

## Curriculum Vitae

Personal information **Andreu Porta-Sanchez**

### Work experience

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- 2005-06 Intern in the Pneumonology Service at Hospital Clínic, Barcelona, Spain (PI: Antoni Torres).
- 2008-13 Resident in Cardiology, Vall d'Hebron University Hospital, Barcelona, Spain.
- 2013-14 Fellow in Clinical Electrophysiology, Vall d'Hebron University Hospital, Barcelona, Spain.
- 2014-17 Fellow in Clinical Electrophysiology and Research Fellow at University of Toronto.
- 2017-19 Predoctoral Fellow, Molecular Cardiology Laboratory (PI: Silvia Priori) at Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC).
- 2018-22 Associate Professor: Universidad Europea de Madrid (UEM).
- 2017-22 Director, Cardiac Electrophysiology Unit, Hospital Universitario Quironsalud Madrid and Complejo Hospitalario Ruber Juan Bravo.

#### Current positions:

- 2019- Visiting scientist, Molecular Cardiology Laboratory (PI: Silvia Priori) at Centro Nacional de Investigaciones Cardiovasculares Carlos III (CNIC).
- 2022- Staff. Arrhythmia Unit. Hospital Clínic i Provincial de Barcelona (Spain).

### Education and training

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**Bachelor Degree:** Col.legi Claver, Raïmat, Lleida (Spain). 1998-2000.

**MD:** Universitat de Barcelona, Hospital Clínic Barcelona, Spain, 2001-07.

**MSc:** Methodology of Investigation in Health Sciences, Universitat Autònoma de Barcelona, Spain - 2014-2017.

**PhD:** Medicine and translational science. Universitat de Barcelona, Spain, 2016-19. Qualification: *Cum laude. International PhD mention.* PhD directors: Antonio Berrezo Sánchez and Ivo Roca Luque. Doctoral Thesis Title: Ventricular tachycardia (VT): Mortality implications in patients with cardiomyopathy, impact of VT ablation and development of new invasive treatment strategies.

### Additional information

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#### Publications

1. Pujol-López M, Ferró E, Borràs R, Garre P, Guasch E, Jiménez-Arjona R, Garcia-Ribas C, Doltra A, Niebla M, Carro E, Roca-Luque I, Guichard JB, Puente JL, Uribe L, Vázquez-Calvo S, Castel MÁ, Arbelo E, **Porta-Sánchez A**, Sitges M, Tolosana JM, Mont L. Stepwise Application of ECG and Electrogram Based Criteria to Ensure Electrical Resynchronization with Left Bundle Branch Pacing. *Europace.* 2023 Jun 2;25(6):euad128. doi: 10.1093/europace/euad128.
2. Al-Sheikhli J, James W, Roca-Luque I, Lambiase P, Orini M, **Porta-Sánchez A**, Dhanjal T, et al. Optimisation of Decrementing Evoked Potential mapping for functional substrate identification in Ischaemic Ventricular Tachycardia Ablation. (in press) *Europace.* 14 March 2023.
3. Mumtaz M, Downar E, Kawada S, Zammit-Burg M, Anderson R, Massé S, Nair MKK, Nanthakumar J, Ghauri FM, **Porta-Sánchez A**, Bhaskaran A. Utility of Substrate Mapping Using Extra-systole to Localize Comprehensive Ventricular Tachycardia Circuits - Results from Intra-Operative Mapping Studies. *Can J Cardiol.* 12 Mar 2023. <https://doi.org/10.1016/j.cjca.2023.02.074>.
4. Vázquez-Calvo S, Mas-Casanovas J, Garre P, Ferró E, Sánchez-Somonte P, Quinto L, Guasch E, **Porta-Sánchez A**, Tolosana JM, Borrás R, Arbelo E, Ortíz-Pérez JT, Brugada J, Mont L, Roca-Luque I. Evolution of Deceleration Zones During Ventricular Tachycardia Ablation and Relation With Cardiac Magnetic Resonance. *JACC: Clinical Electrophysiology.* 22 Feb 2023 (in press). <https://doi.org/10.1016/j.jacep.2022.12.015>.
5. **Preprint:** **Porta-Sánchez A**, Mazzanti A, Tarifa-Lora C, Kukavica D, Trancuccio A, Mohsin M, Zanfrini E, Perota A, Duchi R, Hernandez-Lopez K, Fernandez-Moya E, Bongianino R, Tavazzani, Scacchi S, Pavarino L, Franzone PC, Lentini G, Filgueiras-Rama D, Galli D, Santiago DJ, Priori S. Unexpected

