PERSONAL INFORMATION

Name: Claudia Fuoco
Date of birth: February 22, 1981
Birthplace: Marino (RM) Italy
Nationality: Italy
Email: c.fuoco@yahoo.it/claudia.fuoco@uniroma2.it

A. PERSONEL STATEMENT

Fixed-term researcher at the Department of Biology, "Tor Vergata" University of Rome. She published 48 articles in peer-reviewed journals (15 as first or last/corresponding author) among which several in high-impact journals likewise EMBO Mol Med, Small, and Cell Discovery. Total H index 20 (SCOPUS); i10-hindex 38 (Google Scholar). She works as a Researcher in the Laboratory of Stem Cells and Tissue Engineering directed by Prof. Cesare Gargioli. She developed great expertise in skeletal muscle tissue engineering for muscle reconstruction by manipulating biomaterials and skeletal muscle stem cells. She experienced in mass cytometry and she is currently responsible for the CyTOF2 instrument present in the Biology Department.

B. EDUCATION, TRAINING AND ACADEMIC CAREER

2003: Bachelor's Degree in Cellular and Molecular Biology, 109/110 University of Rome Tor Vergata, IT
2005: Master's Degree in Cellular and Molecular Biology, 110/110 cum laude, University of Rome Tor Vergata, IT
2010: PhD in Cellular and Molecular Biology, University of Rome Tor Vergata, IT
March 2006-November 2006: TELETHON fellowship for graduated University of Rome Tor Vergata, IT
November 2006-October 2009: PhD student in Cellular and Molecular Biology, University of Rome Tor Vergata, IT
November 2009-August 2010: TELETHON fellowship for PhD position, University of Rome Tor Vergata, IT
September 2010-February 2012: fixed term contract for PhD position, Fondazione Centro San Raffaele del Monte Tabor (hsr) at San Raffaele Scientific Biomedical Park Foundation, Rome, IT
September 2012-May 2013: Research grant for PhD, European Centre for Brain Research, Santa Lucia Foundation, IT
July 2013-March 2019: Research grant for PhD position, Department of Biology, University of Rome Tor Vergata, IT
April 2021 – December 2021: Scholarship for PhD position, Department of Biology, University of Rome Tor Vergata, IT
December 2021-present: Fixed Term Researcher, Department of Biology, Rome University Tor Vergata, IT

• PERIODS OF LEAVE

March 2012-August 2012: suspension for maternity leave
June 2016-November2016: suspension for maternity leave

C. COMMISSIONS OF TRUST

2021-present: editorial board of "Striated Muscle Physiology" as a review editor (Frontiers in Physiology)
2021-present: guest editor of Cells for the special issue "Cell–Microenvironment Crosstalk, Models, and Molecular Mechanisms in Rhabdomyosarcoma: Current and Future Perspectives".

D. HONORS AND AWARDS

2005: Graduated with honors (110/110 cum laude) in Cellular and Molecular Biology.
2006: Awarded TELETHON fellowship project N S99038CSPC for graduated students.
2009: Awarded TELETHON fellowship project S99038TELU for PhD position
2012-19: Research Competitive
2019: Awarded Fondazione Umberto Veronesi research grant "Post-doctoral fellowship "2019"
2020: Awarded Fondazione Umberto Veronesi research grant "Post-doctoral fellowship "2019"
2021: Awarded research fellowship for PhD position with University Tor Vergata, Rome
2021-present: Fixed term Researcher competition Rome University Tor Vergata, Rome

E. MAIN RESEARCH GRANTS (last 10 years)

2019-20: Fondazione Umberto Veronesi research grant "Post-doctoral fellowship "2019"
2020-21: Fondazione Umberto Veronesi research grant "Post-doctoral fellowship "2020"
2019-actual: GR2019 Project Title: Single-cell deep phenotyping of B lymphocytes to personalize immunotherapy in patients with myasthenia gravis" (Collaborator)
2021-actual: Call: HORIZON-WIDERA-2021-ACCESS-03 Project title: "Enhancing Cancer Vaccine Science for New Therapy Pathways "CANVAS" (Collaborator)
2023-actual: PRIN 2022 Project Title:" The myofascial unit: the missing point in the comprehension of muscular dystrophies" (PI of unit research)
2023-actual: Farm2Fork Horizon CL6-2023 Project title: "Fostering European cellular Agriculture for Sustainable Transition Solutions" (Team member)

