Fernando Henrique Lopes da Silva

General Information

F.H. Lopes da Silva born on January 24, 1935.
Place of birth: Lisbon, Portugal
Address: Home in The Netherlands: Hartingstraat 306, 3511 HV Utrecht.
Office: Center of Neurosciences, Swammerdam Institute of Life Sciences, Faculty of Science, University of Amsterdam, Kruislaan 320, 1098 SM, Amsterdam, The Netherlands

Education and training

- Received his Medical Degree from the University of Lisbon in 1959.
- Received a Gulbenkian Scholarship (1962—1964) for training in Physiology at the Department of Physiology and Pharmacology (Head: Prof. Dr. W. Feldberg) of the National Institute of Medical Research (Mill Hill, London UK); to follow a post-graduate course on Engineering and Physics for physiologists (Head: Prof. Dr. B. McA. Sayers) at the Imperial College of the University of London; and to acquire training in neurophysiology at the Department of Brain Research of the Institute of Medical Physics (TNO) in Utrecht, The Netherlands (Head: Prof Dr. W. Storm van Leeuwen).

Employment record: main positions

- In 1965, joined the scientific staff of the Brain Research Group of this Institute as assistant researcher. He got his Ph.D. from the University of Utrecht in 1970.His supervisors were: Prof. Dr. W. Storm van Leeuwen (Neurophysiology) and Prof. Dr. H. van der Tweel (Biophysics).
- In 1973, he followed Prof. dr. W. Storm van Leeuwen as Head of the Brain Research Group.
- In 1980 was appointed Full Professor of General Physiology at the Faculty of Science at the University of Amsterdam (since 2002 part of the Swammerdam Institute for Life Sciences).
- From 1993 to 2000, Director of the newly created Institute of Neurobiology of the University of Amsterdam, and member of the Scientific Directorate of the Graduate School Neurosciences Amsterdam.
- In 2000, when he reached the retirement age of 65, he became Emeritus Professor of the same University, and has at present a free-lance contract with the Swammerdam Institute for Life Sciences.

Employment record: part-time positions

- Part-time professor at the Twente University (THT, Enschede) where he taught Neurophysiology (from 1975 to 1985) as a as part of the program Bio-Medical Engineering.
- From 1995 up to 2002, he was Scientific Director of the Foundation of Epilepsy Clinics of the Netherlands at "Meer en Bosch" in Heemstede, on a part-time basis.
- Since 2000 appointed visiting professor of the Faculty of Medicine of the University of Lisbon, and since 2005 appointed Professor at the 'Instituto Superior Técnico' of the Technical University of Lisbon with the task of co-ordinating teaching and research in 'Bio-Medical Engineering'.

Main Research interests

- His research interests are centred on the biophysical aspects of electrical activity of the brain and the functional organization of neuronal networks, namely of the cerebral cortex and the limbic system, with a special interest in the generation and functional significance of brain rhythmic activities.
- A main topic of research is the generation of epileptic phenomena, both at the cellular/molecular level, and at the neuronal network level.

Selection of Scientific awards

- 1975 He received the Winkler Medal from the Netherlands Association for Neurology for scientific contributions in the field of neurosciences.
- 1985 Elected member of the Royal Netherlands Academy of Arts and Sciences.
- 1990 "Lord Adrian" Lecturer at the 12th World Congress of Electroencephalography and Clinical Neurophysiology in Rio de Janeiro, Brazil.
- 1992 Honorary President of the VIIth European Congress of Clinical Neurophysiology, Budapest, Hungary.
- 1995 Honorary Life Member of The British Society for Clinical Neurophysiology (Formerly The EEG Society), London, United Kingdom.
- 1997 Doctor Honoris Causa of the University of Lisbon (Portugal).
- 1997 Special "Berger" Lecturer at the 14th International Congress of EEG and Clinical Neurophysiology in Florence, Italy.
- 1999 Recipient of the Herbert H. Jasper Award, selected by the American Clinical Neurophysiology Society for his "lifetime of outstanding contributions to the field of clinical neurophysiology.''
- 2000 Recipient of the 'Storm van Leeuwen/Magnus Prize' of the Dutch Society of Clinical Neurophysiology.
- 2000 Honorary member of the Portuguese Society of Electroencephalography and Clinical Neurophysiology.
- 2002 Recipient of the Ragnar Granit Prize for his work on the field of Bioelectromagnetism.
- 2002 Doctor Honoris Causa of the University of Porto (Portugal).
- 2004 Recipient of the first Prize "Universidade de Coimbra" for a (sic) "person of Portuguese nationality who has made a particular relevant and innovative contribution in the fields of culture or science."