Impairment of INa current Underpins Reentrant Arrhythmias in a Knock-in Swine Model of Timothy Syndrome.

6. TF Althoff, Eichenlaub M, Padilla-Cueto D, Lehrmann H, Garre P, Schoechlin S, Ferro E, Figueras-i-Ventura RM, Prat-González S, Mueller-Edenborn B, Bohnen M, **Porta-Sánchez A**, Tolosana JM, Guasch E, Roca-Luque I, Arbelo E, Neuman FJ, Westermann D, Sitges M, Brugada J, Arentz T, Mont L, Jadidi A. Predictive value of late gadolinium enhancement cardiac magnetic resonance in patients with persistent atrial fibrillation. January 2023. European Heart Journal Open 3 (1), oeac085
7. Niri A, Shapira E, Massé S, Bar-Tal M, Bar-On T, Hayam G, Ben-Dor A, Bhaskaran A, Ha A, Anter E, **Porta-Sánchez A**, Jackson N, Nanthakumar K, Nair K. Automated Identification of Ventricular Tachycardia Ablation Targets: Multicenter Validation and Workflow Characterization. J Innov Card Rhythm Manag. 2022 Sept 15; 13(9):5147-5152. doi:10.19102/icrm.2022.130903.
8. Padilla-Cueto D, Ferro E, Garre P, Prat S, Guichard JB, Perea RJ, Tolosana JM, Guasch E, Arbelo E, **Porta-Sánchez A**, Roca-Luque I, Sitges M, Brugada J, Mont L, Althoff TF. Non-invasive assessment of pulmonary vein isolation durability using late gadolinium enhancement magnetic resonance imaging. Europace (2022) 00, 1-6. <https://doi.org/10.1093/europace/euac163>
9. Jøns C, **Porta-Sánchez A**, Lai PFH, Wauchop M, Massé S, Azam MA, Asta J, Rose RA, Nanthakumar K. Mechanism of and Strategy to Mitigate Liraglutide-Mediated Positive Chronotropy. Life Sciences. [in press] 10 Jul 2021. <https://doi.org/10.1016/j.lfs.2021.119815>
10. Bhaskaran A, Niri A, Azam MA, Nayyar S, **Porta-Sánchez A**, Massé S, Liang T, Veluppillai A, Du B, Lai PFH, Ha ACT, Nanthakumar K. On the Safety, Efficacy and Monitoring of Bipolar Radiofrequency ablation in Beating Myopathic Human and Healthy Swine Hearts. Heart Rhythm Journal. doi: <https://doi.org/10.1016/j.hrthm.2021.06.1189> [in press]
11. Kawada S, Chakraborty P, Downar E, **Porta-Sánchez A**, Sathananthan G, Bhaskaran A, Kugamoorthy P, Albertini L, Oechslin E, Silversides C, Wald RM, Roche SL, Swan L, Alonso-Gonzalez R, Thorne S, Harris L, Hickey E, Nanthakumar K, Mondésert B, Khairy P, Nair K. The Role of Ablation in Prevention of Recurrent Implantable Cardioverter Defibrillator Shocks in Tetralogy of Fallot. Canadian Journal of Cardiology Open. Volume 0, Issue 0. <https://doi.org/10.1016/j.cjco.2021.01.005> [in press].
12. Deno DC, Bhaskaran A, Morgan DJ, Goksu F, Batman K, Olson GK, Magtibay K, Nayyar S, **Porta-Sánchez A**, Laflamme MA, Massé S, Aukhojee P, Nair K, Nanthakumar K. High Resolution, Live, Directional Mapping. Heart Rhythm Journal 2020, Volume 17, Issue 9, 1621 - 1628. <https://doi.org/10.1016/j.hrthm.2020.04.039>
13. Cabrera JA, **Porta-Sánchez A**, Tung R, Sánchez-Quintana D. Tracking Down the Anatomy of the Left Bundle Branch to Optimize Left Bundle Branch Pacing. J Am Coll Cardiol Case Rep. 2020 May, 2 (5) 750-755.