G. PUBBLICATIONS (last 20 publications)

1. Long-term longitudinal study on swine VML model.
De Paolis F, et al., Biology Direct, 2023, 18(1), 42
2. Combining rotary wet-spinning biofabrication and electro-mechanical stimulation for the in vitro production of functional myo-substitutes
Celikkin, N.et al. Biofabrication 2023, 15(4), 045012
3. Exploiting Mass Spectrometry to Unlock the Mechanism of Nanoparticle-Induced Inflammasome Activation
Gupta, G. et al., ACS Nano, 2023, 17(17), pp. 17451–17467
4. A call for an 'Asilomar' for cultivated meat and seafood
Bottini S et al., Nature Biotechnology, 2023, 41(7), pp. 895–897
5. A 3D adipogenesis platform to study the fate of fibro/adipogenic progenitors in muscular dystrophies
Reggio A et al., DMM Disease Models and Mechanisms, 2023, 16(6), dmm049915
6. A novel extrusion-based 3D bioprinting system for skeletal muscle tissue engineering
Fornetti et al., Biofabrication, 2023 15(2), 025009
7. Inter and intra-tumor heterogeneity of paediatric type diffuse high-grade gliomas revealed by single-cell mass cytometry.
Petrilli LL, Fuoco C, Palma A, Pasquini L, Pericoli G, Grabovska Y, Mackay A, Rossi S, Carcaboso AM, Carai A, Mastronuzzi A, Jones C, Cesareni G, Locatelli F, Vinci M. Front Oncol. 2022 doi: 10.3389/fonc.2022.1016343. eCollection 2022.PMID: 36568177 Free PMC article.
8. Graphene nanoribbons are internalized by human primary immune cell subpopulations maintaining a safety profile: A high-dimensional pilot study by single-cell mass cytometry
Fuoco C, Xiangfeng L, Fusco L, Riccio F, Giuliani G, Hazel L, Orecchioni M, Martin C, Cesareni G, Feng X, May Y, Bianco A, Delogu LG., Applaied Material Today DOI 10.1016/j.apmt.2022.101593
9. In vivo restoration of dystrophin expression in mdx mice using intra-muscular and intra-arterial injections of hydrogel microsphere carriers of exon skipping antisense oligonucleotides.
Cohen SA, Bar-Am O, Fuoco C, Saar G, Gargioli C, Seliktar D. Cell Death Dis. 2022 Sep 9;13(9):779. doi: 10.1038/s41419-022-05166-0. PMID: 36085138
10. Ejection of damaged mitochondria and their removal by macrophages ensure efficient thermogenesis in brown adipose tissue
Rosina M, Ceci V, Turchi R, Chuan L, Borcherding N, Sciarretta F, Sánchez-Díaz M, Tortolici F, Karlinsey K, Chiurchiù V, Fuoco C, Giwa R, Field RL, Audano M, Arena S, Palma A, Riccio F, Shamsi F, Renzone G, Verri

M, Crescenzi A, Rizza S, Faienza F, Filomeni G, Kooijman S, Rufini S, de Vries AAF, Scaloni A, Mitro N, Tseng YH, Hidalgo A, Zhou B, Brestoff JR, Aquilano K, Lettieri-Barbato D. Cell Metab. 2022 Apr 5;34(4):533-548.e12. doi: 10.1016/j.cmet.2022.02.016. Epub 2022 Mar 18. PMID: 35305295

11. Transcription Factor Activation Profiles (TFAP) identify compounds promoting differentiation of Acute Myeloid Leukemia cell lines.

