

IP 1 (Nombre y apellidos): Bàrbara Segura Fàbregas

IP 2 (Nombre y apellidos): Carme Junqué Plaja

TÍTULO DEL PROYECTO (ACRÓNIMO): Patrones cerebrales estructurales y funcionales asociados con diferentes fenotipos cognitivos y su progresión en trastorno de la conducta del sueño REM. (SIGN)

TITLE OF THE PROJECT (ACRONYM): *Structural and functional brain patterns associated with different cognitive phenotypes and their progression in REM Behavioural disorder.* (SIGN)

3.1 Doctoral theses supervised in the last 10 years (2010-2020)

· List of publication from each fellow during their predoctoral training (* indicates that publications included in the doctoral thesis)

Fernández-Espejo (2006-2010). Lecture:10/12/2010

Fernández-Espejo D, Soddu A, Cruse D, Palacios EM, Junque C, Vanhaudenhuyse A, Rivas E, Newcombe V, Menon DK, Pickard JD, Laureys S, Owen AM. A role for the default mode network in the bases of disorders of consciousness. *Ann Neurol.* 2012 Sep;72(3):335-43. doi: 10.1002/ana.23635. PMID: 23034909.

* Fernández-Espejo D, Bekinschtein T, Monti MM, Pickard JD, Junque C, Coleman MR, Owen AM. Diffusion weighted imaging distinguishes the vegetative state from the minimally conscious state. *Neuroimage.* 2011 Jan 1;54(1):103-12. doi: 10.1016/j.neuroimage.2010.08.035. Epub 2010 Aug 20. PMID: 20728553.

Fernández-Espejo D, Junque C, Cruse D, Bernabeu M, Roig-Rovira T, Fábregas N, Rivas E, Mercader JM. Combination of diffusion tensor and functional magnetic resonance imaging during recovery from the vegetative state. *BMC Neurol.* 2010 Sep 3;10:77. doi: 10.1186/1471-2377-10-77. PMID: 20815871; PMCID: PMC2941677.

*Fernández-Espejo D, Junque C, Bernabeu M, Roig-Rovira T, Vendrell P, Mercader JM. Reductions of thalamic volume and regional shape changes in the vegetative and the minimally conscious states. *J Neurotrauma.* 2010 Jul;27(7):1187-93. doi: 10.1089/neu.2010.1297. PMID: 20392136.

Bosch B, Bartrés-Faz D, Rami L, Arenaza-Urquijo EM, Fernández-Espejo D, Junqué C, Solé-Padullés C, Sánchez-Valle R, Bargalló N, Falcón C, Molinuevo JL. Cognitive reserve modulates task-induced activations and deactivations in healthy elders, amnesic mild cognitive impairment and mild Alzheimer's disease. *Cortex.* 2010 Apr;46(4):451-61. doi: 10.1016/j.cortex.2009.05.006. Epub 2009 May 20. PMID: 19560134.

Sanchez-Carrion R, Fernandez-Espejo D, Junque C, Falcon C, Bargallo N, Roig T, Bernabeu M, Tormos JM, Vendrell P. A longitudinal fMRI study of working memory in severe TBI patients with diffuse axonal injury. *Neuroimage.* 2008 Nov 15;43(3):421-9. doi: 10.1016/j.neuroimage.2008.08.003. Epub 2008 Aug 15. PMID: 18771738.

* Fernández-Espejo D, Junqué C, Vendrell P, Bernabeu M, Roig T, Bargalló N, Mercader JM. Cerebral response to speech in vegetative and minimally conscious states after traumatic brain injury. *Brain Inj.* 2008 Oct;22(11):882-90. doi: 10.1080/02699050802403573. PMID: 18850346..

Sánchez-Carrión R, Gómez PV, Junqué C, Fernández-Espejo D, Falcon C, Bargalló N, Roig-Rovira T, Enseñat-Cantalops A, Bernabeu M. Frontal hypoactivation on functional magnetic resonance imaging in working memory after severe diffuse traumatic brain injury. *J Neurotrauma.* 2008 May;25(5):479-94. doi: 10.1089/neu.2007.0417. PMID: 18363509.

Gemma Escartin Marti (2008-2012) Lecture: 18/0/2012

* Escartin G, Junqué C, Juncadella M, Gabarrós A, de Miquel MA, Rubio F. Decision-making impairment on the Iowa Gambling Task after endovascular coiling or neurosurgical clipping for ruptured anterior communicating artery aneurysm. *Neuropsychology.* 2012 Mar;26(2):172-80. doi: 10.1037/a0024336. Epub 2012 Jan 16. PMID: 22251310.