14. Escobar-Cervantes C, Castrejón S, **Porta A**, Salvador Ó, Cabrera JA, Merino JL. Early discharge after atrial fibrillation ablation. Arch Cardiol Mex (Eng). 2019;89(4):374-375.
15. Chauhan VS, Verma A, Nayyar S, Timmerman N, **Porta-Sánchez A**, Gizararson S, Haldar S, Suszko A, Ragot D, Ha ACT. Focal Source and Trigger (FaST) mapping in Atrial Fibrillation: Randomized control trial evaluating a novel adjunctive ablation strategy. Heart Rhythm Journal. 2019;17(5):683-691. <https://doi.org/10.1016/j.hrthm.2019.12.011>.
16. Cabrera JA, Anderson R, Macias Y, Nevado-Medina J, **Porta-Sánchez A**, Rubio JM, Sánchez-Quintana D. The Variable Arrangement of the Atrioventricular Conduction Axis within the Triangle of Koch: Implications for Permanent His Bundle Pacing. JACC: Clinical Electrophysiology. 2020, 6(4):362-377. <https://doi.org/10.1016/j.jacep.2019.12.004>.
17. Ibáñez Criado JL, Quesada A, Cózar R, ... **Porta-Sánchez A**... et al.; Spanish Catheter Ablation Registry. 18th Official Report of the Spanish Society of Cardiology Working Group on Electrophysiology and Arrhythmias (2018) [published online ahead of print, 2019 Nov 12]. Rev Esp Cardiol (Engl Ed). 2019;S1885-5857(19)30251-8. doi:10.1016/j.rec.2019.08.005
18. Bhaskaran A, Nayyar S, **Porta-Sánchez A**, Massé S, Magtibay K, Aukhojee P, Downar E, Tung R, Nanthakumar K. Direct and Indirect Mapping of Intramural Space in Ventricular Tachycardia. Heart Rhythm Journal. 2020. Mar, P439-P446. doi: 10.1016/j.hrthm.2019.10.017.
19. Magtibay K, **Porta-Sánchez A**, Haldar SK, Deno DC, Massé S, Nanthakumar K. Reinserting Physiology into Cardiac Mapping Using Omnipolar Electrograms. Card Electrophysiol Clin 2019. 11:525-536.
20. Bhaskaran A, Nayyar S, Charla P, Saeed Y, Haldar S, **Porta-Sánchez A**, Kugamoorthy P, Hans A, Jons C, Oechslin E, Hickey E, Harris L, Silversides C, Roche SL, Downar E, Nanthakumar K, Nair K. Lateral Tunnel Fontan Atrial Tachycardia Ablation- Trans-Baffle Access is not Mandatory as the Initial Strategy. J Interv Cardiac Electrophysiology (2019):1-8.
21. Suszko AM, Nayyar S, **Porta-Sánchez A**, Das M, Pinter A, Crystal E, Tomlison G, Dalvi R, Chauhan V. Quantification of Abnormal QRS Peaks Predicts Response to Cardiac Resynchronization Therapy and Tracks Structural Remodeling. PLoS One. 2019 Jun 6;14(6):e0217875. doi: 10.1371/journal.pone.0217875. eCollection 2019.
22. Romagnuolo R, Masoudpour H, **Porta-Sánchez A**, Qiang B, Barry J, Laskary A, Qi X, Massé S, Magtibay K, Kawajiri H, Wu J, Valdman Sadikov T, Rothberg J, Panchalingam K, Titus E, Li RK, Zandstra PW, Wright GA, Nanthakumar K, Ghugre NR, Keller G, Laflamme MA. Human Embryonic Stem Cell-Derived Cardiomyocytes Regenerate the Infarcted Pig Heart but Induce Ventricular Tachyarrhythmia. Stem Cell Reports. 2019 May 14;12(5):967-981. doi: 10.1016/j.stemcr.2019.04.005. Epub 2019 May 2.
23. Figueras J, Bañeras J, Aguadé S, Sambola A, Barrabés JA, Candell-Riera J, **Porta-Sánchez A**, Garcia-

