

### PERSONAL INFORMATION **Ana Catarina Fonseca**

#### WORK EXPERIENCE

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April 2013- Present **Neurologist**  
Hospital de Santa Maria (Portugal)  
- work stroke unit- emergency department-outpatient clinic

October 2019- Present **Expert**  
INFARMED (Portugal)

September 2010- Present **Assistant Professor of pharmacology**  
University of Lisbon (Portugal)

September 2014- Present **Assistant Professor of Neurology**  
University of Lisbon (Portugal)

#### EDUCATION AND TRAINING

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January 2010-February 2014 **PhD in Medicine**  
University of Lisbon (Portugal)

September 2012-March 2014 **Master in Public Health**  
Harvard University (United States)

July 2011-September 2011 **Program in Clinical Effectiveness**  
Harvard Univeristy (United States)

November 2008-April 2011 **Master in Stroke medicine**  
Danuber University Krems (Austria)

September 1998-November 2004 **Medical Degree (MD)**  
New University of Lisbon (Portugal)

#### ADDITIONAL INFORMATION

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**Expertise** Stroke  
Cerebrovascular disease  
Neurology

**Publications** 1. Fonseca AC, Marto JP, Pimenta D, et al. Undetermined stroke genesis and hidden

- cardiomyopathies determined by cardiac magnetic resonance. *Neurology*. 2020;94:e107e113.
2. Fonseca AC, Alves P, Inácio N, Marto JP, Viana-Baptista M, Pinho-E-Melo T, Ferro JM, Almeida AG. Patients With Undetermined Stroke Have Increased Atrial Fibrosis: A Cardiac Magnetic Resonance Imaging Study. *Stroke*. 2018;49:734-737.
  3. Marto JP, Kauppila LA, Jorge C, Calado S, Viana-Baptista M, Pinho e Melo T, Fonseca AC. Intravenous Thrombolysis for Acute Ischemic Stroke After Recent Myocardial Infarction: Case Series and Systematic Review. *Stroke*. 2019;50:28132818.
  4. Fonseca AC, Marto JP, Alves PN, et al. Women Who Have Ischemic Strokes Have a Higher Burden of Left Atrial Fibrosis Than Men. *Stroke*. 2018;49(11):25842589.
  5. Fonseca AC, Brito D, Pinho e Melo T, Geraldês R, Canhão P, Caplan LR, Ferro JM. NTproBNP shows diagnostic accuracy for detecting atrial fibrillation in cryptogenic stroke patients. *Int J Stroke*. 2014;9:419-425.
  6. Vargas M, Costa M, Pinho E Melo T, Ferro JM, Fonseca AC. Increase in the Admission of Stroke Mimics after Change in Emergency Shifts. *Cerebrovasc Di*. 2017;44:68-74.
  7. Kobayashi A, Czlonkowska A, Ford GA, et al. European Academy of Neurology and European Stroke Organization consensus statement and practical guidance for pre-hospital management of stroke [published correction appears in *Eur J Neurol* 2018;25:425433
  8. Fonseca AC, Franco AC, Tavares J. Bilateral parotid gland hemorrhage after intravenous thrombolysis for stroke treatment. *J Neuro* 2017;264:2176-2177.