Joana Braga Pereira (2008-2012). Lecture 20/07/2012

*Pereira JB, Valls-Pedret C, Ros E, Palacios E, Falcón C, Bargalló N, Bartrés-Faz D, Wahlund LO, Westman E, Junque C. Regional vulnerability of hippocampal subfields to aging measured by structural and diffusion MRI. *Hippocampus.* 2014 Apr;24(4):403-14. doi: 10.1002/hipo.22234. Epub 2013 Dec 25. PMID: 24339261.

* Pereira JB, Junqué C, Bartrés-Faz D, Martí MJ, Sala-Llonch R, Compta Y, Falcón C, Vendrell P, Pascual-Leone A, Valls-Solé J, Tolosa E. Modulation of verbal fluency networks by transcranial direct current stimulation (tDCS) in Parkinson's disease. *Brain Stimul.* 2013 Jan;6(1):16-24. doi: 10.1016/j.brs.2012.01.006. Epub 2012 Feb 22. PMID: 22410476.

* Pereira JB, Junqué C, Bartrés-Faz D, Ramírez-Ruiz B, Marti MJ, Tolosa E. Regional vulnerability of hippocampal subfields and memory deficits in Parkinson's disease. *Hippocampus.* 2013 Aug;23(8):720-8. doi: 10.1002/hipo.22131. Epub 2013 Apr 30. PMID: 23553678.

Compta Y, Pereira JB, Ríos J, Ibarretxe-Bilbao N, Junqué C, Bargalló N, Cámara A, Buongiorno M, Fernández M, Pont-Sunyer C, Martí MJ. Combined dementia-risk biomarkers in Parkinson's disease: a prospective longitudinal study. *Parkinsonism Relat Disord.* 2013 Aug;19(8):717-24. doi: 10.1016/j.parkreldis.2013.03.009. Epub 2013 May 3. Erratum in: *Parkinsonism Relat Disord.* 2013 Nov;19(11):1071-2. PMID: 23643469.

* Pereira JB, Ibarretxe-Bilbao N, Marti MJ, Compta Y, Junqué C, Bargallo N, Tolosa E. Assessment of cortical degeneration in patients with Parkinson's disease by voxel-based morphometry, cortical folding, and cortical thickness. *Hum Brain Mapp.* 2012 Nov;33(11):2521-34. doi: 10.1002/hbm.21378. Epub 2011 Sep 6. PMID: 21898679; PMCID: PMC6870035.

Compta Y, Ibarretxe-Bilbao N, Pereira JB, Junqué C, Bargalló N, Tolosa E, Valldeoriola F, Muñoz E, Camara A, Buongiorno M, Martí MJ. Grey matter volume correlates of cerebrospinal markers of Alzheimer-pathology in Parkinson's disease and related dementia. *Parkinsonism Relat Disord.* 2012 Sep;18(8):941-7. doi: 10.1016/j.parkreldis.2012.04.028. Epub 2012 May 15. PMID: 22595621.

Pereira JB, Junqué C, Bartrés-Faz D, Martí MJ, Sala-Llloch R, Compta Y, Falcón C, Vendrell P, Pascual-Leone A, Valls-Solé J, Tolosa E. Modulation of verbal fluency networks by transcranial direct current stimulation (tDCS) in Parkinson's disease. *Brain Stimul.* 2013 Jan;6(1):16-24. doi: 10.1016/j.brs.2012.01.006. Epub 2012 Feb 22. PMID: 22410476.

*Pereira JB, Junqué C, Martí MJ, Ramirez-Ruiz B, Bargalló N, Tolosa E. Neuroanatomical substrate of visuospatial and visuoperceptual impairment in Parkinson's disease. *Mov Disord.* 2009 Jun 15;24(8):1193-9. doi: 10.1002/mds.22560. PMID: 19412935.

*Pereira JB, Junqué C, Martí MJ, Ramirez-Ruiz B, Bartrés-Faz D, Tolosa E. Structural brain correlates of verbal fluency in Parkinson's disease. *Neuroreport.* 2009 May 27;20(8):741-4. doi: 10.1097/WNR.0b013e328329370b. PMID: 19349926.

Jordi Ortiz Gil (2008-2012). Lecture: 14/09/2012

*Ortiz-Gil J, Pomarol-Clotet E, Salvador R, Canales-Rodríguez EJ, Sarró S, Gomar JJ, Guerrero A, Sans-Sansa B, Capdevila A, Junqué C, McKenna PJ. Neural correlates of cognitive impairment in schizophrenia. *Br J Psychiatry.* 2011 Sep;199(3):202-10. doi: 10.1192/bjp.bp.110.083600. Epub 2011 Jul 4. PMID: 21727234.

Leire Zubiaurre Elorza (2009-2013). Lecture 04/03/2013

Zubiaurre-Elorza L, Junque C, Gómez-Gil E, Guillamon A. Effects of cross-sex hormone treatment on cortical thickness in transsexual individuals. *J Sex Med.* 2014 May;11(5):1248-61. doi: 10.1111/jsm.12491. Epub 2014 Mar 11. PMID: 24617977.

