Allegato B

NOME COGNOME
Curriculum Vitae

Place
Date

Part I – General Information

Full Name	Roberto Gaetani
Citizenship	Italian

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	2003	Sapienza University of Rome	Graduated cum laude, Bachelor of Biotechnology.
University graduation	2005	Sapienza University of Rome	Graduated cum laude, Master in Medical Biotechnology
Post-graduate studies			
PhD	2009	Sapienza University of Rome	PhD in Pasteurian Science. PhD project: Adult Cardiac Stem Cells: characterization and role in cardiovascular medicine.
Pre-doctorate training	2003-2005	Sapienza University of Rome	Research internship in the Dep. Of Experimental Medicine. Research on the isolation and characterization of cardiac progenitor cells and their role in cardiac regeneration.
Pre-doctorate training	2006	Hannover Medical School, Hannover, Germany.	Research internship in the Leibniz Research Laboratories for Biotechnology and Artificial Organs. Research on 3D culture approaches of cardiac progenitor cells for cardiac regeneration.
Abilitazione Scientifica Nazionale (ASN).	2021		ASN alle funzioni di professore universitario di Seconda Fascia nel Settore Concorsuale 06/A2 - PATOLOGIA GENERALE E PATOLOGIA CLINICA con validità dal 31/05/2021 al 31/05/2032
Abilitazione Scientifica Nazionale (ASN).	201		ASN alle funzioni di professore universitario di Seconda Fascia nel Settore Concorsuale 06/N1 - SCIENZE DELLE PROFESSIONI SANITARIE E

DELLE TECNOLOGIE MEDICHE APPLICATE con validità dal 31/05/2021 al 31/05/2032

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
Dec 2023	Dec 2024	Sapienza University of Rome, Department of Molecular Medicine	Assegnista di Ricerca
Dec 2018	Dec 2023	Sapienza University of Rome, Department of Molecular Medicine	RTDA
Apr 2015	Dec 2018	Department of Bioengineering, Sanford Consortium for Regenerative Medicine, University of California San Diego. San Diego (CA), US.	Research Scientist
Mar 2105	Jun 2019	Jacobs School of Engineering, University of California, San Diego. San Diego (CA), US.	Co-Director of NSF-Research Experience for Undergraduate students in Engineered Materials for Tissue Engineering and Drug Delivery.
Apr 2015	Aug 2023	Jacobs School of Engineering, University of California, San Diego. San Diego (CA), US.	Instructor of COSMOS summer program. Co-director COSMOS cluster 8: Tissue Engineering and Regenerative Medicine.
Jul 2013	Mar 2015	Department of Bioengineering, Sanford Consortium for Regenerative Medicine, University of California San Diego.	Post-Doctoral fellow
Mar 2009	Jun 2013	Dep. Of Experimental Cardiology, University Medical Center Utrecht, Utrecht, the Netherlands.	Post-Doctoral fellow
Sep 2012	Aug 2015	Sapienza University of Rome, Department of Experimental Medicine	Assegnista di Ricerca
Nov 2008	Feb 2009	Sapienza University of Rome, Department of Experimental Medicine	Fellow student

Part IV – Teaching experience

Year	Institution	Lecture/Course
2019-2023	Master in Pharmaceutical Biotechnology, University of Rome Sapienza.	Molecular and Cellular Pathology, 3CFU

2016-2018:	UC San Diego Bioengineering Graduate Program.	Course BENG277: Tissue Engineering laboratory.
2016-2018:	UC San Diego Bioengineering Graduate Program.	Course BENG241A: Tissue Engineering and Regenerative Medicine Foundation;
2016-2019	Jacobs School of Engineering, University of California, San Diego. San Diego (CA), US.	Engineered Materials for Tissue Engineering and Drug Delivery. Summer program
2015-2023	California State Summer School for Mathematics and Science [COSMOS]. Jacobs School of Engineering, University of California, San Diego. San Diego (CA), US.	Tissue engineering and regenerative medicine cluster. Summer program
2012	Faculty of Life Science, University of Utrecht. Utrecht (NL).	Teaching assistant, undergraduate program, Cardiac Tissue Engineering module; Cardiovascular regenerative Medicine module

Part V
Awards
2012: Transatlantic career Development award; Leduq Foundation; Paris.
2009: Post-Doc career development award; Pasteur Institute- Cenci Bolognetti Foundation, Rome IT, Italy.

