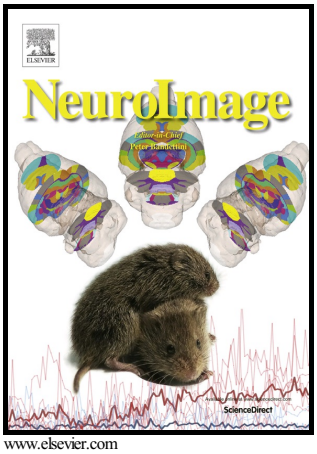

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Resting State Network Topology of the Ferret Brain

Zhe Charles Zhou[1,8], Andrew P. Salzwedel[9,10], Susanne Radtke-Schuller[1], Yuhui Li[1], Kristin K. Sellers[1,8], John H. Gilmore[1], Yen-Yu Ian Shih[3,4,5,6,7,8], Flavio Fröhlich[1,2,3,4,7,8*], Wei Gao[9,10*]

[1]Department of Psychiatry, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[2]Department of Cell Biology and Physiology, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[3]Department of Biomedical Engineering, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[4]Department of Neurology, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[5]Biomedical Research Imaging Center, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[6]Small Animal Imaging Facility, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[7]Neuroscience Center, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[8]Neurobiology Curriculum, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599
[9]Biomedical Imaging Research Institute, Cedars-Sinai Medical Center, Los Angeles, CA 90048
[10]Department of Biomedical Sciences, Cedars-Sinai Medical Center, Los Angeles, CA 90048

Correspondence should be addressed to: Flavio Fröhlich, 115 Mason Farm Rd. NRB 4109F, Chapel Hill, NC. 27599. Tel.: 1.919.966.4584. flavio_fröhlich@med.unc.edu

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Wei Gao, 8700 Beverly Blvd., Los Angeles, CA. Tel.: 1.310.423.6699. wei.gao@cshs.org

*Authors contributed equally

Abstract

Resting state functional magnetic resonance imaging (rsfMRI) has emerged as a versatile tool for non-invasive measurement of functional connectivity patterns in the brain. RsfMRI brain dynamics in rodents, non-human primates, and humans share similar properties; however, little is known about the resting state functional connectivity patterns in the ferret, an animal model with high potential for developmental and cognitive translational study. To address this knowledge-gap, we performed rsfMRI on anesthetized ferrets using a 9.4 tesla MRI scanner, and subsequently performed group-level independent component analysis (gICA) to identify functionally connected brain networks. Group-level ICA analysis revealed distributed sensory, motor, and higher-order networks in the ferret brain.