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**CARDIOVASCULAR**

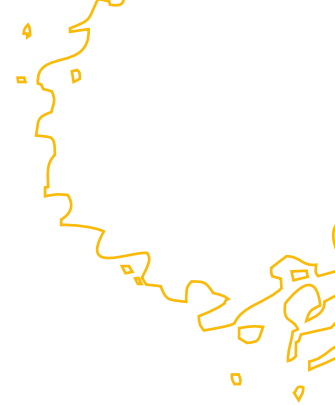
**GROUPS**

- CV.1** Technology Assessment and Therapeutic Strategies in Coronary Arteriosclerosis
- CV.2** Cardiovascular Imaging
- CV.4** Arrhythmia
- CV.6** Group on Predictive Biomedicine and Translational Research of Respiratory, Cardiovascular and Metabolic Diseases
- CV.7** Valvular Pathology and Large Vessels
- CV.8** Translational Research in Acute Myocardial Syndromes (INTEGRA)
- CV.10** Myocardial Regeneration Therapy
- CV.11** Cardiovascular Risk

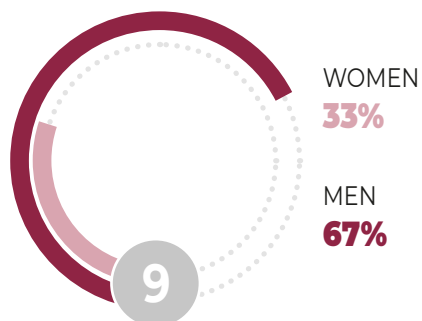


**ANNUAL GOALS**

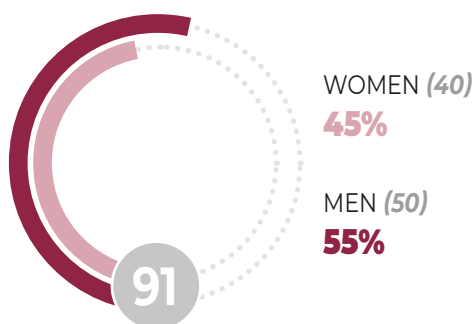
	COMPLETED	NOT COMPLETED
<i>Promoting cooperation in competitive research projects.</i>	✓	X
<i>Promoting cooperation in publications between groups in the area.</i>	✓	X
<i>Actions in line with the lines of the Strategic Plan in force.</i>	✓	X
<i>Training actions completed.</i>	✓	X



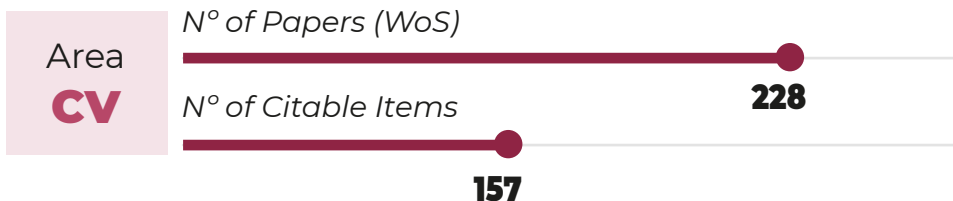
### GROUP LEAD RESEARCHERS



### TOTAL PROFESSIONALS IN THE AREA



### SCIENTIFIC PRODUCTION



### OPEN ACCESS

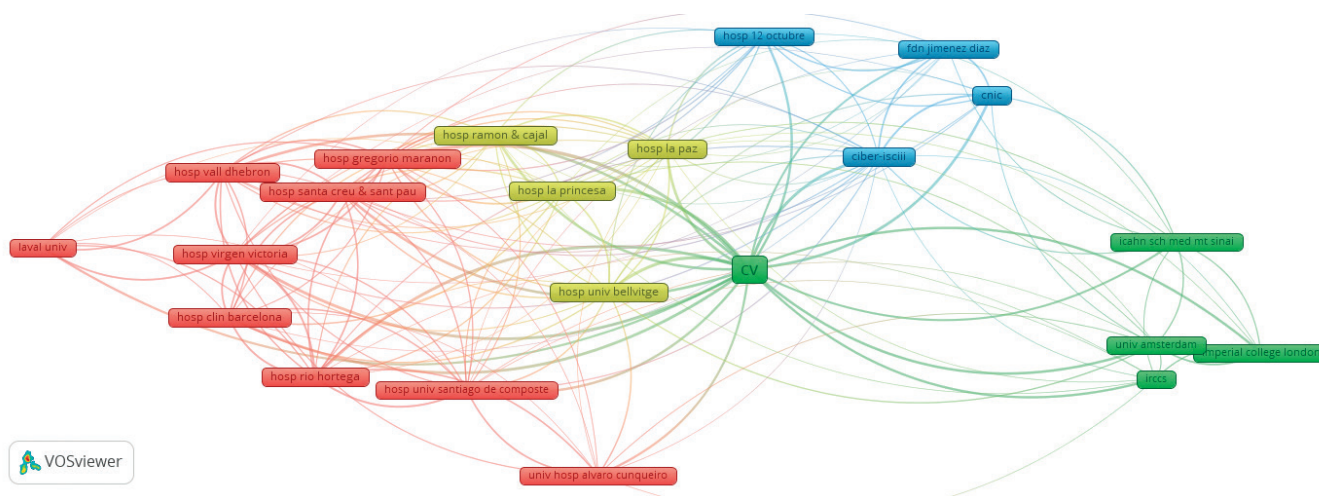


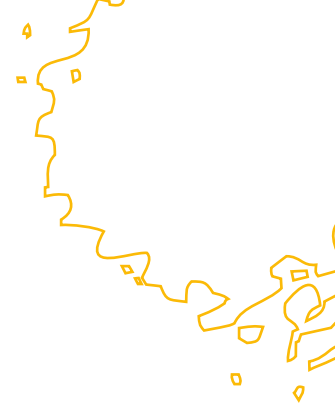
## JOURNALS WITH THE HIGHEST PUBLICATION RATE IN THE AREA

During 2020, the Cardiovascular area`s researchers have published in a total of 77 different journals. The top 5 journals where they publish the most are shown below. It represents the 41,22% of the scientific production of this area. All of these journals are in the first quartile of the JCR 2020 for their thematic category. Two journals are in the Top 5 in their WoS category.

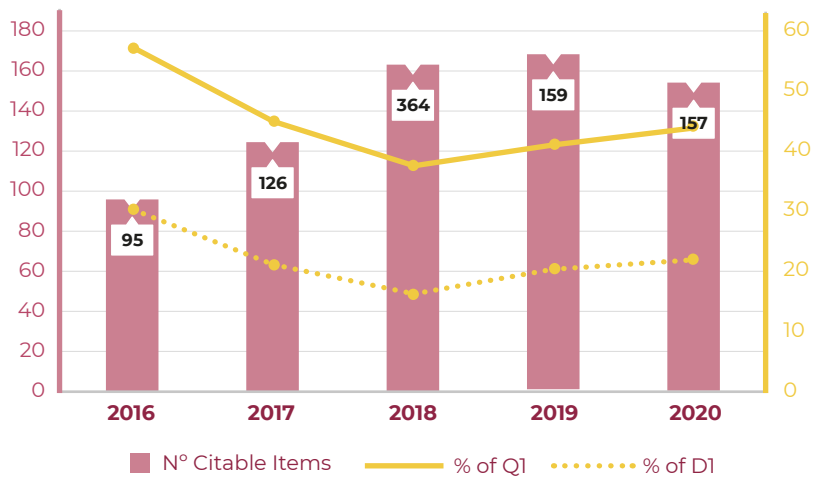
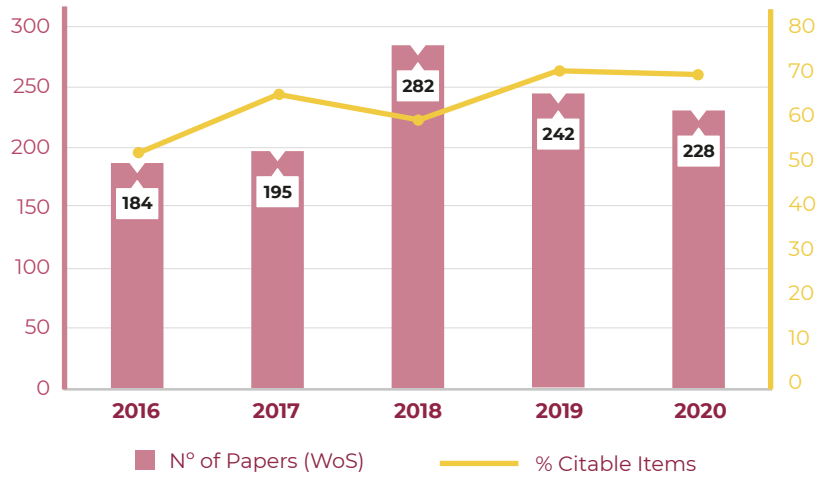
Journal	Nº of Papers (WoS)	Times Cited	Nº Citable items	Times Cited ( Citable items)	Quartil 2020	WoS Category	Article Influence Score 2020	Journal Citation Indicator (JCI) 2020	IF (without self citations) 2020
EUROPEAN HEART JOURNAL	35	111	5	108	Q1 (2/142)	Cardiac and Cardiovascular Systems	10.410	5.87	28.341
JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY	20	171	10	170	Q1 (4/142)	Cardiac and Cardiovascular Systems	8.967	4.75	22.916
JACC- CARDIOVASCULAR INTERVENTIONS	17	51	12	50	Q1 (11/142)	Cardiac and Cardiovascular Systems	3.808	2.19	10.100
EUROINTERVENTION	11	56	5	28	Q1 (25/142)	Cardiac and Cardiovascular Systems	1.444	1.15	6.029
REVISTA ESPANOLA DE CARDIOLOGIA	11	62	9	61	Q1 (45/142)	Cardiac and Cardiovascular Systems	1.162	0.83	3.696
<b>Total</b>	<b>94</b>	<b>451</b>	<b>41</b>	<b>417</b>					

