

## MASSIMILIANO GNECCHI, MD, PhD, FESC

Medical Licence n 08082 Ordine dei Medici Chirurghi della Provincia di Pavia

Abilitazione nazionale Professore I fascia in Cardiologia

**Business address:** Fondazione IRCCS Policlinico San Matteo  
Intensive Coronary Care Unit and Laboratory of Clinical and Experimental  
Cardiology  
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### POSITION AND EMPLOYMENT

03/2023 - present **Director of “Translational Cardiology”**  
of the Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

01/2019 - present Position of High Specialization in Molecular and Translational Cardiology -  
Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

05/2018 - present Honorary Professor  
Department of Medicine  
University of Cape Town (South Africa)

11/2017 - present **Associate Professor of Cardiology**  
Department of Molecular Medicine – Unit of Cardiology  
**University of Pavia** – Pavia, Italy

11/2017 - present Faculty member of the PhD program in Translational Medicine  
University of Pavia – Pavia, Italy

10/2012 - present Lecturer Faculty of Biotechnology  
Cardio-Vascular Medicine Course  
University of Pavia – Pavia, Italy

08/2012 – 04/2018 Visiting Senior Lecturer  
Department of Medicine  
University of Cape Town (South Africa)

01/2011 - present Attending physician  
Intensive Coronary Care Unit  
Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

01/2011 - present Head “Laboratory of Experimental Cardiology for Cell and Molecular Therapy”  
Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

- 10/2010 - 10/2017      Assistant Professor of Cardiology (tenured position)  
 School of Cardiology  
 University of Pavia – Pavia, Italy
- 04/2006 - 03/2010      Research Assistant Professor of Cardiology (non-tenured position)  
 Faculty of Medicine,  
 University of Pavia – Pavia, Italy
- 03/2006 - 12/2010      Consultant Cardiologist  
 Intensive Coronary Care Unit  
 Fondazione IRCCS Policlinico San Matteo, Pavia, Italy
- 10/2004 - 2/2006        Research Associate,  
 Cardiovascular Research Laboratories,  
 Duke University Medical Center - Durham, NC, USA
- 09/2003 - 09/2004      Research Associate,  
 Cardiovascular Research Laboratories,  
 Brigham and Women’s Hospital and Harvard Medical School – Boston, MA, USA

**EDUCATION AND TRAINING**

- October 2006 - October 2009  
 University of Pavia - Pavia, Italy  
 Faculty of Mathematics, Physics and Natural Sciences  
 PhD in Genetic and Biomolecular Sciences
- September 2002 - September 2003  
 Cardiovascular Research Laboratories, Brigham and Women’s Hospital and  
 Harvard Medical School, Boston, MA, USA  
 Research Fellowship
- October 2002  
 Board Certification in Cardiology  
 School of Specialization in Cardiology  
 University of Pavia – Pavia, Italy  
 Faculty of Medicine and Surgery
- June 1998  
 Medical Degree in Medicine and Surgery  
 Faculty of Medicine and Surgery  
 University of Pavia - Pavia, Italy

## HONORS

- 2023**            **Abilitazione nazionale Professore I fascia in Cardiologia**  
**2021-23**        **Board Member of the Basic Science Council of the European Society of Cardiology**  
**2021-23**        **Vice President Europe of the International Society of Cell Therapy (ISCT)**  
**2019-21**        **Vice President elected Europe of the International Society of Cell Therapy (ISCT)**  
**2015-today**    **Chair of the Cardiovascular Committee of the International Society for Cell Therapy**

**2013-today**    **Fellow** of the European Society of Cardiology

- 2011**    **“Hot Topics in Cardiovascular Science”** at the American Heart Association Scientific Session 2011. Abstract selected as one of the three top-scoring works presented under the “Cardiac Regeneration/Cellular Therapy” category.
- 2010**    **“Progetto di grande rilevanza Internazionale”**. Winner of an “Internationally Relevant Grant” from the Italian Ministry of Foreign Affairs. Dr. Gneccchi’s proposal was the only project selected for the category “stem cells”.
- 2008**    **“Young Investigator Grant”**. Winner of a competitive grant from the Italian Ministry of Health; the project ranked in the top10 among 998 proposals.
- 2006**    **Winner of National Research Award (“Programma Rientro dei Cervelli”)** from MIUR (Italian Ministry of University and Research). Prestigious competitive award and 4 years research grant.
- 2005**    **Winner of the American College of Cardiology Young Investigator Award**. First prize in the category Molecular and Cellular Cardiology; finals held in Orlando, FL on March 8<sup>th</sup>, 2005, during the American College of Cardiology Annual Scientific Meeting.
- 2004**    **Astra Zeneca Young Investigator Award**. Third prize in the category, Basic Science Research.
- 2002**    **Società Italiana di Cardiologia Research Scholarship**. Winner of a competitive scholarship from the Società Italiana di Cardiologia (Italian Society of Cardiology) to support my research training in USA.

