

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome GIUSTO DAVIDE
Cognome BADAMI
E-mail giustodavide.badami@unipa.it

FORMAZIONE TITOLI

- BACHELOR'S DEGREE IN BIOTECHNOLOGY (Unipa)
- MASTER'S DEGREE IN MEDICAL BIOTECHNOLOGY AND MOLECULAR MEDICINE (Unipa)
- PhD IN MOLECULAR AND CLINICAL MEDICINE (Unipa)

ATTIVITA' DIDATTICA

- Tutoring for students at Unipa (Medicine and Surgery; Biotechnology; Biology)

INCARICHI / CONSULENZE

- a.a. 2023/2025 Cultore della materia per Immunologia e Patologia Generale (MED-04) nei corsi di laurea di Medicina e Chirurgia (CL), Fisioterapia (PA)
- a.a. 2023/2024 Docente a contratto di Patologia generale e fisiopatologia per il CdL di Infermieristica (TP)

PUBBLICAZIONE

- Shekarkar Azgomi, M., Badami, G. D., Lo Pizzo, M., Tamburini, B., Dieli, C., La Manna, M. P., ... & Caccamo, N. (2024). Integrated Analysis of Single-Cell and Bulk RNA Sequencing Data Reveals Memory-like NK Cell Subset Associated with Mycobacterium tuberculosis Latency. *Cells*, 13(4), 293.
- Pratelli, G.; Tamburini, B.; Badami, G.D.; Lo Pizzo, M.; De Blasio, A.; Carlisi, D.; Di Liberto, D. Cow's Milk: A Benefit for Human Health? Omics Tools and Precision Nutrition for Lactose Intolerance Management. *Nutrients* 2024, 16, 320. <https://doi.org/10.3390/nu16020320>
- Badami GD, La Manna MP, Di Carlo P, Stanek O, Linhartova I, Caccamo N, Sebo P and Dieli F (2023) Delivery of Mycobacterium tuberculosis epitopes by Bordetella pertussis adenylate cyclase toxoid expands HLA-E-restricted cytotoxic CD8+ T cells. *Front. Immunol.* 14:1289212. doi: 10.3389/fimmu.2023.1289212
- Tamburini, B.; Badami, G.D.; La Manna, M.P.; Shekarkar Azgomi, M.; Caccamo, N.; Dieli, F. Emerging Roles of Cells and Molecules of Innate Immunity in Alzheimer's Disease. *Int. J. Mol. Sci.* 2023, 24, 11922. <https://doi.org/10.3390/ijms241511922>
- La Manna MP, Shekarkar-Azgomi M, Badami GD, Tamburini B, Dieli C, Di Carlo P, Fasciana T, Marcianò V, Lo Sasso B, Giglio RV, Giammanco A, Ciaccio M, Dieli F, Caccamo N. Impact of Mycobacterium tuberculosis Infection on Human B Cell Compartment and Antibody Responses. *Cells.* 2022; 11(18):2906. <https://doi.org/10.3390/cells11182906>
- Mohammadnezhad L, Shekarkar Azgomi M, La Manna MP, Sireci G, Rizzo C, Badami GD, Tamburini B, Dieli F, Guggino G, Caccamo N. Metabolic Reprogramming of Innate Immune Cells as a Possible Source of New Therapeutic Approaches in Autoimmunity. *Cells.* 2022; 11(10):1663. <https://doi.org/10.3390/cells11101663>
- La Manna MP, Shekarkar Azgomi M, Tamburini B, Badami GD, Mohammadnezhad L, Dieli F, Caccamo N. Phenotypic and Immunometabolic Aspects on Stem Cell Memory and Resident Memory CD8+ T Cells. *Front Immunol.* 2022 Jun 17; 13:884148. doi: 10.3389/fimmu.2022.884148. PMID: 35784300; PMCID: PMC9247337.
- Tamburini, Bartolo, Marco Pio La Manna, Lidia La Barbera, Leila Mohammadnezhad, Giusto Davide Badami, Mojtaba Shekarkar Azgomi, Francesco Dieli, and Nadia Caccamo. 2022. "Immunity and Nutrition: The Right Balance in Inflammatory Bowel Disease" *Cells* 11, no. 3: 455. <https://doi.org/10.3390/cells11030455>
- La Manna, M.P., Orlando, V., Badami, G.D., Tamburini, B., Shekarkar Azgomi, M., Lo Presti, E., del Nonno, F., Petrone, L., Belmonte, B., Falasca, L., Di Carlo, P., Dieli, F., Goletti, D. and Caccamo, N. (2022), Platelets accumulate in lung lesions of tuberculosis patients and inhibit T-cell responses and Mycobacterium tuberculosis replication in macrophages. *Eur. J. Immunol.*, 52: 784-799. <https://doi.org/10.1002/eji.202149549>
- Azgomi, M.S.; La Manna, M.P.; Badami, G.D.; Ragonese, P.; Trizzino, A.; Dieli, F.; Caccamo, N. A Rapid and Simple Multiparameter Assay to Quantify Spike-Specific CD4 and CD8 T Cells after SARS-CoV-2 Vaccination: A Preliminary Report. *Biomedicines* 2021, 9, 1576. <https://doi.org/10.3390/biomedicines91115>
- La Manna MP, Tamburini B, Orlando V, Badami GD, Di Carlo P, Cascio A, Singh M, Dieli F, Caccamo N. LIODetect@TB-ST: Evaluation of novel blood test for a rapid diagnosis of active pulmonary and extra-pulmonary tuberculosis in IGRA confirmed patients. *Tuberculosis (Edinb).* 2021 Sep; 130:102119. doi: 10.1016/j.tube.2021.102119. Epub 2021 Aug 13. PMID: 34411890.
- Tamburini B, Badami GD, Azgomi MS, Dieli F, La Manna MP, Caccamo N. Role of hematopoietic cells in Mycobacterium tuberculosis infection. *Tuberculosis (Edinb).* 2021 Sep; 130:102109. doi: 10.1016/j.tube.2021.102109. Epub 2021 Jul 21. PMID: 34315045.

