisor, Béres Co. Ltd., Budapest, Hungary.  
1995–1998: Graduate student, Semmelweis Medical School, Budapest, Hungary.  
1992–1995: Pre-graduate student, Alzheimer's disease Research Unit, Szent-Györgyi Albert Medical School and Department of Zoology and Cell Biology, József Attila University, Szeged, Hungary.

### **c. Education and academic degrees**

- 1999: PhD in Medical Sciences (*summa cum laude*). Semmelweis Medical School, Budapest, Hungary (No. 249). [Thesis title: ' $\beta$ -Amyloid-induced brain injury: Evidence for  $Ca^{2+}$  and free radical-mediated neurotoxic cascade mechanisms'; supervisor: Professor Csaba Nyakas].  
1995: M.Sc. as biologist specialized in molecular biological and biotechnological sciences (No. 291/1995), József Attila University, Szeged, Hungary.

### **d. Docentur (Habilitation)**

- 2005: Docent in Neuropharmacology (Dnr. 3664/2005), Karolinska Institutet, Stockholm, Sweden.

### **e. Academic distinctions & awards**

- 2013: Erik K. Fernström Prize (four young scientists)  
2013: IACM Award for young researchers for this "major contributions to cannabinoid research"  
2012: Anders Jahre Prize for Medical Research (for young scientists, shared with K. Pietras)  
2010: Elected Fellow (FSB), Society for Biology, United Kingdom  
2009: Elected Member of the Society of Hungarian Scientists and Scholars; Hungarian Academy of Sciences, Budapest, Hungary.  
2008: Senior researcher award, Karolinska Institutet, Stockholm, Sweden.  
2008: Graduate studentship award, Integrative Toxicology Training Partnership, Medical Research Council – Toxicology Unit, UK.  
2007: Member, European Molecular Biology Organization (EMBO) - Young Investigator Programme.  
2007: Prize graduate studentship, Scottish Universities Life Science Alliance (SULSA).

- 2007: Readership, Scottish Universities Life Science Alliance (SULSA), Cell Biology Directorate.
- 2002-2004: Post-doctoral fellowship ('Cell replacement strategies in neurodegenerative disorders'), Karolinska Institutet, Stockholm, Sweden.
- 1998: Short-term fellowship of the International Soros Foundation.
- 1996: Short-term fellowship of the Eötvös Foundation, Hungarian Scholarship Board
- 1996–1997: 'Ph.D. thesis support' from the Hungarian Credit Bank (MHB/ABN AMRO)
- 1993–1995: 'Outstanding Young Biologist', Scholarship of Varga Béla Foundation (Hungary)
- 1993–1995: Hungarian State Scholarship

#### **f. Other merits: study-trips sponsored by international foundations**

- 1998: International Soros Foundation fellowship (Department of Animal Physiology, University of Groningen, The Netherlands).
- 1997: Fulbright fellowship (Laboratory on Aging and Neurodegenerative Disorders, Deaconess Hospital, Harvard Medical School, Boston, USA, *declined*),
- 1997: Hungarian Scholarship Board/Netherlands Organization for International Co-operation in Higher Education (NUFFIC) (Department of Animal Physiology, University of Groningen, The Netherlands),
- 1996-1997: Eötvös Foundation, Hungarian Scholarship Board (Department of Animal Physiology, University of Groningen, The Netherlands),
- 1995: European Neuroscience Mobility Programme Grant, European Science Foundation (Pharmacology Department, National University of Ireland, Galway, Republic of Ireland),
- 1994-1996: NWO-HSF fellow (Department of Animal Physiology, University of Groningen, The Netherlands),
- 1993-1994: TEMPUS exchange fellow (Department of Animal Physiology, University of Groningen, The Netherlands).

