

**Professor Francisco Fernández-Avilés**  
*Spain*

**Current position**

- Editor in Chief of the European Heart Journal Supplements (Journal of the European Society of Cardiology).
- Head Department of Cardiology at the Hospital General Universitario Gregorio Marañón in Madrid and Professor at the Universidad Complutense in Madrid.
- Coordinator of the Cooperative Network of Cardiovascular Research (RIC) from the Instituto de Salud Carlos III – Spanish Ministry of Science and Innovation.
- Full Professor of Cardiology at the Complutense University of Madrid, Faculty of Medicine.

**Profession**

- Interventionalist.
- Healthcare Professional (Nurse, Radiographer, Technician) working in PCI.
- Industry Professional.
- Other.

**Additional Information**

- Fellow of the ESC.
- EAPCI Member.
- Member of the Spanish Society of Cardiology and ACC.
- Member of the Working Group on Interventional Cardiology – Spanish Society of Cardiology.

## General CV

Francisco Fernández-Avilés Díaz (Cuenca, 1953) is a full Professor of Medicine at the Complutense University and Head of the Department of Cardiology at the Hospital General Universitario Gregorio Marañón in Madrid. He obtained his Bachelor's degree and Ph.D. from the Universidad Complutense of Madrid and is board-certified in Cardiovascular Medicine and Interventional Cardiology. He is also board-certified in Business Administration and Management of Medical Departments by the School of Top Business Management of Barcelona (EADA).

He is a member of the National Commission for the Specialty of Cardiology in the Spanish Ministry of Health and participates actively in different national and international organizations related to biomedical science. He is the only expert in cardiovascular disease at the Advisory Board of the Health Research Committee of the Seventh Framework Program in the European Union. He plays an active role at Instituto de Salud Carlos III (ISCIII) from the Spanish Ministry of Science and Innovation, in which he has served as President of the Cardiovascular Commission of the Health Research Fund (FIS). He now serves as a member of Cellular Therapy Network (TERCEL) and as the National Coordinator of the Spanish Network for Cardiovascular Research RECAVA. He also participates consistently in various scientific societies focused on the cardiovascular field. He is a fellow in the European Society of Cardiology and the American College of Cardiology. He was a member of the Board at the Spanish Society of Cardiology and the Editor-in-Chief of its official journal ("Revista Española de Cardiología"). In addition, he was a member of the Board of the European Society of Cardiology (ESC) having occupied positions as Councilor and Vice-President. He now serves the ESC as the Editor-in-Chief of the *European Heart Journal Supplements* and as the Co-Chairman of the *European Relations Research Committee*. He also lends his expertise in planning and evaluating care, educational and research activities in various private and public entities. He is also member of the Editorial Committee of some of the most prestigious cardiovascular journals.

Professor Fernandez-Aviles' career has been shaped by his dedication to patients. Before graduating he was an intern student at the Departments of Cardiology and Pneumology at the Hospital General Universitario Gregorio Marañón in Madrid. Later, he served the Spanish Army as a doctor in the Department of Heart and Lung at the Hospital Militar in Zaragoza. He was fellow in the Department of Cardiology at the Hospital Universitario Ramon y Cajal in Madrid from 1979 to 1982. From 1982 to 1990 he worked as a staff member of the Department of Cardiology at the Hospital General Universitario Gregorio Marañón in Madrid as a clinical consultant, researcher and assistant professor. From 1990 to 2006 he was Chief of the Department of Cardiology at the Hospital Clínico Universitario in Valladolid and Professor at its university. There, he started the modern development in this specialty and consolidated it by creating the Institute of Heart Sciences (ICICOR), which promptly moved to the Spanish and international forefront. Since August 2006, he has worked as a professor and Chief of the Department of Cardiology at the Hospital General Universitario Gregorio Marañón in Madrid, which has traditionally led Spanish cardiology. Since rejoining the hospital he has reinforced this course with substantial innovation in care and academics.

Professor Fernández-Avilés' investigation has been recognized for thirty years by the Comisión Nacional Evaluadora de la Actividad Investigadora "National Evaluator Commission of Research Activity" (CNEAI). Within this trajectory one should consider not only his and his group's direct work but also his achievements as a manager, planner and coordinator of scientific work.