Dorado D. Reduction of Left Ventricular Dilatation Beyond the First Year Following Anterior Myocardial Infarction. *J Card Fail.* 2019 Mar 22; 25(8):645-653. pii: S1071-9164(18)31181-3. doi: 10.1016/j.cardfail.2019.03.012.

24. Bhaskaran A, Nayyar S, **Porta-Sánchez A**, Haldar S, Bokhari M, Massé S, Liang T, Zehra N, Talha F, Downar E, Nanthakumar K. Exit Sites on the Epicardium Rarely Subtend Critical Diastolic Path of Ischemic VT on the Endocardium: Implications for Non-Invasive Ablation. *J Cardiovasc Electrophysiol.* 2019 Apr;30(4):520-527. doi: 10.1111/jce.13843. Epub 2019 Jan 15.
25. **Porta-Sánchez A**, Magtibay K, Nayyar S, Bhaskaran A, Lai PFH, Massé S, Qiang B, Romagnuolo R, Masoudpor H, Biswas L, Ghugre N, Laflamme MA, Deno DC, Nanthakumar K. Omnipolarity Applied to Equi-Spaced Electrode Array for Substrate Mapping. *Europace.* 2019 Feb 4; 21(5):813-821. doi: 10.1093/europace/euy304.
26. **Porta-Sánchez A**, Ha ACT, Wang X, Almehmadi F, Austin PC, Fischer HD, AlQubbany A, Chemello D, Chauhan V, Downar E, Lee DS, Nanthakumar K. Health Care Utilization following Ventricular Tachycardia Ablation: A Propensity Score Matched Cohort Study. *Can J Cardiol.* 2019 Feb;35(2):169-177. doi: 10.1016/j.cjca.2018.10.011. Epub 2018 Oct 25.
27. **Porta-Sánchez A**, Pizarro-Sánchez G, Salvador-Montañés O, Sánchez-Quintana D, Cabrera JA. Relevant anatomical determinants for epicardial left atrial appendage exclusion. *J Am Coll Cardiol.* 2019 Jan 29;73(3):380-381. doi: 10.1016/j.jacc.2018.10.064.
28. Si D, Azam MA, Lai PFH, Zamiri N, Kichigina G, Asta J, Massé S, Bokhari M, **Porta-Sánchez A**, Labos C, Sun H, Yang P, Nanthakumar K. Essential Role of RyR2 Phosphorylation in the Effect of Azumolene on Ventricular Arrhythmia Vulnerability in a Rabbit Heart Model. *Journal of Cardiovascular Electrophysiology.* 2018 Sep 11. 29(12),1707-1715. doi: 10.1111/jce.13737.
29. Bhaskaran A, Gizuranson S, **Porta-Sánchez A**, Massé S, Nair K, Nanthakumar K. Atrial Decremental Evoked Potentials Accurately Determine the Critical Isthmus of Intra-atrial Re-entrant Tachycardia. *Europace.* 2018 Oct 1;20(10):1620. doi: 10.1093/europace/euy164.
30. Beheshti MA, Magtibay K, Massé S, **Porta-Sánchez A**, Haldar S, Bhaskaran A, Nayyar S, Glover B, Deno DC, Vigmond EJ, Nanthakumar K. Determinants of Atrial Bipolar Voltage: Inter-electrode Distance and Wavefront Angle. *Comput Biol Med.* 2018 Nov 1;102:449-457. doi: 10.1016/j.combiomed.2018.07.011. Epub 2018 Jul 27.
31. Nayyar S, Suszko A, **Porta-Sánchez A**, Dalvi R, Chauhan VS. Reduced T wave Alternans in Heart Failure Responders to Cardiac Resynchronization Therapy: Evidence of Electrical Remodeling. *PLoS One.* 2018 Jun 28;13(6):e0199637. doi: 10.1371/journal.pone.0199637. eCollection 2018.
