ICVS Life and Health Sciences Research Institute

University of Minho School of Medicine

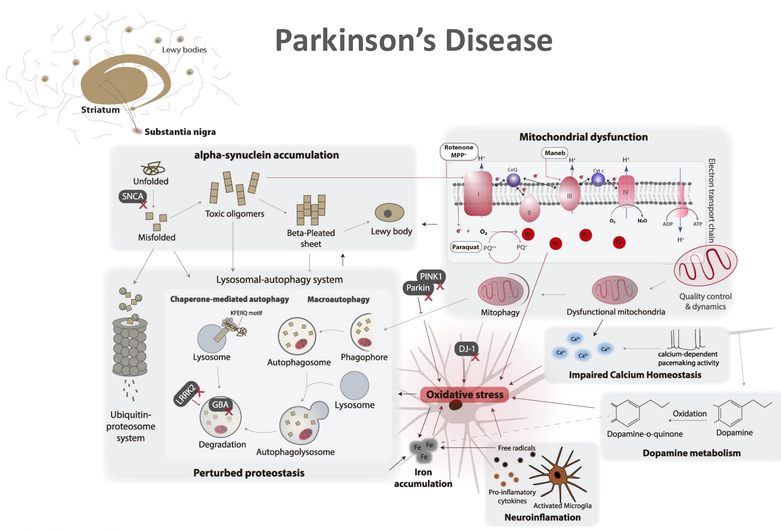
Cell-free regeneration in Parkinson's Disease: The therapeutic signature of iMSC secretome

Filipa Ferreira-Antunes[1,2], Ana Marote[1,2], Jorge H. Fernandes[1,2], Jonas Campos[1,2], Carla Teixeira-Pereira[1,2], Sofia C. Serra[1,2] , Sandra Barata-Antunes[1,2], Bárbara Mendes-Pinheiro[1,2], Carina Soares-Cunha[1,2], Ana Verónica Domingues[1,2],Stephanie Oliveira[1,2], Sandra Anjo[3], Daniela Monteiro-Fernandes[1,2], Bruno Manadas[3], Andreia Teixeira-Castro[1,2], Luísa Pinto[1,2],Belém Sampaio-Marques[1,2#] and António J Salgado[1,2#]

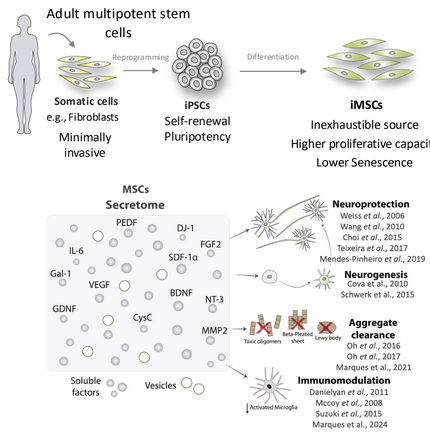
[1]Life and Health Sciences Research Institute (ICVS), School of Medicine, University of Minho, Braga, Portugal;
[2]ICVS/3B's - PT Government Associate Laboratory, Braga/Guimarães, Portugal.
[3]CNC-Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal
co-senior autorship