## SCIENTIFIC SOCIETIES

- European Society of Cardiology (Fellow)
- International Society for Cell Therapy
- AHA
- SIC

## Editorial board

International Journal of Cardiology, Cytotherapy

## Reviewer for the following scientific journals

Lancet, Circulation Research, Cardiovascular Research, European Heart Journal, European Journal of Heart Failure, Journal of the American College of Cardiology, JACC Heart Failure, Stem Cells, Stem Cell Report, Journal of Molecular and Cell Cardiology, Plos One, Cytotherapy, International Journal of Cardiology.

## **SYNTHETIC CLINICAL PROFILE**

Prof. Gneccchi completed the Fellowship in Cardiology at the University of Pavia in 2002. During the years of the specialty Prof. Gneccchi worked at the Division of Cardiology and at the Coronary Intensive Care Unit of the IRCCS San Matteo Hospital of Pavia. During the last 18 months of his fellowship, Prof. Gneccchi worked at the Interventional Cardiology Unit of the IRCCS Policlinico San Matteo, performing about 500 coronary angiography and 250 percutaneous coronary procedures as first operator.

Since 2006, Prof. Gneccchi has been working at the Intensive Coronary Care Unit of the IRCCS San Matteo in Pavia where he deals with the treatment of patients affected by acute cardiovascular diseases such as acute myocardial infarction, acute and refractory heart failure, pulmonary embolism, malignant arrhythmias, valvulopathies, myocarditis, myo-pericarditis. The complexity of the patients admitted to the ICCU requires the in-depth knowledge of both cardiology and pharmacology, combined with a prompt decision-making attitude. The capacity to relate and work in a team of colleagues also from other disciplines is a key prerogative in an environment such as the ICCU.

Prof. Gneccchi also acts as consultant for the "Post myocardial infarction ambulatory" of the San Matteo Hospital, where risk stratification is carried out by multi-modality imaging and clinical tests. Prof. Gneccchi is the responsible for a prospective registry of all STEMI patients discharged by the San Matteo Hospital and of a National prospective registry of post STEMI patients aiming to establish the clinical and genetic predictors of ventricular fibrillation during the first myocardial infarction.

***Dr. Gneccchi is familiar with ICH-GCP and has experience in performing clinical trials according to the ICH-GCP principles.***

## SYNTHETIC RESEARCH PROFILE

Between 2002 and 2006 Prof. Gneccchi worked in the United States, at the Brigham and Woman's Hospital & Harvard Medical School in Boston first and later at Duke University Medical Center, in the cardiovascular research laboratory directed by Prof. Victor J. Dzau, a world leader in cardiovascular research.

During the years spent in the United States, Prof. Gneccchi devoted himself to the study of stem cells as a possible therapy for cardiovascular diseases. In particular, using a combined approach of cell and gene therapy, Prof. Gneccchi was able to demonstrate, for the first time in the world, that mesenchymal stem cells perform a beneficial action on the myocardium mainly via paracrine, i.e. cytoprotective factors capable of preserving the viability of the ischemic myocardium present in the area at the periphery of the infarct. This new theory, first published in Nature Medicine and FASEB Journal, was later validated by the work of numerous other laboratories and the paracrine effect is currently considered the main mechanism of action of stem cells for the treatment not only of myocardial infarction but also of numerous other pathologies such as, for example, stroke, kidney and lung damage, peripheral vascular disease, muscle injuries and liver disease. The discovery of the paracrine effect has opened a whole new line of research based on the identification of mediators with a view to developing "cell free" therapies.

The pioneering work of Prof. Gneccchi is internationally recognized by experts in the field as evidenced by a citation index Scopus (January 2023) of 1425 for the work published in Nature Medicine and over 1000 for the work published in FASEB Journal, in addition to 1670 of a review on the same topic and published in 2008 in Circulation Research.