Memberships (past and current)
American Heart Association (AHA); European Society of Cardiology (ESC); International Society for Heart Research (ISHR); Tissue engineering and Regenerative Medicine international Society (TERMIS); Biomedical Engineering Society (BMES).

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2023-2025	Molecular processes underlying hypertrophy in icefish can be translated in cardiac cultures from zebrafish to human cardiac-iPSCs and organoids	Programma Nazionale di Ricerca in Antartide - Bando PNRA 2022. PNRA0000022. Responsabile scientifico unità Sapienza.	
2023-2025	Role of 22q11.2 deletion syndrome (22q11DS) haploinsufficency in driving cardiac extracellular matrix changes and mechanical sequelae using a Tbx1 mutant mice model: mechanistic insight and detection of potential therapeutic targets.	Prin 2022 PNRR. Responsabile Scientifico, Prof.ssa Elisa Messina. Componente unità di ricerca.	
2021-2024	Evaluation of gelatin-based cryo-hydrogels for cardiac tissue engineering applications.	Università Sapienza. Bando Ateneo. Numero protocollo: RM12117A8B470BA7	
2020-2023	Evalaution of Silicon Nanowires for controlled drug release in a 3D	Università Sapienza. Bando Ateneo. Numero protocollo: RM120172B7F71B4B	

	model of healthy and patholgical lung tissue.		
2019-2021:	Research Experience for Undergraduate. Engineered Materials for Tissue Engineering and Drug Delivery.	National Science Foundation; USA. Grant. N. 1559781. Co-PI	
2019-2021:	Implications of medical low dose radiation exposure-MEDIRAD	Progamma Horizon 2020; EU. Responsabile Scientifico, Prof.ssa Elisa Messina. Componente unità di ricerca.	
2017-2019	2017-2019: Evaluation of human islets extracellular matrix components for tissue engineering applications.	Human islets Research Network-NHI grant; Young investigator pilot grant. Study number BS358	No direct funding. Access to human samples, reagents, and facilities free of charge to conduct pilot studies in the diabetes field.
2016-2019:	A Vascularized 3D Biomimetic for Islet Function and Physiology.	Human islets Research Network-NHI grant; grant n. UC4 DK104196; Consortium Partner;	
2013-2015	Cardiac tissue engineering by using Cardiac stem cells, heart derived extracellular matrix and Tissue Printing technology for cardiac regeneration.	Transatlantic career Development grant; Leduq Foundation; Paris.	
2009-2011	Comparative genome analysis of Cardiac Progenitor cells isolated with different methodologies.	Post-Doc career development award; Pasteur Institute-Cenci Bolognetti Foundation, Rome IT, Italy. € 24,000.	

Part VII – Research Activities

Keywords:
Cardiac Regenerative Medicine, Tissue Engineering, Tissue modelling and drug screening, Cardiac Remodeling/reverse remodeling, Microenviroment, Biomaterials.

Brief Description

The initial research activity was a pioneering effort that focused on the isolation and characterization of a newly discovered cardiac progenitor/stromal cell population from murine and human organ culture. These cells' unique feature is their spontaneous growth as cellular spheroids/micro-tissues (Cardiospheres, CSs) that recapitulate the developmental stages and