INTRODUCTION

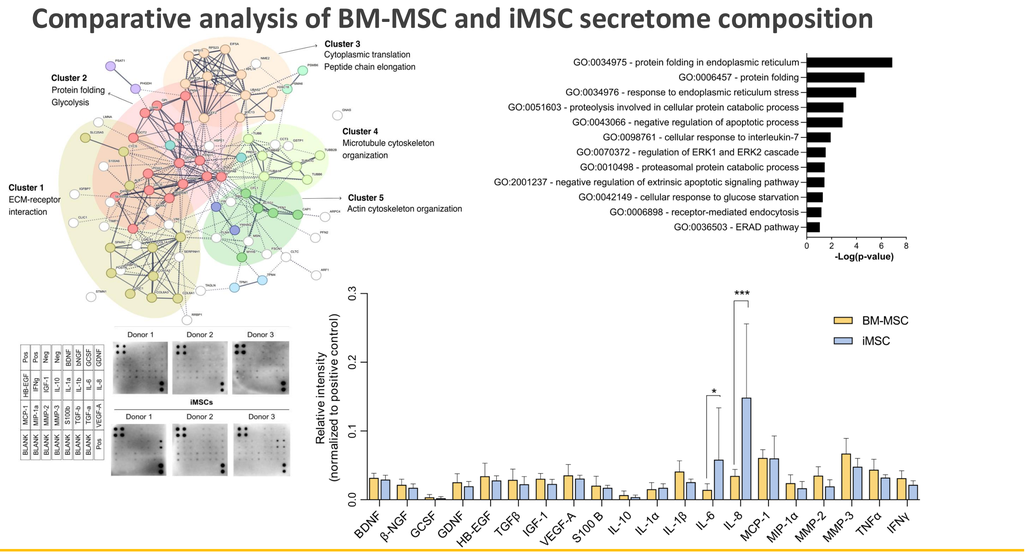
Parkinson's Disease



iMSCs Secretome a therapeutic approach

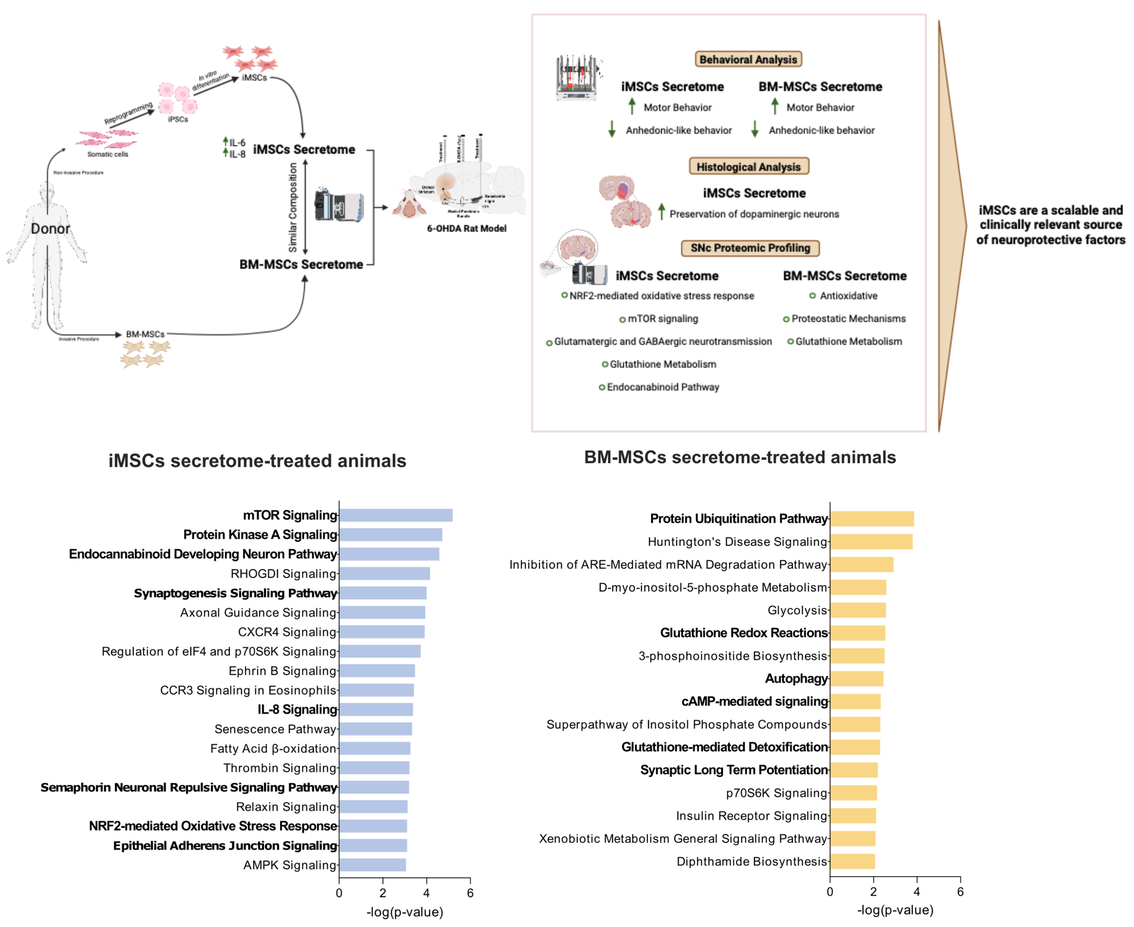


Comparative analysis of BM-MSC and iMSC secretome composition