32. Beheshti MA, Nayyar S, Magtibay K, Massé S, **Porta-Sánchez A**, Haldar S, Bhaskaran A, Vigmond E, Nanthakumar K. Quantifying the Determinants of Decremental Response in Critical Ventricular Tachycardia Substrate. *Comput Biol Med.* 2018 Nov 1;102:260-266. doi: 10.1016/j.combiomed.2018.05.025. Epub 2018 May 28.
33. Alcaraz G, Chui J, Schaafsma J, Manninem P, **Porta-Sánchez A**, Mendes-Pereira V, Venkatraghavan L. Hemodynamic management of patients during endovascular treatment of Acute Ischemic Stroke under Conscious Sedation: A Retrospective Cohort Study. *Journal of Neurosurgical Anesthesiology.* [in press, May 2018. doi: 10.1097/ANA.0000000000000514].
34. **Porta-Sánchez A**, Jackson N, Lukac P, Kristiansen SB, Nielsen JM, Gizuranson S, Massé S, Labos C, Viswanathan K, King B, Ha ACT, Downar E, Nanthakumar K. Multicenter Observational Study of a Mechanistic VT Ablation Strategy with DEEP mapping. *JACC: Clinical Electrophysiology.* 2018. Feb, 592. doi: 10.1016/j.jacep.2017.12.005.
35. **Porta-Sánchez A**, Gilbert C, Spears D, Amir E, Chan J, Nanthakumar K, Thavendiranathan P. Incidence, Diagnosis and Management of QT Prolongation Induced by Cancer Therapies: A Systematic Review. *J Am Heart Assoc.* 2017 Dec 7;6(12). pii: e007724. doi: 10.1161/JAHA.117.007724.
36. Gupta A, Barrabés JA, Strait K, Bueno H, **Porta-Sánchez A**, Acosta-Vélez JG, Lidón RM, Spatz E, Geda M, Dreyer RP, Lorenze N, Lichman J, D'Onofrio G, Krumholz HM. Sex Differences in Timeliness of Reperfusion in Young Patients with STEMI by Initial ECG Characteristics. *J Am Heart Assoc.* 2018 Mar 7;7(6). doi: 10.1161/JAHA.117.007021.
37. Barrabés JA, Gupta A, **Porta-Sánchez A**, Strait KM, Acosta-Vélez JG, D'Onofrio G, Lidón RM, Geda M, Drever RP, Lorenze N, Lichtman JH, Bueno H, Krumholz H. Comparison of Electrocardiographic Characteristics in Men Versus Women≤55 Years With Acute Myocardial Infarction (a Variation in Recovery: Role of Gender on Outcomes of Young Acute Myocardial Infarction Patients Substudy). *Am J Cardiol.* 2017 Nov 15;120(10):1727-1733. doi: 10.1016/j.amjcard.2017.07.106.
38. Haldar S, Magtibay K, **Porta-Sánchez A**, Massé S, Mitsakakis N, Lai PFH, Azam MA, Asta J, Kusha M, Dorian P, Ha ACT, Chauhan V, Deno DC, Nanthakumar K. Resolving Bipolar Electrogram Voltages during Atrial Fibrillation using Omnipolar Mapping. *Circ Arrhythm Electrophysiol* 2017 Sep;10(9). doi: 10.1161/CIRCEP.117.005018.
39. **Porta-Sánchez A**, Almehmadi F (co-first author). Ha ACT, Fischer H, Wang X, Austin P, Lee D, Nanthakumar K. Mortality Implications Of A Single Appropriate Shock in Secondary Prevention ICD Patients from a Prospective Population-Based Registry. *J Am Heart Assoc.* 2017;6:e006220. doi: 10.1161/JAHA.117.006220.
40. Magtibay K, Massé S, Asta J, Kusha M, Lai PFH, Azam MA, **Porta-Sánchez A**, Haldar S, Malebranche D, Labos C, Deno DC, Nanthakumar K. Physiological Assessment of Ventricular Myocardial Voltage Using Omnipolar Electrograms. *J Am Heart Assoc.* 2017;6:e006447. June 2017. DOI: 10.1161/JAHA.117.006447.

