



Matteo Fracella

EDUCATION AND TRAINING

PhD in "Experimental Medicine" [XXXVII Cycle] (Ottimo cum laude)

Sapienza University of Rome, Italy [2025]

City: Rome | Country: Italy

Master's Degree in "Genetica e Biologia Molecolare" [LM - Ordin. 2017; LM-6] (110/110 cum laude)

Sapienza University of Rome, Italy [2021]

City: Rome | Country: Italy

Bachelor's Degree in "Scienze Biologiche" [L-13; DM270] (108/110)

Università del Salento, Italy [2019]

City: Lecce | Country: Italy

High School Diploma (100/100)

Liceo Scientifico Galileo Galilei [2016]

City: Nardò | Country: Italy

WORK EXPERIENCE

 *Sapienza University of Rome, Italy* – Rome, Italy

City: Rome | Country: Italy

Post Doctoral research fellow

[01/12/2024 – 30/11/2025]

Research fellow, categoria B tipo I (SSD MEDS-03/A), Department of Molecular Medicine, Sapienza University of Rome. "Emerging and re-emerging viral threats" - PNRR/PE13, CUP: B53C22004040007 - "One Health Basic and Translational Research Actions addressing Unmet Needs on Emerging Infectious Diseases". Project title: "*Studio dei determinanti di patogenesi nel corso di infezioni virali respiratorie per lo sviluppo di un nuovo modello clinico-diagnostico*".

 *Sapienza University of Rome, Italy* – Rome, Italy

City: Rome | Country: Italy

PhD Internship

[2021 – 2025]

Training for experimental PhD thesis at Department of Molecular Medicine, Laboratory of Virology, Sapienza, University of Rome. Title of thesis: "Microbial co-infections and innate immune responses in human papillomavirus mucosal infections: insights from in vivo and in vitro models"

 *Sapienza University of Rome, Italy* – Rome, Italy

City: Rome | Country: Italy

Master's degree Internship

[2019 – 2021]

Training for experimental Master's Degree thesis at Department of Molecular Medicine, Laboratory of Virology, Sapienza, University of Rome. Title of thesis: "Infezione di MmuPV1 su cheratinociti di topo come modello per lo studio di geni associati all'Interferon nel controllo della replicazione del papillomavirus".

 *Università del Salento, Italy* – Lecce, Italy

City: Lecce | Country: Italy

Bachelor's Degree Internship

[2018 – 2019]

Training for experimental Bachelor's Degree thesis at Department of Anatomia Comparata e Citologia, Università del Salento, Lecce. Title of thesis: "Vescicole extracellulari: attività immuno-modulatoria dei macrofagi in condizioni di stress iperglicemico"

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

TECHNICAL SKILLS

Cellular biology

- Cell cultures
- Virus isolation, propagation and titration
- In vitro testing of antiviral and virucidal efficacy of natural and synthetic molecules • Neutralization bioassay
- Flow cytometry methods

Molecular biology

- Nucleic acid extraction
- Standard PCR assays for virus detection
- Real Time-RT PCR and Digital PCR for quantification of viral nucleic acids and gene expression measurements
- ELISA assay

Computer skills

- Database consultation and literature search (e.g., PubMed, Scopus)
- Proficient in Microsoft Office Suite (Word, Excel, PowerPoint)
- Statistical analysis software (SPSS, GraphPad Prism)
- Basic image editing and figure preparation (GraphPad Prism, BioRender)
- Online collaboration platforms (Teams, Zoom, Google Workspace)

MAIN RESEARCH TOPICS

Scientific topics

Matteo Fracella's research focuses on host-virus interactions and antiviral immunity, with a particular emphasis on interferon (IFN) pathways and cell-mediated responses in both acute and chronic viral infections. His work spans a broad range of viruses, including human papillomavirus (HPV), human immunodeficiency virus (HIV), and polyomaviruses (HPyVs), as well as respiratory pathogens such as respiratory syncytial virus (RSV), rhinovirus (HRV), metapneumovirus (hMPV), and coronaviruses, including SARS-CoV-2. To further investigate viral pathogenesis and immune mechanisms, he also employs surrogate models such as murine papillomavirus (MmuPV1), feline coronavirus (FCoV) and bovine coronavirus (BCoV). Dr. Fracella is actively involved in the characterization of emerging respiratory viruses, such as RSV-A-ON1. He has extensive expertise in molecular and cellular biology techniques, including standard PCR, real-time quantitative PCR (qPCR), digital PCR (dPCR), cell culture and in vitro functional studies. His experience encompasses antiviral and virucidal assays using both natural and synthetic compounds. He also has expertise in flow cytometry and data analysis, as well as a strong background in computational tools for virological and immunological research. His work also includes epidemiological investigations, with a particular focus on viral transmission dynamics and the role of immune responses in infection spread and disease severity.