Zubiaurre-Elorza L, Junque C, Gómez-Gil E, Segovia S, Carrillo B, Rametti G, Guillamon A. Cortical thickness in untreated transsexuals. *Cereb Cortex.* 2013 Dec;23(12):2855-62. doi: 10.1093/cercor/bhs267. Epub 2012 Aug 31. PMID: 22941717.

Rametti G, Carrillo B, Gómez-Gil E, Junque C, Zubiaurre-Elorza L, Segovia S, Gomez A, Karadi K, Guillamon A. Effects of androgenization on the white matter microstructure of female-to-male transsexuals. A diffusion tensor imaging study. *Psychoneuroendocrinology.* 2012 Aug;37(8):1261-9. doi: 10.1016/j.psyneuen.2011.12.019. Epub 2012 Jan 18. PMID: 22260939.

*Zubiaurre-Elorza L, Soria-Pastor S, Junque C, Sala-Llloch R, Segarra D, Bargallo N, Macaya A. Cortical thickness and behavior abnormalities in children born preterm. *PLoS One.* 2012;7(7):e42148. doi: 10.1371/journal.pone.0042148. Epub 2012 Jul 30. PMID: 22860067; PMCID: PMC3408470.

* Zubiaurre-Elorza L, Soria-Pastor S, Junqué C, Fernandez-Espejo D, Segarra D, Bargalló N, Romano-Berindoague C, Macaya A. Thalamic changes in a preterm sample with periventricular leukomalacia: correlation with white-matter integrity and cognitive outcome at school age. *Pediatr Res.* 2012 Apr;71(4 Pt 1):354-60. doi: 10.1038/pr.2011.70. Epub 2012 Feb 15. PMID: 22391635.

* Zubiaurre-Elorza L, Soria-Pastor S, Junque C, Segarra D, Bargalló N, Mayolas N, Romano-Berindoague C, Macaya A. Gray matter volume decrements in preterm children with

periventricular leukomalacia. *Pediatr Res.* 2011 Jun;69(6):554-60. doi: 10.1203/PDR.0b013e3182182366. PMID: 21386751.

Rametti G, Junqué C, Bartrés-Faz D, Zubiaurre-Elorza L, Catalán R, Penadés R, Bargalló N, Bernardo M. Anterior cingulate and paracingulate sulci morphology in patients with schizophrenia. *Schizophr Res.* 2010 Aug;121(1-3):66-74. doi: 10.1016/j.schres.2010.05.016. Epub 2010 Jun 13. PMID: 20547448.

Soria-Pastor S, Padilla N, Zubiaurre-Elorza L, Ibarretxe-Bilbao N, Botet F, Costas-Moragas C, Falcon C, Bargallo N, Mercader JM, Junqué C. Decreased regional brain volume and cognitive impairment in preterm children at low risk. *Pediatrics.* 2009 Dec;124(6):e1161-70. doi: 10.1542/peds.2009-0244. PMID: 19948618.

*Zubiaurre-Elorza L, Soria-Pastor S, Junqué C, Vendrell P, Padilla N, Rametti G, Bargalló N, Botet F. Magnetic resonance imaging study of cerebral sulci in low-risk preterm children. *Int J Dev Neurosci.* 2009 Oct;27(6):559-65. doi: 10.1016/j.ijdevneu.2009.06.006. Epub 2009 Jun 27. PMID: 19563880.

Eva M Palacios Martínez (2009-2013) Lecture 31/05/2013

Palacios EM, Sala-Llloch R, Junque C, Roig T, Tormos JM, Bargallo N, Vendrell P. White matter/gray matter contrast changes in chronic and diffuse traumatic brain injury. *J Neurotrauma.* 2013 Dec 1;30(23):1991-4. doi: 10.1089/neu.2012.2836. Epub 2013 Oct 1. PMID: 23822854.

*Palacios EM, Sala-Llloch R, Junque C, Roig T, Tormos JM, Bargallo N, Vendrell P. Resting-state functional magnetic resonance imaging activity and connectivity and cognitive outcome in traumatic brain injury. *JAMA Neurol.* 2013 Jul;70(7):845-51. doi: 10.1001/jamaneurol.2013.38. PMID: 23689958.

* Palacios EM, Sala-Llloch R, Junque C, Fernandez-Espejo D, Roig T, Tormos JM, Bargallo N, Vendrell P. Long-term declarative memory deficits in diffuse TBI: correlations with cortical thickness, white matter integrity and hippocampal volume. *Cortex.* 2013 Mar;49(3):646-57. doi: 10.1016/j.cortex.2012.02.011. Epub 2012 Mar 8. PMID: 22482692.

