



BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Francisco Javier Santos Vicente ORCID: 0000-0002-4798-5033	-Head of Clinical Gastroenterology and Pancreas, Vall d'Hebron Hospital Universitari, Vall d'Hebron Hospital Campus, Barcelona; -Head of the Digestive Physiology and Physiopathology Research Group, Vall d'Hebron Research Institute (VHIR), Barcelona (https://vhir.vallhebron.com/en/research/physiology-and-pathophysiology-digestive-tract) -Head of the Spanish Network Research Group CB06/04/0021, Centro de Investigación Biomédica en Red, Enfermedades Hepáticas y Digestivas (CIBERehd), Instituto de Salud Carlos III, Madrid (https://www.ciberehd.org/grupos/grupo-de-investigacion?id=16293) -Coordinator of the AGAUR Research Group (SGR 2021-00766), Catalunya.

1. EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Navarra, Pamplona, Spain	M.D.	1988	Medicine
Vall d'Hebron Hospital, Barcelona, Spain	Fellowship	1993	Gastroenterology
Vall d'Hebron Hospital, Barcelona, Spain	Ph.D	1997	Neuro-Gastroenterology
McMaster Univ, IDRP, On, Canada	Postdoc fellowship	1997-99	Gastrointestinal immunology
Nestle Health Research Center, Lausanne, Switzerland	Postdoc fellowship	Summer 2000/1	Stress and gastrointestinal physiology
The Faircomb Institute, Faculty of Health Sciences, Hamilton, Canada	Postdoc fellowship	Summer 2012	Disorders of Gut-Brain Interaction
Alimentary Pharmabiotic centre, University College, Cork, Ireland	Postdoc fellowship	Summer 2013	Gastrointestinal microbiota Brain-gut-axis

Indicators of Scientific Production (SCOPUS): Publications: 168; H. Index 42. Total citations: 7,587. International collaboration: 65.6%. Documents in top citation percentiles: 67.2%. Documents in top 25% journals by CiteScore percentile 70%.

2. ACADEMIC AND PROFESSIONAL EXPERIENCE

Positions

1990-1993	Fellow in Gastroenterology, Gastroenterology Department, Vall d'Hebron Hospital, Autonomous University, Barcelona, Spain.
1994-1997	Research Fellow, Digestive Diseases Research Unit, Vall d'Hebron Hospital, Autonomous University, Barcelona & Staff GI bleeding Unit, Vall d'Hebron Hospital, Autonomous University, Barcelona, Spain.
2000-2005	National Clinical Investigator, Miguel Servet Research contract, Fondo de Investigación Sanitaria Spain, at Vall d'Hebron Research Institute, Vall d'Hebron Hospital, Spain.
2006-	Faculty Physician in Gastroenterology, Department of Gastroenterology, Vall d'Hebron Hospital, Barcelona, Spain.
2009-	Member of the Spanish Network of Research in Hepatic and Digestive Diseases (CIBERehd)

- 2021- Mentor of gastroenterology fellows at Vall d'Hebron Hospital, Spain.
- 2022- Principal investigator & Group Leader of the CIBERehd group (CB06/04/0021)
- 2022- Director of the Consolidated Group of Digestive Research in Cataluña (2021-00766 SGR-AGAUR).
- 2024- Director of the Group of Physiology and Pathophysiology of Digestive Diseases at the Vall d'Hebron Research Institute (VHIR)
- 2024- Chief of Clinical Gastroenterology and Pancreas, Department of Gastroenterology, Vall d'Hebron Hospital, Barcelona, Spain.