TEACHING ASSIGNMENT

[2024 – Current]

Culture della materia, MICROBIOLOGIA (SSD MEDS-03/A), Sapienza, University of Rome

Master's degree in "Medicina e Chirurgia - Canale A", Sapienza, University of Rome

[2024 – Current]

Tutoring assignment for Bachelor's degree students, Sapienza, University of Rome, a.a. 2024/2025

Bachelor's degree students of "Tecniche di Laboratorio Biomedico Canale A", Sapienza, University of Rome

[2024 – 2025]

Elective Didactic Activity (ADE) - Nursing Bachelor's degree at Sapienza, University of Rome, a.a. 2024/2025

ADE at Nursing Bachelor's degree (Isernia, "Farmacia e Medicina", Sapienza, University of Rome). Topic of the lectures:

1. *Papillomavirus umano: approcci per la prevenzione, diagnosi e cura*
2. *Infezioni virali respiratorie nei pazienti pediatrici: strategie di gestione clinica*
3. *Malattie con trasmissione per contatto interpersonale: aspetti virologici e di prevenzione*

[2023 – 2024]

Tutoring assignment for Bachelor's degree students at Sapienza, University of Rome, a.a. 2023/2024

Bachelor's degree students of "Tecniche di Laboratorio Biomedico Canale A", Sapienza, University of Rome

[2023 – 2024]

Elective Didactic Activity (ADE) - Nursing Bachelor's degree at Sapienza, University of Rome, a.a. 2023/2024

ADE for Nursing Bachelor Degree (Isernia, "Farmacia e Medicina", Sapienza, University of Rome). Topic of the lectures:

1. *"Prevenzione, diagnosi e trattamento delle infezioni da Papillomavirus umano"*
2. *"Meccanismi patogenetici, sintomatologia e decorso dell'infezione da HCV"*
3. *"Malaria: incidenza, trattamento e profilassi"*
4. *"Infezioni virali respiratorie e gestione del paziente pediatrico"*

[2023 – 2024]

Teaching assignment - Second level Master's in "Molecular Virology", Sapienza, University of Rome, a.a. 2023/2024

Second level Master's in "Molecular Virology", Sapienza. Topic of the lectures:

1. *"Principi della Digital PCR"*
2. *"Applicazioni della Digital PCR in virologia"*
3. *"Estrazione acidi nucleici cellulari e virali, reazione di retrotrascrizione e di PCR"*
4. *"Applicazione della tecnologia CRISPR/CAS9 nella virologia"*
5. *"Ruolo della risposta immunitaria innata nell'infezione da HPV"*
6. *"Esercitazione su Real Time PCR e analisi dei prodotti di PCR"*

[2022 – 2023]

Elective Didactic Activity (ADE) - Nursing Bachelor's degree, Sapienza, University of Rome, a.a. 2022/2023

ADE for Nursing Bachelor Degree (Isernia, "Farmacia e Medicina", Sapienza, University of Rome). Topic of the lectures:

1. *"Infezioni da papillomavirus umano: incidenza, fattori di rischio e trattamento delle lesioni associate"*
2. *"HCV: modalità di trasmissione, meccanismi patogenetici e gestione del rischio biologico"*

[2022 – 2023]

Teaching assignment - First level Master's in "Gestione del paziente critico in corso di eventi catastrofici (CBNRE/Natech)", Sapienza, University of Rome, a.a. 2022/2023

First level Master's in "Gestione del paziente critico in corso di eventi catastrofici (CBNRE/Natech)", Sapienza, University of Rome.