- Sireci G, Badami GD, Di Liberto D, Blanda V, Grippi F, Di Paola L, Guercio A, de la Fuente J, Torina A. Recent Advances on the Innate Immune Response to *Coxiella burnetii*. *Front Cell Infect Microbiol*. 2021 Nov 2; 11:754455. doi: 10.3389/fcimb.2021.754455. PMID: 34796128; PMCID: PMC8593175.
- La Manna MP, Orlando V, Tamburini B, Badami GD, Dieli F, Caccamo N. Harnessing Unconventional T Cells for Immunotherapy of Tuberculosis. *Front Immunol*. 2020 Sep 3; 11:2107. doi: 10.3389/fimmu.2020.02107. PMID: 33013888; PMCID: PMC7497315.

ATTIVITA' SCIENTIFICHE

- Evaluation of the effects of conjugated linoleic acid in synergy with the use of "endurance training" protocols, on healthy and cachectic mouse models.
- New strategies for the activation of an immune response of HLA-E histocompatibility molecule-restricted CD8 T lymphocytes against *Mycobacterium tuberculosis* infection.
- Study of a particular population of CD8 T lymphocytes defined as TRM (Tissue Resident Memory) in Multiple Myeloma.
- Assessment of the Platelets Contribution to the Pathogenesis of Tuberculosis.
- Quantitative, phenotypic and functional analysis of circulating B lymphocytes in latent and TB active subjects.
- Assessment of an Engineered Fusion Protein Featuring a TCR Specific to an HLA-E Restricted Peptide from *M. tuberculosis*
- Assessment of a rapid screening test for detecting TB active patients.
- Assessment of a rapid and simple multiparameter assay to quantify Spike-specific CD4 and CD8 T Cells after SARS-CoV-2 Vaccination
- From inflammatory bowel disease to colon cancer: involvement of innate lymphocytes in early pathogenic mechanism
- Innovative strategies in diagnosis, immune phenotype characterization and outcome prediction of Tuberculosis in native and migrant subjects: role of stool GeneXpert and next-generation single-cell (SC) sequencing
- Role of gamma/delta lymphocytes in immune surveillance of lung cancer: effector functions and therapeutic potential
- n° 3 Poster presentation at National congress (2021/2022/2023)

AMBITI DI RICERCA

New Immunotherapy strategies against cancer and infectious diseases are the main research interests. Expertise in a range of immunological techniques covering Immunohistochemistry, flow cytometry, cell culture, functional assays, confocal microscopy and in vivo mice procedures.