

Name Participants of WG3	Maria Teresa de Teixeira Cruz Orcid 0000-0001-9846-6754 trosete@ff.uc.pt
Affiliation	Center for Neuroscience and Cell Biology, University of Coimbra, Portugal
Scientific expertise, up to 5 key words	Immunopharmacology, innate immunity, cellular therapy, inflammation
Motivation for participation in WG3	I intend to test new activators of Nrf2 in Alzheimer's Disease (AD), thus justifying my motivation for participation in WG3A.
Short narrative biosketch, including scientific background/ education/major achievements etc.	<p>Maria Teresa Cruz (MT Cruz) has a degree in Pharmaceutical Sciences (1991) from the University of Lisbon, Portugal, a master in Drug Technologies (1996) and a PhD in Pharmacology (2004) from the University of Coimbra. She is assistant professor at the Faculty of Pharmacy and Group Leader at the Center for Neuroscience and Cell Biology at the University of Coimbra (Cell Signaling and Metabolism in Disease) and Principal Investigator of the research line Innate Immunity in inflammation-related diseases.</p> <p>MT Cruz has been dedicated for approximately two decades to the study of the immunobiology of inflammatory processes. The research developed has focused mainly on two areas: the molecular mechanisms involved in inflammation with a special focus in dendritic cells and macrophages and the development of methodologies to evaluate the ability of natural and industrial chemists to modulate innate immunity. MT Cruz is Group Leader at CNC and PI of Innate Immunity in inflammation-related diseases group. She published 2 international patents, 6 book chapters and 156 articles in SCI indexed journals (h-index of 31, 6264 citations, Web of Science), supervised or co-supervised 15 PhD, 21 master and 3 pos-docs. She integrated 35 funded projects, being the PI of 14, namely from the EU 7th Framework Programme and from John Hopkins, USA. MT Cruz is member of the editorial board of Scientific Reports, Pharmaceutics and Future Pharmacology and reviewer of I&D projects from FCT, Netherlands Organisation for Scientific Research, French National Research Agency, Alzheimer's Association Research Fellowship Program and Estonian and Republic of Serbia Research Council. Her group received several entrepreneurship awards and was involved in the creation of a spin-off of UC, currently performing specialized services to Cosmetics Europe and pharmaceuticals. She also participated in the creation of a BSL3 facility fulfilling the requirements to produce clinical-grade cell-based products for cancer immunotherapy, resulting from a partnership between UC and a Portuguese pharmaceutical industry.</p>
Current research topics/ongoing projects	Identification of innovative molecules targeting the Nrf2 signaling pathway and concomitantly displaying anti-inflammatory properties with beneficial effects in Alzheimer's disease cellular models. The potential therapeutic effect of those molecules is currently being validated using in vivo models of AD (Silva A, Pereira M, Carrascal M, Brites G, Neves BM, Moreira P, Resende R, Silva MM, Santos AE, Pereira C, Cruz MT. Calcium modulation, anti-oxidant and anti-inflammatory effect of skin allergens targeting the Nrf2 signaling pathway in Alzheimer's disease cellular models. Int J Mol Sci. 2020 Oct 21;21(20):7791)
Nfr2-related methodologies/ infrastructure/ equipment	<p>We developed an in-house method able to detect Nrf2 activators, which is a cheap, rapid and high throughput fluorimetric/colorimetric based method.</p> <p>Additionally, we are able to detect the activation of the Nrf2 by real time PCR (genes dependent of this transcription factor) and by western blot.</p>

Available sample collections/datasets; interested in sharing; yes/no	We have a physical library of 60 potential activators of Nrf2, which we are interested in sharing.
Available cohorts/ ongoing/planned human studies/grant applications	We have an ongoing project able to detect new activators of Nrf2 for AD treatment. The in vitro and in vivo results already achieved are quite promising. Therefore, we are planning to initiate human studies.
Interested in STSM: outgoing/hosting (year 1/later); yes/no	Yes