Topic of the lecture:

1. *"Procedure di sicurezza, gestione del rischio biologico e controllo dell'infezione da MONKEYPOX VIRUS"*

[2021 – 2022]

Teaching assignment - Second level Master's in "Molecular Virology", Sapienza, University of Rome, a.a. 2021/2022

Second level Master's in "Molecular Virology", Sapienza, University of Rome. Topic of the lectures:

1. *"Applicazione della tecnologia CRISPR/CAS9"*
2. *"Ruolo della risposta immunitaria innata nell'infezione da HPV"*

[2021 – 2022]

Tutoring assignment (Tutorati in ingresso e in itinere) for Master's degree students of "Medicina e Odontoiatria", Sapienza, University of Rome, a.a 2021/2022

[2021 – 2022]

Elective Didactic Activity (ADE) - Nursing Bachelor's degree, Sapienza, University of Rome, a.a. 2021/2022

ADE for Nursing Bachelor Degree (Isernia, "Farmacia e Medicina", Sapienza, University of Rome). Topic of the lectures:

1. *"Malaria: contagio, sintomi e profilassi"*
2. *"Patogenesi e trasmissione dell'infezione da virus dell'epatite c (HCV)"*
3. *"SARS-CoV-2: patogenesi e gestione clinica del paziente durante e post COVID-19"*

FUNDING [GRANTS AS PRINCIPAL INVESTIGATOR OR COMPONENT]

[2025]

CALL2024 "Anna Tramontano" - Institute Pasteur (40.000,00 Euro)

Role: **Component**. Title: "Unravelling the interplay of cellular and viral non-coding RNA with the interferon response in dengue virus infection: a comprehensive in vitro and in vivo molecular characterization".

[2024]

Avvio alla Ricerca 2024, Tipo2 - Sapienza, University of Rome (2.175,00 Euro)

Role: **Principal Investigator**. Title: "Characterization of the Interferon response in mouse keratinocytes infected with mouse Papillomavirus (MmuPV1)"

[2023]

R.I.Pr.E.I. 2023 - Istituto Superiore di Sanità (70.000,00 Euro)

Role: **Component**. Title: "Decoding the pathogenesis of SARS-CoV-2: investigating host and viral biomarkers in vitro and in an animal model across multiple viral variants".

[2023]

Progetti di Ricerca - Progetti Piccoli 2023 - Sapienza, University of Rome (3.000,00 Euro)

Role: **Component**. Title: "Role of resident and pathogenic microbes in determining the innate immune response to anal papillomavirus infections in men and women".

[2022]

Progetti di Ricerca - Progetti Medi 2022 - Sapienza, University of Rome (10.000,00 Euro)

Role: **Component**. Title: "Immune response and microbiota signature following natural SARS-CoV-2 infection and vaccination in HIV- infected individuals".

[2022]

PRIN 2022 (41.750,00 Euro)

Role: **Component**. Title: "Assessment of the missing link between Human Endogenous Retroviruses and gut Microbiota- Immunity Axis in the colorectal cancer pathogenesis"

CONFERENCES AND SEMINARS

TORINO (POSTER PRESENTATION)

2025 - Presenting author - 9th NATIONAL CONGRESS OF THE ITALIAN SOCIETY FOR VIROLOGY (SIV)

ABSTRACT TITLE: *"In vitro replication kinetics and extracellular vesicle profiling of a contemporary RSV-A strain in respiratory cell models"*. **Matteo Fracella**, Alessandra Pierangeli, Eleonora Coratti, Roberta Campagna, Carolina Scagnolari, Agostina Longo, Valeria Manganelli, Maurizio Sorice, Guido Antonelli.

VIENNA (POSTER PRESENTATION)

2025 - Presenting author - EUROPEAN CONGRESS OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES – ESCMID GLOBAL 2025

ABSTRACT TITLE: *"Co-infection with persistent HPV and Merkel cell polyomavirus enhances IFN-lambdas production in the anal mucosa of MLWH"*. **Matteo Fracella**, Sara Passerini, Federica Frasca, Alessandra D'auria, Ginevra Bugani, Eugenio Nelson Cavallari, Giancarlo Ceccarelli, Claudio Maria Mastroianni, Guido Antonelli, Alessandra Pierangeli, Valeria Pietropaolo, Gabriella D'ettore, Carolina Scagnolari.