## SCIENTIFIC COLLABORATION BY CENTER ( > 10 PAPERS)






SCIENTIFIC PRODUCTION (2016-2020)




$\Sigma$  **833,828** Total impact factor

$\bar{X}$  **5,831** Average impact factor


## SELECTED 5 PUBLICATIONS




Lee, Seung Hun , Kim, Hyun Kuk , Lee, Joo Myung , Hong, Young Joon , Lim, Kyung Seob , Kim, Han Byul , Choi, Ki Hong , Shin, Eun-Seok , Nam, Chang-Wook , Doh, Joon-Hyung , Yang, Jeong Hoon , Bin Song, Young , Hahn, Joo-Yong , Choi, Seung-Hyuk , Jeong, Myung Ho , Samady, Habib , ESCANED BARBOSA, JAVIER. Coronary Circulatory Indexes in Non -Infarct -Related Vascular Territories in a Porcine Acute Myocardial Infarction Model. JACC-CARDIOVASCULAR INTERVENTIONS. 2020; 13(10): 1155-1167. DOI: 10.1016/j.jcin.2020.03.006. IF: 8,432. (Q1).




CERRATO MERA, CRISTINA, MEJÍA RENTERÍA, HERNÁN DAVID, Dehbi, Hakim-Moulay , Ahn, Jung-Min, Cook, Christopher , Dupouy, Patrick , Baptista, Sergio Bravo , Raposo, Luis , Van Belle, Eric , Gotberg, Matthias , Davies, Justin E. , Park, Seung-Jung , ESCANED BARBOSA, JAVIER. Revascularization Deferral of Nonculprit Stenoses on the Basis of Fractional Flow Reserve 1-Year Outcomes of 8,579 Patients. JACC-CARDIOVASCULAR INTERVENTIONS. 2020; 13(16): 1894-1903. DOI: 10.1016/j.jcin.2020.05.024. IF: 8,432. (Q1).



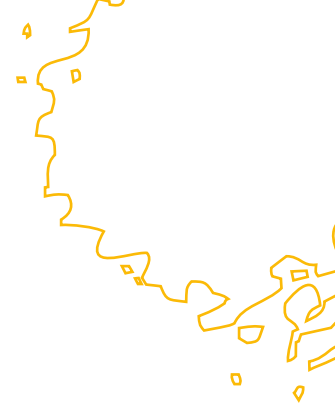
ARMIJO ASTRAIN, JAVIER EDUARDO, Estevez-Loureiro, Rodrigo , Carrasco-Chinchilla, Fernando , Arzamendi, Dabit, Fernandez-Vazquez, Felipe , JIMÉNEZ QUEVEDO, PILAR, Freixa, Xavier , Pascual, Isaac , Serrador, Ana Maria , Mesa, Dolores , Alonso-Briales, Juan H. , Goicolea, Javier , Hernandez-Antolin, Rosana , Fernandez-Peregrina, Estefania , Alvarez, Ana Belen Cid , Andraka, Leire , Cruz-Gonzalez, Ignacio , Berenguer, Alberto , Sanchis, Juan , Gil, Jose Luis Diez , Hernandez-Garcia, Jose M. , Li, Chi-Hion , Benito-Gonzalez, Tomas , DE AGUSTIN LOECHES, JOSE ALBERTO, Avanzas, Pablo , REGUEIRO GONZÁLEZ-BARROS, JOSÉ RAMÓN, Amat-Santos, Ignacio , Pan, Manuel , NOMBELA FRANCO, LUIS. Acute Kidney Injury After Percutaneous Edge-to-Edge Mitral Repair. JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY. 2020; 76(21): 2463-2473. DOI: 10.1016/j.jacc.2020.09.582. IF: 20,589. (Q1).



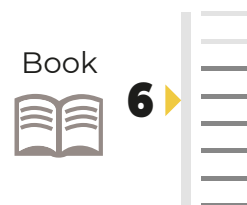
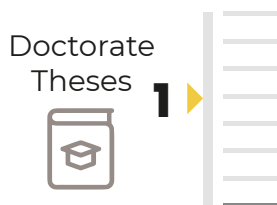
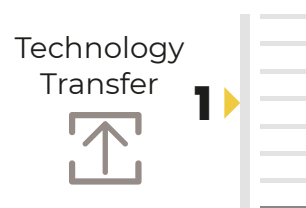
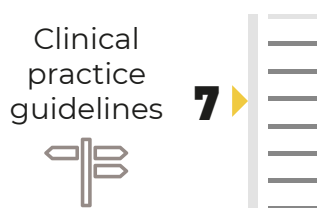
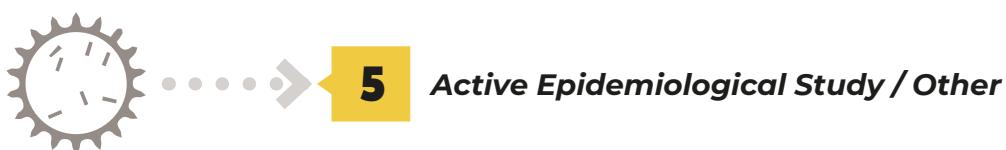
Gutierrez-Calabres, Elena , ORTEGA HERNÁNDEZ, ADRIANA, MODREGO MARTIN, JAVIER, GÓMEZ-GORDO DÍAZ, RUBÉN, Caro-Vadillo, Alicia , RODRÍGUEZ- BOBADA GONZÁLEZ DEL CAMPO, MARÍA CRUZ, GONZÁLEZ DÍAZ, PABLO, GÓMEZ GARRE, DULCENOMBRE. Gut Microbiota Profile Identifies Transition From Compensated Cardiac Hypertrophy to Heart Failure in Hypertensive Rats. Hypertension. 2020; 76(5): 1545-1554. DOI: 10.1161/HYPERTENSIONAHA.120.15123. IF: 7,713. (Q1).



ORTEGA HERNÁNDEZ, ADRIANA, Martinez-Martinez, Ernesto , GÓMEZ-GORDO DÍAZ, RUBÉN, Lopez-Andres, Natalia , Fernandez-Celis, Amaya , Gutierrez-Miranda, Beatriz , Luisa Nieto, Maria , Alarcon, Teresa , ALBA LÓPEZ, CRISTINA, GÓMEZ GARRE, DULCENOMBRE, Cachofeiro, Victoria . The Interaction between Mitochondrial Oxidative Stress and Gut Microbiota in the Cardiometabolic Consequences in Diet-Induced Obese Rats. ANTIOXIDANTS. 2020; 9(7): na-na. DOI: 10.3390/antiox9070640. IF: 5,014. (Q1).



ACTIVITY



# Technology Assessment and Therapeutic Strategies in Coronary Arteriosclerosis

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

94

Nº OF PAPERS JCR INDEXED

90

CITABLE ITEMS

68% (64)

Q1 (CITABLE ITEMS)

42% (27)

D1 (CITABLE ITEMS)

23% (15)

CUMULATIVE IF

359,40

AVERAGE IF

5,98

### LEADING RESEARCHER

Escaned Barbosa, Javier

### MEMBERS

Carlos Macaya Miguel  
 Carmen Olmos Blanco  
 Carolina Espejo Paeres  
 Fernando Macaya Ten  
 Hernán David Mejía Rentería  
 María Nieves Gonzalo López  
 Pablo Salinas Sanguino  
 Pedro Marcos-Alberca Moreno  
 Vera Rodríguez García-Abad



## OVERVIEW

The diagnosis and management of coronary artery disease (CAD) has changed substantially over the last 20 years. From being envisaged as a stenosis-centered problem, in which obstruction of epicardial coronary arteries were the only cause of myocardial ischemia, we have moved to understanding that non-obstructive disease, such as that caused by derangements of the coronary microcirculation, play an important role in patient symptoms and prognosis. The implications of this knowledge shift for the development of diagnostic and therapeutic strategies is huge. Within this new paradigm, the research of our group focus on key contemporary aspects in the diagnosis and treatment of CAD aimed to

- 1) setting the indication of coronary revascularisation on invasive- and non-invasive physiological assessment;
- 2) improve the safety and long-term efficacy of percutaneous coronary interventions by performing advanced procedural planning and guidance based on imaging, physiology or in-silico tools;
- 3) development and validation of invasive- and non-invasive diagnostic tools for the identification of non-obstructive causes of myocardial ischaemia which would allow effective personalised patient treatment;
- 4) assessing the safety and efficacy of new modalities of percutaneous revascularisation; and
- 5) developing and testing artificial intelligence algorithms to all previous revascularisation pathways.

