

**CURRICULUM VITAE** Name: Federico Quaini

Address: Dipartimento di Medicina e Chirurgia, Via Gramsci, 14 43126 Parma, Italy  
email: federico.quaini@unipr.it Phone: +39-0521033297

Date and place of birth: 07/04/1948, Cremona, ITALY

*Education*

High School: Liceo Classico 1966

M.D.: University of Parma 1974

Board in Hematology, University of Modena 1977

*Current Italian Appointment* Adjunct Professor of Medicine, University of Parma

*Recent Italian Appointments* Associate Professor of Oncology, University of Parma

Director of the Cardiac Stem Cell Center CISTAC,  
University of Parma

Expert Manager on Regenerative Medicine, University  
Hospital Parma

Coordinator School of Specialization in Oncology

*Previous Appointments* 1979-1985: Assistant Professor of Medicine, University of  
Parma

December 1981 and January - July 1984: Research Assistant Professor, Department of  
Anatomy, New York Medical College, New York, USA

1984: Adjunct Assistant Professor of Histology, City College University of the NYU,  
New York, USA

1985-1996: Associate Professor of Medicine, University of Parma

1987: Research Assistant Professor, Department of Anatomy, NY Medical College,  
New York, USA

1994, 1997, 2001-2007: Visiting Professor, Cardiovascular Research Institute,  
Department of Medicine, NY Medical College, New York, USA

Associate Professor of Oncology, University of Parma 1996-

*Teaching positions:* Lecturer on the Course in Hematology-Oncology, Faculty of  
Medicine; and Course of Professions on Obstetric and Gynecology -University of  
Parma

*Ongoing collaborative work:* 1) Marcello Tiseo, Medical Oncology,  
University/Hospital of Parma on the role of the immune contexture on lung cancer; 2)  
Giovanni Roti, Hematology and Bone Marrow Transplantation-Parma on novel  
therapeutic targets in leukemia and cancer; 3) P. Madeddu, Experimental  
Cardiovascular Medicine, Bristol University, UK on diabetes as a stem cell disease;

*Referee:* PRIN e FIRB scientific projects from the Italian Ministry of University  
(MIUR), Heart Research UK, European RESTART 2016 – 2020 Programmes, e-  
COST Open Call Collection OC-2018-1 and Georgian National Science Foundation.

*Editorial Board* PloSOne

*Reviewer for:* PloSOne, Stem Cell, Biochemical Pharmacology, Stem Cell  
Translational Medicine, Frontiers, British Journal of Cancer, Journal of Cardio-  
Thoracic Surgery, Technology in Cancer Research

*Previously Supported Research:*

Co-Principal Investigator of the NIH Grant entitled: Cardiac Stem Cells and the  
Infarcted aging heart, 2004-2009;

-Co-Principal investigator of the European Project N° 214539 FP7-NMP-2007:  
BIOSCENT, 2008-2013

-Co-Principal Investigator of Regional Project on Regenerative Medicine, 2008-2012

*Actual Supported Research:*

- Co-Principal Investigator of AIRC 2017 project: Study of PD-L1 and other immunotherapy efficacy predictors on cytology and circulating tumor cells in advanced NSCLC
- Co-Principal Investigator of the European Cooperation in Science and Technology project: CA16122 – BIONECA 2017-2020

*Membership*

International Association for the Study of Lung Cancer  
European Society of Medical Oncology  
Council Basic Cardiovascular Science  
Italian Society of Cardiovascular Research

**Statement of Interest:** Translational Research in Normal and Cancer Stem Cells, Tumor Microenvironment, Regenerative Medicine, Identification of the role of stem cells in several pathologic states including cardiovascular and lung diseases.