ROME (ORAL PRESENTATION)

2024 - Presenting author - BEMM SYMPOSIUM – XI EDITION

TITLE: *"Role of the innate immune response in the persistence of human papillomavirus mucosal infections"*. **Matteo Fracella**, PhD in Experimental Medicine. Aula Cesare Gerin – Istituto di Medicina Legale, Sapienza, Viale Regina Elena 336.

PAVIA (POSTER PRESENTATION)

2024 - Presenting author - 52° CONGRESSO NAZIONALE SOCIETÀ ITALIANA MICROBIOLOGIA (SIM)

ABSTRACT TITLE: *"Molecular epidemiology of respiratory viruses in autumn-winter 2023-24 in Rome"*. **Matteo Fracella**, Ombretta Turriziani, Eleonora Coratti, Roberta Campagna, Manuel Pacchiale, Piergiorgio Roberto, Lilia Cinti, Gabriella d'Ettore, Giancarlo Ceccarelli, Laura Petrarca, Raffaella Nenna, Fabio Midulla, Gioacchino Galardo, Guido Antonelli, Alessandra Pierangeli.

ROME (ORAL PRESENTATION)

2024 - Presenting author - 16° CONGRESSO ITALIAN CONFERENCE ON AIDS AND ANTIVIRAL RESEARCH (ICAR)

ABSTRACT TITLE: *"High rates of anal polyomaviruses and HPV co-infection among people living with HIV"*. **Matteo Fracella**, Sara Passerini, Ginevra Bugani, Federica Frasca, Alessandra D'Auria, Eleonora Coratti, Letizia Santinelli, Domenico Benvenuto, Eugenio Nelson Cavallari, Claudio Maria Mastroianni, Guido Antonelli, Alessandra Pierangeli, Gabriella D'Ettore, Valeria Pietropaolo, Carolina Scagnolari.

DENVER (ORAL PRESENTATION)

2024 - Presenting author - CONFERENCE ON RETROVIRUSES AND OPPORTUNISTIC INFECTIONS (CROI)

ABSTRACT TITLE: *"Synergistic Effects of HIV, HPV, and Polyomaviruses on Interferon Response in Male Anal Mucosa"*. **Matteo Fracella**, Sara Passerini, Letizia Santinelli, Leonardo Sorrentino, Luca Maddaloni, Ginevra Bugani, Eugenio Nelson Cavallari, Alessandra Pierangeli, Guido Antonelli, Claudio Maria Mastroianni, Gabriella D'Ettore, Valeria Pietropaolo, Carolina Scagnolari.

CAGLIARI (POSTER PRESENTATION)

2023 - Presenting author - 51° CONGRESSO NAZIONALE SOCIETÀ ITALIANA MICROBIOLOGIA (SIM)

ABSTRACT TITLE: *"Differential type I interferon expression between children and adolescents with long COVID"*. **Matteo Fracella**, Federica Frasca, Leonardo Sorrentino, Alessandra D'Auria, Letizia Santinelli, Luca Maddaloni, Ginevra Bugani, Chiara Virgillito, Enrica Mancino, Greta Di Mattia, Maria Giulia Conti, Luigi Matera, Beniamino Caputo, Gabriella D'Ettore, Fabio Midulla, Guido Antonelli, Alessandra Pierangeli, Carolina Scagnolari.

BRESCIA (POSTER PRESENTATION)

2023 - Presenting author - 7th NATIONAL CONGRESS OF THE ITALIAN SOCIETY FOR VIROLOGY (SIV)

ABSTRACT TITLE: *"Molecular and clinical analysis of RSV-positive bronchiolitis cases before and after pandemic restrictions, in Rome"*. **Matteo Fracella**, Carolina Scagnolari, Giuseppe Oliveto, Leonardo Sorrentino, Martina Ardone, Federica Frasca, Luigi Matera, Maria Giulia Conti, Laura Petrarca, Raffaella Nenna, Fabio Midulla, Paola Papoff, Ombretta Turriziani, Guido Antonelli, Alessandra Pierangeli.