*Palacios EM, Sala-Llloch R, Junque C, Roig T, Tormos JM, Bargallo N, Vendrell P. White matter integrity related to functional working memory networks in traumatic brain injury. *Neurology.* 2012 Mar 20;78(12):852-60. doi: 10.1212/WNL.0b013e31824c465a. Epub 2012 Feb 15. PMID: 22345222. Palacios EM, et al. *BMC Neurol.* 2011 Feb 23;11:24.

*Palacios EM, Fernandez-Espejo D, Junque C, Sanchez-Carrion R, Roig T, Tormos JM, Bargallo N, Vendrell P. Diffusion tensor imaging differences relate to memory deficits in diffuse traumatic brain injury. *BMC Neurol.* 2011 Feb 23;11:24. doi: 10.1186/1471-2377-11-24. PMID: 21345223; PMCID: PMC3050687.

Nuria Pujol (2009-2013). Lecture 29/11/2013

*Pujol N, Penadés R, Junqué C, Dinov I, Fu CH, Catalán R, Ibarretxe-Bilbao N, Bargalló N, Bernardo M, Toga A, Howard RJ, Costafreda SG. Hippocampal abnormalities and age in chronic schizophrenia: morphometric study across the adult lifespan. *Br J Psychiatry.* 2014 Nov;205(5):369-75. doi: 10.1192/bjp.bp.113.140384. Epub 2014 Sep 11. PMID: 25213158; PMCID: PMC4217027.

* Pujol N, Penadés R, Rametti G, Catalán R, Vidal-Piñeiro D, Palacios E, Bargallo N, Bernardo M, Junqué C. Inferior frontal and insular cortical thinning is related to dysfunctional brain activation/deactivation during working memory task in schizophrenic patients. *Psychiatry Res.* 2013 Nov 30;214(2):94-101. doi: 10.1016/j.psychres.2013.06.008. Epub 2013 Aug 29. PMID: 23993992.

Penadés R, Pujol N, Catalán R, Masana G, García-Rizo C, Bargalló N, González-Rodríguez A, Vidal-Piñeiro D, Bernardo M, Junqué C. Cortical thickness in regions of frontal and temporal lobes is associated with responsiveness to cognitive remediation therapy in schizophrenia. *Schizophr Res.* 2016 Mar;171(1-3):110-6. doi: 10.1016/j.schres.2016.01.006. Epub 2016 Jan 15. PMID: 26777884.

*Penadés R, Pujol N, Catalán R, Massana G, Rametti G, García-Rizo C, Bargalló N, Gastó C, Bernardo M, Junqué C. Brain effects of cognitive remediation therapy in schizophrenia: a structural and functional neuroimaging study. *Biol Psychiatry.* 2013 May 15;73(10):1015-23. doi: 10.1016/j.biopsych.2013.01.017. Epub 2013 Feb 26. Erratum in: *Biol Psychiatry.* 2014 Mar 1;75(5):425. PMID: 23452665.

Hugo Cesar Baggio (2010-2014). Lecture 06/10/2014

* Baggio HC, Segura B, Junque C, de Reus MA, Sala-Llloch R, Van den Heuvel MP. Rich Club Organization and Cognitive Performance in Healthy Older Participants. *J Cogn Neurosci.* 2015 Sep;27(9):1801-10. doi: 10.1162/jocn_a_00821. Epub 2015 May 5. PMID: 25941870.

*Baggio HC, Segura B, Garrido-Millan JL, Marti MJ, Compta Y, Valldeoriola F, Tolosa E, Junque C. Resting-state frontostriatal functional connectivity in Parkinson's disease-related apathy. *Mov Disord.* 2015 Apr 15;30(5):671-9. doi: 10.1002/mds.26137. Epub 2015 Jan 20. PMID: 25600482.

*Baggio HC, Segura B, Sala-Llloch R, Marti MJ, Valldeoriola F, Compta Y, Tolosa E, Junqué C. Cognitive impairment and resting-state network connectivity in Parkinson's disease. *Hum Brain Mapp.* 2015 Jan;36(1):199-212. doi: 10.1002/hbm.22622. Epub 2014 Aug 28. PMID: 25164875; PMCID: PMC6869118.

*Segura B, Baggio HC, Marti MJ, Valldeoriola F, Compta Y, Garcia-Diaz AI, Vendrell P, Bargallo N, Tolosa E, Junque C. Cortical thinning associated with mild cognitive impairment in Parkinson's disease. *Mov Disord.* 2014 Oct;29(12):1495-503. doi: 10.1002/mds.25982. Epub 2014 Aug 7. PMID: 25100674.

*Baggio HC, Sala-Llloch R, Segura B, Marti MJ, Valldeoriola F, Compta Y, Tolosa E, Junqué C. Functional brain networks and cognitive deficits in Parkinson's disease. *Hum Brain Mapp.* 2014 Sep;35(9):4620-34. doi: 10.1002/hbm.22499. Epub 2014 Mar 17. PMID: 24639411; PMCID: PMC6869398.