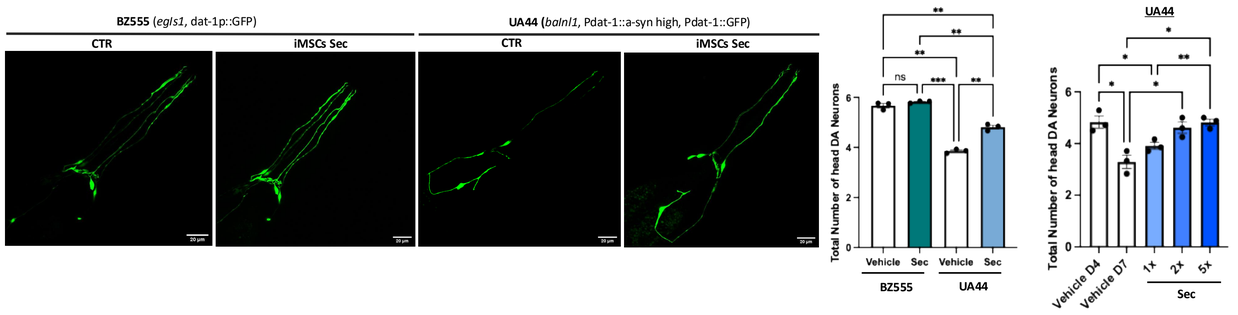


RESULTS

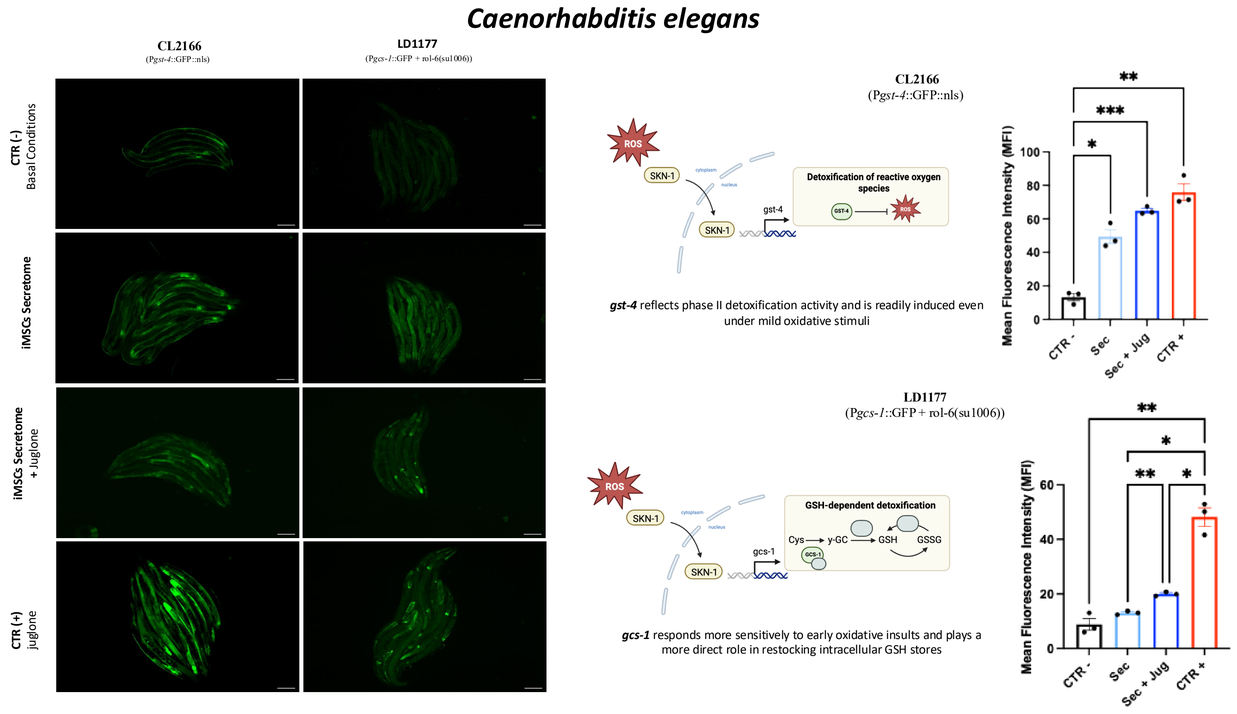
I. Comparative analysis of BM-MSC and iMSC secretome effect in a 6-OHDA Rat Model of Parkinson's Disease



