



Martina Ciarnelli

WORK EXPERIENCE

PhD Student

**C.R.E.A.T.E. - Center for REsearch and InnovATion in MedicinE, Polo Biomedico "E. Altomare" -
Department of Medical and Surgical Sciences
University of Foggia, Foggia, Italy**
[25/01/2022 – present]

EDUCATION AND TRAINING

PhD in Innovative Technologies and Sciences for Health and Active Aging

**C.R.E.A.T.E. - Center for REsearch and InnovATion in MedicinE, Polo Biomedico "E. Altomare" -
Department of Medical and Surgical Sciences
University of Foggia, Foggia, Italy**
[25/01/2022 – present]

Research activity: Study of immunometabolic alterations on the monocyte-macrophage system in chronic diseases

Master's Degree in Molecular and Applied Biology, curriculum Biological Technologies (LM-6)

Polytechnic University of Marche, Ancona, Italy
[10/2016 – 07/2019]

Thesis: Alteration of the crosstalk between circadian rhythms and lipid metabolism in zebrafish nr3c1ia30/ia30 mutant line

Bachelor's Degree in Biological Sciences, curriculum Bio-Molecular (L-13)

Polytechnic University of Marche, Ancona, Italy
[10/2013 – 10/2016]

Thesis: Sex cell fate: reprogramming by DMRT1 in the ovary

High School leaving qualification in Scientific studies

Liceo Scientifico G. Checchia Rispoli, San Severo (FG), Italy

Attendance of Laboratory

**C.R.E.A.T.E. - Center for REsearch and InnovATion in MedicinE, Polo Biomedico "E. Altomare" -
Department of Medical and Surgical Sciences
University of Foggia, Foggia, Italy**
[25/01/2022 – present]
Attendance of the C.R.E.A.T.E. Laboratory in the group of Internal Medicine, as PhD Student.

Attendance of Laboratory

University of Valencia, Valencia, Spain
[01/10/2024 – 31/12/2024]
Attendance of the Laboratory of Physiology, in the MiniAging group as Visiting PhD student.

Attendance of Laboratory

Polytechnic University of Marche, Ancona, Italy
[10/2019 – 02/2020]
Attendance of the Laboratory of Developmental and Reproductive Biology, as Post Graduate Student.

Attendance of Laboratory

Polytechnic University of Marche, Ancona, Italy
[02/2018-07/2019]
Attendance of the Laboratory of Developmental and Reproductive Biology, for Experimental Thesis work (Master's Degree).

LANGUAGE SKILLS

Mother tongue: Italian C2

Other languages:

- English B2 (Key English Test, Level A2 (Pass with Merit), released on 19 Jul 2004 from University of Cambridge, ESOL Examinations)
- Francais B1 (Diplôme d'Études en Langue Française (DELFF), Premier Degré, unités A1, A2, A3, A4, released from Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche de la République Française)

JOB-RELATED SKILLS

- Biomolecular procedures, such as DNA and RNA isolation from cell and tissue samples; qualitative PCR; electrophoresis, qPCR.
- Protein extraction from tissues and cell pellets, purification and quantification of proteins extracted, SDS-PAGE, Western Blot, ELISA.
- Isolation of Peripheral Blood Lymphomonocytes (PBMCs) and monocytes.
- Isolation of mouse PBMCs and lymphocytes.
- *In vitro* seed and expansion of cell lines, freezing and thawing procedures.
- Mouse primary microglia isolation; mouse ADSCs isolation.
- Seahorse real-time cell metabolic analysis.
- Preparation of solutions.
- Histochemistry techniques on tissue samples. Paraffin embedding and sectioning with microtome and cryostat.
- Immunofluorescence on cell/tissue samples.
- *In vivo* model: *Danio rerio*.
- *In vivo* model: tissues and cells from mice model.
- FT-IR microspectroscopy techniques. Analysis and interpretation of results with dedicated softwares.
- EVs isolation and characterization.
- Basics of flow cytometry.
- Mitochondria isolation and analysis with Oroboros Instrument.