For his research on the paracrine effect of stem cells, in 2005 Prof. Gneccchi was awarded the prestigious ***Young Investigator Award from the American College of Cardiology***.

Also, in 2005, Prof. Gneccchi was the winner of the "Return of brains" competition launched by the Italian Ministry of University and Research and consequently returned to Italy in 2006 as non-tenure Assistant Professor in Cardiology the University of Pavia. It also stipulated a collaboration agreement with the IRCCS Policlinico San Matteo Foundation, where the "Laboratory of Experimental Cardiology for Cell and Molecular Therapy" was created and which Prof. Gneccchi has been directing continuously since 2006.

The main purpose of the research carried out by Prof. Gneccchi is to identify the identity of the cardio-protective factors released by stem cells and to test new therapeutic approaches on a molecular basis for the treatment of myocardial infarction and chronic heart failure with the aim of translating the treatment with cells to the patient's bed.

Prof. Gneccchi coordinates a research group of biologists, biotechnologists, pharmaceutical chemists, and medical doctors. His research group, in addition to paracrine effects, deals or has dealt with the following research topics:

- identification of experimental models to favor the differentiation of adult stem cells into cardiomyocytes;
- generation and use of cardiomyocytes derived from induced pluripotent stem cells (iPSC) for disease modelling and drug testing;
- study of new therapeutic approaches that combine the use of stem cells and biomaterials;
- identification of specific circulating miRNAs useful for the diagnosis and prognostic stratification of patients suffering from heart disease of various origins (acute myocardial infarction, heart failure, patients undergoing bi-ventricular pacemaker implantation);
- identification of pathophysiological mechanisms underlying cardiac dysfunction in patients affected by amyloidosis.

Prof. Gneccchi's research activity has been financed continuously since 2006 by grants from the following funding agencies: Italian Ministry of University and Research; Ministry of Health; Ministry of Foreign Affairs; Cariplo Foundation; Leducq Foundation, AIFA (total of over 4 million Euro).

Prof. Gneccchi also entertains MANY COLLABORATIONS WITH PRESTIGIOUS UNIVERSITIES AND RESEARCH INSTITUTES AT NATIONAL AND INTERNATIONAL LEVEL.

As evidence of internationally recognized scientific credibility, Prof. Gneccchi was awarded the position of Honorary Professor by the University of Cape Town in South Africa, where he coordinated a research project on combined use of stem cells and biomaterials funded by the Ministry of Foreign Affairs as part of

the "Projects of great international importance". Another collaborative project on the use of iPSCs for the study of genetic diseases in the South African population is currently underway.

Other disease modeling studies based on the use of iPSCs have been conducted with the Universities of Munich (Germany), Milan, Singapore and Hong Kong and have led to important scientific publications. For the study of mesenchymal stem cells, there have been collaborations with the University of Groningen, and the Erasmus Center of Rotterdam in the Netherlands.

In addition to basic and translational research activities, Prof. Gneccchi has participated and is participating as co-investigator in randomized clinical studies, mainly in the field of ischemic heart disease and dyslipidemia.

Prof. Gneccchi is the PI of a prospective registry of STEMI patients discharged by the San Matteo Hospital. The analysis of this registry, that was started 15 years ago, has allowed to discover numerous predictive parameters of cardiovascular outcome in post ischemic patients and patients affected by chronic ischemic heart disease. Studies have been conducted on the adherence to therapy with statins, to the meaning of various biochemical parameters including inflammation and renal dysfunction parameters.

Prof. Gneccchi is also responsible for a National prospective registry of post-AMI patients aiming to establish the clinical and genetic predictors of ventricular fibrillation during a first myocardial infarction episode.

Prof. Gneccchi's competence and recognized position on the international scene in the field of cardiovascular research is testified not only by the scientific production of relevant quality and originality, but also by numerous invited readings he has held over the last 15 years (over 150).

Prof. Gneccchi was a member of the scientific committee organizing scientific congresses of international importance such as, for example, the annual congress of the International Society for Cell and Gene Therapy (ISCT) and of the European Society of Thoracic Surgeons.

Since 2016, Prof. Gneccchi has been the Chair of the "Cardiovascular Committee" of the International Society for Cell and Gene Therapy (ISCT).

**In the two-year period 2021-23 he was President of the Europe section of ISCT.**

Since 2020 Prof. Gneccchi is a member of the nucleus of the CARE (Cardiovascular Regenerative & Reparative Medicine) working group of the European Society of Cardiology.