#### **g. Membership in scientific societies**

- 1993-: Alzheimer's disease Section, Society of Hungarian Neurologists and Psychiatrists
- 1995-: Federation of European Neuroscience Societies (FENS)
- 1997-: Hungarian Society of Neuropathology
- 1998-: Society for Neuroscience
- 2007-2011: British Neuroscience Association
- 2008-2010: British Toxicology Society

#### **h. Major funding sources**

Scottish Universities Life Science Alliance, EMBO, Swedish Research Council, Medical Research Council (MRC) UK, National Institutes of Health, Alzheimer's Association, European Union 7<sup>th</sup> Framework programme

#### **i. Supervisor of Ph.D. theses including completed and on-going projects**

- Bart J. Oosterink (Ph.D: 01/23/2002; University of Groningen (NL), referent).
- Jan Mulder (Ph.D: 02/11/2005; University of Groningen (NL), referent).
- Paul Berghuis (Ph.D: 03/09/2007; Karolinska Institutet (S), principal supervisor).
- Márton B. Dobszay (Ph.D: 12/05/2010; University of Szeged (H), principal supervisor).
- Erik Keimpema (Ph.D.: 08/09/2011; University of Aberdeen (UK), principal supervisor).
- Ashley Dorning (viva: 14/02/2013; University of Aberdeen (UK), principal supervisor).
- Lauren Spence (viva: 05/09/2012; University of Aberdeen (UK), principal supervisor).
- Katarzyna Maleńczyk (NENCKI Institute (Poland)/Aberdeen (UK), co-supervisor) 2010-.
- Daniela Calvigioni (Karolinska Institutet (S), principal supervisor) 2012-.
- Mingdong Zhang (Karolinska Institutet (S), principal supervisor), 2012-

#### **j. Editorial contributions**

Editorial board member, Current Signal Transduction Therapy, Bentham Scientific Publisher (2006-).

Honorary editorial board member, International Journal of BioSciences and Technology (2008-).

Scientific review associate, European Journal of Neuroscience (2008-).  
Review editor, Frontiers in Systems Biology (2010-).  
Review editor, Frontiers in Neurodegenerative Diseases (2010-).  
Editorial board member, Dataset Papers in Neuroscience (2012-).

Guest editor: “*Molecular mechanisms of neuronal specification*” – European Journal of Neuroscience, Special Issue (published: November, 2011)

#### k. Media: interviews & press releases

**Deutschlandfunk**, Germany - <http://www.dradio.de/dlf/sendungen/forschak/> (Interviewer: Kristin Raabe; May 25, 2007).

**Szonda/Science section, Kossuth Radio**, Hungary – [www.radio.hu/read/227537/rid/PVI6Tg==](http://www.radio.hu/read/227537/rid/PVI6Tg==) (Interviewer: Júlia Gimes, June 30, 2007).

**Élet és Tudomány**, Hungary – Fék az agyban – az idegrendszer marihuánája és a kannabisz (LXII (44): 1389-1391; November 2, 2007).

**Scientific American** - <http://www.scientificamerican.com/article.cfm?id=marijuana-like-chemicals-guide-fetal-brain-cells> (May 24, 2007)

**Hungarian Academy of Sciences** – Mother’s drug, fetus’ posion ([www.mta.hu](http://www.mta.hu); May 25, 2007)

**Tentakel**, Sweden - (<http://tentakel.vr.se/nummer/200804/artiklar/>) – Cannabisforskning gav EMBO-pengar (Interviewer: Siv Engelmark Cederborg; April 28, 2008).

**BBC News on-line** - [news.bbc.co.uk/1/hi/scotland/north\\_east/8074082.stm](http://news.bbc.co.uk/1/hi/scotland/north_east/8074082.stm) – ‘Fund for city Alzheimer’s study’ (May 31, 2009)

**BBC News on-line** - [http://news.bbc.co.uk/1/hi/scotland/north\\_east/7456625.stm](http://news.bbc.co.uk/1/hi/scotland/north_east/7456625.stm) – Cannabis can harm foetal brain (June 16, 2008)

**BBC News on-line** - <http://news.bbc.co.uk/1/hi/health/7948465.stm> - Alzheimer’s and epilepsy (March 19, 2009).

**Times online** - <http://www.timesonline.co.uk/tol/news/uk/scotland/article5934869.ece> - Alzheimer’s and epilepsy (2009).