PUBLICATIONS ON INTERNATIONAL PERIODICALS

* equal contribution

Krebs cycle derivatives, dimethyl fumarate and itaconate, control metabolic reprogramming in inflammatory human microglia cell line.

Sanginetto M*, Ciarnelli M*, Moola A, Naik Bukke V, Cassano T, Villani R, Romano AD, Di Gioia G, Avolio C, Serviddio G. Mitochondrion. 2024 Sep 12;79:101966. doi: 10.1016/j.mito.2024.101966. Epub ahead of print. PMID: 39276907. (Research article)

Monocyte bioenergetics: An immunometabolic perspective in metabolic dysfunction-associated steatohepatitis.

Sanginetto M, Ciarnelli M, Colangelo T, Moola A, Bukke VN, Duda L, Villani R, Romano A, Giandomenico S, Kanwal H, Serviddio G. Cell Rep Med. 2024 May 21;5(5):101564. doi: 10.1016/j.xcrm.2024.101564. Epub 2024 May 10. PMID: 38733988; PMCID: PMC11148801. (Research article)

Metabolic reprogramming in inflammatory microglia indicates a potential way of targeting inflammation in Alzheimer's disease.

M. Sanginetto*, M. Ciarnelli*, T. Cassano, A. Radesco, A. Moola, V. N. Bukke, A. Romano, R. Villani, H. Kanwal, N. Capitanio, L. Duda, C. Avolio, G. Serviddio. Redox Biology, Volume 66, 2023. <https://doi.org/10.1016/j.redox.2023.102846> (Research article).

Potential Therapeutic Targets to Modulate the Endocannabinoid System in Alzheimer's Disease.

Kanwal, H.; Sanginetto, M.; Ciarnelli, M.; Castaldo, P.; Villani, R.; Romano, A.D.; Serviddio, G.; Cassano, T. Int. J. Mol. Sci. 2024, 25, 4050. <https://doi.org/10.3390/ijms25074050> (Literature Review).

SPEAKER AT INTERNATIONAL CONFERENCES

1. Immunomodulatory effects of Krebs cycle derivatives on metabolic reprogramming in inflammatory human microglia cell line.

Martina Ciarnelli, Tommaso Cassano, Giuseppe Di Gioia, Rosanna Villani, Moris Sanginetto, Gaetano Serviddio. ConBioPreVal – VI National of Young Researchers in Biomedicine. Valencia, 2024, December 11-13.

2. Immunometabolic alterations of monocyte/macrophage system in chronic diseases.

Martina Ciarnelli, Gaetano Serviddio, Moris Sanginetto

Online symposium "Redox Relay Race: Ph.D. Students on the Move – 2nd edition" – organized by SFRR Society, November 19th 2024.

3. Targeting monocyte immunometabolism: a novel potential approach for metabolic dysfunction-associated steatohepatitis.

Martina Ciarnelli, Tommaso Colangelo, Rosanna Villani, Antonino Romano, Gaetano Serviddio, Moris Sanginetto
From Molecules to Tissue: Redox Biology in Action. Istanbul, 2024, June 5-7.

4. **Immunometabolism of TLR4-mediated activation in microglia and translational application.**
Martina Ciarnelli, Moris Sangineto, Hina Kanwal, Ilaria Frisoli, Tommaso Cassano, Gaetano Serviddio
Redox Biology in Translation, Vienna, 2023, June 6-9.
5. **Bioenergetic profile of LPS-activated human microglia cell line and immunomodulatory functions of dimethyl fumarate and itaconate.**
Ilaria Frisoli, Moris Sangineto, Martina Ciarnelli, Hina Kanwal, Tommaso Cassano, Gaetano Serviddio – Redox Biology in Translation, Vienna, 2023, June 6-9.