General Honors

- 2000: High Officer of the Order of Santiago da Espada, for outstanding achievements in the field of Science/Art/Literature, awarded by the President of the Republic of Portugal.
- 2001: Knight of the Order of the 'Nederlandse Leeuw' awarded by the Queen of the Netherlands in appreciation for his achievements in science.

Teaching activities

Since 1970, he supervised a large number of student trainees from different Universities and Faculties: Medical, Biology, Sciences, (Bio-medical)Engineering. He was the coordinator (1988 - 1998) of the educational programme of the new Graduate School Neurosciences Amsterdam, which provides research training for about 90 Ph.D students in different branches of the Neurosciences.

Supervised 65 Ph.D. students (up to December 2006).

Selected Publications

He published more than 220 papers in peer-reviewed journals and contributed Chapters to 10 multi-authored books (of 6 he is co-editor), among which the Handbook "Electroencephalography: Basic principles, clinical applications and related fields", Niedermeyer, E. and Lopes da Silva, F.H. (Eds), published by Lippincott, Williams and Wilkins, Baltimore; 5 Editions:1982, 1987, 1993, 1998, 2004. In addition he contributed chapters to to the Encyclopedia of Neuroscience (George Adelman, Barry H. Smith. Eds), Elsevier Science, 2003 (3rd edition), to the Encyclopedia of the Human Brain (Ed. V. S. Ramachandran), Academic Press, 2002, and to The Handbook of Brain Theory and Neural Networks (Ed. Michael A. Arbib), The MIT Press, 2003 (2nd edition).

Seven representative key publications:

- Lopes da Silva, F.H. and Storm van Leeuwen, W. The cortical source of the alpha rhythm. *Neurosci. Lett*., 1977, 6: 237-241.
- Steriade, M., Gloor, P., Llinás, R.R., Lopes da Silva, F.H. and Mesulam, M.-M. Basic mechanisms of cerebral rhythmic activities. *Electroenceph. clin. Neurophysiol*., 1990, 76: 481-508.
- Lopes da Silva, F.H., Witter, M.P., Boeijinga, P.H. and Lohman, A.H.M. Anatomical organisation and physiology of the limbic cortex. *Physiol. Revs*., 1990, 70: 453-511.
- Pfurtscheller G, Lopes da Silva FH. Event-related EEG/MEG synchronization and desynchronization: basic principles. Clin Neurophysiol. 1999 Nov;110(11):1842-57.
- Meeren HK, Pijn JP, Van Luijtelaar EL, Coenen AM, Lopes da Silva FH. Cortical focus drives widespread corticothalamic networks during spontaneous absence seizures in rats. *J Neurosci*. 2002 Feb 15;22(4):1480-95.
- Parra J, Kalitzin SN, Iriarte J, Blanes W, Velis DN, Lopes da Silva FH. Gamma-band phase clustering and photosensitivity: is there an underlying mechanism common to photosensitive epilepsy and visual perception? *Brain*. 2003 May;126(Pt 5):1164-72.
- Gorter JA, Van Vliet, E, Aronica, E, Breit, T, Rauwerda, H, Lopes da Silva, F H and Wadman, W J. Potential new anti-epileptogenic targets indicated by microarray ,analysis in a rat model for temporal lobe epilepsy. *J. Neuroscience* 2006, Oct 25;26(43):11083-110.