Segura B, Baggio HC, Solana E, Palacios EM, Vendrell P, Bargalló N, Junqué C. Neuroanatomical correlates of olfactory loss in normal aged subjects. *Behav Brain Res.* 2013 Jun 1;246:148-53. doi: 10.1016/j.bbr.2013.02.025. Epub 2013 Feb 28. PMID: 23458742.

*Segura B, Ibarretxe-Bilbao N, Sala-Llloch R, Baggio HC, Martí MJ, Valldeoriola F, Vendrell P, Bargalló N, Tolosa E, Junqué C. Progressive changes in a recognition memory

network in Parkinson's disease. *J Neurol Neurosurg Psychiatry*. 2013 Apr;84(4):370-8. doi: 10.1136/jnnp-2012-302822. Epub 2012 Oct 31. PMID: 23117490.

*Ibarretxe-Bilbao N, Junque C, Segura B, Baggio HC, Marti MJ, Valldeoriola F, Bargallo N, Tolosa E. Progression of cortical thinning in early Parkinson's disease. *Mov Disord*. 2012 Dec;27(14):1746-53. doi: 10.1002/mds.25240. Epub 2012 Nov 2. PMID: 23124622.

*Baggio HC, Segura B, Ibarretxe-Bilbao N, Valldeoriola F, Marti MJ, Compta Y, Tolosa E, Junqué C. Structural correlates of facial emotion recognition deficits in Parkinson's disease patients. *Neuropsychologia*. 2012 Jul;50(8):2121-8. doi: 10.1016/j.neuropsychologia.2012.05.020. Epub 2012 May 26. PMID: 22640663.

Roser Sala Llonch (2011-2015). Lecture 13/01 2015

Sala-Llonch R, Palacios EM, Junqué C, Bargalló N, Vendrell P. Functional networks and structural connectivity of visuospatial and visuoperceptual working memory. *Front Hum Neurosci*. 2015 Jun 11;9:340. doi: 10.3389/fnhum.2015.00340. PMID: 26124716; PMCID: PMC4463024.

*Sala-Llonch R, Bartrés-Faz D, Junqué C. Reorganization of brain networks in aging: a review of functional connectivity studies. *Front Psychol*. 2015 May 21;6:663. doi: 10.3389/fpsyg.2015.00663. PMID: 26052298; PMCID: PMC4439539.

Sala-Llonch R, Lladó A, Fortea J, Bosch B, Antonell A, Balasa M, Bargalló N, Bartrés-Faz D, Molinuevo JL, Sánchez-Valle R. Evolving brain structural changes in PSEN1 mutation carriers. *Neurobiol Aging*. 2015 Mar;36(3):1261-70. doi: 10.1016/j.neurobiolaging.2014.12.022. Epub 2014 Dec 24. PMID: 25638532.

*Sala-Llonch R, Junqué C, Arenaza-Urquijo EM, Vidal-Piñeiro D, Valls-Pedret C, Palacios EM, Domènech S, Salvà A, Bargalló N, Bartrés-Faz D. Changes in whole-brain functional networks and memory performance in aging. *Neurobiol Aging*. 2014 Oct;35(10):2193-202. doi: 10.1016/j.neurobiolaging.2014.04.007. Epub 2014 Apr 19. PMID: 24814675.

Vidal-Piñeiro D, Valls-Pedret C, Fernández-Cabello S, Arenaza-Urquijo EM, Sala-Llonch R, Solana E, Bargalló N, Junqué C, Ros E, Bartrés-Faz D. Decreased Default Mode Network connectivity correlates with age-associated structural and cognitive changes. *Front Aging Neurosci*. 2014 Sep 25;6:256. doi: 10.3389/fnagi.2014.00256. PMID: 25309433; PMCID: PMC4174767.

García-García I, Jurado MÁ, Garolera M, Segura B, Sala-Llonch R, Marqués-Iturria I, Pueyo R, Sender-Palacios MJ, Vernet-Vernet M, Narberhaus A, Ariza M, Junqué C. Alterations of the salience network in obesity: a resting-state fMRI study. *Hum Brain Mapp*. 2013 Nov;34(11):2786-97. doi: 10.1002/hbm.22104. Epub 2012 Apr 21. PMID: 22522963; PMCID: PMC6870073.

Segura B, Ibarretxe-Bilbao N, Sala-Llonch R, Baggio HC, Martí MJ, Valldeoriola F, Vendrell P, Bargalló N, Tolosa E, Junqué C. Progressive changes in a recognition memory network in Parkinson's disease. *J Neurol Neurosurg Psychiatry*. 2013 Apr;84(4):370-8. doi: 10.1136/jnnp-2012-302822. Epub 2012 Oct 31. PMID: 23117490.

