

Nuclear Medicine

Group leader

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Researchers

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DESCRIPTION

Current research includes, on the one hand, molecular imaging in cancer, neurodegenerative diseases, and cardiovascular inflammation, taking advantage of the development in radiomics and artificial intelligence and, on the other hand, the use of radioligand therapy in cancer care. Fundamentally, our research is based on the use of SPECT/CT, PET/CT and radiolabeled tracers to characterize pathophysiological processes and improve disease diagnosis, staging, prognostication, and therapy.

MAIN LINES OF RESEARCH

- Molecular imaging in cancer: Valle Camacho, Alejandro Fernández.
- Brain imaging in neurodegenerative disorders: Valle Camacho.
- Cardiovascular inflammation: Alejandro Fernández.
- A.I. in image reading: Ignasi Carrió i Albert Flotats.

SCIENTIFIC CHALLENGES

- New technologies in diagnosis and therapy.
- Molecular imaging of disease.
- Integration of A.I. tools in research and the clinic.

ACTIVE GRANTS

- Camacho Marti, M. Del Valle. Estudio pseudoexperimental sobre el efecto de la inflamación asociada a la obesidad sobre el sistema nervioso central y la enfermedad de Alzheimer. PI19/O1512. Instituto de Salud Carlos III (ISCIII). Duration: 2020-2024. 232.320,00 €.



5.1.6 Associated Groups

- Fernández Leon, Alejandro. Impacto de la Inflamación en la Progresión de la Aterosclerosis Carotídea y el Riesgo de Ictus (estudio INCREASE). PI22/01659. Duration: 2023-2025. 141.570,00 €.
- Flotats Giralt, Albert & Carrio Gasset, Ignasi. Erasmus+ cooperation for multidisciplinary training in radioligand therapies for healthcare professionals. Erasmus+. Unión Europea. Duration: 2022-2024. 36.170,00 €.
- Gorey S, McCabe JJ, Camps-Renom P, Giannotti N, McNulty JP, Barry M, Cassidy T, Cronin S, Dolan E, Fernández-León A, Foley S, Harbison J, O'Connell M, Williams DJ, Marnane M, Martí-Fabregas J, Kelly PJ. Symptomatic Carotid Atheroma Inflammation Lumen-stenosis score compared with Oxford and Essen risk scores to predict recurrent stroke in symptomatic carotid stenosis. *Eur Stroke J.* 2023; 8(4):1064-1070. DOI: 10.1177/23969873231186911. PMID: 37480278. Document type: Article.

SCIENTIFIC PRODUCTION

- Bugani V, Battistelli L, Sansovini M, Monti M, Paganelli G, Gich I, Flotats A, Erba PA, Blay JY, la Fougere C, Van H, Charalambous A, Herrmann K, Giordano A, Gyorke T, Deroose C, Matteucci F, Carrio I. Radioligand therapies in cancer: mapping the educational landscape in Europe. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING.* 2023; 50(9). DOI:10.1007/s00259-023-06217-0. PMID:37058168. IF:9,100 (Q1/1D). Document type: Article.
- Carrió I. Standing on the shoulders of giants: 50 years of EJNM and EJNMMI. *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING.* 2023; 50(12). DOI:10.1007/s00259-023-06359-1. PMID:37535109. IF:9,100 (Q1/1D). Document type: Editorial Material.
- García E, Camps P, Puig N, Fernández A, Aguilera A, Benitez A, Solé A, Vilades D, Sánchez JL, Martí J, Jiménez E, Benitez S, Llorente V. Soluble low-density lipoprotein receptor-related protein 1 as a surrogate marker of carotid plaque inflammation assessed by 18F-FDG PET in patients with a recent ischemic stroke. *Journal of Translational Medicine.* 2023; 21(1):131. DOI:10.1186/s12967-022-03867-w. PMID:36805772. IF:7,400 (Q1/3D). Document type: Article.
- Gorey S, McCabe JJ, Camps P, Giannotti N, McNulty JP, Barry M, Cassidy T, Cronin S, Dolan E, Fernández A, Foley S, Harbison J, O'Connell M, Williams DJ, Marnane M, Martí J, Kelly PJ. Symptomatic Carotid Atheroma Inflammation Lumen-stenosis score compared with Oxford and Essen risk scores to predict recurrent stroke in symptomatic carotid stenosis. *European Stroke Journal.* 2023; :23969873231186911. DOI:10.1177/23969873231186911. PMID:37480278. IF:6,100 (Q1/2D). Document type: Article.
- Hologado A, León X, Quer M, Camacho V, Fernández A. Association between maximum standardized uptake value (SUV) and local control in patients with oropharyngeal carcinoma treated with radiotherapy. *Acta Otorrinolaringologica Española.* 2023; 74(4). DOI:10.1016/j.otorri.2022.05.004. PMID:37149130. Document type: Article.
- Horta-Barba A, Martínez-Horta S, Sampedro F, Pérez-Pérez J, Camacho V, Pagonabarraga J, Kulisevsky J. Structural and metabolic brain correlates of arithmetic word-problem solving in Huntington's disease. *J Neurosci Res.* 2023; 101(6):990-999. DOI: 10.1002/jnr.25174. PMID: 36807154. IF:4,200 (Q2/D4). Document type: Article.
- Iulita MF, Bejanin A, Vilaplana E, Carmona M, Benjam B, Videla L, Barroeta I, Fernández S, Altuna M, Pegueroles J, Montal V, Valldeneu S, Gimenez S, González S, Torres S, El Bennadi SE, Padilla C, Aranha MR, Estelles T, Illán I, Belbin O, Valle N, Camacho V, Blessing E, Osorio RS, Videla S, Lehmann S, Holland AJ, Zetterberg H, Blennow K, Alcolea D, Clarimón J, Zaman SH, Blesa R, Lleó A, Fortea J. Association of biological sex with clinical outcomes and biomarkers of Alzheimer's disease in adults with Down syndrome. *Brain Communications.* 2023; 5(2):fcad074. DOI:10.1093/braincomms/fcad074. PMID:37056479. Document type: Article.
- Mansour N, Nekolla SG, Reyes E, Angelidis G, Georgoulas P, Anagnostopoulos C, Bravo P, Bruno I, Flotats A, Fuentes F, Sciagra R, Keng F, Kessler L, Papathanasiou M, Soman P, Rischpler C. Multi-center study of inter-rater reproducibility, image quality, and diagnostic accuracy of CZT versus conventional SPECT myocardial perfusion imaging. *JOURNAL OF NUCLEAR CARDIOLOGY.*



5.1.6 Associated Groups

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- Tian M, Zuo C, Civelek AC, Carrio I, Watanabe Y, Kang KW, Murakami K, Garibotto V, Prior JO, Barthel H, Guan Y, Lu J, Zhou R, Jin C, Wu S, Zhang X, Zhong Y, Zhang H, Molecular Imaging International Nuclear Medicine Consensus on the Clinical Use of Amyloid Positron Emission Tomography in Alzheimer's Disease. *PHENOMICS*. 2023; 3(4). DOI:10.1007/s43657-022-00068-9. PMID:37589025. Document type: Article.