**Significant Publications**

1. Beltrami CA, Finato N, Rocco M, Feruglio GA, Puricelli C, Cigola E, Quaini F, Sonnenblick EH, Olivetti G, Anversa P Structural basis of end-stage failure in ischemic cardiomyopathy in humans. *Circulation* 1994; 89:151-163
2. Quaini F, Cigola E, Lagrasta C, Sacconi G, Quaini E, Rossi C, Olivetti G, Anversa P End-stage cardiac failure in humans is coupled with the induction of proliferating cell nuclear antigen and nuclear mitotic division in ventricular myocytes. *Circ Res* 1994; 75: 1050-1063
3. Anversa P, Kajstura J, Reiss K, Quaini F, Baldini A, Olivetti G, Sonnenblick EH Ischemic Cardiomyopathy: myocyte cell loss, myocyte cellular hypertrophy, and myocyte cellular hyperplasia. *Ann NY Acad Sci* 1995; 752, 47-64
4. Olivetti G, Abbi R, Quaini F, Kajstura J, Cheng W, Nitahara JA, Quaini E, Di Loreto C, Beltrami CA, Krajewsky S, Reed J, Anversa P Apoptosis in the failing human heart. *N Engl J Med* 336: 1131-114, 1997
5. Quaini F, Urbanek K, Beltrami AP, Finato N, Beltrami CA, Nadal-Ginard B, Kajstura J, Leri A, Anversa P. Chimerism of the transplanted human heart. *N Engl J Med* 2002; 346:15-22
6. Urbanek K, Torella D, Sheikh F, De Angelis A, Nurzynska D, Silvestri F, Beltrami CA, Bussani R, Beltrami AP, Quaini F, Bolli R, Leri A, Kajstura J, Anversa P: Myocardial Regeneration by Activation of Multipotent Cardiac Stem Cells in Ischemic Heart Failure. *Proc Natl Acad Sci USA* 2005; 102: 8692-9,
7. Giuliani A, Frati C, Rossini A, Komlev VS, Lagrasta C, Savi M, Cavalli S, Gaetano C, Quaini F, Manescu A, Rustichelli F. High-resolution X-ray microtomography for three-dimensional imaging of cardiac progenitor cell homing in infarcted rat hearts. *J Tissue Eng Regen Med*. 2011 5:e168-78
8. Frati C, Savi M, Graiani G, Lagrasta C, Cavalli S, Prezioso L, Rossetti P, Mangiaracina C, Ferraro F, Madeddu D, Musso E, Stilli D, Rossini A, Falco A, De Angelis AD, Rossi F, Urbanek K, Leri A, Kajstura J, Anversa P, Quaini E, Quaini F. Resident cardiac stem cells. *Curr Pharm Des*. 2011;17(30):3252-7.
9. Ferraro F, Lymperi S, Mendez-Ferrer S, Saez B, Spencer JA, Yeap BY, Masselli E, Graiani G, Prezioso L, Rizzini EL, Mangoni M, Rizzoli V, Sykes SM, Lin CP,