Since 2021 Prof. Gneccchi is a member of Cellular Biology of the Heart working group of the European Society of Cardiology.

In the two-year period 2021-23 he was a member of the board of the Council of Basic Science of the European Society of Cardiology.

## TEACHING ACTIVITIES

November 2017 – present	Associate Professor in Cardiology Department of Molecular Medicine – Unit of Cardiology Faculty of Medicine and Surgery University of Pavia  Teaching and tutoring: <ul style="list-style-type: none"><li>- Integrated Course “Diseases of the Cardiovascular System” Golgi Degree Course in Medicine and Surgery (in Italian);</li><li>- Integrated Course “Diseases of the Cardiovascular System” Harvey Degree Course in Medicine and Surgery (in English);</li><li>- School of Specialization in Cardiology;</li><li>- School of Specialization in Internal Medicine;</li><li>- School of Specialization in Pulmonary Medicine;</li><li>- School of Specialization in Cardiac Surgery;</li><li>- School of Specialization in Anesthesiology and Reanimation;</li><li>- School of Specialization in Radiology;</li><li>- School of Specialization in Sport Medicine;</li><li>- School of Specialization in Geriatric Medicine;</li><li>- School of Specialization in Pathology and Clinical Biochemistry.</li></ul>
August 2018 – present	Honorary Professor Department of Medicine University of Cape Town (South Africa)
April 2017 – present	Member of the PhD Program in Translational Medicine, Department of Molecular Medicine – Unit of Cardiology Faculty of Medicine and Surgery University of Pavia
October 2010 – October 2017	Assistant Professor of Cardiology Department of Molecular Medicine – Unit of Cardiology Faculty of Medicine and Surgery University of Pavia  Teaching and tutoring: <ul style="list-style-type: none"><li>- Integrated Course “Diseases of the Cardiovascular System” Golgi Degree Course in Medicine and Surgery (in Italian);</li><li>- Integrated Course “Diseases of the Cardiovascular System” Harvey Degree Course in Medicine and Surgery (in English);</li><li>- School of Specialization in Cardiology;</li></ul>
October 2012 – present	Holder of the course of Cardiovascular System Diseases Corso di Laurea in Biotecnologie presso l’Università di Pavia.
August 2012 – present	Visiting Senior Lecturer Department of Medicine University of Cape Town (South Africa)
April 2006 - March 2010	Non tenure track Assistant Professor of Cardiology

Department of Molecular Medicine – Unit of Cardiology  
Faculty of Medicine and Surgery  
University of Pavia

Teaching and tutoring:

- Integrated Course “Diseases of the Cardiovascular System”  
Golgi Degree Course in Medicine and Surgery (in Italian);
- Integrated Course “Diseases of the Cardiovascular System”  
Harvey Degree Course in Medicine and Surgery (in English);
- School of Specialization in Cardiology;