SPEAKER AT NATIONAL CONFERENCES

6. **Monocyte Immunometabolism: A New Therapeutic Target in Metabolic Dysfunction-Associated Steatohepatitis.**
Martina Ciarnelli, Tommaso Colangelo, Rosanna Villani, Antonino Davide Romano, Rossella Bianco, Grazia Gabriella Bufano, Giuseppe De Girolamo, Giuseppe Di Gioia, Giulia Savino, Gaetano Serviddio, Moris Sangineto.
SPRING Meeting, Rimini, 6-8 Aprile 2025.
7. **EXPLORING MONOCYTE BIOENERGETIC FOR NOVEL PERSPECTIVE IN METABOLIC DYSFUNCTION-ASSOCIATED STEATOHEPATITIS.**
Martina Ciarnelli, Tommaso Colangelo, Rosanna Villani, Emanuele Murgo, Antonino Davide Romano, Gaetano Serviddio, Moris Sangineto.
XXII Congresso Nazionale A.I.B.G. Salerno, 19-21 Settembre 2024.
8. **Mitochondrial modulation as a therapeutic strategy for attenuating microglia-driven inflammation in Alzheimer's Disease.**
Martina Ciarnelli, Moris Sangineto, Rossella Bianco, Giuseppe De Girolamo, Giuseppe Di Gioia, Tommaso Cassano, Antonio Radesco, Antonino Davide Romano, Rosanna Villani, Nazzareno Capitanio, Loren Duda, Carlo Avolio, Gaetano Serviddio.
SPRING Meeting, Rimini, 25-27 Febbraio 2024.
9. **The gr-/- zebrafish mutant line as a model to study metabolic diseases.**
F. Maradonna, M. Ciarnelli, C. Bertolucci, E. Morbiato, A. Dinarello, N. Facchinello, L. Dalla Valle, O. Carnevali.
2nd Italian Zebrafish Meeting - Pisa, 2019.

CONFERENCES CONTRIBUTION

10. **The role of multiple chronic metabolic disorders on cognitive decline**
G. Di Gioia, G.G. Bufano, G. De Girolamo, M. Ciarnelli, G. Savino, G. Serviddio, M. Sangineto
SPRING Meeting, Rimini, 6-8 Aprile 2025.
11. **Immunomodulatory properties of Krebs cycle intermediates in metabolic reprogramming of activated human microglia**
G. Savino, M. Ciarnelli, G. Di Gioia, R. Bianco, G.G. Bufano, G. De Girolamo, T. Cassano, R. Villani, A.D. Romano, G. Serviddio, M. Sangineto
SPRING Meeting, Rimini, 6-8 Aprile 2025.
12. **The influence of lifestyle on body composition alteration and masld progression: A multicentre cohort**
R. Bianco, G. Di Gioia, M. Dallio, M. Sangineto, M. Romeo, M. Cipullo, A. Coppola, S. Mammone, M. Masarone, M. Persico, A. Federico, M. Ciarnelli, G. De Girolamo, G. G. Bufano, G. Savino, A.D. Romano, R. Villani, G. Serviddio.
SPRING Meeting, Rimini, 6-8 Aprile 2025.
13. **Body composition, insulin sensitivity, and gender differences in sarcopenic obesity**
G. De Girolamo, R. Bianco, M. Ciarnelli, G. Di Gioia, G.G. Bufano, G. Savino, G. Serviddio, M. Sangineto.
SPRING Meeting, Rimini, 6-8 Aprile 2025.
14. **IL TEST DELLE 15 PAROLE DI REY: ANALISI DINAMICA DEI PUNTEGGI NELLA VALUTAZIONE DEL DECLINO COGNITIVO**
Giuseppe Di Gioia, Grazia Gabriella Bufano, Christian Modugno, Carmen Mennea, Giuseppe De Girolamo, Martina Ciarnelli, Gaetano Serviddio, Moris Sangineto.
25° Congresso Nazionale Associazione Italiana Psicogeriatría (AIP). Padova, 27-29 Marzo, 2025.
15. **IMPATTO DELLE PATOLOGIE METABOLICHE CRONICHE SULLE FUNZIONI COGNITIVE**
Grazia Gabriella Bufano, Giuseppe Di Gioia, Enrico Gesuete, Giuseppe De Girolamo, Martina Ciarnelli, Moris Sangineto, Gaetano Serviddio.
Congresso Nazionale SIGG. Firenze, 11-14 Dicembre 2024.
16. **TEST DELLE 15 PAROLE DI REY: OLTRE IL SEMPLICE PUNTEGGIO**
Giuseppe Di Gioia, Grazia Gabriella Bufano, Giuseppe De Girolamo, Martina Ciarnelli, Moris Sangineto, Gaetano Serviddio.
Congresso Nazionale SIGG. Firenze, 11-14 Dicembre 2024.