His most relevant research was centered on the ischemic dysfunction of the heart and includes studies in animals and humans on coronary stenosis, myocardial perfusion with severe ischemia and regenerative heart medicine. In 1999, professor Fernández-Avilés created the multicentre group of independent investigation GRACIA (GRupo de Anlisis de Cardiopatía Isquémica Aguda), which has now completed three independent clinical trials published in important Journals (Lancet, European Heart Journal) that have had a significant impact on clinical practice and practice guidelines. Following this line, Professor Fernández-Avilés started the studies of cardiac application in regenerative medicine and in 2002 founded the TECAM group (Stem Cell Therapy form Myocardial Repair). In 2004, it published the first evidence of the capacity of myocardial regenerative stem cells from human bone marrow in the infarcted mice heart (Circulation Research). Currently, professor Fernández-Avilés is developing several research programs on cardiac stem cell therapy including several essays and pending publications on the efficiency and safety of the intracardiac transplant of bone marrow stem cells or adipose-derived mesenchymal stem cells (randomized studies APOLLO, TECAM-2 and PRECISE) along with various projects in development (independent trial TECAM-PACING about the role of cardiac resynchronization or stem cells intracoronary transplantation in patients with acute myocardial infarction; the SABIO project for the creation of bioartificial organs and tissue with autologous stem cells; and the subproject of cardiac regeneration with reprogrammed adult stem cells CARDIO-STEM).

In leadership and management of scientific activity, his work as head of research and his capacity to coordinate joint research is noteworthy. As leader, professor Fernández-Avilés created and consolidated the group of cardiovascular research of Valladolid, ICICOR and has substantially reinforced the course of the cardiovascular research group at the Hospital General Universitario Gregorio Marañón in Madrid. In three years, it has got more than 11,000,000 € in competitive calls and has developed outstanding work in translational research (48 publications in which 24 belong to journals situated in the elite media). As mentioned above, another important highlight is his work as National Coordinator of the Spanish Network of Cardiovascular Research RIC of the ISCiii, an organization dedicated to the excellence of translational research as well as the education and training of more than 700 researchers integrated in 67 groups all around Spain. Based on several common use platforms, coordination and management, this network has developed outstanding activity which in the past year has produced 61 publications in elite media, funding for 18 projects, 18 exchange programs for junior researchers, multiple training courses and widespread diffusion in society.

Without ever leaving his clinical activity or his management responsibilities, professor Fernández-Avilés has published more than 530 articles in scientific magazines, abstracts and chapters in books. He has a journal impact factor of 787.673, a cumulative index of citation of 4516. In addition, he is fully dedicated to the teaching and development of vigorous educational activities. He is the founder and director of the Annual International Symposium on Stem Cell Therapy Cardiovascular Innovation (see details at [www.cardiovascularcelltherapy.com](http://www.cardiovascularcelltherapy.com)), an international meeting solidified after 7 annual editions that gather an outstanding group of experts from both basic and clinical fields to discuss and update the latest advances in these fields and their translation potential to clinical practice.

### Previous experience in EAPCI, ESC or your National Bodies

Since 1979	Member of The Spanish Society of Cardiology.
Since 1979	Member of the ESC.
Since 1994	Fellow of The American College of Cardiology.
Since 1996	Fellow of the ESC.
Since 1996	Member of the WG on Coronary Circulation of the ESC.
Since 1995	Member of the WG on Thrombosis and Platelets of the ESC
From 08.2002 to 2004	Vice-president of the ESC.
From 08.2000 to 2006	Councilor of the Board of the ESC.
Since 2005	Editor-in-Chief of the European Heart Journal Supplements.

- Member of the Task Force on stem cells and repair of the heart of the ESC.
- Member of the Task Force on the management of ST-segment elevation acute myocardial infarction of the ESC.
- Member of the Task Force for the diagnosis and treatment of non-ST-segment elevation acute coronary syndromes of the ESC.

### Publications in the field of PCI

1. Bakal JA, Westerhout CM, Cantor WJ, Fernández-Avilés F, Welsh RC, Fitchett D, Goodman SG, Armstrong PW. Evaluation of early percutaneous coronary intervention vs. standard therapy after fibrinolysis for ST-segment elevation myocardial infarction: contribution of weighting the composite endpoint. *Eur Heart J.* 2012 Dec 19.
2. Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC), Steg PG, James SK, Atar D, Badano LP, Blömmström-Lundqvist C, Borger MA, Di Mario C, Dickstein K, Ducrocq G, Fernandez-Aviles F, Gershlick AH, Giannuzzi P, Halvorsen S, Huber K, Juni P, Kastrati A, Knuuti J, Lenzen MJ, Mahaffey KW, Valgimigli M, van 't Hof A, Widimsky P, Zahger D. ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. *Eur Heart J.* 2012 Oct;33(20):2569-619.
3. Houtgraaf JH, den Dekker WK, van Dalen BM, Springeling T, de Jong R, van Geuns RJ, Geleijnse ML, Fernandez-Aviles F, Zijlstra F, Serruys PW, Duckers HJ. First experience in humans using adipose tissue-derived regenerative cells in the treatment of patients with ST-segment elevation myocardial infarction. *J Am Coll Cardiol.* 2012 Jan 31;59(5):539-40.
4. Sanchez PL, Fernandez-Aviles F. Catheterization laboratories open 24 hours a day, every day: does stable non-ST-elevation acute coronary syndrome need the offer? *Eur Heart J.* 2012 Aug;33(16):1992-5