García-García I, Jurado MA, Garolera M, Segura B, Marqués-Iturria I, Pueyo R, Vernet-Vernet M, Sender-Palacios MJ, Sala-Llonch R, Ariza M, Narberhaus A, Junqué C. Functional

connectivity in obesity during reward processing. *Neuroimage*. 2013 Feb 1;66:232-9. doi: 10.1016/j.neuroimage.2012.10.035. Epub 2012 Oct 24. PMID: 23103690.

* Sala-Llloch R, Arenaza-Urquijo EM, Valls-Pedret C, Vidal-Piñeiro D, Bargalló N, Junqué C, Bartrés-Faz D. Dynamic functional reorganizations and relationship with working memory performance in healthy aging. *Front Hum Neurosci*. 2012 Jun 7;6:152. doi: 10.3389/fnhum.2012.00152. PMID: 22701409; PMCID: PMC3369258.

Bosch B, Arenaza-Urquijo EM, Rami L, Sala-Llloch R, Junqué C, Solé-Padullés C, Peña-Gómez C, Bargalló N, Molinuevo JL, Bartrés-Faz D. Multiple DTI index analysis in normal aging, amnesic MCI and AD. Relationship with neuropsychological performance. *Neurobiol Aging*. 2012 Jan;33(1):61-74. doi: 10.1016/j.neurobiolaging.2010.02.004. Epub 2010 Apr 3. PMID: 20371138.

*Sala-Llloch R, Peña-Gómez C, Arenaza-Urquijo EM, Vidal-Piñeiro D, Bargalló N, Junqué C, Bartrés-Faz D. Brain connectivity during resting state and subsequent working memory task predicts behavioural performance. *Cortex*. 2012 Oct;48(9):1187-96. doi: 10.1016/j.cortex.2011.07.006. Epub 2011 Aug 5. PMID: 21872853.

Arenaza-Urquijo EM, Bosch B, Sala-Llloch R, Solé-Padullés C, Junqué C, Fernández-Espejo D, Bargalló N, Rami L, Molinuevo JL, Bartrés-Faz D. Specific anatomic associations between white matter integrity and cognitive reserve in normal and cognitively impaired elders. *Am J Geriatr Psychiatry*. 2011 Jan;19(1):33-42. doi: 10.1097/JGP.0b013e3181e448e1. PMID: 20808130.

* Sala-Llloch R, Bosch B, Arenaza-Urquijo EM, Rami L, Bargalló N, Junqué C, Molinuevo JL, Bartrés-Faz D. Greater default-mode network abnormalities compared to high order visual processing systems in amnesic mild cognitive impairment: an integrated multi-modal MRI study. *J Alzheimers Dis*. 2010;22(2):523-39. doi: 10.3233/JAD-2010-101038. PMID: 20847425.

Nelly Fabiola Padilla Gomes (2012-2016). Lecture: 05/02/2016

*Padilla N, Fransson P, Donaire A, Figueras F, Arranz A, Sanz-Cortés M, Tenorio V, Bargallo N, Junqué C, Lagercrantz H, Ådén U, Gratacós E. Intrinsic Functional Connectivity in Preterm Infants with Fetal Growth Restriction Evaluated at 12 Months Corrected Age. *Cereb Cortex*. 2017 Oct 1;27(10):4750-4758. doi: 10.1093/cercor/bhw269. PMID: 27600838.

*Padilla N, Fransson P, Donaire A, Figueras F, Arranz A, Sanz-Cortés M, Tenorio V, Bargallo N, Junqué C, Lagercrantz H, Ådén U, Gratacós E. Intrinsic Functional Connectivity in Preterm Infants with Fetal Growth Restriction Evaluated at 12 Months Corrected Age. *Cereb Cortex*. 2017 Oct 1;27(10):4750-4758. doi: 10.1093/cercor/bhw269. PMID: 27600838.

*Padilla N, Junqué C, Figueras F, Sanz-Cortés M, Bargalló N, Arranz A, Donaire A, Figueras J, Gratacós E. Differential vulnerability of gray matter and white matter to intrauterine growth restriction in preterm infants at 12 months corrected age. *Brain Res*. 2014 Jan 30;1545:1-11. doi: 10.1016/j.brainres.2013.12.007. Epub 2013 Dec 17. PMID: 24361462.

Soria-Pastor S, Padilla N, Zubiaurre-Elorza L, Ibarretxe-Bilbao N, Botet F, Costas-Moragas C, Falcon C, Bargallo N, Mercader JM, Junqué C. Decreased regional brain volume and cognitive impairment in preterm children at low risk. *Pediatrics*. 2009 Dec;124(6):e1161-70. doi: 10.1542/peds.2009-0244. PMID: 19948618.

Anna Garcia-Diaz (2014-2018). Lecture: 16/02/2018.

