

ONE
LIFE IN
MEDICINE

Catarina Resende de Oliveira

Neurologist and Scientist

By

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She was born in Coimbra in February 1946 into a family originating from the nearby village of Murtosa. Given that her father was a professor of medicine at the University of Coimbra (Full Professor of Microbiology and Parasitology), her choice of medicine comes as no surprise. She graduated from the University of Coimbra in 1970, became a specialist in neurology in 1976 at the Hospitais da Universidade de Coimbra (HUC), and attained the position of Full Professor in 1984.

Her primary scientific mentors were Professor António Nunes Vicente (a neurologist) and Professor Arsélio Pato de Carvalho (a biologist), who directed a research laboratory at the University of Coimbra. This laboratory would later evolve into the Centro de Neurociências e Biologia Celular, where Catarina Oliveira became its President in 2003.

As a neurologist, she committed herself to the study of neurodegenerative diseases, which pose a significant burden on the elderly population. She believes that neurodegenerative disorders are multifactorial conditions of largely unknown causes, although factors such as oxidative stress, excitotoxicity, calcium dysregulation, and mitochondrial dys-



FIGURE 1. Professor Catarina Resende de Oliveira participating in a round-table discussion during the 39th Annual Meeting of the Study Group on Cerebral Aging and Dementia, 2025.

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function are thought to play a critical role in the cell damage associated with these disorders.

It is also recognized that amyloidogenic peptides, including beta-amyloid, prion peptide, and alpha-synuclein, contribute to neuronal death and glial activation during this process. Indeed, her primary research interests revolve around investigating these factors, as well as assessing antioxidant defenses and neuronal repair mechanisms in aging and neurodegenerative diseases such as Parkinson's disease, Alzheimer's disease, and Huntington's disease.

Additionally, she is interested in studying biomarkers and genetics related to such diseases. During her career, she has supervised more than 20 young investigators who obtained their PhD degrees at the University of Coimbra and led a research group focused on advanced diagnostics and biomarkers associated with aging and brain diseases, particularly the study of new biomarkers for neurodegenerative disorders at the Centro de Neurociências e Biologia Celular at the University of Coimbra.

She has been an active member of JPND, a European consortium dedicated to investigating biomarkers for

Alzheimer's and prion diseases. The European Union Joint Programme – Neurodegenerative Disease Research (JPND) represents the world's largest collaborative research effort aimed at addressing the challenges posed by neurodegenerative diseases, especially Alzheimer's disease.

It is no wonder that Professor Catarina Oliveira has held several leadership roles, including serving as President of the Scientific Council of the Faculty of Medicine at the University of Coimbra and contributing to curricular reforms within her Medical School. She has also served as President of the Scientific Council for Life Sciences and Health at the Portuguese Founda-

tion for Science and Technology (FCT) and coordinated the Inter-University PhD Program in Aging and Chronic Diseases, among several other responsibilities. She was also the first President of the Portuguese Agency for Clinical Research and Biomedical Innovation (AICIB).

Throughout her career, she has received numerous accolades, including: the Portuguese Government's Grande-Oficial da Ordem da Instrução Pública (Order of Public Instruction) in 2014; the Portuguese Ministry of Health distinction "Serviços Distintos" (Distinct Services), gold medal, in 2016; the gold medal of the Faculty of Medicine of the University of Coimbra in 2016; the European Society for Clinical Investigation (ESCI) Award and Albert Struyvenberg Medal in 2022; and the Prémio Ciência (FCT) in 2024.

Her contribution to medical research in Portugal, together with the international recognition she achieved, provides an example for young investigators in her country and abroad.

Married to a physician (Orthopaedic Surgeon), mother of four and grandmother of six grandchildren, she managed to reconcile family responsibilities with scientific activity at the highest level, which is internationally recognized in her field, making her a reference for Portuguese investigators.

Although retired from her academic duties since 2016, she remains active not only due to the various scientific invitations she receives but also because she believes that intellectual activity is an important tool for preserving a healthy brain, as she states.



FIGURE 2. Tribute to Professor Catarina Resende de Oliveira by the Portuguese Society of Neurology, 2024. (Foto: © Esfera das Ideias.)