  9. Bentes C, Martins H, Peralta AR, Casimiro C, Morgado C, Franco AC, Fonseca AC, Geraldês R, Canhão P, Pinho E Melo T, Paiva T, Ferro JM. Post-stroke seizures are clinically underestimated. *J Neurol*. 2017;264:1978-1985.
  10. Bentes C, Martins H, Peralta AR, Morgado C, Casimiro C, Franco AC, Fonseca AC, Geraldês R, Canhão P, Pinho E Melo T, Paiva T, Ferro JM. Epileptic manifestations in stroke patients treated with intravenous alteplase. *Eur J Neurol*. 2017;24:755-761.
  11. Bentes C, Franco AC, Peralta AR, Viana P, Martins H, Morgado C, Casimiro C, Fonseca AC, Geraldês R, Canhão P, Pinho E Melo T, Paiva T, Ferro JM. Epilepsia partialis continua after an anterior circulation ischaemic stroke. *Eur J Neurol*. 2017;24:929-934.
  12. Fonseca M, Teotónio P, Fonseca AC. An unsuspected cause of hypnic-like headache. *J Neurol*. 2017;264:404-406.
  13. Nascimento Alves P, Silva C, Baptista J, Lima B, Jacinto M, Trigueiros F, Martins A, Pinho E Melo T, Fonseca AC. Laterality of Pneumonia in Acute Stroke. *Eur Neurol*. 2017;77:75-79.
  14. Nascimento Alves P, Reimão S, Campos C, Maruta C, Rocha L, Sá G, Fonseca AC, Pavão Martins I. Loss of object ownership feeling following a left hemisphere infarct. *Cortex* 2016;84:132-134.
  15. Martins IP, Fonseca J, Morgado J, Leal G, Farrajota L, Fonseca AC, Melo TP. Language improvement one week after thrombolysis in acute stroke. *Acta Neurol Scand* 2017;135:339-345.
  16. Correia M, Fonseca AC, Canhão P. Short-term outcome of patients with possible transient ischemic attacks: a prospective study. *BMC Neurol* 2015;15:78.
  17. Llombart V, Antolin-Fontes A, Bustamante A, Giralt D, Rost NS, Furie K, Shibasaki K, Biteker M, Castillo J, Rodríguez-Yáñez M, Fonseca AC, Watanabe T, Purroy F, Zhixin W, Etgen T, Hosomi N, Jafarian Kerman SR, Sharma JC, Knauer C, Santamarina E, Giannakoulas G, García-Berrocoso T, Montaner J. B-type natriuretic peptides help in cardioembolic stroke diagnosis: pooled data meta-analysis. *Stroke* 2015;46:1187-1195.
  18. Alves PN, de Carvalho M, Peralta R, Geraldês R, Fonseca AC, Pinho E Melo T. Axial myoclonus after ischemic stroke. *Neurology* 2015;85:654.
  19. Aragão Homem C, Fonseca AC, Geraldês R, Pinho e Melo T. Brain Magnetic Resonance with Negative Diffusion- Weighted Imaging: Does It Preclude Acute Stroke Diagnosis? *J Stroke Cerebrovasc Dis* 2015;24:e251-253.
  20. Fonseca AC, Ferro JM. Cryptogenic stroke. *Eur J Neurol*. 2015;22:618-623.
  21. Sousa Nanji L, Melo TP, Canhão P, Fonseca AC, Ferro JM. Subarachnoid Haemorrhage and Sports. *Cerebrovasc Dis Extra* 2015;5:146-151.
  22. Azevedo L, Costa MR, Fonseca AC, Pinho e Melo T. Recurrent cerebral ischaemic events in the

