

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO


selezione pubblica per n.1 posto/i di Ricercatore a tempo determinato in tenure track (RTT)

per il settore concorsuale 05/F1,
settore scientifico-disciplinare BIO/13, BIOS/10A
presso il Dipartimento di Scienze Farmacologiche e Biomolecolari,
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PERSONAL INFORMATION

FIORENZA LOTTI

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Gender F | Date of birth 05-12-1979 | Nationality Italian

PROFESSIONAL EXPERIENCE

February 2018-Now

Senior post-doc scientist, Dept. of Experimental Oncology, European Institute of Oncology, Milan, Italy.

Research activity: generation of patient derived organotypic culture as a model to study immune system interaction with melanoma and as platform for new therapies; isolation of invasive quiescent melanoma cells and study of transcriptional reprogramming driven by the tumor niche

November 2015-January 2018

Research fellow, Campus Biomedico, Rome, Italy. Dept. Neuroscience and Medical Bioengineer

Research activity: foreign body reaction and neural interfaces; clinical trial protocols writing for Health Ministry and Ethical Committee

July 2010-July 2013

Postdoctoral fellow, Lerner Research Institute, Cleveland Clinic, Dept. Stem Cell Biology and Regenerative Medicine, Cleveland, OH, US

Research activity: colorectal cancer stem cells, tumor microenvironment, new therapeutic targets

November 2004-October 2010

PhD student, Istituto Superiore di Sanità Dept. of Hematology, Oncology and Molecular Medicine, Rome, Italy

Research activity: Lung cancer stem cells: isolation, characterization and identification of innovative therapeutic targets

March 2003-December 2004

Master's Degree student, Istituto Superiore di Sanità, Dept. of Hematology and Oncology and Molecular Medicine, Rome, Italy

Research activity: Inhibition of DNA methylation sensitizes glioblastoma for tumor necrosis factor-related apoptosis-inducing ligand-mediated destruction

EDUCATION

November 2005- February 2010

PhD in "Immunological Sciences", University of Rome "La Sapienza", Rome, Italy

December 2009

CPA board certify, University of Rome "Tor Vergata", Rome, Italy

December 2004

Master's degree in Biological Sciences, University of Rome "La Sapienza", Rome, Italy

1998

Certificate of secondary education in Humanities, Rome, Italy

GRANT

March 2019-June 2023

"Giovani Ricercatori 2018" grant funded by Minister of Health

FELLOWSHIP

July 2010-July 2012

ITALY-USA ONCO-PROTEOMIC RESEARCH PROGRAM FELLOWSHIP

2009-2010

IOM FELLOWSHIP

TECHNICAL SKILLS

CELL BIOLOGY

- 2D and 3D Cell culture: normal and cancer cell lines, primary cultures and PDXs
- Microfluidic culture system
- Cancer stem cell isolation (from brain, lung, colon, kidney, skin) manipulation and characterization
- Cell Preparation for Next generation sequencing (single cell RNA sequencing)
- Ex vivo system: patient derived organotypic models
- PBMC isolation from buffy coat
- Cell-based assays: viability, co-culture, migration, invasion, apoptosis, drug resistance, adhesion, self-renewal limiting dilution and soft agar
- Immunofluorescence and immunohistochemistry

MICROSCOPY

- Acquisition and image analysis of: bright field, fluorescence, confocal (LSCM) and time-lapse microscopy

MOLECULAR BIOLOGY

- RNA extraction from cells and frozen or fixed tissues
- PCR, qRT-PCR
- Vector cloning
- Lentiviral and retroviral gene transfer
- Genomic DNA extraction

PROTEOMICS

- SDS-PAGE and immunoblotting
- Protein expression assays (ELISA, CBA, LUMINEX)
- Immunoprecipitation

MICROBIOLOGY

- bacterial culture and transformation for viral production

FLOW CYTOMETRY AND CELL SORTING

- Preparation and analysis of human or mice cells and tissue samples for flow cytometry (cell cycle, ALDH activity, proliferation and apoptosis analysis, multifluorimetric characterization), cell sorting.
- BD FACSDiva (flow cytometry)
- BD FACSAriaII (cell sorting)
- BD FACSMelody (cell sorting)