Landmark research performed by our group in this regard include: 1) a key role in the development and validation instantaneous wave free ratio (iFR) and its co-registration with coronary angiography; 2) testing a holistic strategy for coronary revascularisation in patients with 3-vessel disease (SYNTAX II trial); 3) establishing relationships between microvascular coronary dysfunction and small cerebral vessel disease (C3 study); 4) validation of functional coronary angiography (QFR) in a wide range of clinical scenarios; and 5) assessment of intravascular lithotripsy in different anatomical contexts.



SELECTED PUBLICATIONS

- ▶ Lee, Seung Hun, Kim, Hyun Kuk, Lee, Joo Myung, Hong, Young Joon, Lim, Kyung Seob, Kim, Han Byul, Choi, Ki Hong, Shin, Eun-Seok, Nam, Chang-Wook, Doh, Joon-Hyung, Yang, Jeong Hoon, Bin Song, Young, Hahn, Joo-Yong, Choi, Seung-Hyuk, Jeong, Myung Ho, Samady, Habib, ESCANED BARBOSA, JAVIER. Coronary Circulatory Indexes in Non -Infarct -Related Vascular Territories in a Porcine Acute Myocardial Infarction Model. JACC-CARDIOVASCULAR INTERVENTIONS. 2020; 13(10): 1155-1167. DOI: 10.1016/j.jcin.2020.03.006. IF: 8,432. (Q1).
- ▶ CERRATO MERA, CRISTINA, MEJÍA RENTERÍA, HERNÁN DAVID, Dehbi, Hakim-Moulay, Ahn, Jung-Min, Cook, Christopher, Dupouy, Patrick, Baptista, Sergio Bravo, Raposo, Luis, Van Belle, Eric, Gotberg, Matthias, Davies, Justin E., Park, Seung-Jung, ESCANED BARBOSA, JAVIER. Revascularization Deferral of Nonculprit Stenoses on the Basis of Fractional Flow Reserve 1-Year Outcomes of 8,579 Patients. JACC-CARDIOVASCULAR INTERVENTIONS. 2020; 13(16): 1894-1903. DOI: 10.1016/j.jcin.2020.05.024. IF: 8,432. (Q1).
- ▶ Goicolea Ruigomez, F. Javier, Elola, Francisco J., Durante-Lopez, Alejandro, Perez, Cristina Fernandez, Bernal, José L., MACAYA MIGUEL, CARLOS. Coronary artery bypass grafting in Spain. Influence of procedural volume on outcomes. REVISTA ESPANOLA DE CARDIOLOGIA. 2020; 73(6): 488-494. DOI: 10.1016/j.recesp.2019.08.013. IF: 4,642. (Q1).

NEW COMPETITIVE FUNDING

CM20/00013. RRHH RIO HORTEGA: Angela Carolina Espejo Paeres. PI: ESCANED BARBOSA, JAVIER. Funding Organisation: INSTITUTO DE SALUD CARLOS III.

NEW NON COMPETITIVE FUNDING

ECL.20/119. OPTIMAL: The OPTIMAL study is a randomized, controlled, multicentre, international study. A total of 800 patients will be randomized in a 1:1 fashion to IVUS-guided PCI versus qualitative angio-guided PCI. Patients will be consented prior to the PCI procedure and then followed up to 2 years after the index procedure. PI: JAVIER ESCANED BARBOSA. Funding Organisation: ECRI.

ECL.19/237. PEBSI II (PEPSI II): Balón liberador de Paclitaxel tras stent convencional vs stent liberador de fármaco en el infarto agudo con elevación de st.. PI: MARIA NIEVES GONZALO LÓPEZ. Funding Organisation: FIC.

2020. Endopat-COVID: Assessment of Endothelial Vasodilator Function in COVID-19 Patients. Estudio prospectivo observacional y ciego que evalúa el estado de la función endotelial vascular sistémica en pacientes COVID-19 comparado con un grupo control sano. PI: HERNÁN DAVID MEJÍA RENTERÍA. Funding Organisation: Hospital Clínico San Carlos.

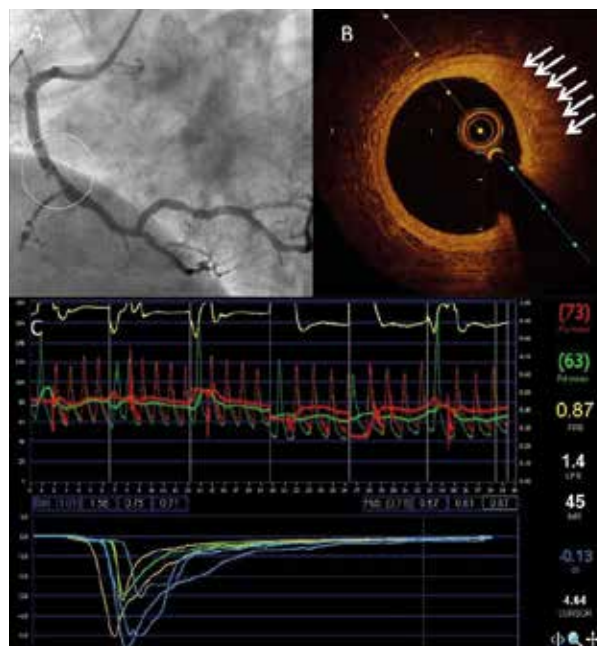
CLINICAL PRACTICE GUIDELINES

Javier Escaned Barbosa. 2019 ESC Guidelines for the diagnosis and management of chronic coronary syndromes. Science Society: SOCIEDAD EUROPEA DE CARDIOLOGIA (2020). PMID: 31504439.

Javier Escaned Barbosa. An EAPCI Expert Consensus Document on Ischaemia with Non-Obstructive Coronary Arteries in Collaboration with European Society of Cardiology Working Group on Coronary Pathophysiology & Microcirculation Endorsed by Coronary Vasomotor Disorders International Study Group. Science Society: SOCIEDAD EUROPEA DE CARDIOLOGIA (2020)..

Javier Escaned Barbosa. Management of myocardial revascularisation failure: an expert consensus document of the EAPCI. Science Society: (2020). PMID: 32597391.

Knuuti, Juhani , Wijns, William , Saraste, Antti , Capodanno, Davide , Barbato, Emanuele , Funck-Brentano, Christian , Prescott, Eva , Storey, Robert F. , Deaton, Christi , Cuisset, Thomas , Agewall, Stefan , Dickstein, Kenneth , Edvardsen, Thor , ESCANED. 2019 ESC Guide on the Diagnosis and Treatment of Chronic Coronary Syndromes. REVISTA ESPANOLA DE CARDIOLOGIA. 2020; 73(6).



# Cardiovascular Imaging

## SCIENTIFIC PRODUCTION

N° OF PAPERS (WOS)

**17**

N° OF PAPERS JCR INDEXED

**16**

CITABLE ITEMS

**65% (11)**

Q1 (CITABLE ITEMS)

**45% (5)**

D1 (CITABLE ITEMS)

**18% (2)**

CUMULATIVE IF

**133,97**

AVERAGE IF

**8,37**

### LEADING RESEARCHER

Pérez De Isla, Leopoldo

### MEMBERS

Eduardo Pozo Osinalde  
 Fabian O Nore Islas Ramírez  
 José Alberto De Agustín Loeches  
 José Juan Gómez De Diego  
 María Luaces Mendez  
 Patricia Mahia Casado  
 Pedro Marcos-Alberca Moreno



## OVERVIEW

This research group is one of the most dynamic and productive within the cardiovascular imaging field in our country. Due to a strong welfare activity encompassing different fields of cardiovascular imaging, such as echocardiography and cardiac magnetic resonance, the group displays a pronounced teaching and research projection. Proof of this are the numerous publications in national and international scientific journals and books, work presentations in the most important national and international conferences, and the participation of the group members as moderators, speakers and organizers. The research work conducted by the group stands out for the development of the clinical application of novel imaging tools to improve the diagnosis, management and treatment of both cardiac and extra-cardiac patients, upon exploration of the technique's advantages and limitations. The group outstands for the collaboration with other research groups related with cardiology and other fields within IdISSC.