differentiation process of the organ of origin. This innovative approach represents a prototype of the organoid's models, currently widely used in drug screening and/or tissue development studies, and holds great promise for the field of regenerative medicine.
After functional evaluation of the CSs and CSs-derived cells (CDCs), both in vitro and in vivo, and exploitation of their translational properties, both at pre-clinical and clinical levels, my interest further expanded on the development of new biomaterial-based approaches for tissue engineering applications, both for translational approaches and for the development of new 3D tissues to study pathophysiological mechanisms that can lead to chronic cardiac disease following myocardial infarction. During my Post-Doc at the Department of Experimental Cardiology in Utrecht, I initiated the use of biomaterials and established cardiovascular tissue engineering as a new research line in Prof. Sluijter's lab. We were the first to demonstrate that cardiac progenitor cells can be used in combination with tissue printing technology for the in vitro generation of 3D cardiac constructs for in vivo applications. Our approach showed that the printed tissue regenerated the infarcted myocardium and prevented adverse remodeling after transplantation, therefore having the potential to slow the progression toward a chronic myocardial disease. At the molecular level, we also showed that the paracrine activity of transplanted cells had an effect on the microenvironment of the infarcted myocardium, reducing scar formation while promoting tissue regeneration by preventing cardiomyocyte apoptosis and inducing neo-vascularization. Our studies led to the understanding of the importance of the proper microenvironment to develop new regenerative translational approaches and prevent chronic disease development, as well as to better generate 3D models that can be used to study pathophysiological mechanisms that led to chroming heart failure. I have started to investigate the effects of decellularized biomaterials on cardiac progenitor cells and their potential as a platform for cell delivery. This line of research has been developed in Prof. Christman's lab in the Bioengineering department of the University of California San Diego and made possible thanks to a Young Career Development Grant that I received from the Leduq Foundation in Paris. We showed that a cardiac-specific hydrogel is advantageous in preserving and enhancing the cardiogenic commitment of human cardiac progenitor cells compared to other commercially available hydrogels. We also showed that the cardiac hydrogel better preserves cell survival in the presence of reactive oxygen species, such as in the infarcted myocardium. We demonstrated that the cells do not alter the gelation properties of the cardiac hydrogel in vivo and that the matrix can be used as a platform for cell delivery. This is particularly important because cardiac hydrogel is one of the few naturally derived materials that can be injected through a catheter, thus serving as a minimally invasive cell-biomaterial-based therapy with beneficial effects on patient morbidity and hospitalization costs. We also investigated the underlying mechanisms of the previously mentioned myocardial extracellular matrix hydrogel's regenerative capability. We used transcriptome and histological analyses to show that the myocardial matrix hydrogel prevented cardiomyocyte apoptosis, increased vasculogenesis, increased cardiac progenitor cell recruitment, and promoted cardiomyocyte proliferation and survival. In the Department of Bioengineering, I have also expanded my research interest in the diabetic field. We have generated a new protocol for the decellularization of pancreatic tissue, which we have further used (in collaboration with other groups) to recreate a 3D microvascular pancreatic tissue to study type I diabetic disease and the role of immune cells in the pathology. We are also currently characterizing the extracellular matrix compartment of healthy and diabetic donors in order to better recreate the isle of Langerhans microenvironment and better understand the role of the ECM on the development of type II diabetes.
Recently, we have also used our 3D models developed using cells from a clinically relevant rat model of heart irradiation simulating thoracic radiotherapy for the in vitro and in vivo evaluation of the effects of different breast cancer ionizing radiation doses on the cardiovascular system. This study was performed by the applicant in the context of a project (MEDIRAD Grant number: 755523) funded by HORIZON 2020, the EU Framework Program for Research and Innovation. Our study showed that following irradiation, early paracrine and transcriptional alterations of the cardiac

stroma may represent a dose- and time-dependent biological substrate for the delayed cardiac dysfunction phenotype observed in vivo.
Lastly, we have recently started to investigate the role of cardiac stromal cells in the development and progression of the pathological cardiac phenotype in a mouse model of DiGeorge syndrome and the molecular processes underlying hypertrophy in icefish for which the applicant has receive funding from the PNRA program (Programma nazionale di ricerca in Antartide) funded by the Italian Ministry of Education, University and Research. ways.