## SELECTED PEER REVIEWED MANUSCRIPTS

1. Cornara S, Mandurino-Mirizzi A, Somaschini A, Mauri S, Crimi G, Munafò A, Camporotondo R, **Gnecchi M**, De Servi S, De Ferrari GM, Ferlini M.  
***Derivation and validation of the incomplete ST-segment resolution score and its usefulness for treatment with glycoprotein IIb-IIIa inhibitors***  
J Cardiovasc Med. 2024 Feb 1;25(2):173-175. doi: 10.2459/JCM.0000000000001583.
1. Somaschini A, Cornara S, Leonardi S, Demarchi A, Mandurino-Mirizzi A, Fortuni F, Ferlini M, Crimi G, Camporotondo R, **Gnecchi M**, Oltrona Visconti L, De Servi S, De Ferrari GM.  
***Beneficial Effects of IABP in Anterior Myocardial Infarction Complicated by Cardiogenic Shock***  
Medicina (Kaunas). 2023 Oct 11;59(10):1806. doi: 10.3390/medicina59101806.
2. Vives J, Sanchez-Guijo F, **Gnecchi M**, Zwaginga JJ.  
***Cell and gene therapy workforce development: the role of the International Society for Cell & Gene Therapy (ISCT) in the creation of a sustainable and skilled workforce in Europe.***  
Cytotherapy. 2023 Jul 27:S1465-3249(23)00982-9. doi: 10.1016/j.jcyt.2023.06.006.
3. Giannetti F, Barbieri M, Shiti A, Casini S, Sager PT, Das S, Pradhananga S, Srinivasan D, Nimani S, Alerni N, Louradour J, Mura M, **Gnecchi M**, Brink P, Zehender M, Koren G, Zaza A, Crotti L, Wilde AAM, Schwartz PJ, Remme CA, Gepstein L, Sala L, Odening KE.  
***Gene- and variant-specific efficacy of serum/glucocorticoid-regulated kinase 1 inhibition in long QT syndrome types 1 and 2.***  
Europace. 2023 May 19;25(5):euad094. doi: 10.1093/europace/euad094.
4. Evans PC, Davidson SM, Wojta J, Bäck M, Bollini S, Brittan M, Catapano AL, Chaudhry B, Cluitmans M, **Gnecchi M**, Guzik TJ, Hofer I, Madonna R, Monteiro JP, Morawietz H, Osto E, Padró T, Sluimer JC, Tocchetti CG, Van der Heiden K, Vilahur G, Waltenberger J, Weber C.  
***From novel discovery tools and biomarkers to precision medicine-basic cardiovascular science highlights of 2021/22.***  
Cardiovasc Res. 2022 Oct 21;118(13):2754-2767. doi: 10.1093/cvr/cvac114. (IF: 14,2)
5. Gyöngyösi M, Alcaide P, Asselbergs FW, Brundel BJJM, Camici GG, da Costa Martins P, Ferdinandy P, Fontana M, Girao H, **Gnecchi M**, Gollmann-Tepeköylü C, Kleinbongard P, Krieg T, Madonna R, Paillard M, Pantazis A, Perrino C, Pesce M, Schiattarella GG, Sluijter JPG, Steffens S, Tschöpe C, Van Linthout S, Davidson SM.  
***Long COVID and the cardiovascular system - elucidating causes and cellular mechanisms in order to develop targeted diagnostic and therapeutic strategies: A joint Scientific Statement of the ESC Working Groups on Cellular Biology of the Heart and Myocardial & Pericardial Diseases.***  
Cardiovasc Res. 2022 Jul 25:cvac115. doi: 10.1093/cvr/cvac115. Online ahead of print. (IF: 14,2)
6. Vezzoli M, Inciardi RM, Oriecua C, Paris S, Murillo NH, Agostoni P, Ameri P, Bellasi A, Camporotondo R, Canale C, Carubelli V, Carugo S, Catagnano F, Danzi G, Dalla Vecchia L, Giovinazzo S, **Gnecchi M**, Guazzi M, Iorio A, La Rovere MT, Leonardi S, Maccagni G, Mapelli M, Margonato D, Merlo M, Monzo L, Mortara A, Nuzzi V, Pagnesi M, Piepoli M, Porto I, Pozzi A, Provenzale G, Sarullo F, Senni M, Sinagra G, Tomasoni D, Adamo M, Volterrani M, Maroldi R, Metra M, Lombardi CM, Specchia C.J  
***Machine learning for prediction of in-hospital mortality in coronavirus disease 2019 patients: results from an Italian multicenter study.***  
J Cardiovasc Med 2022 Jul 1;23(7):439-446. doi: 10.2459/JCM.0000000000001329.PMID: 35763764 (IF: 2,4)