SELECTED PUBLICATIONS

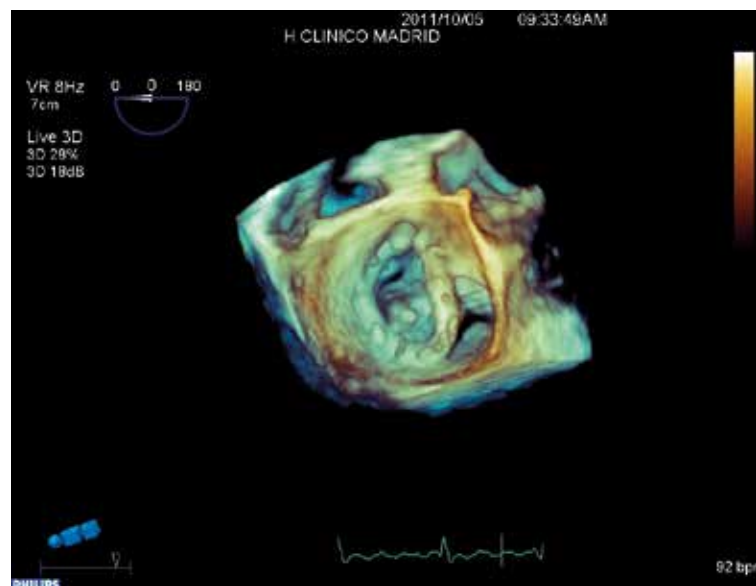
- ▶ Freitas-Ferraz, Afonso B., Lerakis, Stamatios, Ribeiro, Henrique Barbosa, Gilard, Martine, Cavalcante, Joao L., Makkar, Raj, Herrmann, Howard C., Windecker, Stephan, Enriquez-Sarano, Maurice, Cheema, Asim N., NOMBELA FRANCO, LUIS, Amat-Santos, Ignacio, Munoz-Garcia, Antonio J., Garcia del Blanco, Bruno, Zajarias, Alan, Lisko, John C., Hayek, Salim, Babaliarios, Vasilis, Le Ven, Florent, Gleason, Thomas G., Chakravarty, Tarun, Szeto, Wilson Y., Clavel, Marie-Annick, DE AGUSTIN LOECHES, JOSÉ ALBERTO, Serra, Vicenc, Schindler, John T., Dahou, Abdellaziz, Annabi, Mohamed-Salah, Pelletier-Beaumont, Emilie, Pibarot, Philippe, Rodes-Cabau, Josép. Mitral Regurgitation in Low-Flow, Low-Gradient Aortic Stenosis Patients Undergoing TAVR Insights From the TOPAS-TAVI Registry. JACC-CARDIOVASCULAR INTERVENTIONS. 2020; 13(5): 567-579. DOI: 10.1016/j.jcin.2019.11.042. IF: 8,432. (Q1).
- ▶ ARMIJO ASTRAIN, JAVIER EDUARDO, Estevez-Loureiro, Rodrigo, Carrasco-Chinchilla, Fernando, Arzamendi, Dabit, Fernandez-Vazquez, Felipe, JIMÉNEZ QUEVEDO, PILAR, Freixa, Xavier, Pascual, Isaac, Serrador, Ana María, Mesa, Dolores, Alonso-Briales, Juan H., Goicolea, Javier, Hernandez-Antolin, Rosana, Fernandez-Peregrina, Estefania, Alvarez, Ana Belen Cid, Andraka, Leire, Cruz-Gonzalez, Ignacio, Berenguer, Alberto, Sanchis, Juan, Gil, José Luis Diez, Hernandez-Garcia, José M., Li, Chi-Hion, Benito-Gonzalez, Tomas, DE AGUSTIN LOECHES, JOSÉ ALBERTO, Avanzas, Pablo, REGUEIRO GONZÁLEZ-BARROS, JOSÉ RAMÓN, Amat-Santos, Ignacio, Pan, Manuel, NOMBELA FRANCO, LUIS. Acute Kidney Injury After Percutaneous Edge-to-Edge Mitral Repair. JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY. 2020; 76(21): 2463-2473. DOI: 10.1016/j.jacc.2020.09.582. IF: 20,589. (Q1).
- ▶ PÉREZ DE ISLA, LEOPOLDO, Arroyo-Olivares, Raquel, Alonso, Rodrigo, Muniz-Grijalvo, Ovidio, Luis Diaz-Diaz, José, Zambon, Daniel, Fuentes, Francisco, Mata, Nelva, Piedecausa, Mar, Dolores Manas, M., Sanchez Munoz-Torrero, Juan F., Pablo Miramontes-Gonzalez, José, de Andres, Raimundo, Mauri, Marta, Aguado, Rocio, Brea, Angel, Cepeda, José M., Vidal-Pardo, José, Martínez-Faedo, Ceferino, Angel Barba, Miguel, Argueso, Rosa, Ruiz-Perez, Enrique, Michan, Alfredo, Arrieta, Francisco, Riestra Fernandez, María, Perez, Leire, Pinilla, José M., Diaz-Soto, Gonzalo, Pinto, Xavier, Padro, Teresa, Badimon, Lina, Mata, Pedro, Invest SAFEHEART. Incidence of cardiovascular events and changes in the estimated risk and treatment of familial hypercholesterolemia: the SAFEHEART registry. REVISTA ESPANOLA DE CARDIOLOGIA. 2020; 73(10): 828-834. DOI: 10.1016/j.recesp.2019.10.013. IF: 4,642. (Q1).

NEW NON COMPETITIVE FUNDING

- ECL.20/543. ESTUDIO OBSERVACIONAL AMBISPECTIVO PARA ANALIZAR EL MANEJO EVOLUTIVO DE LOS FÁRMACOS CON EFECTO PRONÓSTICO EN PACIENTES TRATADOS CON POLIPÍLDORA COMO TRATAMIENTO DE BASE AL ALTA DE UN PRIMER SÍNDROME CORONARIO AGUDO. PI: . Funding Organisation: Ferrer.
- DAI-LDL-2020-01. PERFIL DE LDL-C EN PACIENTES CON EVENTOCARDIOVASCULAR:UN ESTUDIO MULTICÉNTRICO RETROSPECTIVO EN ESPAÑA. PI: HEARTBEAT. Funding Organisation: Daiichi-Sankyo.
- DSE-HCL-01-19. Tratamiento de pacientes dislipémicos con alto riesgo y muy alto riesgo para la prevención de eventos cardiovasculares en Europa - Estudio Multinacional Observacional (SANTORINI). PI: SANTORINI. Funding Organisation: Daiichi-Sankyo.

CLINICAL PRACTICE GUIDELINES

Escobar C, Anguita M, Arrarte V, Barrios V, Cequier Á, Cosín-Sales J, Egocheaga I, López de Sa E, Masana L, Pallarés V, Pérez de Isla L, Pintó X; Recommendations to improve lipid control. Consensus document of the Spanish Society of Cardiology. Rev Esp Cardiol (Engl Ed). 2020 Feb;73(2):161-167. English, Spanish. doi: 10.1016/j.rec.2019.08.012. Epub 2019 Dec 7. PMID: 31818706. Science Society: Sociedad Española de Cardiología (2020).



# Arrhythmia

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

14

Nº OF PAPERS JCR INDEXED

13

CITABLE ITEMS

64%(9)

Q1 (CITABLE ITEMS)

56%(5)

D1 (CITABLE ITEMS)

11%(1)

CUMULATIVE IF

31,65

AVERAGE IF

3,52



### LEADING RESEARCHER

Pérez-Villacastín Domínguez, Julián

### MEMBERS

Ana Martínez Rodríguez  
 David Filgueiras Rama  
 Josébe Goirigolzarri Artaza  
 Luis Borrego Bernabé  
 M<sup>a</sup> Jesús García Torrent  
 María Herreros Gil  
 María Sánchez Sánchez  
 María Victoria Cañadas Godoy  
 Marta Lourdes Casas De La Cal  
 Mónica Lamuedra Del Olmo  
 Nicasio Pérez Castellano  
 Ramón Bover Freire  
 Ricardo Salgado Aranda  
 Virginia Beatriz Cerron Rodríguez  
 Juan José González Ferrer  
 Jennifer Nuñez Chavarry



## OVERVIEW

The Arrhythmia Unit of the HospitalClínico San Carlos, established in December 2000, belongs to the Cardiovascular Institute of the hospital. The cardiologists within the group are accredited in Interventional Cardiac Electrophysiology by the Spanish and European Society, and they are members of the Spanish and European Society of Cardiology.

Currently, three competitively funded projects are being developed, one of which is financed by the European Social Fund, and the other two by the national plan of the Ministry of Science and Innovation. The group is also involved in eight competitive multicenter clinical trials, being Dr. Perez-Villacastín the national coordinator in two of them. In addition, the group contributes to the record of arrhythmia ablations at a national and international level, to the research in implantable devices and to the EURObservational Research Program from the European Cardiology Society.