Riccio F, Micarelli E, Secci R, Giuliani G, Vumbaca S, Massacci G, Castagnoli L, Fuoco C, Cesareni G Cell Death Discov. 2022 Jan 10;8(1):16. doi: 10.1038/s41420-021-00811-7. PMID: 35013135

12. Dystrophic Muscle Affects Motoneuron Axon Outgrowth and NMJ Assembly

Fornetti E, Testa S, De Paolis F, Fuoco C, Bernardini S, Pozo Devoto V, Stokin GB, Giannitelli SM, Rainer A, Bigot A, Zoccali C, Baldi J, Sandonà D, Rizzi R, Bearzi C, Fotte G, Cannata S, Gargioli C. Advanced Materials Technologies doi: 0.1002/admt.202101216

13. Graphene oxide activates B cells with upregulation of granzyme B expression: evidence at the single-cell level for its immune-modulatory properties and anticancer activity

Orecchioni M, Fusco L, Mall R, Bordoni V, Fuoco C, Rinchai D, Guo S, Sainz R, Zoccheddu M, Gurcan C, Yilmazer A, Zavan B, Ménard-Moyon C, Bianco A, Hendrickx W, Bedognetti D, Delogu LG.
Nanoscale. 2022 Jan 6;14(2):333-349. doi: 10.1039/d1nr04355b. PMID: 34796889

14. Characterization of the Skeletal Muscle Secretome Reveals a Role for Extracellular Vesicles and IL1α/IL1β in Restricting Fibro/Adipogenic Progenitor Adipogenesis.

Vumbaca S, Giuliani G, Fiorentini V, Tortolici F, Cerquone Perpetuini A, Riccio F, Sennato S, Gargioli C, Fuoco C, Castagnoli L, Cesareni G. Biomolecules. 2021 Aug 8;11(8):1171. doi: 10.3390/biom11081171. PMID: 34439837

15. Lateral dimension and amino-functionalization on the balance to assess the single-cell toxicity of graphene on fifteen immune cell types

Fusco L, Orecchioni M, Reina G, Bordoni V, Fuoco C, Gurcan C, Guo S, Zoccheddu M, Collino F, Zavan B, Treossi E, Yilmazer A, Palermo V, Bianco A, Delogu L.G. NanoImpact. 2021. ISSN 24520748 DOI 10.1016/j.impact.2021.100330

16. The War after War: Volumetric Muscle Loss Incidence, Implication, Current Therapies and Emerging Reconstructive Strategies, a Comprehensive Review.

Testa S, Fornetti E, Fuoco C, Sanchez-Riera C, Rizzo F, Ciccotti M, Cannata S, Sciarra T, Gargioli C. Biomedicines. 2021 May 18;9(5):564. doi: 10.3390/biomedicines9050564. PMID: 34069964

17. A Resource for the Network Representation of Cell Perturbations Caused by SARS-CoV-2 Infection.

Perfetto L, Micarelli E, Iannuccelli M, Lo Surdo P, Giuliani G, Latini S, Pugliese GM, Massacci G, Vumbaca S, Riccio F, Fuoco C, Paoluzi S, Castagnoli L, Cesareni G, Licata L, Sacco F. Genes (Basel). 2021 Mar 22;12(3):450. doi: 10.3390/genes12030450.PMID: 33809949

18. Skeletal Muscle Subpopulation Rearrangements upon Rhabdomyosarcoma Development through Single-Cell Mass Cytometry.

Petrilli LL, Riccio F, Giuliani G, Palma A, Gargioli C, Vumbaca S, Faron M, Palmieri G, Pasquini L, Sacco F, Cesareni G, Castagnoli L, Fuoco C. J Clin Med. 2021 Feb 17;10(4):823. doi: 10.3390/jcm10040823.PMID: 33671425

19. Biofabricating murine and human myo-substitutes for rapid volumetric muscle loss restoration.

Costantini M, Testa S, Fornetti E, Fuoco C, Sanchez Riera C, Nie M, Bernardini S, Rainer A, Baldi J, Zoccali C, Biagini R, Castagnoli L, Vitiello L, Blaauw B, Seliktar D, Święszkowski W, Garstecki P, Takeuchi S, Cesareni G, Cannata S, Gargioli C. EMBO Mol Med. 2021 Mar 5;13(3):e12778. doi: 10.15252/emmm.202012778. Epub 2021 Feb 15.PMID: 33587336

20. SCA-1 micro-heterogeneity in the fate decision of dystrophic fibro/adipogenic progenitors.

Giuliani G, Vumbaca S, Fuoco C, Gargioli C, Giorda E, Massacci G, Palma A, Reggio A, Riccio F, Rosina M, Vinci M, Castagnoli L, Cesareni G. Cell Death Dis. 2021 Jan 25;12(1):122. doi: 10.1038/s41419-021-03408-1

Legal authorization of the personal data, L675/96