7. **Gnecchi M.**  
***Self-perception of acute symptoms in adolescents with COVID-19.***  
 Lancet Reg Health Eur. 2022 May;16:100383. doi: 10.1016/j.lanepe.2022.100383. (IF: 20,9)
8. Lombardi CM, Specchia C, Conforti F, Rovere MT, Carubelli V, Agostoni P, Carugo S, Danzi GB, Guazzi M, Mortara A, Piepoli M, Porto I, Sinagra G, Volterrani M, Ameri P, **Gnecchi M**, Leonardi S, Merlo M, Iorio A, Bellasi A, Canale C, Camporotondo R, Catagnano F, Dalla Vecchia LA, Di Pasquale M, Giovinazzo S, Maccagni G, Mapelli M, Margonato D, Monzo L, Nuzzi V, Oriecuia C, Pala L, Peveri G, Pozzi A, Provenzale G, Sarullo F, Adamo M, Tomasoni D, Inciardi RM, Senni M, Metra M.  
***Sex-related differences in patients with coronavirus disease 2019: results of the Cardio-COVID-Italy multicentre study.***  
 J Cardiovasc Med (Hagerstown). 2022 Apr 1;23(4):254-263. doi: 10.2459/JCM.0000000000001261. (IF: 2,4)
9. Iorio A, Lombardi CM, Specchia C, Merlo M, Nuzzi V, Ferraro I, Peveri G, Oriecuia C, Pozzi A, Inciardi RM, Carubelli V, Bellasi A, Canale C, Camporotondo R, Catagnano F, Vecchia LD, Giovinazzo S, Maccagni G, Mapelli M, Margonato D, Monzo L, Provenzale G, Sarullo F, Tomasoni D, Ameri P, **Gnecchi M**, Leonardi S, Agostoni P, Carugo S, Danzi GB, Guazzi M, La Rovere MT, Mortara A, Piepoli M, Porto I, Volterrani M, Sinagra G, Senni M, Metra M.  
***Combined Role of Troponin and Natriuretic Peptides Measurements in Patients with Covid-19 (from the Cardio-COVID-Italy Multicenter Study).***  
 Am J Cardiol. 2022 Jan 18:S0002-9149(21)01204-2. doi: 10.1016/j.amjcard.2021.11.054. (IF=2,77)
10. Sala L, Leonov V, Mura M, Giannetti F, Khudiakov A, Moretti A, Crotti L, **Gnecchi M**, Schwartz PJ. ***Use of hiPSC-Derived Cardiomyocytes to Rule Out Proarrhythmic Effects of Drugs: The Case of Hydroxychloroquine in COVID-19.***  
 Front Physiol. 2022 Jan 27;12:730127. doi: 10.3389/fphys.2021.730127. (IF=4,56)
11. Baldi E, Camporotondo R, **Gnecchi M**, Totaro R, Guida S, Costantino I, Repetto A, Savastano S, Sacchi MC, Bollato C, Giglietta F, Oltrona Visconti L, Leonardi S; STEACS-EMS study group.  
***Barriers associated with emergency medical service activation in patients with ST-segment elevation acute coronary syndromes.***  
 Intern Emerg Med. 2021 Nov 26:1-10. doi: 10.1007/s11739-021-02894-7. Online ahead of print. (IF: 3,4)
12. Lima Correa B, El Harane N, Desgres M, Perotto M, Alayrac P, Guillas C, Pidial L, Bellamy V, Baron E, Autret G, Kamaleswaran K, Pezzana C, Perier MC, Vilar J, Alberdi A, Brisson A, Renault N, **Gnecchi M**, Silvestre JS, Menasché P.  
***Extracellular vesicles fail to trigger the generation of new cardiomyocytes in chronically infarcted hearts.***  
 Theranostics. 2021 Nov 2;11(20):10114-10124. doi: 10.7150/thno.62304. eCollection 2021. (IF: 11,55)
13. Kozek K, Wada Y, Sala L, Denjoy I, Egly C, O'Neill MJ, Aiba T, Shimizu W, Makita N, Ishikawa T, Crotti L, Spazzolini C, Kotta MC, Dagradi F, Castelletti S, Pedrazzini M, **Gnecchi M**, Leenhardt A, Salem JE, Ohno S, Zuo Y, Glazer AM, Mosley JD, Roden DM, Knollmann BC, Blume JD, Extramiana F, Schwartz PJ, Horie M, Kroncke BM.  
***Estimating the Posttest Probability of Long QT Syndrome Diagnosis for Rare KCNH2 Variants.***  
 Circ Genom Precis Med. 2021 Aug;14(4):e003289. doi: 10.1161/CIRCGEN.120.003289. (IF: 3,4)