41. Jackson N, Gizuranson S, Azam MA, King B, Ramadeen A, Zamiri N, **Porta-Sánchez A**, Al Hesayen A, Graham J, Kusha M, Massé S, Lai PFH, Parker J, John R, Kiehl TR, Kumar Nair GK, Dorian P, Nanthakumar K. Effects of Renal Artery Denervation on Ventricular Arrhythmias in a Postinfarct Model. *Circ Cardiovasc Interv*. 2017; 10:e004172 [doi: 10.1161/CIRCINTERVENTIONS.116.004172].
42. King B, **Porta-Sánchez A**, Massé S, Zamiri N, Balasundaram K, Kusha M, Jackson N, Haldar S, Umapathy K, Nanthakumar K. The Effect of Spatial Resolution and Filtering on Mapping Cardiac Fibrillation. *Heart Rhythm* 2017;14:608-615. doi:10.1016/j.hrthm.2017.01.023.
43. **Porta-Sánchez A**, Ha A, Nayyar S, Dalvi R, Chauhan V. Hierarchical Analysis of Electrograms to Guide Termination of Persistent Atrial Fibrillation. *Heart Rhythm Case Reports* 2017;3:22-26. doi 10.1016/j.hrcr.2016.10.007.
44. **Porta-Sánchez A**, Angaran P, Massé S, Nair K, Farid T, Umapathy K, Asta J, Gizuranson S, Nanthakumar K. The effect of left ventricular pacing on transmural activation delay in myopathic human hearts. 2018;20(4):719-728. doi:10.1093/europace/euw375.
45. **Porta-Sánchez A**, Spillane D, Harris L, Xue J, Dorsey P, Care M, Chauhan V, Gollob M, Spears D. T wave morphology analysis in Congenital Long QT Syndrome discriminates patients from healthy individuals. *JACC Clinical Electrophysiology* 2017;3(4):374-381. doi 10.1016/j.jacep.2016.10.013.
46. Haldar S, **Porta-Sánchez A**, Oechslin E, Downar E, Benson L, Nair K. Transbaffle multielectrode mapping of atrial flutter post double switch operation. *J Cardiovasc Electrophysiol* 2016;27(10):1240-1241.
47. **Porta A**, Barrabés JA, Candell-Riera J, Agulló L, Aguadé-Bruix S, De León G, Figueras J, García-Dorado D. Plasma B-type natriuretic peptide levels are poorly related to the occurrence of ischemia or ventricular arrhythmias during symptom-limited exercise in low-risk patients. *Arch Med Sci* 2016; 12, 2:341-348.
48. Jackson N, Gizuranson S, Viswanathan K, King B, Massé S, Kusha M, **Porta-Sánchez A**, Jacob JR, Khan F, Das M, Ha A, Pashaei A, Vigmond E, Downar E, Nanthakumar K. Decrement Evoked Potential (DEEP) Mapping: The Basis of a Mechanistic Strategy for Ventricular Tachycardia Ablation. *Circ Arrhythm Electrophysiol* 2015 Dec; 8(6):1433-42.
49. **Porta-Sánchez A**, Sagristà-Sauleda J, Ferreira-González I, Torrents-Fernández A, Roca-Luque I, García-Dorado D. Constrictive Pericarditis: Etiologic Spectrum, Patterns of Clinical Presentation, Prognostic Factors, and Long-term Follow-up. *Rev Esp Cardiol (Engl Ed)*. 2015 Dec;68(12):1092-100.
50. Gillebert TC, Brooks N, Fontes-Carvalho R, Fras Z, Gueret P, López-Sendón J, Salvador MJ, Van den Brink RB, Smiseth OA et al. Reviewers and Contributors: **Porta-Sánchez A**, et al. ESC Core Curriculum for the General Cardiologist (2013). *Eur Heart Journal* 2013, Vol 34, 2381-2411.
51. **Porta A**, Barabés JA, Figueras J, Millan X, Sambola A, Boyé R, García-Dorado D. Transient apical ballooning complicated with left ventricular thrombus and repeated embolic events despite correct anticoagulant therapy. *Int J Cardiol* 2013, Vol 165, e11-e12.