International Congress invited speaker:

- 10/12/2019, Utrecht (The Netherlands): New approaches in cardiac tissue modelling.
- 12/12/2016, San Diego (USA), TERMIS-AM conference; Biomaterial-based strategies for exosome delivery.
- 23/04/2016, San Diego (USA), BMES Translational Medicine Day 2016; Biomaterials and Tissue Engineering.
- 25/01/2013, Les Diablerets (Switzerland), HFA Winter Research Meeting on Translational Research. "Tissue printed Cardiac Progenitor Cells improve myocardial function in a mouse model of MI."
- 8/06/2011, Granada (Spain); Tissue engineering and Regenerative Medicine international Society (TERMIS). "Tissue Printing technology for Cardiac regeneration" .
- 11/05/2011, Brussels (Belgium); Heart Failure Association Cardiac Stem Cell Workshop.
- " Cardiospheres for Cardiac Regeneration".
- 25/03/2010, Bucharest (Romania): Federation of the European Academies of Medicine (FEAM). "Cardiac Stem and Tissue engineering for Myocardial regeneration".
- 9/02/2009, Utrecht (The Netherlands): Regenerative Medicine Symposium. "Cardiac Stem cells isolation as a therapeutic tool for heart regeneration.
- 16/04/2009, Roma Monteporzio Catone (Italia): I.S.P.E.S.L symposium on "Magnetic Field and Biological system". Cardiac Stem Cells and Electromagnetic fields.

Scientific Reviewer/ Editorial board:
Cardiovascular research (Card Res); Journal of the American College of Cardiology (JACC); Journal of Cellular and Molecular Medicine (JCMM); Biomaterials; Tissue Engineering; Advanced Biomaterials; Stem Cells International.
Guest Editor of the special issue "Stem Cells as Regenerative Tools and Biological Models for the Cardiovascular System" for Stem Cell International Journal.
Guest Editor of the special issue "Evalauting biomaterial and implanted devices" for Drug Discovery Today: Disease Model.
Topic Editorial Board Member of International Journal of Molecular Sciences

Part VIII – Summary of Scientific Achievements. Bibliometrics (as of 21/08/2024):

Impact factor (IF) source: Journal citation report (https://jcr.clarivate.com/jcr/search-results) or Scopus if not available on Jcr. IF of the publication year.

Scopus Author ID: 15831924500
https://www.scopus.com/authid/detail.uri?authorId=15831924500

Orcid ID: 0000-0001-5667-5152
https://orcid.org/0000-0001-5667-5152

NIH bibliography: https://www.ncbi.nlm.nih.gov/myncbi/1jatja3brjv5s/bibliography/public/

Product type	Number	Data Base	Start	End
Papers [international]	32	Entrez pubmed, Scopus, Web of science	2007	2024
Books [scientific]	4	Entrez pubmed, Scopus, Web of science	2011	2015
Editorials	4	Entrez pubmed, Scopus, Web of science	2017	2024

Total Impact factor: 205
Total citations: 2023 (Scopus); 2920 (Google scholar).
Average Citations per Product: 63.2
Hirsch (H) index: 24 (Scopus); 26 (Google scholar)
Normalized H index*: 1.6

***H index divided by the academic seniority (time span from graduation, PhD in 2009 =15y)**

Part IX– Selected Publications

Selected publications bibliometrics:
Total Impact factor: 107,6
Average IF (IF/nr of publications): 8,97
Total Citations: 845
Average citations per product: 70,4

1. **Gaetani R**, Feyen DA, Verhage V, Slaats R, Messina E, Christman KL, Giacomello A, Doevendans PA, Sluijter JP. Epicardial application of cardiac progenitor cells in a 3D-printed gelatin/hyaluronic acid patch preserves cardiac function after myocardial infarction. Biomaterials. 2015 Aug; 61:339-48.
   IF 2015: 8.4; nr citazioni: 252 (Scopus); 257 (wos)

2. Bejleri D, Streeter BW, Nachlas ALY, Brown ME, **Gaetani R**, Christman KL, Davis ME. A Bioprinted Cardiac Patch Composed of Cardiac-Specific Extracellular Matrix and Progenitor Cells for Heart Repair. Adv Healthc Mater. 2018 Dec;7(23)
   IF 2018: 7.4; nr citazioni: 189 (Scopus); 174 (wos)