14. Paris S, Inciardi RM, Lombardi CM, Tomasoni D, Ameri P, Carubelli V, Agostoni P, Canale C, Carugo S, Danzi G, Di Pasquale M, Sarullo F, La Rovere MT, Mortara A, Piepoli M, Porto I, Sinagra G, Volterrani M, **Gnecchi M**, Leonardi S, Merlo M, Iorio A, Giovinazzo S, Bellasi A, Zaccone G, Camporotondo R, Catagnano F, Dalla Vecchia L, Maccagni G, Mapelli M, Margonato D, Monzo L, Nuzzi V, Pozzi A, Provenzale G, Specchia C, Tedino C, Guazzi M, Senni M, Metra M.  
**Implications of atrial fibrillation on the clinical course and outcomes of hospitalized COVID-19 patients: results of the Cardio-COVID-Italy multicentre study.** *Europace*. 2021 Oct 9;23(10):1603-1611. doi: 10.1093/europace/euab146. (IF: 5,2)
15. Nuzzi V, Merlo M, Specchia C, Lombardi CM, Carubelli V, Iorio A, Inciardi RM, Bellasi A, Canale C, Camporotondo R, Catagnano F, Dalla Vecchia LA, Giovinazzo S, Maccagni G, Mapelli M, Margonato D, Monzo L, Oriecua C, Peveri G, Pozzi A, Provenzale G, Sarullo F, Tomasoni D, Ameri P, **Gnecchi M**, Leonardi S, Agostoni P, Carugo S, Danzi GB, Guazzi M, La Rovere MT, Mortara A, Piepoli M, Porto I, Volterrani M, Senni M, Metra M, Sinagra G.  
**The prognostic value of serial troponin measurements in patients admitted for COVID-19.** *ESC Heart Fail*. 2021 Oct;8(5):3504-3511. doi: 10.1002/ehf2.13462. (IF: 3,9)
16. Pandolfi L, Bozzini S, Frangipane V, Percivalle E, De Luigi A, Violatto MB, Lopez G, Gabanti E, Carsana L, D'Amato M, Morosini M, De Amici M, Nebuloni M, Fossali T, Colombo R, Saracino L, Codullo V, **Gnecchi M**, Bigini P, Baldanti F, Lilleri D, Meloni F.  
**Neutrophil Extracellular Traps Induce the Epithelial-Mesenchymal Transition: Implications in Post-COVID-19 Fibrosis.** *Front Immunol*. 2021 Jun 14;12:663303. doi: 10.3389/fimmu.2021.663303. eCollection 2021. (IF: 6,4)
17. Pagnesi M, Inciardi RM, Lombardi CM, Agostoni P, Ameri P, Barbieri L, Bellasi A, Camporotondo R, Canale C, Carubelli V, Carugo S, Catagnano F, Dalla Vecchia LA, Danzi GB, Di Pasquale M, Gaudenzi M, Giovinazzo S, **Gnecchi M**, Guazzi M, Iorio A, La Rovere MT, Leonardi S, Maccagni G, Mapelli M, Margonato D, Merlo M, Monzo L, Mortara A, Nuzzi V, Piepoli M, Porto I, Pozzi A, Sarullo F, Sinagra G, Tedino C, Tomasoni D, Volterrani M, Zaccone G, Senni M, Metra M.  
**Determinants of the protective effect of glucocorticoids on mortality in hospitalized patients with COVID-19: Insights from the Cardio-COVID-Italy multicenter study.** *Int J Infect Dis*. 2021 Jul;108:270-273. doi: 10.1016/j.ijid.2021.05.056. (IF: 3,6)
18. Mandurino-Mirizzi A, Kajana V, Cornara S, Somaschini A, Demarchi A, Galazzi M, Crimi G, Ferlini M, Camporotondo R, **Gnecchi M**, Ferrario M, Oltrona-Visconti L, De Ferrari GM.  
**Elevated serum uric acid is a predictor of contrast associated acute kidney injury in patient with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention.** *Nutr Metab Cardiovasc Dis*. 2021 Jun 30;31(7):2140-2143. doi: 10.1016/j.numecd.2021.04.002. Epub 2021 Apr 19. (IF: 4,2)
19. **Gnecchi M**, Sala L, Schwartz PJ.  
**Precision Medicine and cardiac channelopathies: when dreams meet reality.** *Eur Heart J*. 2021 May 1;42(17):1661-1675. doi: 10.1093/eurheartj/ehab007.ADFSD (IF: 30)
20. Mandurino-Mirizzi A, Cornara S, Somaschini A, Demarchi A, Galazzi M, Puccio S, Montalto C, Crimi G, Ferlini M, Camporotondo R, **Gnecchi M**, Ferrario M, Oltrona-Visconti L, De Ferrari GM.  
**Elevated serum uric acid is associated with a greater inflammatory response and with short- and long-term mortality in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention.** *Nutr Metab Cardiovasc Dis*. 2021 Feb 8;31(2):608-614. doi: 10.1016/j.numecd.2020.10.020. Epub 2020 Nov 3. (IF: 4,2)

21. Demarchi A, Cornara S, Somaschini A, Fortuni F, Mandurino-Mirizzi A, Crimi G, Ferlini M, **Gnecchi M**, De Servi S, Visconti LO, De Ferrari GM.  
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Pavia, 12 January 2024