#### Reviews, Book Chapters, Editorials and Letters:

1. Vázquez S, Roca-Luque I, **Porta-Sánchez A**. Ventricular Tachycardia Ablation Guided by Functional Mapping: Practices and Outcomes. *Journal of Cardiovascular Development and Disease*. (in press) 2022.
2. **Porta-Sánchez A**, Casado R, Salvador Ó, Sánchez-Enrique C, Bayona-Horta S, Sánchez-Borqué P, Rubio-Campal JM, Cabrera JA. Arritmias cardíacas. *Medicine - Programa de Formación Médica Continuada Acreditado*. 2021;13(44):2568-76. doi: <https://doi.org/10.1016/j.med.2021.10.011>.
3. Cabrera JA, **Porta-Sánchez A**, Casado R, Salvador O, Sánchez-Enrique C, Bayona-Horta S, Sánchez Borqué P, Rubio-Campal JM. Síncope. *Medicine - Programa de Formación Médica Continuada Acreditado*. 2021;13(44):2591-600. <https://doi.org/10.1016/j.med.2021.10.013>
4. Sánchez-Enrique C, Casado R, **Porta-Sánchez A**, Salvador O, Sánchez-Borqué P, Rubio-Campal JM, Cabrera JA. Protocolo diagnóstico de las bradiarritmias en urgencias. *Medicine - Programa de Formación Médica Continuada Acreditado*. 2021;13(44):2611-15. <https://doi.org/10.1016/j.med.2021.10.017>
5. Cabrera JA, Casado R, Salvador Ó, Sánchez-Enrique C, Bayona-Horta S, Sánchez-Borqué P, Rubio-Campal JM, **Porta-Sánchez A**. Protocolo terapéutico del síncope en urgencias Medicine- Programa de Formación Médica Continuada Acreditada. 2021;13(44):2607-10. <https://doi.org/10.1016/j.med.2021.10.016>
6. Cabrera JA, Casado R, Salvador Ó, Sánchez-Enrique C, Bayona-Horta S, Sánchez-Borqué P, Rubio-Campal JM, **Porta-Sánchez A**. Protocolo de estratificación de riesgo en la evaluación inicial del paciente con síncope. *Medicine- Programa de Formación Médica Continuada Acreditado*. 2021;13(44):2601-03. <https://doi.org/10.1016/j.med.2021.10.014>
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8. Salvador O, **Porta-Sánchez A**, Casado R, Sánchez-Enrique C, Sánchez-Borqué P, Rubio-Campal JM. Mujer de 45 años con episodios síncope de repetición. *Medicine- Programa de Formación Médica Continuada Acreditado* 2021;13(44):2616.e1-2616.e6. <https://doi.org/10.1016/j.med.2021.10.018>
9. Casado R, **Porta-Sánchez A**, Salvador O, Sánchez-Enrique C, Bayona-Horta S, Vega A, Sánchez-Borqué P, Rubio-Campal JM, Cabrera JA. Bradirritmias y bloqueos cardíacos. *Medicine- Programa de Formación Médica Continuada Acreditado* 2021;13(44):2577-90. <https://doi.org/10.1016/j.med.2021.10.012>
10. Cabrera JA, **Porta-Sánchez A**, Casado R, Salvador Ó, Sánchez-Enrique C, Sánchez-Borqué P, Rubio-Campal JM, Sánchez-Quintana D.. El sistema especializado de conducción eléctrica del corazón. Los nodos