5. Sánchez PL, Fernández-Avilés F. Routine early coronary angioplasty after thrombolysis in acute ST-elevation myocardial infarction: lysis is not the final step. *Eur Heart J.* 2011 Apr;32(8):927-30.
6. Borgia F, Goodman SG, Halvorsen S, Cantor WJ, Piscione F, Le May MR, Fernández-Avilés F, Sánchez PL, Dimopoulos K, Scheller B, Armstrong PW, Di Mario C. Early routine percutaneous coronary intervention after fibrinolysis vs. standard therapy in ST-segment elevation myocardial infarction: a meta-analysis. *Eur Heart J.* 2010 Sep;31(17):2156-69.
7. Villa A, Arnold R, Sánchez PL, Gimeno F, Ramos B, Cantero T, Fernández ME, Sanz R, Gutiérrez O, Mota P, García-Frade J, San Román JA, Francisco Fernández-Avilés; Terapia Celular Aplicada al Miocardio Research Group. Comparison of neointimal hyperplasia with drug-eluting stents versus bare metal stents in patients undergoing intracoronary bone-marrow mononuclear cell transplantation following acute myocardial infarction. *Am J Cardiol.* 2009 Jun 15;103(12):1651-6.
8. Bassand JP, Hamm CW, Ardissino D, Boersma E, Budaj A, Francisco Fernández-Avilés, Fox KA, Hasdai D, Ohman EM, Wallentin L, Wijns W; Guidelines for the diagnosis and treatment of non-ST-segment elevation acute coronary syndromes. *Eur Heart J.* 2007 Jul;28(13):1598-660.
9. Abraham JM, Gibson CM, Pena G, Sanz R, Almahameed A, Murphy SA, Blanco J, Alonso-Briales J, Lopez-Mesa J, Gimeno F, Sánchez PL, Francisco Fernández-Avilés; for the GRACIA-2 (Grupo de Análisis de la Cardiopatía Isquémica Aguda) Investigators. Association of angiographic perfusion score following percutaneous coronary intervention for ST-elevation myocardial infarction with left ventricular remodeling at 6 weeks in GRACIA-2. *J Thromb Thrombolysis.* 2008 Mar 11.
10. Thygesen K, Alpert JS, White HD; Joint ESC/ACCF/AHA/WHF Task Force for the Redefinition of Myocardial Infarction, Jaffe AS, Apple FS, Galvani M, Katus HA, Newby LK, Ravkilde J, Chaitman B, Clemmensen PM, Dellborg M, Hod H, Porela P, Underwood R, Bax JJ, Beller GA, Bonow R, Van der Wall EE, Bassand JP, Wijns W, Ferguson TB, Steg PG, Uretsky BF, Williams DO, Armstrong PW, Antman EM, Fox KA, Hamm CW, Ohman EM, Simoons ML, Poole-Wilson PA, Gurfinkel EP, Lopez-Sendon JL, Pais P, Mendis S, Zhu JR, Wallentin LC, Francisco Fernández-Avilés, Fox KM, Parkhomenko AN, Priori SG, Tendera M, Voipio-Pulkki LM, Vahanian A, Camm AJ, De Caterina R, Dean V, Dickstein K, Filippatos G, Funck-Brentano C, Hellemans I, Kristensen SD, McGregor K, Sechtem U, Silber S, Tendera M, Widimsky P, Zamorano JL, Morais J, Brener S, Harrington R, Morrow D, Lim M, Martinez-Rios MA, Steinhubl S, Levine GN, Gibler WB, Goff D, Tubaro M, Dudek D, Al-Attar N. Universal definition of myocardial infarction. *Circulation.* 2007 Nov 27; 116(22):2634-53.

### **Distinctions**

- 2007 Prize for Scientific Research conceded by the Castilla y Leon Regional Government.
- 2003 "Civil Order of Merit for Health" conceded by the Spanish Ministry of Health.