3. Wassenaar J, **Gaetani R**, Garcia J, Braden R, Luo C, Huang D, DeMaria A, Omens J, Christman KL. Transcriptional and Histological Evidence for the Mechanisms Underlying the Functional Benefits of a Myocardial Matrix Hydrogel for Post-Myocardial Infarction Treatment. J Am Coll Cardiol. 2016 Mar 8;67(9):1074-86.
   IF 2016: 19.89; nr citazioni: 116 (Scopus); 103 (wos)

4. Carlini AS, **Gaetani R**, Braden RL, Luo C, Christman KL, Gianneschi NC. Enzyme-responsive progelator cyclic peptides for minimally invasive delivery to the heart post-myocardial infarction. Nat Commun. 2019 Apr 15;10(1):1735.
   IF 2019: 14.9; nr citazioni: 78 (Scopus); 68 (wos)

5. **Gaetani R**, Yin C, Srikumar N, Braden R, Doevendans PA, Sluijter JP, Christman KL. Cardiac derived extracellular matrix enhances cardiogenic properties of human cardiac progenitor cells. Cell Transplant. 2015 Nov 16.
   IF 2015: 3.4; nr citazioni: 55 (Scopus); 50 (wos)

6. **Gaetani R**, Eric Adriano Zizzi, Marco Agostino Deriu, Umberto Morbiducci, Maurizio Pesce, Elisa Messina. When stiffness matters: mechanosensing in heart development and disease. Front Cell Dev Biol. 25 May 2020; 8:334.
   IF 2020: 6.1; nr citazioni: 49 (Scopus); 43 (wos)

7. Hernandez MJ[#], **Gaetani R[#],** Pieters VM, Ng NW, Chang AE, Martin TR, van Ingen E, Mol EA, Sluijter JPG, Christman KL. Decellularized Extracellular Matrix Hydrogels as a Delivery Platform for MicroRNA and Extracellular Vesicle Therapeutics. Adv Ther (Weinh). 2018 Jul;1(3). **#co-first author**.
   IF 2018: 5; nr citazioni: 35 (Scopus); 31 (wos)

8. Feyen DA, **Gaetani R**, Doevendans PA, Sluijter JP. Stem-cell based therapy, improving myocardial cell delivery. Advanced Drug Delivery Reviews. 2016 Nov 15;106(Pt A):104-115
   IF 2016: 13.6; nr citazioni: 36 (Scopus); 33 (wos)

9. Pagliarosi O, Picchio V, Chimenti I, Messina E, **Gaetani R**. Building an Artificial Cardiac Microenvironment: A Focus on the Extracellular Matrix. Front Cell Dev Biol. Sep 4 2020; 8: 559032
   IF 2020: 6.1; nr citazioni: 21 (Scopus); 19 (wos)

10. Diaz M, Tran E, Spang M, Wang R, **Gaetani R**, Luo CG, Braden R, Hill RC, Hansen KC, DeMaria AN, Christman KL, Injectable Myocardial Matrix Hydrogel Mitigates Negative Left Ventricular Remodeling in a Chronic Myocardial Infarction Model. JACC Basic Transl Sci. 2021 Mar 10;6(4):350-361
    IF 2022: 9.7; nr citazioni: 10 (Scopus); 9 (wos)

11. Bender RHF, O'Donnell BT, Shergill B, Pham BQ, Tahmouresie S, Sanchez CN, Juat DJ, Hatch MMS, Shirure VS, Wortham M, Nguyen-Ngoc KV, Jun Y, **Gaetani R,** Christman KL, Teyton L, George SC, Sander M, Hughes CCW. A vascularized 3D model of the human pancreatic islet for ex vivostudy of immune cell-islet interaction. Biofabrication. 2024 Jan 11;16(2):025001. doi: 10.1088/1758-5090/ad17d0.
    IF 2023: 8.2; nr citazioni: 4 (Scopus); 4 (wos)