Honors

- 1998 Canadian CAG/ASTRA fellowship for Meritorious Research
- 2003 Rising Star in Gastroenterology, Association of European and Mediterranean National Societies of Gastroenterology.
- 2009 Junior Investigator Research Award in Clinical Science, IFFGD.
- 2010 Young Investigator Award, VII Annual Functional Brain-Gut Research Group
- 2016 Rome Foundation Fellow, The Rome Foundation.
- 2024 Aldo Torsoli Award for research, education and patient care in the area of gut-brain interactions

3. SELECTED PEER-REVIEWED PUBLICATIONS

Original Articles

1. Santos J, Saperas E, Nogueiras C, et al. Release of mast cell mediators into the jejunum by cold pain stress in humans. *Gastroenterology* 1998;114:640-8.
2. Santos J, Saunders PR, Hanssen NP, et al. Corticotropin-releasing hormone mimics stress-induced colonic epithelial pathophysiology in the rat. *Am J Physiol* 1999;277:G391-9.
4. Guilarte M, Santos J, de Torres I, et al. Diarrhoea-predominant IBS patients show mast cell activation and hyperplasia in the jejunum. *Gut* 200;56:203-9.
5. Alonso C, Guilarte M, Vicario M, et al. Maladaptive intestinal epithelial responses to life stress may predispose healthy women to gut mucosal inflammation. *Gastroenterology* 2008;135:163-172.e1.
6. Martínez C, Vicario M, Ramos L, et al. The jejunum of diarrhea-predominant irritable bowel syndrome shows molecular alterations in the tight junction signaling pathway that are associated with mucosal pathobiology and clinical manifestations. *Am J Gastroenterol* 2012;107:736-46.
7. Martínez C, Lobo B, Pigrau M, et al. Diarrhoea-predominant irritable bowel syndrome: an organic disorder with structural abnormalities in the jejunal epithelial barrier. *Gut* 2013;62:1160-8.
8. Vanheel H, Vicario M, Vanuytsel T, et al. Impaired duodenal mucosal integrity and low-grade inflammation in functional dyspepsia. *Gut* 2014;63:262-71.
9. Vicario M, González-Castro AM, Martínez C, et al. Increased humoral immunity in the jejunum of diarrhoea-predominant irritable bowel syndrome associated with clinical manifestations. *Gut* 2015;64:1379-88.
10. Martínez C, Rodiño-Janeiro BK, Lobo B, et al. miR-16 and miR-125b are involved in barrier function dysregulation through the modulation of claudin-2 and cingulin expression in the jejunum in IBS with diarrhoea. *Gut* 2017;66:1537-1538.
11. Guilarte M, Vicario M, Martínez C, et al. Peripheral Corticotropin-Releasing Factor Triggers Jejunal Mast Cell Activation and Abdominal Pain in Patients With Diarrhea-Predominant Irritable Bowel Syndrome. *Am J Gastroenterol* 2020;115:2047-2059.
12. Sperber AD, Bangdiwala SI, Drossman DA, et al. Worldwide Prevalence and Burden of Functional Gastrointestinal Disorders, Results of Rome Foundation Global Study. *Gastroenterology* 2021;160:99-114.e3.
13. Marasco G, Cremon C, Barbaro MR, et al. GI-COVID19 study group. Post COVID-19 irritable bowel syndrome. *Gut*. 2022 Dec 9;gutjnl-2022-328483.
14. Flores-Arriaga J, Aso MC, Izagirre A, et al. Prevalence and description of disorders of gut-brain interaction in Spain according to the results of the Rome Foundation Global Epidemiology Study. *Neurogastroenterol Motil* 2023;35:e14582.
15. Santos J, Rescigno M. Gut Barrier Leakiness: Time to Take It Seriously? *Gastroenterology* 2024;167:1080-1082.
15. Izagirre A, Sarasqueta C, Flores-Arriaga J, et al. Worldwide Prevalence and Description of Cyclic Vomiting Syndrome According to the Results of the Rome Foundation Global Epidemiology Study. *Am J Gastroenterol*. 2024 Sep 25. doi: 10.14309/ajg.0000000000003105.

16. Balsiger LM, Santos J, Serra J, et al. A Phase II, Multicentric, Randomized, Double-Blind, Placebo-Controlled, Proof of Concept Study of Efficacy and Safety of Rifamycin SV-MMX 600 mg Tablets Administered Three or Two Times Daily to Patients With Diarrhea-Predominant Irritable Bowel Syndrome. *Am J Gastroenterol* 2024 Nov 26. doi: 10.14309/ajg.0000000000003236.

