

Supplementary Material

**Cortical gray matter and hippocampal atrophy in idiopathic Rapid Eye
Movement sleep behavior disorder**

A. Campabadal; B. Segura; C. Junque* ; M. Serradell; A. Abos; C. Uribe; H.C. Baggio; C. Gaig; J. Santamaria; Y Compta; N. Bargallo; A. Iranzo

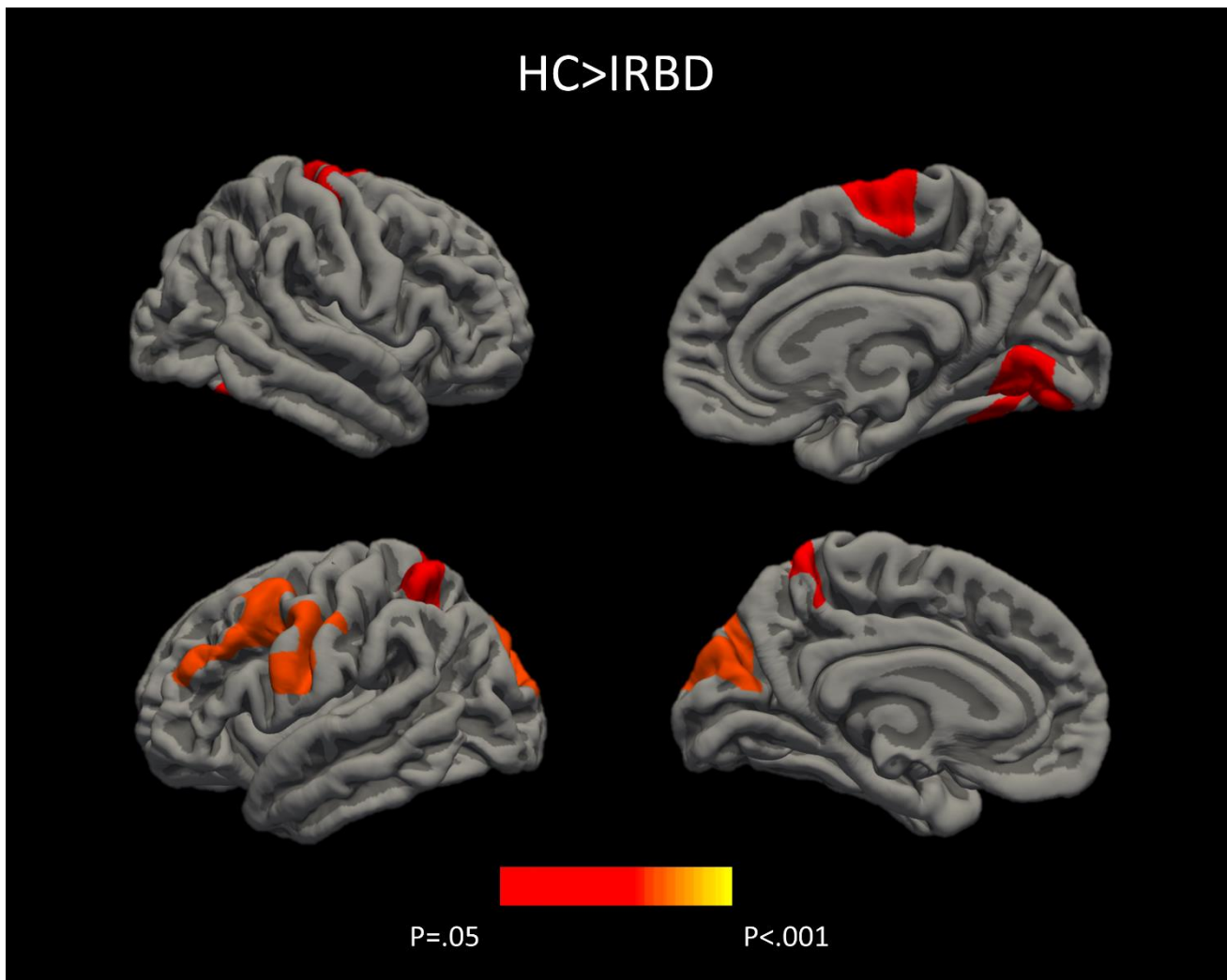
***Correspondence:** Prof. Carme Junque.

Medical Psychology Unit, Department of Medicine. University of Barcelona

Casanova 143 (08036) Barcelona, Spain

Phone: (+34) 93 402 45 70 // Fax: (+34) 93 403 52 94 // E-mail: cjunque@ub.edu

Supplementary Material 1.



Images show vertex-wise cortical thickness differences between HC and IRBD patients when age and sex were introduced as covariates. Significant clusters are highlighted in warm colors. Results after FWE correction with Monte Carlo simulation and threshold at $p \leq 0.05$.

Graphics program: Freeview from FreeSurfer

(<https://surfer.nmr.mgh.harvard.edu/fswiki/FreeviewGuide>) and edited with Microsoft PowerPoint®.

Supplementary Material 2. Hippocampal subfield volumes (mm³)

	HC (n=27)	IRBD (n=20)	Test stat/p-value	Effect size
Right Hippocampal tail	514.4 (85.9)	475.9 (54.3)	3.819/0.057	
Right subiculum	429.1 (58.1)	400.0 (59.9)	3.316/0.075	
Right CA1	641.0 (79.3)	594.0 (73.2)	5.685/0.021	0.616
Right hippocampal fissure	170.2 (25.5)	173.1 (26.9)	0.098/0.756	
Right presubiculum	289.1 (47.8)	276.7 (46.6)	1.071/0.306	
Right parasubiculum	60.8 (16.1)	65.0 (15.7)	0.665/0.419	
Right molecular layer HP	570.7 (73.9)	524.7 (68.6)	5.764/0.021	0.645
Right granule cell of dentate gyrus	305.8 (41.1)	282.9 (37.8)	4.863/0.033	0.579
Right CA2-CA3	227.1 (33.6)	211.2 (33.1)	3.025/0.089	
Right CA4	264.8 (33.5)	246.3 (29.5)	4.890/0.032	0.586
Right fimbria	78.2 (25.7)	67.6 (27.2)	2.033/0.161	
Right HATA	59.8 (9.1)	56.4 (10.4)	1.951/0.169	

Abbreviations: HC, healthy controls; IRBD, idiopathic rapid eye movement sleep behavior disorder. General lineal model with estimated Total Intracranial Volume as a covariate was used, Cohen's *d* effect size was computed for significant effects. Measures are presented as means (standard deviation). In bold highlighted those results that reached statistical significance.