12. Picchio V[#], **Gaetani R[#]**, Pagano F, Derevyanchuk Y, Pagliarosi O, Floris E, Cozzolino C, Bernava G, Bordin A, Rocha F, Pereira ARS, Ministro A, Pinto AT, De Falco E, Serino G, Massai D, Tamarat R, Pesce M, Santos SCR, Messina E, Chimenti I. Early Impairment of Paracrine and Phenotypic Features in Resident Cardiac Mesenchymal Stromal Cells after

Thoracic Radiotherapy. Int J Mol Sci. 2024 Mar 1;25(5):2873. doi: 10.3390/ijms25052873. **#co-first author**.
IF 2023: 4.9; nr citazioni: 0 (Scopus); 0 (wos)

Part X– Other Publications (used for bibliometric values)

1. Di Muzio L, Sergi C, Carriero V C, Tirillò J, Adrover A, Messina E, **Gaetani R**, Petralito S, Casadei M A, Paolicelli P. Gelatin-based spongy and compressive resistant cryogels with shape recovery ability as ideal scaffolds to support cell adhesion for tissue regeneration. Reactive and Functional Polymers, 2023, 189, 105607.
IF 2023: 4.5; nr citazioni: 10 (Scopus);

2. Picchio V, Floris E, Derevyanchuk Y, Cozzolino C, Messina E, Pagano F, Chimenti I, **Gaetani R**. Multicellular 3D Models for the Study of Cardiac Fibrosis. Int J Mol Sci. 2022 Oct 1;23(19):11642.
IF 2022: 5.6; nr citazioni: 10 (Scopus); 9 (wos)

3. **Gaetani R**, Derevyanchuk Y, Notargiacomo A, Pea M, Renzi M, Messina E, Palma F. Biocompatibility and Connectivity of Semiconductor Nanostructures for Cardiac Tissue Engineering Applications. Bioengineering (Basel). 2022 Oct 27;9(11):621.
IF 2022: 4.6; nr citazioni: 1 (Scopus); 1 (wos)

4. **Gaetani R**, Aouad S, Demaddalena LL, Straessle H, Dzieciatkowska M, Wortham M, Bender HR, Nguyen-Ngoc KV, Schmid-Schoenbein GW, George SC, Hughes CCW, Sander M, Hansen KC, Christman KL. Evaluation of different decellularization protocols on the generation of pancreas-derived hydrogels. Tissue Eng Part C Methods. 2018 Nov 6.
IF 2018: 2.6; nr citazioni: 58 (Scopus); 55 (wos)

5. Feyen DA, **Gaetani R**, Deddens J, van Keulen D, van Opbergen C, Poldervaart M, Alblas J, Chamuleau S, van Laake LW, Doevendans PA, Sluijter JP. Gelatin Microspheres as Vehicle for Cardiac Progenitor Cells Delivery to the Myocardium. Adv Healthc Mater. 2016 Feb 23.
IF 2016: 5.6; nr citazioni: 48 (Scopus); 44 (wos)

6. **Gaetani R**, Feyen DA, Doevendans PA, Gremmels H, Forte E, Fledderus JO, Ramjankhan FZ, Messina E, Sussman MA, Giacomello A, Sluijter JP. Different types of cultured human adult Cardiac Progenitor Cells have a high degree of transcriptome similarity. J Cell Mol Med. 2014 Nov;18(11):2147-51.
IF 2014: 4.9; nr citazioni: 32 (Scopus); 22 (wos)

7. Johnson T., DeQuach J., **Gaetani R.**, Ungerleider J.,Elhag D., Nigam V., Behfard A. and Christman KL. Human versus porcine tissue sourcing for an injectable myocardial matrix hydrogel. Biomater. Sci; 2: 735-44 2014.
IF 2014: 3.6; nr citazioni: 78 (Scopus); 73 (wos)