Reviews, Book Chapters and Editorials

1. **Santos J**, Yang PC, Söderholm JD, Benjamin M, Perdue MH. Role of mast cells in chronic stress induced colonic epithelial barrier dysfunction in the rat. *Gut* 2001;48:630-6.
2. **Santos J**; Bienenstock J; Perdue MH. Innervation of lymphoid tissue and functional consequences of neurotransmitter and neuropeptide release. *Food Allergy and Intolerance*. pp. 51-67. Brostoff J, Challacombe SJ, eds, 2002.
3. Alonso C, **Santos J**. A closer look at mucosal inflammation in irritable bowel syndrome: sex- and gender-related disparities--quantity, quality, or both? *Am J Gastroenterol*. 2009;104:401-3.
4. Vicario M, Alonso C, **Santos J**. Impaired intestinal molecular tightness in the mucosa of irritable bowel syndrome: what are the mediators? *Gut*.2009;58:161-2.
5. Wouters MM, Vicario M, **Santos J**. The role of mast cells in functional GI disorders. *Gut* 2016;65:155-68.
6. Gazouli M, Wouters MM, Kapur-Pojskić L, et al. Lessons learned-resolving the enigma of genetic factors in IBS. *Nat Rev Gastroenterol Hepatol* 2016;13:77-87.
7. Barbara G, Feinle-Bisset C, Ghoshal UC, et al. The Intestinal Microenvironment and Functional Gastrointestinal Disorders. *Gastroenterology* 2016:S0016-5085(16)00219-5.
8. **Santos J**, Rescigno M. Gut Barrier Leakiness: Time to Take It Seriously? *Gastroenterology*. 2024;167:1080-1082.

4. SUMMARY OF CLINICAL AND RESEARCH ACTIVITIES & PROFESSIONAL MEMBERSHIPS

Dr. Santos clinical practice develops mainly in the hospital outpatient setting, integrated in a large referral unit, and focuses on disorders of brain-gut interaction (DGBI). He has contributed to the development of clinical guidelines and to the organization of national and international training courses on aspects related to functional gastrointestinal disorders. He also develops various academic and scientific activities, including the supervision of gastroenterology fellows during their residency, the direction and mentoring of dozens of pre- and post-doctoral research fellows, and has acted as a member of national and international dissertation and steering committees. He is a member of several international professional and scientific societies, such as the ESNM, IFFGD, AGA, and UEG. He also serves as an external reviewer for regional, national and supranational public and private funding agencies and academic institutions, as well as for a very large number of scientific journals, including several editorial boards.

He has raised and led the Neuro-Immuno-Gastroenterology Research Laboratory at the Hospital Vall d'Hebron for twenty years. His research remains inherently translational, with special emphasis on the mechanisms linking genetic, molecular, microbial, cellular and environmental determinants to the clinical manifestations of DGBI. His research also aims at the identification of sensitive and specific molecular and microbial biomarkers potentially useful for the diagnostic and therapeutic management of these disorders. Dr. Santos has a solid research background, with more than 30 years dedicated to these tasks. He has enjoyed continuous funding from the Spanish Fondo de Investigación Sanitaria since 1999, directed numerous competitive and non-competitive projects, including clinical trials of different categories. Dr. Santos has participated in several European research initiatives, such as the European Training Network in Neural Regulation of Intestinal Function (NeuroGut, <https://cordis.europa.eu/project/id/607652/reporting/es>), two COST Actions (BM1007, Mast Cells and Basophils Targets for Innovative Therapies; BM1106, GENIEUR, The Genes in Irritable Bowel Syndrome Research Network Europe), and has recently obtained a large European project as main coordinator, for the study of the origin of comorbidities in IBS, (www.discoverie.eu). He is also a Rome Foundation Fellow since 2016 (<https://theromefoundation.org/>) and keeps international ongoing collaborations in the field and also with transversal groups in other areas of medicine.