**European Research Headlines** - Alzheimer’s and epilepsy, [http://ec.europa.eu/research/headlines/news/article\\_09\\_04\\_28\\_en.html](http://ec.europa.eu/research/headlines/news/article_09_04_28_en.html)

**Royal Society of Edinburgh**, <http://www.sciencescotland.org/feature.php?id=40> - Mind-expanding science (2009).

**British Pharmacological Society**, ‘Cannabinoid signalling in brain repair – symposium review - <http://www.bps.ac.uk/uploadedfiles/podcasts/TRANSCRIPTDavidAKendallCannabinoidSignallingInBrainRepairWIN09.pdf> (with DA Kendall, D Baker, P Doherty, F Molina-Holgado)

**Karolinska Institutet press release**, <http://internwebben.ki.se/en/anders-jahre-prize-young-scientists-tibor-harkany> (2012).

**University of Oslo press release**, <http://www.uio.no/om/tall-og-fakta/uio-priser/jahreprisen/> (2012).

**Tidsskrift for Nordisk Biokjemisk Selskap**, “Anders Jahres medisinske priser for 2012”, Nr. 4/2012, pages 16-17.

**Karolinska INstitutet press release**, <http://ki.se/ki/jsp/polopoly.jsp?d=130&a=166848&l=en&newsdep=130> (2013).

**Eric K. Fernström foundation**, [http://www.med.lu.se/eric\\_k\\_fernstroems\\_stiftelse/fernstroemspriserna/svenska\\_priset](http://www.med.lu.se/eric_k_fernstroems_stiftelse/fernstroemspriserna/svenska_priset)

#### I. Selected publications

Malenczyk K, Jazurek M, Keimpema E, Janikiewicz J, Mackie K, Di Marzo V, Redowicz MJ, **Harkany T\***, Dobrzyn A\*. CB<sub>1</sub> cannabinoid receptors couple to focal adhesion kinase to control insulin release. 2013, **J Biol Chem**, online: PMID: 24089517. | \* shared senior authorship

Keimpema E, Tortoriello G, Alpar A, Capsoni S, Arisi I, Cattaneo A, Doherty P, Mackie K, **Harkany T**. Nerve growth factor scales endocannabinoid signaling by regulating monoacylglycerol lipase turnover in developing cholinergic. **Proc Natl Acad Sci USA** 2013, 110:1935-1940.

Mulder J, Zilberter M, Pasquare S, Alpar A, Schulte G, Ferreira SG, Kofalvi A, Martin-Moreno AA, Keimpema E, Tanila H, Watanabe M, Mackie K, Hortobagyi T, de Ceballos ML, Harkany T, 2011.

Molecular reorganization of endocannabinoid signaling in Alzheimer's disease. **Brain** 134:1041-1060.

Keimpema E, Mackie K, Harkany T, 2011. Molecular model of cannabis sensitivity in developing neuronal circuitries. **Trends Pharmacol. Sci.** 32:551-561.

Gupta A, Mulder J, Gomes I, Rozenfeld R, Bushlin I, Ong E, Lim M, Maillet E, Junek M, Cahill CM, Harkany T, Devi LA, 2010. Increased abundance of opioid receptor heteromers after chronic morphine administration. **Sci. Signal.** 3:ra54.

Keimpema E, Barabas K, Morozov YM, Tortoriello G, Torii M, Cameron G, Yanagawa Y, Watanabe M, Mackie K, Harkany T, 2010. Differential subcellular recruitment of monoacylglycerol lipase generates spatial specificity of 2-arachidonoyl glycerol signaling during axonal pathfinding. **J. Neurosci.** 30:13992-14007.

Mulder J, Zilberter M, Spence L, Tortoriello G, Uhlen M, Yanagawa Y, Aujard F, Hökfelt T, Harkany T, 2009. Secretagogin is a Ca<sup>2+</sup>-binding protein specifying telencephalic neurons. **Proc. Natl. Acad. Sci. USA** 106: 22492-22497.

Berghuis P, Rajnicek AM, Morozov YM, Ross RA, Mulder J, Monory K, Marsicano G, Matteoli M, Canty A, Yanagawa Y, Rakic P, Lutz B, Mackie K, Harkany T, 2007. Hardwiring the brain: Endocannabinoids shape neuronal connectivity. **Science** 316:1212-1216.