- 17. BCL-XL: Prevention of Immunosenescence and Chronic Inflammation for the Improvement of Muscle Frailty**
 Marta Arnal-Forne, Cristina Mas-Bargues, Javier Huete-Acevedo, Sandra Atencia, Jose de Santiago, [Martina Ciarnelli](#), Jose Vina, Consuelo Borrás.
 ConBioPreVal - VI National Congress of Young Researchers in Biomedicine. December 11-13, 2024, Valencia.
- 18. THE EFFECTS OF A DIET RICH IN OMEGA-3 POLYUNSATURATED FATTY ACIDS ON THE MUSCLE MASS AND METABOLIC PROFILE OF PATIENTS WITH MASLD**
 Buquicchio S., [Ciarnelli M.](#), De Girolamo G., Bianco R., Di Gioia G., Villani R., Romano A., Serviddio G., Sangineto M.
 SIMI 2024, Rimini, 11-13 Ottobre 2024.
- 19. DISSECTING THE CELLULAR ORIGIN OF A CIRCULATING MIRNA SIGNATURE DIAGNOSTIC FOR ASYMPTOMATIC EARLY-STAGE LUNG CANCER**
 Anna Alessia Saponaro, Emanuele Murgo, Rossella Cariglia, [Martina Ciarnelli](#), Francesco Mazzarelli, Roberto Cuttano, Fabrizio Bianchi, Tommaso Colangelo.
 XXII Congresso Nazionale A.I.B.G. Salerno, 19-21 Settembre 2024.
- 20. EXTRACELLULAR VESICLE MICRORNAS CONTRIBUTE TO NOTCH SIGNALING PATHWAY IN T-CELL ACUTE LYMPHOBLASTIC LEUKEMIA**
 Tommaso Colangelo, Emanuele Murgo, Anna Alessia Saponaro, Rossella Cariglia, [Martina Ciarnelli](#), Francesco Mazzarelli, Roberto Cuttano, Fabrizio Bianchi, Vincenzo Giambra.
 XXII Congresso Nazionale A.I.B.G. Salerno, 19-21 Settembre 2024.
- 21. LOSS OF CIRCADIAN GENE TIMELESS INDUCES EMT AND TUMOR PROGRESSION IN COLORECTAL CANCER VIA ZEB1-DEPENDENT MECHANISM**
 Tommaso Colangelo, Emanuele Murgo, Anna Alessia Saponaro, Rossella Cariglia, [Martina Ciarnelli](#), Francesco Mazzarelli, Roberto Cuttano, Fabrizio Bianchi.
 XXII Congresso Nazionale A.I.B.G. Salerno, 19-21 Settembre 2024.
- 22. MICRORNA-27A-3P MODULATES THE CIRCADIAN MOLECULAR CLOCKWORK AND IMPACTS CANCER CELL PHENOTYPE IN HUMAN LUNG ADENOCARCINOMA**
 Emanuele Murgo, Marina Maria Bellet, Anna Alessia Saponaro, [Martina Ciarnelli](#), Gaetano Serviddio, Tommaso Colangelo.
 XXII Congresso Nazionale A.I.B.G. Salerno, 19-21 Settembre 2024.