del corazón y el sistema His-Purkinje. Sustrato anatómico de las vías accesorias. Medicine- Programa de Formación Médica Continuada Acreditado 2021;13(44):2557–67. <https://doi.org/10.1016/j.med.2021.10.010>

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12. **Porta-Sánchez A**, Priori SG. Genetic Abnormalities of the Sinoatrial Node and Atrioventricular Conduction. Card Electrophysiol Clin (2021) 625-639. <https://doi.org/10.1016/j.ccep.2021.06.005>.
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14. Chapter 98. Timothy Syndrome. In Zipes, Jalife, Stevenson. Clinical Arrhythmology and Electrophysiology, 8th edition. Napolitano C, Mazzanti A, **Porta-Sánchez A**, Priori SG. 2020. ISBN: 9780323757454.
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## Projects

### Public:

Acción Estratégica de Salud: Proyectos I+D+I en Salud (Fondo de Investigación Sanitaria (FIS). **Research grant as Co-PI:** PI22/00717: Ensayo clínico PLA1-AF: Aislamiento auricular izquierdo parcial endo-epicárdico vs. ablación endocárdica en pacientes con fibrilación auricular persistente. Funding: 147.015€.

### Private:

Sociedad Española de Arritmias y Electrofisiología: **Research Grant as PI**. March 2018. Project: Substrate Mapping to Guide Atrial Fibrillation Ablation. Funding: 18.000€

"La Caixa" Foundation post-graduate **Fellowship Grant** in June 2014. Clinical and Research fellowship at University of Toronto. Funding: 51.600USD.

## Memberships

### Committees and Public Service:

#### National:

2012-14 Member of the National Committee of Cardiology Residents, Sociedad Española de Cardiología.

2012-14 Elected Vice-president of the National Commission of Cardiology from the Ministry of Health, Social Services and Equality.

2022 Member of the Scientific Committee of the "Ritmo 22" annual meeting of the Sociedad Española de Cardiología - Asociación del Ritmo Cardiaco.

2022 PhD committee Member for the PhD defense of Miguel Valderrabano MD "New insights in atrial brillation mechanisms, electrogram analysis and alternative therapeutic approaches", defended in Santiago de Compostela on September 16th 2022.

#### International:

2020 European Institute of Innovation and Technology (EIT) Evaluator for the Headstart Funding Programme European Health Catapult (Regional Selection).

2020-22 European Heart Rhythm Association Selection Committee (co-chair).

2020-22 European Heart Rhythm Association Young Electrophysiologist Ambassador for Spain.

2022-24 European Heart Rhythm Association Certification Committee (chair).

2022 External Evaluator of EMERALD - The International PhD Programme for Medical Doctors ([emerald-mdphd.eu](http://emerald-mdphd.eu))

2020-25 Appointed advisor in the central list of available experts on medical devices and in- vitro diagnostic tests for the European Commission.

**Other Relevant Information**

**Professional Organizations**

Sociedad Española de Cardiología, 2009.

European Society of Cardiology (ESC), 2009.

European Heart Rhythm Association (EHRA), 2014.