8. Gaetani R, Doevendans PA , Metz CHG, Alblas J, Messina E, Giacomello A, Sluijter JPG. Cardiac tissue engineering using tissue printing technology and human Cardiac Progenitor Cells. Biomaterials. 2012 Feb; 33(6):1782-90.
IF 2012: 8.3; nr citazioni: 325 (Scopus); 277 (wos)

9. Chimenti I, Gaetani R, Forte E, Angelini F, De Falco E, Zoccai GB, Messina E, Frati G, Giacomello A. Serum and supplement optimization for EU GMP-compliance in cardiospheres cell culture. J Cell Mol Med. 2014 Jan 20.
   IF 2014: 4.9; nr citazioni: 38 (Scopus); 34 (wos)

10. Feyen D, Gaetani R, Liu J, Noort W, Martens A, den Ouden K, Doevendans PA, Sluijter JP. Increasing short-term cardiomyocyte progenitor cell (CMPC) survival by necrostatin-1 did not further preserve cardiac function. Cardiovasc Res. 2013 Jul 1;99(1):83-91.
   IF 2013:5.9; nr citazioni: 17 (Scopus); 18 (wos)

11. Koudstaal S, Jansen Of Lorkeers SJ, Gaetani R, Gho JM, van Slochteren FJ, Sluijter JP, Doevendans PA, Ellison GM, Chamuleau SA. Concise review: heart regeneration and the role of cardiac stem cells. Stem Cells Transl Med. 2013 Jun;2(6):434-43.
   IF 2013: 5.7; nr citazioni: 72 (Scopus); 59 (wos)

12. Fabrizi C, Angelini F, Chimenti I, Pompili E, Somma F, Gaetani R, Messina E, Fumagalli L, Giacomello A, Frati G. Thrombin and thrombin-derived peptides promote proliferation of cardiac progenitor cells in the form of cardiospheres without affecting their differentiation potential. J Biol Regul Homeost Agents. 2011 Apr-Jun;25(2 Suppl):S43-51.
   IF 2011: 2.4; nr citazioni: 15 (Scopus);

13. Chimenti I, Rizzitelli G, Gaetani R, Angelini F, Ionta V, Forte E, Frati G, Schussler O, Barbetta A, Messina E, Dentini M, Giacomello A. Human cardiosphere-seeded gelatin and collagen scaffolds as cardiogenic engineered bioconstructs. Biomaterials. 2011 Dec; 32(35):9271-81.
   IF 2011: 7.6; nr citazioni: 49 (Scopus); 50 (wos)

14. Gaetani R, Rizzitelli G, Chimenti I, Barile L, Forte E, Ionta V, Angelini F, Sluijter J.P.G., Dentini M, Messina E, Frati G. Cardiospheres and tissue engineering for myocardial regeneration: potential for clinical application. J Cell Mol Med. 2010 May;14(5):1071-7.
   IF 2010: 4.1; nr citazioni: 39 (Scopus); 35 (wos)

15. Gaetani R, Barile L, Forte E, Chimenti I, Ionta V, Di Consiglio A, Miraldi F, Frati G, Messina E, Giacomello A. New perspectives to repair a broken heart. Cardiovasc Hematol Agents Med Chem. 2009 Apr;7(2):91-107.
   IF 2009: 4.6; nr citazioni: 24 (Scopus);

16. Gaetani R, Ledda M, Barile L, Chimenti I, Forte E, De Carlo F, Messina E, Grimaldi S, Giacomello A, Lisi A. Differentiation of human cardiac stem cells exposed to Extremely Low Frequency. Electromagnetic Fields. Cardiovasc Res. 2009 Jun 1;82(3):411-20.
   IF 2009: 6.05; nr citazioni: 105 (Scopus); 89 (wos)

17. Chimenti I, Gaetani R, Barile L, Frati G, Messina E, Giacomello A. c-kit cardiac progenitor cells: what is their potential? Proc Natl Acad Sci U S A. 2009 Jul 14; 106(28): E78;
   IF 2009: 9.77 ; nr citazioni: 6 (Scopus); 5 (wos)