- 23. INFLUENCE OF MULTIPLE CHRONIC METABOLIC DISORDERS ON COGNITIVE FUNCTIONS**
 Giuseppe Di Gioia, Enrico Gesuete, Grazia Gabriella Bufano, Giuseppe De Girolamo, [Martina Ciarnelli](#), Moris Sangineto, Gaetano Serviddio.
 20th EuGMS Congress, Valencia, 18-20 Settembre 2024.
- 24. UPPER GASTROINTESTINAL BLEEDING PROGNOSTIC SCORES: LIMITATIONS IN THE GERIATRIC POPULATION.**
 Grazia Gabriella Bufano, Giuseppe Di Gioia, Giuseppe De Girolamo, [Martina Ciarnelli](#), Moris Sangineto, Gaetano Serviddio.
 20th EuGMS Congress, Valencia, 18-20 Settembre 2024.
- 25. The role of omega-3 polyunsaturated fatty acids-rich food on the metabolic profile of patients with MASLD**
 Bianco R., [Ciarnelli M.](#), De Girolamo G., Villani R., Sangineto M., Serviddio G.
 SPRING Meeting, Rimini, 25-27 Febbraio 2024.
- 26. MASLD and muscle mass: effects of a ω 3-PUFAS enriched diet.**
 G. De Girolamo, R. Bianco, [M. Ciarnelli](#), G. Di Gioia, M. Sangineto, R. Villani, G. Serviddio.
 SPRING Meeting, Rimini, 25-27 Febbraio 2024.
- 27. Potentialities of immunometabolism study in nonalcoholic steatohepatitis**
 H. Kanwal, M. Sangineto, [M. Ciarnelli](#), I. Frisoli, T. Cassano, G. Serviddio.
 Redox Biology in Translation, Vienna, 2023, June 6-9.
- 28. MONOCYTE IMMUNOMETABOLISM IN PATIENTS WITH NONALCOHOLIC STEATOHEPATITIS: A POTENTIAL TARGET**
 M. Sangineto, [M. Ciarnelli](#), V.N. Bukke, A. Moola, H. Kanwal, R. Villani, A.D. Romano, G. De Girolamo, G. Serviddio.
 UEGweek, Copenhagen, October 14 – 17, 2023.
- 29. Peculiar bioenergetic profile in monocytes: a potential target in non-alcoholic steatohepatitis (NASH)**
 Sangineto M., [Ciarnelli M.](#), Kanwal H., Frisoli I., Duda L., Villani R., Romano A.D., Di Gioia G., Serviddio G.
 SIMI 2023, Rimini.
- 30. MODULAZIONE DELLA BIOENERGETICA CELLULARE DELLA MICROGLIA: UN POTENZIALE FUTURO APPROCCIO TERAPEUTICO NELLA MALATTIA DI ALZHEIMER**
 Sangineto M., [Ciarnelli M.](#), Cassano T., Cornacchia M.G., Di Gioia G., Romano A.D., Villani R., Avolio C., Serviddio G.
 67° Congresso Nazionale SIGG.