IN VIVO TECHNIQUES

- Immunocompromised mice (i.e. NSG) handling
- Subcutaneous (SQ), intradermic (ID), intraperitoneal (IP) injections
- Small tissue fragment implantation
- Primary tumors resection
- Cardiac blood draw
- Mice organs harvest
- Isofluorane gas anesthesia and liquid anesthesia injection
- In vivo imaging system (IVIS)
- PDXs generation and propagation

SPECIFIC ANIMAL TRAINING:

2018: Practical and theoretical formation course, Biological Service for Animal Experimentation, IEO, Milan, Italy

2014: Practical and theoretical formation course, Biological Service for Animal Experimentation, Torvergata University, Rome, Italy

2010: Practical and theoretical formation course, Biological Resource Unit (BRU), Cleveland Clinic Foundation, Cleveland, OH, US

2009: Practical and theoretical formation course, Biological Service for Animal Experimentation, Istituto Superiore di Sanità, Rome, Italy

INFORMATIC SKILLS

Microsoft Office package (Excel, PowerPoint, Word, Outlook, OneNote)

Adobe package (Acrobat, Illustrator, Photoshop)

GraphPad Prism, ImageJ, Fiji, FlowJo

BLAST, Oligo

Ingenuity Pathway Software Analysis, OncoPrint

PubMed and Human Genome Database (NCBI, UCSC, Atlas TCGA)

Basic bioinformatics skills (Loupe 10X)

WRITING SKILLS

- Experimental human and animal protocol writer for Ethic Committee and Minister of Health
- Clinical trial writer: ID: Ds-FILE IMPLANT “IMPIANTO DI INTERFACCE NEURALI PER IL CONTROLLO BIDIREZIONALE DI UNA PROTESI CIBERNETICA DI ARTO SUPERIORE”
- GRANT writer for Minister of Health “Giovani Ricercatori 2018”
- Editor for Research Topic “Cell stress responses and metabolic reprogramming in skin diseases”; Frontiers in Cell and Developmental Biology
- Scientific manuscript writer for international impacted journals
- Scientific reports and presentations

TEACHING SKILLS

Theoretical and technical lab trainer and supervisor for undergraduating and PhD students, ISS, Rome, Italy and CCF, Cleveland, OH USA