## SELECTED PUBLICATIONS

- ▶ Cervigon, Raquel, Moreno, Javier, Millet, José, PÉREZ-VILLACASTÍN DOMÍNGUEZ, JULIÁN, Castells, Francisco. Pulmonary Vein Activity Organization to Determine Atrial Fibrillation Recurrence: Preliminary Data from a Pilot Study. *Mathematics*. 2020; 8(10): nana. DOI: 10.3390/math8101813. IF: 1,747. (Q1).
- ▶ VIVAS BALCONES, LUIS DAVID, Roldan, Vanessa, Asuncion Esteve-Pastor, María, Roldan, Inmaculada, Tello-Montoliu, Antonio, Miguel Ruiz-Nodar, Juan, Cosin-Sales, Juan, María Gamez, José, Consuegra, Luciano, Luis Ferreira, José, Marin, Francisco, Arrarte, Vicente, Anguita, Manuel, Cequier, Angel, PÉREZ-VILLACASTÍN DOMÍNGUEZ, JULIÁN. Recommendations on antithrombotic treatment during the COVID-19 pandemic. Position statement of the Working Group on Cardiovascular Thrombosis of the Spanish Society of Cardiology. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2020; 73(9): 749-757. DOI: 10.1016/j.recesp.2020.04.006. IF: 4,642. (Q1).
- ▶ de Lavallaz, Jeanne du Fay, Badertscher, Patrick, Kobori, Atsushi, Kuck, Karl-Heinz, Brugada, Josép, Boveda, Serge, Providencia, Rui, Khoueiry, Ziad, Luik, Armin, Squara, Fabien, Kosmidou, Ioanna, Davtyan, V, Elvan, Arif, PÉREZ CASTELLANO, NICASIO, Hunter, Ross J., Schilling, Richard, Knecht, Sven, Kojodjojo, Pipin, Wasserlauf, Jeremiah, Oral, Hakan, Matta, Mario, Jain, Sandeep, Anselmino, Matteo, Kuehne, Michael. Sex-specific efficacy and safety of cryoballoon versus radiofrequency ablation for atrial fibrillation: An individual patient data meta-analysis. *Heart Rhythm*. 2020; 17(8): 1232-1240. DOI: 10.1016/j.hrthm.2020.04.020. IF: 5,731. (Q1).

## NEW NON COMPETITIVE FUNDING

CONV19/089. El convenio tiene por objeto el desarrollo de proyectos sobre el estudio de los mecanismos subyacentes y nuevas terapias en arritmias, tanto auriculares como ventriculares, la caracterización detallada de los mecanismos de inicio y mantenimiento de arritmia. PI: PÉREZ-VILLACASTÍN DOMÍNGUEZ, JULIÁN. Funding Organisation: FUNDACION CENTRO NACIONAL DE INVESTIGACIONES CARDIOVASCULARES CARLOS III.

## AWARDS

Researcher aware: Jorge G. Quintanilla, José Manuel Alfonso-Almazán, Nicasio Pérez-Castellano, Sandeep V. Pandit, José Jalife, Julián Pérez-Villacastín, David Filgueiras-Rama. Winning work: Instantaneous Amplitude and Frequency Modulations Detect the Footprint of Rotational Activity and Reveal Stable Driver Regions as Targets for Persistent Atrial Fibrillation Ablation Circulation Research Volumen: 125 Número: Páginas: 609–627. Award: Premio al artículo más destacado de año en Arritmias.

Researcher aware: Ahmed Chamaisse Akari, Jesús Flores Soler, María Victoria Cañadas Godoy, Nicasio Pérez Castellano, Julián Pérez-Villacastín Domínguez, Francisco García González. Winning work: Crioablación de vía accesoria oculta lateral izquierda en presencia de divertículo gigante del seno coronario. La Semana del Ritmo. Reunión virtual de la Asociación del Ritmo y de la Sección de Estimulación Cardíaca de la Sociedad Española de Cardiología Reunión Virtual. 22-26 junio 2020. Award: Premio a la mejor comunicación de Ritmo 20."

## TECHNOLOGY TRANSFER

Method for the identification of cardiac fibrillation drivers and/or the footprint of rotational activations using single optical or electrical signals without requiring panoramic simultaneous acquisition: Jorge García Quintanilla; David Filgueiras Rama; Nicasio Pérez. Castellano; Julián Pérez-Villacastín.

## CLINICAL PRACTICE GUIDELINES

García Pinilla, Jose Manuel, Díez-Villanueva, Pablo, BOVER FREIRE, RAMÓN, Formiga, Francesc, Cobo Marcos, Marta, Bonadad, Clara, Crespo Leiro, María G., Ruiz Garcia, Juan, Diaz Molina, Beatriz, Enjuanes Grau, Cristina, Garcia, Lluisa, Rexach, Lo. Consensus document and recommendations on palliative care in heart failure of the Heart Failure and Geriatric Cardiology Working Groups of the Spanish Society of Cardiology. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2020; 73(1): 69-77.





# Group on Predictive Biomedicine and Translational Research of Respiratory, Cardiovascular and Metabolic Diseases

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

**7**

Nº OF PAPERS JCR INDEXED

**5**

CITABLE ITEMS

**100%**(7)

Q1 (CITABLE ITEMS)

**14%**(1)

CUMULATIVE IF

**11,78**

AVERAGE IF

**2,35**

### LEADING RESEARCHER

López Farré, Antonio

### MEMBERS

Antonio Ignacio Martín Conejero  
 Begoña Larrea Cruz  
 Francisco Javier Serrano Hernando  
 Guillermo Moñux Ducajú  
 José Antonio Herrero Calvo  
 José Javier Zamorano León  
 M<sup>a</sup> Cruz Iglesias Moreno  
 Manuel Gómez Serrano  
 Meritxell López Gallardo  
 Natalia De Las Heras Jiménez  
 Vicente Lahera Juliá  
 José Luis Álvarez-Sala Walther  
 Sandra Ballesteros Rodrigálvarez  
 Khaoula Zekri Nechar  
 Antonio Martín Conejero



## OVERVIEW

Our group "Predictive biomedicine and traslational research of respiratory, cardiovascular and metabolic diseases" is focused on two main translational research lines: On one hand, on the research of biomarkers of prognosis / diagnosis and drug response, on the signaling pathways associated with cardiovascular pathophysiology, and on the action of drugs used in the treatment of cardiovascular diseases. For this purpose, classical molecular biology techniques (Western blot, ELISA etc.), and 2DE proteomics and mass spectrometry are performed. The second research line focuses on the study of genetic alterations associated with sudden death in sports, primarily using genetic and epigenetic studies.

**SELECTED PUBLICATIONS**

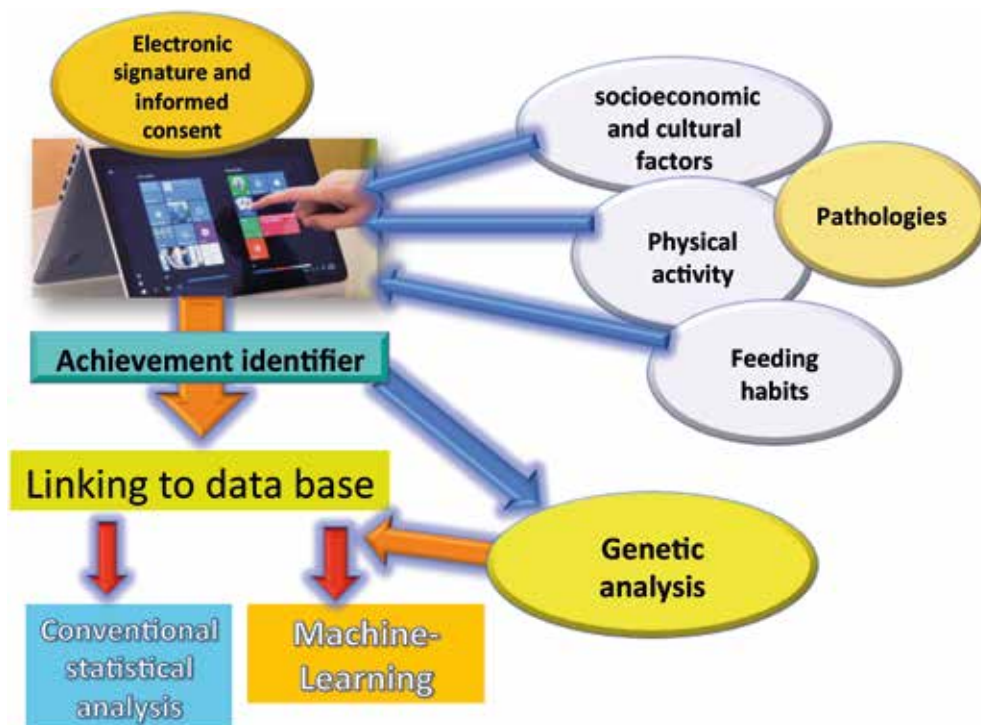
- ▶ MENDEZ BAILON, MANUEL, Jimenez-Garcia, Rodrigo, Hernandez-Barrera, Valentin, de Miguel-Diez, Javier, de Miguel-Yanes, José M., Munoz-Rivas, Nuria, Lorenzo-Villalba, Noel, Carabantes-Alarcon, David, ZAMORANO LEÓN, JOSÉ JAVIER, Astasio-Arbiza, Paloma, Ortega-Molina, Paloma, Lopez-de-Andres, Ana. Heart Failure Is a Risk Factor for Suffering and Dying of Clostridium difficile Infection. Results of a 15-Year Nationwide Study in Spain. Journal of Clinical Medicine. 2020; 9(3): na-na. DOI: 10.3390/jcm9030614. IF: 3,303. (Q1).
- ▶ ZAMORANO LEÓN, JOSÉ JAVIER, Gascon, Martin, Martinez, Carlos H., Freixer, Gala, Guerra, Redy, Zekri-Nechar, Khaoula, BERNARDO GARCÍA, MARÍA ESTHER, de la Serna-Soto, Mariano, Segura, Antonio, Giner, Manel, Garcia-Fernandez, Miguel A., MACAYA MIGUEL, CARLOS, Lopez-Farre, Antonio J. . Platelet Apoptotic Response May Be Associated With the Capacity of Aspirin to Inhibit Platelets. JOURNAL OF CARDIOVASCULAR PHARMACOLOGY. 2020; 76(5): 584-591. DOI: 10.1097/FJC.0000000000000908. IF: 2,598. (Q2).
- ▶ Castellon Rubio, Victoria E., PÉREZ SEGURA, PEDRO, Munoz, Andres, LÓPEZ FARRÉ, ANTONIO, Canosa Ruiz, Liliana, Lorente, Jose A. . High plasma levels of soluble P-Selectin and Factor VIII predict venous thromboembolism in non-small cell lung cancer patients: The Thrombo-Nscl risk score. THROMBOSIS RESEARCH. 2020; 196. 349-354. DOI: 10.1016/j.thromres.2020.09.021. IF: 2,869. (Q2).