*Garcia-Diaz AI, Segura B, Baggio HC, Uribe C, Campabadal A, Abos A, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Junque C. Cortical thinning correlates of changes in visuospatial and visuoperceptual performance in Parkinson's disease: A 4-year follow-up. *Parkinsonism Relat Disord.* 2018 Jan;46:62-68. doi: 10.1016/j.parkreldis.2017.11.003. Epub 2017 Nov 7. PMID: 29132765.

*Garcia-Diaz AI, Segura B, Baggio HC, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Uribe C, Campabadal A, Abos A, Junque C. Structural Brain Correlations of Visuospatial and Visuoperceptual Tests in Parkinson's Disease. *J Int Neuropsychol Soc.* 2018 Jan;24(1):33-44. doi: 10.1017/S1355617717000583. Epub 2017 Jul 17. PMID: 28714429; PMCID: PMC5851059.

*Garcia-Diaz AI, Segura B, Baggio HC, Marti MJ, Valdeoriola F, Compta Y, Vendrell P, Bargallo N, Tolosa E, Junque C. Structural MRI correlates of the MMSE and pentagon copying test in Parkinson's disease. *Parkinsonism Relat Disord.* 2014 Dec;20(12):1405-10. doi: 10.1016/j.parkreldis.2014.10.014. Epub 2014 Oct 19. PMID: 25457818.

Carme Uribe Codesal (2015-2019). Lecture: 03/05/2019

*Uribe C, Segura B, Baggio HC, Abos A, Garcia-Diaz AI, Campabadal A, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Junque C. Progression of Parkinson's disease patients' subtypes based on cortical thinning: 4-year follow-up. *Parkinsonism Relat Disord.* 2019 Jul;64:286-292. doi: 10.1016/j.parkreldis.2019.05.012. Epub 2019 May 11. PMID: 31103485.

Uribe C, Puig-Davi A, Abos A, Baggio HC, Junque C, Segura B. Neuroanatomical and Functional Correlates of Cognitive and Affective Empathy in Young Healthy Adults. *Front Behav Neurosci.* 2019 May 1;13:85. doi: 10.3389/fnbeh.2019.00085. PMID: 31118891; PMCID: PMC6504763.

Uribe C, Segura B, Baggio HC, Campabadal A, Abos A, Compta Y, Marti MJ, Valdeoriola F, Bargallo N, Junque C. Differential Progression of Regional Hippocampal Atrophy in Aging and Parkinson's Disease. *Front Aging Neurosci.* 2018 Oct 11;10:325. doi: 10.3389/fnagi.2018.00325. PMID: 30364338; PMCID: PMC6193198.

*Uribe C, Segura B, Baggio HC, Abos A, Garcia-Diaz AI, Campabadal A, Marti MJ, Valdeoriola F, Compta Y, Tolosa E, Junque C. Cortical atrophy patterns in early Parkinson's disease patients using hierarchical cluster analysis. *Parkinsonism Relat Disord.* 2018 May;50:3-9. doi: 10.1016/j.parkreldis.2018.02.006. Epub 2018 Feb 8. PMID: 29449187.

Uribe C, Segura B, Baggio HC, Abos A, Garcia-Diaz AI, Campabadal A, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Junque C. Gray/White Matter Contrast in Parkinson's Disease. *Front Aging Neurosci.* 2018 Mar 27;10:89. doi: 10.3389/fnagi.2018.00089. PMID: 29636679; PMCID: PMC5881246.

*Uribe C, Segura B, Baggio HC, Abos A, Marti MJ, Valldeoriola F, Compta Y, Bargallo N, Junque C. Patterns of cortical thinning in nondemented Parkinson's disease patients. *Mov Disord.* 2016 May;31(5):699-708. doi: 10.1002/mds.26590. Epub 2016 Apr 20. PMID: 27094093; PMCID: PMC5061099.

Alexandra Abos. Lecture; 05/07/2019

*Abos A, Baggio HC, Segura B, Campabadal A, Uribe C, Giraldo DM, Perez-Soriano A, Muñoz E, Compta Y, Junque C, Marti MJ. Differentiation of multiple system atrophy from Parkinson's disease by structural connectivity derived from probabilistic tractography. *Sci Rep.* 2019 Nov 11;9(1):16488. doi: 10.1038/s41598-019-52829-8. PMID: 31712681; PMCID: PMC6848175.

*Abos A, Segura B, Baggio HC, Campabadal A, Uribe C, Garrido A, Camara A, Muñoz E, Valldeoriola F, Marti MJ, Junque C, Compta Y. Disrupted structural connectivity of fronto-deep gray matter pathways in progressive supranuclear palsy. *Neuroimage Clin.* 2019;23:101899. doi: 10.1016/j.nicl.2019.101899. Epub 2019 Jun 15. PMID: 31229940; PMCID: PMC6593210.