- setting of paroxysmal nocturnal haemoglobinuria. *BMJ Case Rep* 2016; bcr2015213603.
23. Nascimento-Alves P, Fernandes-Silva H, Aragão-Homem C, Geraldes R, Fonseca AC. IV and V cranial nerves dysfunction as initial manifestations of superficial siderosis of the central nervous system. *Rev Neurol*. 2016; 62:334- 335.
24. Ferro JM, Fonseca C. Stroke: an update. *J Neurol*. 2014;261:1837-1841.
25. Geraldes R, Sousa, PR, Fonseca AC, Falcão F, Canhão P, Pinho e Melo T. Non-traumatic convexity subarachnoid haemorrhage: different aetiologies, different outcomes. *J Stroke Cerebrovasc Dis*. 2014;23:e23-30.
26. Barra L, Ha A, Sun L, Fonseca C, Pope J. Efficacy of Biologic Agents for Improving the Health Assessment Questionnaire (HAQ) Score in Established and Early Rheumatoid Arthritis: A Meta-Analysis with Indirect Comparisons. *Clinical and Experimental Rheumatology* 2014;32:333-341.
27. Fonseca AC, Melo TP, Ferro JM. Cotard delusion after stroke. *Eur J Neurol*. *Eur J Neurol* 2013;20:e98-99.
28. Fonseca AC, Matias JS, E Melo TP, Pires C, Geraldes R, Canhão P, Brito D, Ferro JM. Time course of NT-proBNP levels after acute ischemic stroke. *Acta Neurol Scand* 2013;128:235-240.
29. Machet A, Fonseca AC, Oppenheim C, Touzé E, Meder JF, Mas JL, Naggara O. Does Anticoagulation Promote Mural Hematoma Growth or Delayed Occlusion in Spontaneous Cervical Artery Dissections? *Cerebrovasc Dis*. 2013;35:175-181.
30. Fonseca AC, Ferro JM. Drug abuse and stroke. *Current Neurology and Neuroscience Reports* 2013;13:325.
31. Mason RH, Mehta Z, Fonseca AC, Stradling JR, Rothwell PM. Snoring and severity of symptomatic and asymptomatic carotid stenosis: a population-based study. *Sleep* 2012;35:1147-1151.
32. Geraldes R, Fonseca AC, Canhão P, Pinho e Melo T, Ferro JM. Why did we perform a lumbar puncture in a young patient with ischemic stroke? *Journal of Neurology* 2012;259:1472-1473.
33. Fonseca AC, Geraldes R, Pires J, Falcão F, Bentes C, Melo TP. Improvement of sleep architecture in the follow up of a patient with bilateral paramedian thalamic stroke. *Clin Neurol Neurosurg* 2011;113:911-913.
34. Fonseca AC, Geraldes R, Alemida V, Pinho e Melo T. Treatment with rtPA of stroke associated with intravenous immunoglobulins perfusion. *J Neurol Sci*. 2011;308:180-181.
35. Fonseca AC, Sampaio Matias J, Pinho e Melo T, Falcao F, Canhao P, Ferro JM. NTproBNP as a biomarker of cardioembolic stroke. *Int J Stroke* 2011;6:398-403
36. Fonseca AC, Canhao P. Diagnostic difficulties in the classification of transient neurological attacks. *Eur J Neurol* 2011;18:644-648.
37. Fonseca AC, Geraldes R, Reimão S, Pinho e Melo T, Ferro JM. Neck hematoma following intravenous thrombolysis for stroke treatment. *Cerebrovascular Diseases* 2010;30:101-102.
38. Fonseca AC, Costa J, Cordeiro C, Geraldes R, de Sá J. Influence of climatic factors in the incidence of multiple sclerosis relapses in a Portuguese population. *Eur J Neurol* 2009;16:537-553.
39. Fonseca AC, Albuquerque L, Ferro JM. Reversible bilateral sensorineural hearing loss in a woman with cerebral venous thrombosis. *Journal of Neurology* 2008;255:1825-1826.
40. Fonseca AC, Ferreira JJ, Albuquerque L, Ferro JM. Sneeze as a precipitating factor of cerebral venous thrombosis. *Eur J Neurol* 2007;14:e7-8.
41. Putaala J, Martinez-Majander N, Saeed S, Yesilot N, Jäkälä P, Nerg O, Tsvigoulis G, Numminen H, Gordin D, Sarnowski B, Waje-Andreassen U, Ylikotila P, O'Roibe R, Zedde ML, Huhtakangas J, Fonseca C, Redfors P, Leeuw FE, Pezzini A, Kõrv J, Schneider S, Tanislav C, Enzinger C, Jatuzis D, Siegerink B, Martínez-Sánchez P, Grau AJ, Palm F, Groop P, Lanthier S, Ten Cate H, Pussinen P, Paju S, Sinisalo J, Lehto M, Lindgren A, Ferro J, Kittner S, Fazekas F, Gerds E, Tattisumak T. Searching for Explanations for Cryptogenic Stroke in the Young: Revealing the Triggers, Causes, and Outcome (SECRETO): Rationale and design. *European Stroke Journal* 2017;2:116-125
42. Miranda B, Fonseca AC, Ferro JM. Patent foramen ovale and stroke. *J Neurol*. 2018;265(8):1943-1949.
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- Geraldes R, Canhão P, Pinho E Melo T, Paiva T, Ferro JM. Seizures, electroencephalographic abnormalities, and outcome of ischemic stroke patients. *Epilepsia Open*. 2017;441-452.
44. Nascimento Alves P, de Carvalho M, Reimão S, Castro J, Fonseca AC, Canhão P. Voluntary control of a plegic limb during yawning. *J Neurol*. 2018;265:433-435.
45. Silva DP, Soares MF, Almeida V, Fonseca AC. Chronic headache with vasospasm treated with nimodipine. *J Neurol*. 2019;266:15361538.
46. Sotero FD, Rosário M, Fonseca AC, Ferro JM. Neurological Complications of Infective Endocarditis. *Curr Neurol Neurosci Rep*. 2019;19:23.
47. Rosário M, Fonseca AC, Sotero FD, Ferro JM. Neurological Complications of Cardiac Tumors. *Curr Neurol Neurosci Rep*. 2019;19:15.
48. Crespo Pimentel B, Willeit J, Töll T, et al. Etiologic Evaluation of Ischemic Stroke in Young Adults: A Comparative Study between Two European Centers. *J Stroke Cerebrovasc Dis*. 2019;28:12611266.
49. Monteiro M, Fonseca AC, Freitas AT, et al. Using Machine Learning to Improve the Prediction of Functional Outcome in Ischemic Stroke Patients. *IEEE/ACM Trans Comput Biol Bioinform*. 2018;15(6):19531959.