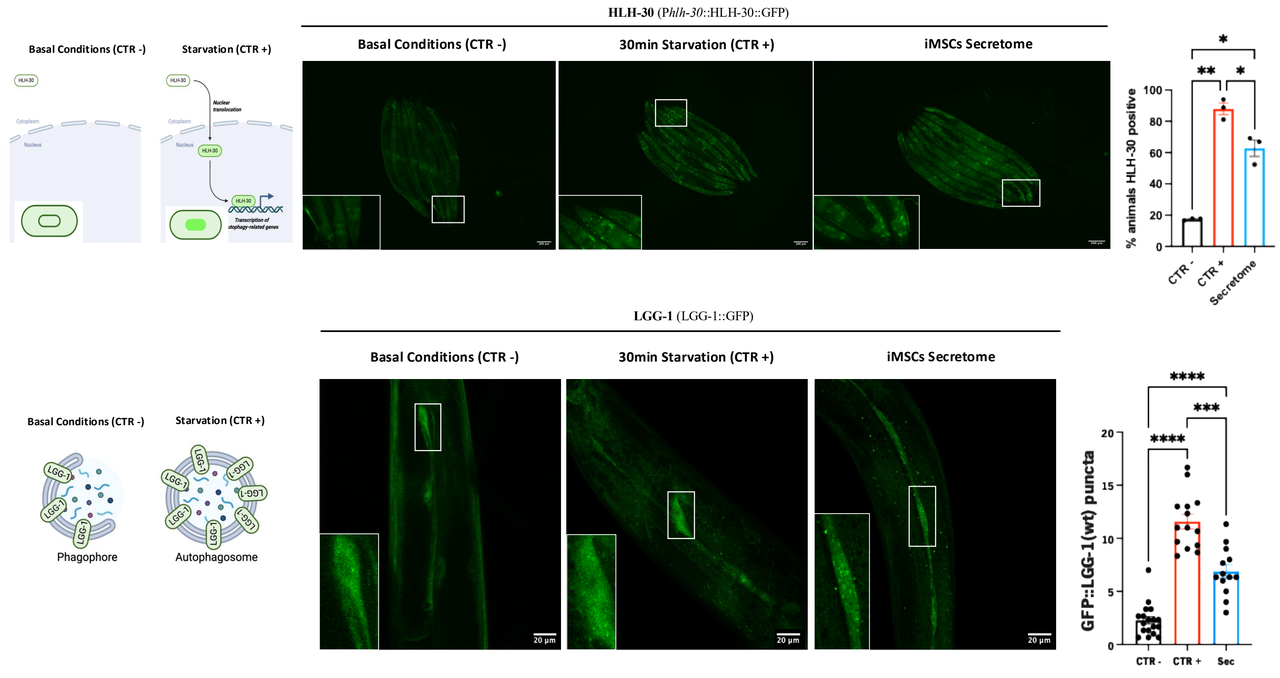
II. iMSCs secretome protects dopaminergic neurons from asyn toxicity in *Caenorhabditis elegans*