PPT presentation for teaching and educational purposes

SOFT SKILLS

Flexibility and communication

Organization and time management

Collaboration and Teamwork

Problem solving and creativity

Leadership and critical thinking

Active listening and emotional intelligence

LANGUAGES

Italian mother tongue

English: C2 level

Spanish: A2

PUBLICATIONS

1. **Lotti F**, Meliksetyan M, Malferrari M, Quaresima N, Rapino S, Gallo B, Mollo V, Ferrarotto I, Vlachou T, Bossi D, Pelicci PG, Luzi L, Lanfrancone L. Isolation of invasive quiescent melanoma cells reveals niche-driven transcriptional reprogramming. *Submitted*
2. Bastonini M, Kovacs D, **Lotti F**, Sanchez-Del-Campo L. Editorial: Cell stress responses and metabolic reprogramming in skin diseases. *Front Cell Dev Biol* 2023 Mar 1;11:1171812. Doi: 10.3389/fcell.2023.1171812. Ecollection2023 IF: 5.5
3. Aladowicz E, Granier L, Marocchi F, Punzi S, Giardina G, Ferrucci F, Mazzarol G, Capra M, Viale G, Confalonieri S, Gandini S, **Lotti F**, Lanfrancone L ShcD Binds DOCK4, Promotes Ameboid Motility and Metastasis Dissemination, Predicting Poor Prognosis in Melanoma. *Cancers* 2020 Nov 13;12(11): 3366.doi: 10.3390/cancers12113366 IF: 5.2
4. Jarrar* A, **Lotti*F**, DeVecchio J, Gantt G, Mace A, Karagkounis G, Ferrandon S, Orloff M, Venere M, Lathia J, Rich JN and Kalady MF PARP inhibition sensitizes metastatic colorectal cancer-initiating cells to chemotherapy. *Stem Cell* 2018 Oct 23. doi: 10.1002/stem.2929 IF: 5.2
5. Fioramonti M, Fausti V, Pantano F, Iuliani M, Ribelli G, **Lotti F**, Pignochino Y, Grignani E, Santini D, Tonini G and Vincenzi B. Cabozantinib Affects Osteosarcoma Growth Through A Direct Effect On Tumor Cells And Modifications In Bone Microenvironment. *Sci Rep* 2018 mar 8;8(1):4177 IF: 4.996
6. **Lotti F**, Ranieri F, Vadala' G, Zollo L, Di Pino G Invasive intraneural interface: foreign body reaction issues. Review *Front Neurosci.* 2017 Sep 6; 11:497 IF: 6.8
7. Di Lazzaro V, Pellegrino G, Di Pino G, Ranieri F, **Lotti F**, Florio L, Capone F. Human Motor Cortex Functional Changes in Acute Stroke: Gender Effects. *Front Neurosci.* 2016 Jan 29;10:10 IF: 6.8
8. Di Pino G, Pellegrino G, Capone F, Assenza G, Florio L, Falato E, **Lotti F**, Di Lazzaro V. Val66Met polymorphism implies a different way to recover from stroke rather than a worse overall recoverability *Neurorehabil Neural Repair.* 2015 Apr 20 IF: 4.2
9. **Lotti F***, Jarrar AM*, Pai RK, Hitomi M, Lathia J, Mace A, Gantt GA, Suhkdeo K, Vasanji A, Leahy P, Hjelmeland AB, Kalady MF, Rich JN. Chemotherapy activates cancer-associated fibroblasts to maintain colorectal cancer-initiating cells by IL-17A. *J Exp Med.* 2013 Dec 210 (13), 2851-2872 IF: 17.579
10. Sette G, Fecchi K, Salvati V, **Lotti F**, Pillozzi E, Duranti E, Biffoni M, Pagliuca A, Memeo L, Milella M, De Maria R and Eramo A. Mek inhibition results in marked antitumor activity against metastatic melanomas by targeting both stem and non-stem cancer cell subpopulation and the microenvironment. *J Exp Clin Cancer Res.* 2013 Nov 16;32(1):91 IF: 11.3

11. Bartucci M, Svensson S, Romania P, Dattilo R, Patrizii M, Signore M, Navarra S, **Lotti F**, Biffoni M, Piloizzi E, Duranti E, Martinelli S, Rinaldo C, Zeuner A, MaugeriSaccà M, Eramo A, De Maria R. Therapeutic targeting of Chk1 in NSCLC stem cells during chemotherapy. *Cell Death Differ.* 2012 May; 19(5):768-78 IF: 12.067

12. Eramo A, **Lotti F**, Sette G, Piloizzi E, Biffoni M, Di Virgilio A, Ponticello C, Peschle C and De Maria R. Identification and expansion of the tumorigenic lung cancer stem cell population. *Cell death and Differentiation* (2008) Mar;15(3):504-14 IF: 12.067

13. Eramo A, Ricci-Vitiani L, Zeuner A, Pallini R, **Lotti F**, Sette G, Piloizzi E, Larocca LM, Peschle C and De Maria R. Chemotherapy resistance of glioblastoma stem cells. *Cell Death and Differentiation* (2006), 1-4 IF: 12.067

14. A.Eramo, R.Pallini, **F.Lotti**, G.Sette, M.Patti, M.Bartucci, L.Ricci-Vitiani, G.Stassi, L.M.Larocca, L.Crinò, C.Peschle and R.De Maria. Inhibition of DNA methylation sensitizes glioblastoma for tumor necrosis factor-related apoptosis-inducing ligandmediated destruction. *Cancer Res* 2005; 65: (24). December 15, 2005 IF: 11.2

15. A.Eramo, M.Sargiacomo, L.Ricci-Vitiani, M.Todaro, G.Stassi, C.G.Messina, I.Parolini, **F.Lotti**, G.Sette, C.Peschle e R.De Maria. CD95 death-inducing signaling complex Formation and internalization occur in lipid rafts of type I and type II cells. *Eur.J.Immunol.* 2004. 34: 1930-1940 IF: 6.688

Autorization for personal data treatment art.13 D. L. 196/2003

Data

11-07-2024

Luogo

MILANO

Giuseppe Lotti