18. Forte E, Chimenti I, Barile L, Gaetani R, Angelini F, Ionta V, Messina E, Giacomello A. Cardiac Cell Therapy: The Next (Re)Generation. Stem Cell Rev. 2011 Nov;7(4):1018-30.
IF 2010: 6.7 ; nr citazioni: 24 (Scopus); 27 (wos)

19. Barile L, Cerisoli F, Frati G, Gaetani R, Chimenti I, Forte E, Cassinelli L, Spinardi L, Altomare C, Kizana E, Giacomello A, Messina E, Ottolenghi S, Magli MC. Bone marrow-derived cells can acquire cardiac stem cells properties in damaged heart. J Cell Mol Med. 2011 Jan;15(1):63-71
IF 2011: 4.5; nr citazioni: 25 (Scopus); 23 (wos)

20. Barile L, Chimenti I, Gaetani R, Forte E, Miraldi F, Frati G, Messina E, Giacomello A. Cardiac stem cells: isolation, expansion and experimental use for myocardial regeneration. Nat Clin Pract Cardiovasc Med. 2007 Feb;4 Suppl 1(S1):S9-S14.
IF 2007: 6; nr citazioni: 96 (Scopus);

Part XI Book Chapter

1. Gaetani R, Ungerleider J. and Christman KL. Acellular Injectable Biomaterials for Treating Cardiovascular Disease. Volume: Stem Cell and Gene Therapy for Cardiovascular Disease. September 2015.

2. Chimenti I, Gaetani R, Barile L, Forte E, Ionta V, Angelini F, Frati G, Messina E, Giacomello A. Isolation and expansion of adult cardiac stem/progenitor cells in the form of cardiospheres from human cardiac biopsies and murine hearts. Methods Mol Biol. 2012;879: 327-38.

3. Gaetani R, Doevendans P.A, Messina E, Sluijter J. P.G. Tissue Engineering For Cardiac Regeneration. Chapter Book; Elsevier Series in the framework of "Studies in Mechanobiology, Tissue Engineering and Biomaterials". 2011, Volume 6, 1-27.

4. Chimenti I, Gaetani R, Barile L, Forte E, Ionta V, Angelini F, Messina E and Giacomello A. Evidence for the existence of resident cardiac stem cells. Springer Science & Business Media series in the framework of Stem Cell Biology and Regenerative Medicine. 2011, Volume: Regenerating the Heart Stem Cells and the Cardiovascular System, 131-149.

Part XII Editorial

1. Picchio V, **Gaetani R**, Chimenti I. Recent Advances in 3D Cultures. Int J Mol Sci. 2024 Apr 10;25(8):4189. doi: 10.3390/ijms25084189.

2. Chimenti I, **Gaetani R**, Pagano F. The cardiac stroma in homeostasis and disease. Editorial. Front Cardiovasc Med. 2023 Jul 10;10:1248750.

3. **Gaetani R**, Chimenti I. 3D Cultures for Modelling the Microenvironment: Current Research Trends and Applications. Int J Mol Sci. 2023 Jul 5;24(13):11109.

4. **Gaetani, R**., Christman, K.L. Evaluating biomaterials and implanted devices". Drug Discovery Today: Disease Models, 2017, 24, pp. 1–3.

5. Hohl M, Ardehali H, Azuaje F, Breckenridge R, Doehner W, Eaton P, Ehret G, Fujita T, **Gaetani R**, Giacca M, Leite-Moreira A, Linke W, Linz D, Lyon A, Mamas AM, Orešič M, Papp Z, Pedrazzini T, Piepoli M, Prosser B, Rizzuto R, Tarone G, Tian R, van Craenenbroeck E, van Rooij E, Wai T, Weiss G, Maack C. Meeting highlights from the 2013 European Society of Cardiology Heart Failure Association Winter Meeting on Translational Heart Failure Research. Eur J Heart Fail. 2014 Jan;16(1):6-14.

Luogo e data:

Roma 21/07/2024

Il dichiarante

Roberto Gaetani