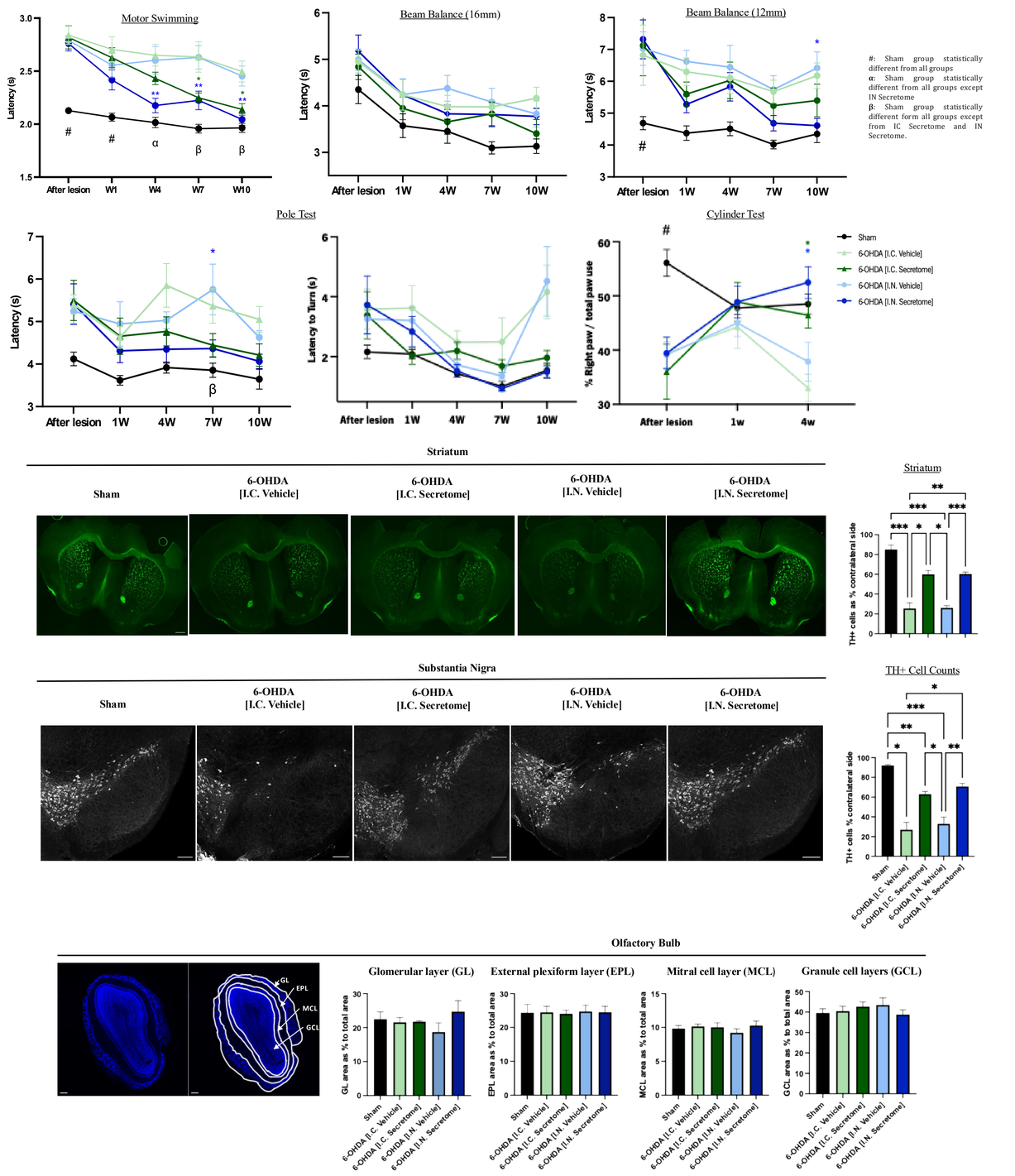
III. iMSCs secretome modulates NRF2-mediated oxidative stress and glutathione redox reactions in *Caenorhabditis elegans*



IV. iMSCs secretome modulates autophagy in *Caenorhabditis elegans*



V. Intranasal administration of iMSCs secretome preserves motor function and protects neuronal dopaminergic integrity after 6-OHDA lesion



ICVS · Fundação "la Caixa" · B.acis Science Innovation Health · 2CA Braga · FCT Fundação para a Ciência e a Tecnologia · Animal Research Tomorrow