**NEW NON COMPETITIVE FUNDING**

ALF.M04BAY. Convenio colaboración para la ejecución de un estudio: Rivaroxaban and COVID-19. PI: LÓPEZ FARRÉ, ANTONIO. Funding Organisation: BAYER HISPANIA, S.L.U.

**DOCTORATE THESES**

Doctoral candidate: na. Thesis title: La respuesta de la plaqueta a la aspirina determina la capacidad apoptótica plaquetar Director(s): Antonio López Farré, José Javier Zamorano. University: Universidad Complutense de Madrid.



# Valvular Pathology and Large Vessels

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

28

Nº OF PAPERS JCR INDEXED

24

CITABLE ITEMS

43% (12)

Q1 (CITABLE ITEMS)

25% (3)

CUMULATIVE IF

29,59

AVERAGE IF

3,28



### LEADING RESEARCHER

Vilacosta, Isidre

### MEMBERS

Carmen Olmos Blanco  
 Elisa Pérez- Cecilia Carrera  
 Luis Carlos Maroto Castellanos



## OVERVIEW

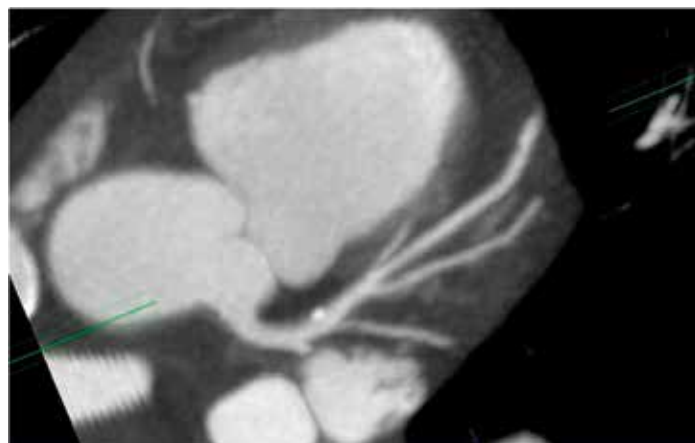
In 1996, a multicenter group (H. Clinical, H. H. U. of Valladolid and Princess) for the study of endocarditis was created. Since then, the group, together with the important contribution of the Clinical Microbiology Service and Cardiac Surgery, manages a database including 900 patients suffering from this serious infectious valvular disease. Numerous publications in national and international journals, as well as a FIS grant to further study this disease, have resulted from this collaboration and hard work: The ENDOVAL project. In this area we are specifically investigating the following aspects: the diagnostic yield of echocardiography, factors of poor prognosis of the disease, and the adequacy of surgery among others.

The group also works together with the Cardiac Surgery Service, and is pioneer on the acute aortic syndrome and the ascending aortic aneurysms. Upon definition of these features by the group in 2001, the different elements that conform the acute aortic pathology are known as the acute aortic syndrome (AAS).



 **SELECTED PUBLICATIONS**

- ▶ Freitas-Ferraz, Afonso B, TIRADO CONTE, GABRIELA, VILACOSTA, ISIDRE, OLMOS BLANCO, CARMEN, Saez, Carmen, LÓPEZ MARTÍN, JAVIER, Sarria, Cristina, Perez-Garcia, Carlos Nicolas, Garcia-Arribas, Daniel, Ciudad, Marianela, Garcia-Granja, Pablo Elpidio, Ladron, Raquel, FERRERA DURAN, CARLOS FELIPE, Di Stefano, Salvatore, MAROTO CASTELLANOS, LUIS CARLOS, CARNERO ALCAZAR, MANUEL, San Roman, J. Alberto. Contemporary epidemiology and outcomes in recurrent infective endocarditis. *Heart*. 2020; 106(8): 596-602. DOI: 10.1136/heartjnl-2019-315433. IF: 5,213. (Q1).
- ▶ Elpidio Garcia-Granja, Pablo, LÓPEZ MARTÍN, JAVIER, VILACOSTA, ISIDRE, Sarria, Cristina, Dominguez, Fernando, Ladron, Raquel, OLMOS BLANCO, CARMEN, Saez, Carmen, Vilches, Silvia, Garcia-Arribas, Daniel, Cobo-Marcos, Marta, Ramos, Antonio, MAROTO CASTELLANOS, LUIS CARLOS, Gomez, Itziar, Carrasco, Manuel, Garcia-Pavia, Pablo, Alberto San Roman, J.. Predictive model of in-hospital mortality in left-sided infective endocarditis. *REVISTA ESPANOLA DE CARDIOLOGIA*. 2020; 73(11): 902-909. DOI: 10.1016/j.recesp.2020.04.010. IF: 4,642. (Q1).
- ▶ Alberto San Roman, José, VILACOSTA, ISIDRE, Antunes, Manuel J., Lung, Bernard, LÓPEZ MARTÍN, JAVIER, Schaeffers, Hans-Joachim. The 'wait for symptoms' strategy in asymptomatic severe aortic stenosis. *Heart*. 2020; 106(23): 1792-1797. DOI: 10.1136/heartjnl-2020-317323. IF: 5,213. (Q1).



# Translational Research in Acute Myocardial Syndromes (INTEGRA)

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

66

Nº OF PAPERS JCR INDEXED

62

CITABLE ITEMS

79%(52)

Q1 (CITABLE ITEMS)

33%(17)

D1 (CITABLE ITEMS)

10%(5)

CUMULATIVE IF

221,19

AVERAGE IF

4,61



### LEADING RESEARCHER

Fernández Ortiz, Antonio Ignacio

### MEMBERS

Ana Viana Tejedor  
 Carlos Felipe Ferrera Duran  
 Diana Tapia Solascasas  
 Francisco Javier Noriega Sanz  
 Iván Javier Núñez Gil  
 Javier Higuera Nafria  
 Luis David Vivas Balcones  
 María Esther Bernardo García  
 Sílvia Mera González  
 Verónica Alvarez Morales



## OVERVIEW

The group is formed by cardiologists (Antonio Fernández-Ortiz, Iván Núñez-Gil, David Vivas, Ana Viana, Javier Nogueira and Javier Higuera) and biologists (Esther Bernardo). Health care work is integrated into the Coronary Care Unit, the hospital facility and the hemodynamic rooms. The group has common research facilities at the Cardiovascular Institute. Over the last years, the group has focused on the study of platelet/leucocyte reactivity in patients with ischemic heart disease. Clinical aspects of transient apical dyskinesia have also been studied, and a research line on the ischemia-reperfusion myocardial injury has been opened in close collaboration with CNIC. Relevant publications in the last 5 years include 3 articles in JACC, 2 in Diabetes, 2 in Heart, 3 in the AJC, and 5 in REC. The group is involved in numerous multicenter clinical trials and has competitive funding from official calls (FIS, FICI, CNIC, SEC, MM).