*Baggio HC, Abos A, Segura B, Campabadal A, Uribe C, Giraldo DM, Perez-Soriano A, Muñoz E, Compta Y, Junque C, Marti MJ. Cerebellar resting-state functional connectivity in Parkinson's disease and multiple system atrophy: Characterization of abnormalities and potential for differential diagnosis at the single-patient level. *Neuroimage Clin.* 2019;22:101720. doi: 10.1016/j.nicl.2019.101720. Epub 2019 Feb 13. PMID: 30785051; PMCID: PMC6383182.

*Baggio HC, Abos A, Segura B, Campabadal A, Garcia-Diaz A, Uribe C, Compta Y, Marti MJ, Valldeoriola F, Junque C. Statistical inference in brain graphs using threshold-free network-based statistics. *Hum Brain Mapp.* 2018 Jun;39(6):2289-2302. doi: 10.1002/hbm.24007. Epub 2018 Feb 15. PMID: 29450940; PMCID: PMC6619254.

*Abós A, Baggio HC, Segura B, García-Díaz AI, Compta Y, Martí MJ, Valldeoriola F, Junqué C. Discriminating cognitive status in Parkinson's disease through functional connectomics and machine learning. *Sci Rep.* 2017 Mar 28;7:45347. doi: 10.1038/srep45347. PMID: 28349948; PMCID: PMC5368610.

Anna Campabadal Delgado. Lecture 7/09/2020

Inguanzo A, Sala-Llonch R, Segura B, Erostarbe H, Abos A, Campabadal A, Uribe C, Baggio HC, Compta Y, Marti MJ, Valldeoriola F, Bargallo N, Junque C. Hierarchical cluster analysis of multimodal imaging data identifies brain atrophy and cognitive patterns in Parkinson's disease. *Parkinsonism Relat Disord.* 2020 Nov 12;82:16-23. doi: 10.1016/j.parkreldis.2020.11.010. Epub ahead of print. PMID: 33227683.

*Campabadal A, Inguanzo A, Segura B, Serradell M, Abos A, Uribe C, Gaig C, Santamaria J, Compta Y, Bargallo N, Junque C, Iranzo A. Cortical gray matter progression in idiopathic REM sleep behavior disorder and its relation to cognitive decline. *Neuroimage Clin.* 2020 Sep 9;28:102421. doi: 10.1016/j.nicl.2020.102421. Epub ahead of print. PMID: 32957013; PMCID: PMC7509231.

*Campabadal A, Abos A, Segura B, Serradell M, Uribe C, Baggio HC, Gaig C, Santamaria J, Compta Y, Bargallo N, Junque C, Iranzo A. Disruption of posterior brain functional connectivity

and its relation to cognitive impairment in idiopathic REM sleep behavior disorder. *Neuroimage Clin.* 2020;25:102138. doi: 10.1016/j.nicl.2019.102138. Epub 2019 Dec 23. PMID: 31911344; PMCID: PMC6948254.

*Campabadal A, Segura B, Junque C, Serradell M, Abos A, Uribe C, Baggio HC, Gaig C, Santamaria J, Bargallo N, Iranzo A. Comparing the accuracy and neuroanatomical correlates of the UPSIT-40 and the Sniffin' Sticks test in REM sleep behavior disorder. *Parkinsonism Relat Disord.* 2019 Aug;65:197-202. doi: 10.1016/j.parkreldis.2019.06.013. Epub 2019 Jun 20. PMID: 31253493.

*Campabadal A, Segura B, Junque C, Serradell M, Abos A, Uribe C, Baggio HC, Gaig C, Santamaria J, Compta Y, Bargallo N, Iranzo A. Cortical Gray Matter and Hippocampal Atrophy in Idiopathic Rapid Eye Movement Sleep Behavior Disorder. *Front Neurol.* 2019 Apr 5;10:312. doi: 10.3389/fneur.2019.00312. PMID: 31024418; PMCID: PMC6459930.

*Campabadal A, Segura B, Baggio HC, Abos A, Uribe C, Garcia-Diaz AI, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Junque C. Diagnostic Accuracy, Item Analysis and Age Effects of the UPSIT Spanish Version in Parkinson's Disease. *Arch Clin Neuropsychol.* 2019 Jun 1;34(4):435-444. doi: 10.1093/arclin/acy053. PMID: 30007334.

*Campabadal A, Uribe C, Segura B, Baggio HC, Abos A, Garcia-Diaz AI, Marti MJ, Valdeoriola F, Compta Y, Bargallo N, Junque C. Brain correlates of progressive olfactory loss in Parkinson's disease. *Parkinsonism Relat Disord.* 2017 Aug;41:44-50. doi: 10.1016/j.parkreldis.2017.05.005. Epub 2017 May 10. PMID: 28522171.