#### Projects

##### MEMBERSHIP OF SCIENTIFIC SOCIETIES

- Secretary of the Stroke Group in the European Brain Council for the project Value of Treatment. From this project resulted a white paper that was sent to the European Union <http://www.braincouncil.eu/activities/projects/value-of-treatment-publications/>
- Member of the domain 1 for the Action Plan for Stroke 2018-2030 endorsed by ESO and SAFE <https://eso-stroke.org/action-plan-stroke-europe-2018-2030/>
- Co-Chair of the Transient ischemic attack management guidelines of the European Stroke Organization
- Member of the writing group of Thrombolytic treatment for acute ischemic stroke guidelines of the European Stroke Association
- Principal Investigator of the collection of the Biobank Stroke at Hospital de Santa Maria in Lisbon
- Investigator of JM Ferro Lab at the Institute of Molecular Medicine, Lisbon
- Lead investigator of the projects CAIUS (Cardioembolic Imaging of Undetermined Stroke) and PRECISE-Stroke (improving stroke prognosis through precision medicine)

##### GRANTS

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- Bolsa para a Formação Avançada em Investigação Clínica de Internos-Doutorandos da Fundação para a Ciência e Tecnologia (SFRH/BD/60058/2009)
- Fundo de investigação para a Saúde (FIS-2015-01CCV)
- Short term fellowship Grant of the Calouste Gulbenkian Foundation
- ESO Department-to-Department Visit Programme Awardee 2016

#### Memberships

##### MEMBERSHIP OF SCIENTIFIC SOCIETIES

- Portuguese Neurological Society SPN (Vice-President 2017-2019)
- Portuguese Stroke Society SPAVC (Member of the Scientific committee)
- European Academy of Neurology EAN (Portuguese delegate in the scientific stroke panel)
- World Federation of Neurology WFN (Portuguese delegate)
- European Stroke Organization - ESO (member of the Education and membership Committees), Fellow
- World Stroke Organization WSO (member of the congress planning committee)

#### Other Relevant Information