SELECTED PUBLICATIONS

- ▶ Jeronimo, Adrian, Ferrandez-Escarabajal, Marcos, FERRERA DURAN, CARLOS FELIPE, NORIEGA SANZ, FRANCISCO JAVIER, Diz-Diaz, Jesus, Fernandez-Jimenez, Rodrigo, McInerney, Angela, FERNÁNDEZ ORTIZ, ANTONIO IGNACIO, VIANA TEJEDOR, ANA. Cardiogenic Shock Clinical Presentation, Management, and In-Hospital Outcomes in Patients Admitted to the Acute Cardiac Care Unit of a Tertiary Hospital: Does Gender Play a Role?. Journal of Clinical Medicine. 2020; 9(10): na-na. DOI: 10.3390/jcm9103117. IF: 3,303. (Q1).
- ▶ Lopez-Melgar, Beatriz, Fernandez-Friera, Leticia, Oliva, Belen, Manuel Garcia-Ruiz, José, Sanchez-Cabo, Fatima, Bueno, Hector, María Mendiguren, José, Lara-Pezzi, Enrique, Andres, Vicente, IBÁÑEZ CABEZA, BORJA, FERNÁNDEZ ORTIZ, ANTONIO IGNACIO, SANZ ORTEGA, JULIÁN, Fuster, Valentin. Short-Term Progression of Multiterritorial Subclinical Atherosclerosis. JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY. 2020; 75(14): 1617-1627. DOI: 10.1016/j.jacc.2020.02.026. IF: 20,589. (Q1).
- ▶ de la Chica, José A., Gomez-Talavera, Sandra, Garcia-Ruiz, José M., Garcia-Lunar, Ines, Oliva, Belen, Fernandez-Alvira, Juan M., Lopez-Melgar, Beatriz, Sanchez-Gonzalez, Javier, de la Pompa, José L., Mendiguren, José M., Martínez de Vega, Vicente, FERNÁNDEZ ORTIZ, ANTONIO IGNACIO, SANZ ORTEGA, JULIÁN, Fernandez-Friera, Leticia, IBÁÑEZ CABEZA, BORJA, Fuster, Valentin. Association Between Left Ventricular Noncompaction and Vigorous Physical Activity. JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY. 2020; 76(15): 1723-1733. DOI: 10.1016/j.jacc.2020.08.030. IF: 20,589. (Q1).

AWARDS

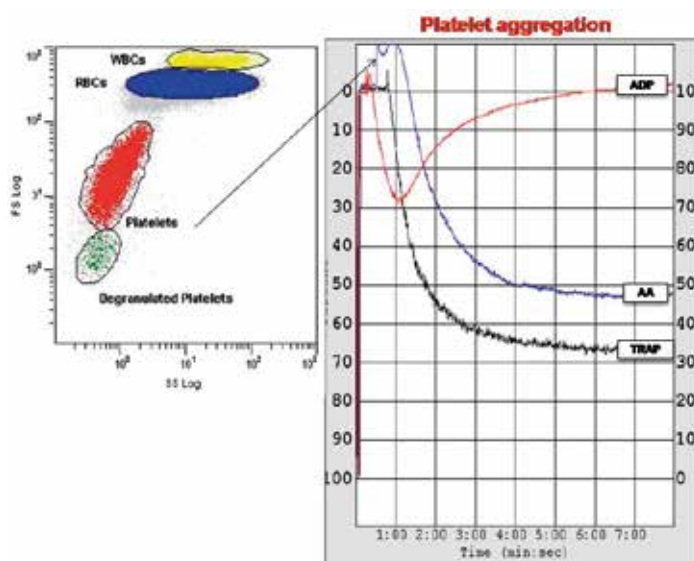
Researcher aware: FERRERA DURAN, CARLOS FELIPE. Winning work: Award: XXV Premio Científico - 1º Mejor trabajo científico original publicado.

Researcher aware: CARLOS FELIPE FERRERA DURAN, ISIDRE VILACOSTA Y LUIS MAROTO. Winning work: Código Aorta. Award: Accésit. Premio Cátedra NOVARTIS 2020.

NEW NON COMPETITIVE FUNDING

ECL20/439. KISS.Keep Bifurcation Single Stenting Simple. PI: ANTONIO IGNACIO FERNÁNDEZ ORTIZ. Funding Organisation: CERC.

ECL2019/121. REFORM. A Prospective, Randomized, Non-Inferiority Trial to Determine the Safety and Efficacy of the Biolimus A9TM Drug Coated Balloon for the Treatment of In-Stent Restenosis: First-in-Man Trial (REFORM. PI: ANTONIO IGNACIO FERNÁNDEZ ORTIZ. Funding Organisation: BIOSENSORS.



# Myocardial Regeneration Therapy

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

45

Nº OF PAPERS JCR INDEXED

44

CITABLE ITEMS

60% (27)

Q1 (CITABLE ITEMS)

63% (17)

D1 (CITABLE ITEMS)

41% (11)

CUMULATIVE IF

223,80

AVERAGE IF

8,61



### LEADING RESEARCHER

Jiménez Quevedo, Pilar

### MEMBERS

Luis Nombela Franco

M<sup>a</sup> Aranzazu Ortega Pozzi

María Del Trigo Espinosa

## OVERVIEW

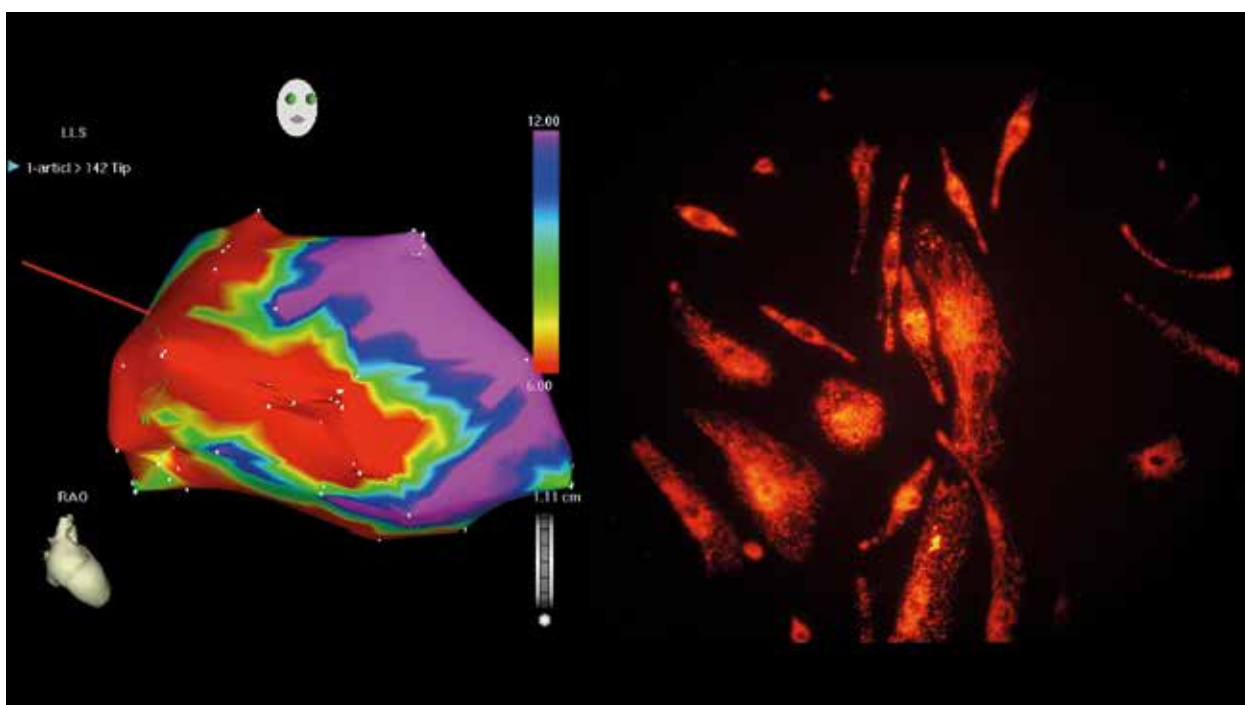
The advanced therapies for cardiac regeneration and structural heart disease group at Hospital San Carlos consists of both cardiologists and cell biologists (4 professionals in total). The team aims to accomplish clinical and translational research in advanced cardiac pathologies. The members of this group are experts in the procurement, isolation, and the administration of intra cardiac stem cells in patients without other therapeutic options. The group also specializes in the new percutaneous intracardiac devices for the treatment of valvular heart disease or heart failure. The ultimate goal is to improve both the symptomatology and the prognosis of patients with high morbidity and mortality rates. The members of the group are experts in cell therapies, the percutaneous treatment of valvular heart disease and have broad experience in development of randomized clinical trials