31. TEMPORAL PROFILE OF SEROLOGICAL RESPONSE TO COVID-19 VACCINES IN A COHORT OF PATIENTS HOSPITALIZED IN INTERNAL MEDICINE

Cornacchia M. G., Giandomenico S., Cicco A., Querques A., Mormando D., Villani R., Romano A. D., Ciarnelli M., Serviddio G., Sangineto M.
123° Congresso Nazionale SIMI

32. KREBS CYCLE DERIVATIVES, DIMETHYL FUMARATE, DIMETHYL MALONATE AND ITACONATE, CONTROL LPS-INDUCED RESPONSE IN MICROGLIA BY PECULIAR CELLULAR BIOENERGETICS REWIRING

Sangineto M., Di Gioia G., Archana Moola, Bukke V.N., Cassano T., Ciarnelli M., Villani R., Romano A.D., Serviddio G.
123° Congresso Nazionale SIMI

CONFERENCES PARTICIPATIONS

PUGLIA SINGLE CELL AND SPATIAL DISCOVERY SYMPOSIUM – 15 APRILE 2025, BARI.

LWF – LONGEVITY WORLD FORUM – 17-18 OTTOBRE, ALICANTE.

Epatologia Clinica 2023, Approccio olistico al paziente con malattie del fegato – 21-22 SETTEMBRE 2023, FOGGIA.

HONOURS, GRANTS AND AWARDS

- Best Poster Award - ConBioPreVal - VI National Congress of Young Researchers in Biomedicine. December 11-13, 2024, Valencia.
- Travel grant for participation to: From Molecules to Tissue: Redox Biology in Action. Istanbul, 2024, June 5-7.

AFFILIATIONS

- **SISA** – Società Italiana per lo studio dell'Aterosclerosi
- **SIBBM** – Società Italiana di Biofisica e Biologia Molecolare
- **AIBG** – Associazione italiana di Biologia e Genetica
- **SFRR-E** – Society for Free Radical Research Europe
- **Member of SFRR Europe Early Career Researchers (ECR) Subcommittee**

THEORETICAL AND PRATICAL COURSES

- **Advanced Technologies in Single Cell Omics** – February 04-05, 2025. Online
- **L'edizione 2024 del Journal Citation Reports**. Clarivate webinar. Online
- **Profili dei ricercatori in Web of Science**. Clarivate webinar. Online
- **EndNote 21 Essentials in Italiano**. Clarivate webinar. Online
- **Training Flow Cytometer "CYTOFLEX S" Beckman Coulter** – September 2-4, 2024. Department of Medical and Surgical Sciences – University of Foggia (Italy)
- **Training MGI Sequencer "DNBSEQ-G400"** – September 24-25, 2024. Department of Medical and Surgical Sciences – University of Foggia (Italy)
- **Training Flow Cytometer "AMNIS Flowsight"** – June 25-27, 2024. Department of Medical and Surgical Sciences – University of Foggia (Italy)
- **Training Agilent 4150 TapeStation System** – March 2024. Department of Medical and Surgical Sciences – University of Foggia (Italy)
- **CORSI FAD IZSLER per lo svolgimento della funzione A (esecutore esperimenti) in materia di utilizzo di animali a fini scientifici:**
 1. **LEGISLAZIONE NAZIONALE ED ETICA LIVELLO 1**, MODULI 1 E 2, DM 5 AGOSTO 2021
 2. **OPBA: FORMAZIONE PER I COMPITI**, MODULI 25, 50, 51
 3. **BIOLOGIA E GESTIONE DEGLI ANIMALI DA LABORATORIO**, MODULI 3.1, 4, 5, 6.1, 7. DM 5 AGOSTO 2021 RODITORI E LAGOMORFI
- **Giornata di studio: I modelli animali in ricerca** - June 20th, 2019. Ancona (Italy)

WEBINARS

- **Tools and Applications of Flow Cytometry**. Cell Press Webinar
- **Emerging applications of next-generation sequencing in disease biology**. Cell Press Webinar
- **Modeling Approaches in Biomedical Sciences**. Miguel Fribourg, Icahn University
- **How to Analyze and Interpret Omics Results**. Miguel Fribourg, Icahn University

DIDACTIC ACTIVITY

Auxiliary teaching (supporto alla didattica)

- 90 hours for the course of *Chemistry 1* of the Bachelor's degree in Biological Sciences (A.A. 2018/2019), UNIVPM, Ancona, Italy

Dichiaro di:

- essere consapevole delle conseguenze derivanti da dichiarazioni mendaci, previste dal D.P.R. 28/12/2000 n. 445 e s.m.i., e che le informazioni riportate nel presente curriculum corrispondono a verità;
- essere informato/a, ai sensi e per gli effetti di cui al Regolamento UE 2016/679, che i dati personali contenuti nel presente curriculum saranno trattati dall'Università degli Studi di Foggia per adempiere agli obblighi di pubblicazione ai fini di trasparenza previsti dalla normativa vigente.

Luogo e data
Foggia, 14/05/2025

Martina Ciarnelli