- Frenette PS, Quaini F, Scadden DT. Diabetes impairs hematopoietic stem cell mobilization by altering niche function. *Sci Transl Med*. 2011;3(104):104ra101.
10. Rai R, Tallawi M, Barbani N, Frati C, Madeddu D, Cavalli S, Graiani G, Quaini F, Roether JA, Schubert DW, Rosellini E, Boccaccini AR. Biomimetic poly(glycerol sebacate) (PGS) membranes for cardiac patch application. *Mater Sci Eng C Mater Biol Appl*. 2013;33(7):3677-87.
  11. Ampollini L, Madeddu D, Falco A, Frati C, Lorusso B, Graiani G, Saccani F, Gervasi A, Rossetti P, Bonomini S, Gnetti L, Lagrasta CA, Silini EM, Quaini E, Petronini P, Alfieri R, Rusca M, Carbognani P, Quaini F. Lung mesenchymal cells function as an inductive microenvironment for human lung cancer propagating cells. *Eur J Cardiothorac Surg*. 2014;46(6):e103-12. doi: 10.1093/ejcts/ezu359.
  14. Rai R, Tallawi M, Frati C, Falco A, Gervasi A, Quaini F, Roether JA, Hochburger T, Schubert DW, Seik L, Barbani N, Lazzeri L, Rosellini E, Boccaccini AR. Bioactive Electrospun Fibers of Poly(glycerol sebacate) and Poly( $\epsilon$ -caprolactone) for Cardiac Patch Application. *Adv Health Mater*. 2015;4(13):2012-25. doi: 10.1002/adhm.201500154.
  15. Massai D, Isu G, Madeddu D, Cerino G, Falco A, Frati C, Gallo D, Deriu MA, Falvo D'Urso Labate G, Quaini F, Audenino A, Morbiducci U. A Versatile Bioreactor for Dynamic Suspension Cell Culture. Application to the Culture of Cancer Cell Spheroids. *PLoS One*. 2016;11(5):e0154610. doi:10.1371/journal.pone.0154610.
  16. Savi M, Bocchi L, Rossi S, Frati C, Graiani G, Lagrasta C, Miragoli M, Di Pasquale E, Stirparo GG, Mastrototaro G, Urbanek K, De Angelis A, Macchi E, Stilli D, Quaini F, Musso E. Anti-arrhythmic effect of growth factors supplemented cardiac progenitor cells in chronic infarcted heart. *Am J Physiol Heart Circ Physiol*. 2016 Mar 18;ajpheart.00035.2015. doi: 10.1152/ajpheart.00035.2015.
  17. Mauro AG, Mezzaroma E, Torrado J, Kundur P, Joshi P, Stroud K, Quaini F, Lagrasta CA, Abbate A, Toldo S. Reduction of Myocardial Ischemia-Reperfusion Injury by Inhibiting Interleukin-1 Alpha. *J Cardiovasc Pharmacol*. 2017;69(3):156-160. doi:10.1097/FJC.0000000000000452.
  18. Savi M, Frati C, Cavalli S, Graiani G, Galati S, Buschini A, Madeddu D, Falco A, Prezioso L, Mazzaschi G, Galaverna F, Lagrasta C, Corradini E, De Angelis A, Cappetta D, Berrino L, Aversa F, Quaini F, Urbanek K: Imatinib mesylate-induced cardiomyopathy involves resident cardiac progenitors. *Pharmacol Res*. 2017 Sep 28. pii: S1043-6618(17)30799-5.117.
  19. Armani G, Madeddu D, Mazzaschi G, Bocchialini G, Sogni F, Frati C, Lorusso B, Falco A, Lagrasta CA, Cavalli S, Mangiaracina C, Vilella R, Becchi G, Gnetti L, Corradini E, Quaini E, Urbanek K, Goldoni M, Carbognani P, Ampollini L, Quaini F. Blood and lymphatic vessels contribute to the impact of the immune microenvironment on clinical outcome in non-small-cell lung cancer. *Eur J Cardiothorac Surg*. 2018 1;53(6):1205-1213
  20. Mazzaschi G, Madeddu D, Falco A, Bocchialini G, Goldoni M, Sogni F, Armani G, Lagrasta CA, Lorusso B, Mangiaracina CM, Vilella R, Frati C, Alfieri R, Ampollini L, Veneziani M, Silini EM, Ardizzoni A, Urbanek K, Aversa F, Quaini F, Tiseo M. Low PD-1 expression in Cytotoxic CD8+ Tumor Infiltrating Lymphocytes Confers an Immune Privileged Tissue Microenvironment in NSCLC with a Prognostic and Predictive Value. *Clin Cancer Res*. 2018 15;24(2):407-419.
  23. Rosellini E, Barbani N, Frati C, Madeddu D, Massai D, Morbiducci U, Lazzeri L, Falco A, Lagrasta C, Audenino A, Cascone MG, Quaini F. Influence of injectable microparticle size on cardiac progenitor cell response. *J Appl Biomater Funct Mater*. 2018 Jul 1;2280800018782844 doi: 10.1177/2280800018782844.

24. Mazzaschi G, Facchinetti F, Missale G, Canetti D, Madeddu D, Zecca A, Veneziani M, Gelsomino F, Goldoni M, Buti S, Bordi P, Aversa F, Ardizzoni A, Quaini F, Tiseo M. The circulating pool of functionally competent NK and CD8+ cells predicts the outcome of anti-PD1 treatment in advanced NSCLC. *Lung Cancer*. 2019 Jan;127:153-163. doi: 10.1016/j.lungcan.2018.11.038.

Parma, May 2019

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