SELECTED PUBLICATIONS

- ▶ ARMIJO ASTRAIN, JAVIER EDUARDO, Tang, Gilbert H L, Kooistra, Nynke, Ferreira-Neto, Alfredo Nunes, Toggweiler, Stefan, Amat-Santos, Ignacio J, Keller, Lukas S, Urena, Marina, Ahmad, Hasan, Tafur Soto, José, Muñoz-García, Erika, REGUEIRO GONZÁLEZ-. Third-Generation Balloon and Self-Expandable Valves for Aortic Stenosis in Large and Extra-Large Aortic Annuli From the TAVR-LARGE Registry. *Circulation-Cardiovascular Interventions*. 2020; 13(8): na-na. DOI: 10.1161/CIRCINTERVENTIONS.120.009047. IF: 5,493. (Q1).
- ▶ ARMIJO ASTRAIN, JAVIER EDUARDO, Estevez-Loureiro, Rodrigo, Carrasco-Chinchilla, Fernando, Arzamendi, Dabit, Fernandez-Vazquez, Felipe, JIMÉNEZ QUEVEDO, PILAR, Freixa, Xavier, Pascual, Isaac, Serrador, Ana María, Mesa, Dolores, Alonso-Briales, Juan. Acute Kidney Injury After Percutaneous Edge-to-Edge Mitral Repair. *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*. 2020; 76(21): 2463-2473. DOI: 10.1016/j.jacc.2020.09.582. IF: 20,589. (Q1).
- ▶ Giacoppo, Daniele, ALFONSO MANTEROLA, FERNANDO, Xu, Bo, Claessen, Bimmer E P M, Adriaenssens, Tom, Jensen, Christoph, PÉREZ VIZCAYNO, MARÍA JOSÉ, Kang, Do-Yoon, Degenhardt, Ralf, Pleva, Leos, Baan, Jan, Cuesta, Javier, Park, Duk-Woo, Schunkert, Heribert, Colleran, Roisin, Kukla, Pavel, JIMÉNEZ QUEVEDO, PILAR, Unverdorben, Martin, Gao, Runlin, Naber, Christoph K, Park, Seung-Jung, Henriques, José P S, Kastrati, Adnan, Byrne, Robert A. Paclitaxel-coated balloon angioplasty vs. drug-eluting stenting for the treatment of coronary in-stent restenosis: a comprehensive, collaborative, individual patient data meta-analysis of 10 randomized clinical trials (DAEDALUS study). *EUROPEAN HEART JOURNAL*. 2020; 41(38): 3715-3728. DOI: 10.1093/eurheartj/ehz594. IF: 22,673. (Q1).

CLINICAL PRACTICE GUIDELINES

Manuel Jiménez Navarro, Almudena Castro, Sara Ballesteros Pradas, Concepción Cruzado Álvarez, Juan José Gómez Doblas, Domingo Marzal Martín, Susana Del Prado, Félix Valencia Serrano, Irene Bretón, Fernando Gómez Peralta, Didac Mauricio, Alfonso Soto González, Vivencio Barrios, Alberto Cordero, Juan Cosin-Sales, Xavier García-Moll, José María García Pinilla, Pilar Jiménez Quevedo, Julio Núñez Villota, Rafael Romaguera Torres, Fernando Arribas, Gemma Berga Congost, Héctor Bueno, Arturo Evangelista, Ignacio Ferreira-González, Manuel Jiménez Navarro, Francisco Marín, Leopoldo Pérez de Isla, Antonia Sambola, Rafael Vázquez, Ana Viana-Tejedor, Borja Ibáñez, Fernando Alfonso. ESC guidelines on diabetes, prediabetes, and cardiovascular diseases; Spanish Society of Cardiology; Spanish Society of Endocrinology and Nutrition; Expert reviewers for the 2019 ESC guidelines on diabetes, prediabetes, and cardiovascular diseases; SEC Guidelines Committee. Comments on the 2019 ESC guidelines on diabetes, prediabetes, and cardiovascular disease. *Science Society: Joint Working Group of the Spanish Society of Cardiology and Spanish Society of Endocrinology and Nutrition* (2020).



# Cardiovascular Risk

## SCIENTIFIC PRODUCTION

Nº OF PAPERS (WOS)

17

Nº OF PAPERS JCR INDEXED

15

CITABLE ITEMS

94% (16)

Q1 (CITABLE ITEMS)

44% (7)

D1 (CITABLE ITEMS)

13% (2)

CUMULATIVE IF

45,21

AVERAGE IF

3,23



## OVERVIEW

The group has always focused on clinical and experimental research in the area of Cardiovascular Prevention, it started off using health care techniques for the evaluation, diagnosis and monitoring of major risk factors, such as hypertension, diabetes, dyslipidemia and obesity. A large number of researchers have been trained in our laboratory, and 30 doctoral theses have been concluded. Today, some of the doctorates occupy important positions in hospitals, universities and private companies.

### LEADING RESEARCHERS

Martell Claros, Nieves  
Gómez Garre, Dulcenombre

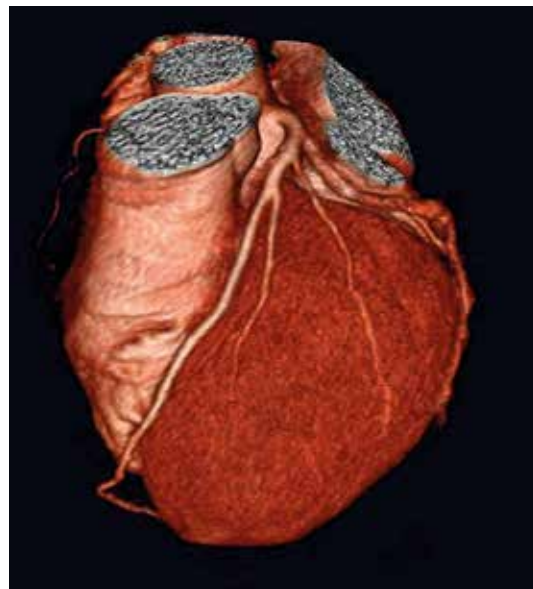
### MEMBERS

Adriana Ortega Hernández  
Ángel Manuel Molino Gonzalez  
Ángel Nieto Sánchez  
Arantzazu Álvarez De Arcaya Vicente  
Aránzazu Barbero Pedraz  
Arturo Corbatón Anchuelo  
Javier Marco Martínez  
Javier Modrego Martín  
José María Pedrajas Navas  
Leonardo Félix Reinares García  
Manuel Méndez Bailon  
María Abad Cardiel  
Matilde Rodríguez Cerrillo  
Rubén Gómez-Gordo Díaz  
Victoria Laguna Calle



 **SELECTED PUBLICATIONS**

- ▶ ORTEGA HERNÁNDEZ, ADRIANA, Martínez-Martínez, Ernesto, GÓMEZ-GORDO DÍAZ, RUBÉN, Lopez-Andres, Natalia, Fernandez-Celis, Amaya, Gutierrez-Miranda, Beatriz, Luisa Nieto, María, Alarcon, Teresa, ALBA LÓPEZ, CRISTINA, GÓMEZ GARRE, DULCENOMBRE, Cachofeiro, Victoria. The Interaction between Mitochondrial Oxidative Stress and Gut Microbiota in the Cardiometabolic Consequences in Diet-Induced Obese Rats. *ANTIOXIDANTS*. 2020; 9(7): na-na. DOI: 10.3390/antiox9070640. IF: 5,014. (Q1).
- ▶ Gutierrez-Calabres, Elena, ORTEGA HERNÁNDEZ, ADRIANA, MODREGO MARTIN, JAVIER, GÓMEZ-GORDO DÍAZ, RUBÉN, Caro-Vadillo, Alicia, RODRÍGUEZ- BOBADA GONZÁLEZ DEL CAMPO, MARÍA CRUZ, GONZÁLEZ DÍAZ, PABLO, GÓMEZ GARRE, DULCENOMBRE. Gut Microbiota Profile Identifies Transition From Compensated Cardiac Hypertrophy to Heart Failure in Hypertensive Rats. *Hypertension*. 2020; 76(5): 1545-1554. DOI: 10.1161/HYPERTENSIONAHA.120.15123. IF: 7,713. (Q1).
- ▶ Torres-Do Rego, Ana, Barrientos, Maria, ORTEGA HERNÁNDEZ, ADRIANA, MODREGO MARTIN, JAVIER, GÓMEZ-GORDO DÍAZ, RUBÉN, Alvarez-Sala, Luis A., Cachofeiro, Victoria, GÓMEZ GARRE, DULCENOMBRE. Identification of a Plasma Microrna Signature as Biomarker of Subaneurysmal Aortic Dilation in Patients with High Cardiovascular Risk. *Journal of Clinical Medicine*. 2020; 9(9): na-na. DOI: 10.3390/jcm9092783. IF: 3,303. (Q1).



 **NEW NON COMPETITIVE FUNDING**

ECL.20/332. EFECTO DE LOS PROBIÓTICOS EN EL RIESGO DE INFECCIÓN POR SARS-CoV-2 Y SUS COMPLICACIONES EN POBLACIONES ALTAMENTE EXPUESTAS. PI: GÓMEZ GARRE, DULCENOMBRE.

MMB.F01VIF. Donación para el estudio “Análisis de los procedimientos endoscópicos (endoscopia y colonoscopia) en el paciente hospitalizado por insuficiencia cardiaca. (2001-2015)”. PI: MENDEZ BAILON, MANUEL. Funding Organisation: VIFOR PHARMA ESPAÑA S.L.