BRESCIA (ORAL PRESENTATION)

2023 - Presenting author - 7th NATIONAL CONGRESS OF THE ITALIAN SOCIETY FOR VIROLOGY (SIV)

ABSTRACT TITLE: *"Characterization of type I/III interferon response to MPXV, HIV and HPV infections in anal mucosa of MSM"*. **Matteo Fracella**, Luca Maddaloni, Alessandra D'Auria, Federica Frasca, Letizia Santinelli, Camilla Bitossi, Nelson Cavallari, Paola Mazzetti, Alessandra Pierangeli, Claudio Maria Mastroianni, Mauro Pistello, Guido Antonelli, Gabriella D'Ettore, Carolina Scagnolari.

BARI (POSTER PRESENTATION)

2023 - Presenting author - 15° CONGRESSO ITALIAN CONFERENCE ON AIDS AND ANTIVIRAL RESEARCH (ICAR)

ABSTRACT TITLE: "*Distinct mucosal interferon response to MPXV, HIV and HPV infections in anal cells from MSM*". **Matteo Fracella**, Luca Maddaloni, Alessandra D'Auria, Federica Frasca, Letizia Santinelli, Camilla Bitossi, Nelson Cavallari, Paola Mazzetti, Alessandra Pierangeli, Claudio Maria Mastroianni, Mauro Pistello, Guido Antonelli, Gabriella D'Ettore, Carolina Scagnolari.

COPENAGHEN (ORAL PRESENTATION)

2023 - Presenting author - 33° EUROPEAN CONGRESS OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES (ECCMID)

ABSTRACT TITLE: "*Alteration of serum cytokine profile in children with long COVID*". **Matteo Fracella**, Leonardo Sorrentino, Federica Frasca, Mirko Scordio, Giuseppe Oliveto, Alessandra D'Auria, Stefania Rossi, Lucia Gabriele, Anna R. Ciccaglione, Roberto Bruni, Enrica Mancino, Gabriella D'Ettore, Guido Antonelli, Alessandra Pierangeli, Carolina Scagnolari

WASHINGTON D.C. (ORAL PRESENTATION)

2023 - Presenting author - 35TH INTERNATIONAL PAPILLOMAVIRUS CONFERENCE (IPVC)

ABSTRACT TITLE: "*Kinetics of expression of viral mRNA and u-ISGF3-regulated interferon stimulated genes in MPEK.BL6 keratinocytes infected with MmuPV1*". **Matteo Fracella**, Richard Roden, Alessandra Pierangeli, Mirko Scordio, Leonardo Sorrentino, Jiafen Hu, Federico De Marco, Guido Antonelli, Carolina Scagnolari, Raphael Viscidi.

BERGAMO (ORAL PRESENTATION)

2022 - Presenting author - 14° CONGRESSO ITALIAN CONFERENCE ON AIDS AND ANTIVIRAL RESEARCH (ICAR)

ABSTRACT TITLE: "*Alteration of IFN pathways in anal cells from HIV-1/HPV co-infected men*". **Matteo Fracella**, Mirko Scordio, Leonardo Sorrentino, Federica Frasca, Giuseppe Oliveto, Agnese Viscido, Letizia Santinelli, Eugenio Nelson Cavallari, Gabriella D'Ettore, Paolo Gozzo, Guido Antonelli, Carolina Scagnolari, Alessandra Pierangeli.

NAPOLI (ORAL PRESENTATION)

2022 - Presenting author - 6° NATIONAL CONGRESS OF THE ITALIAN SOCIETY FOR VIROLOGY.

ABSTRACT TITLE: "*Molecular epidemiology of RSV strains causing an unusual peak of hospitalization in autumn 2021*". **Matteo Fracella**, Leonardo Sorrentino, Carolina Scagnolari, Giuseppe Oliveto, Federica Frasca, Laura Petrarca, Raffaella Nenna, Fabio Midulla, Guido Antonelli, Alessandra Pierangeli.

NAPOLI (POSTER PRESENTATION)

2022 - Presenting author - 50° CONGRESSO NAZIONALE DELLA SOCIETA' ITALIANA DI MICROBIOLOGIA (SIM)

ABSTRACT TITLE: "*Study of immunological parameters associated with Long COVID in children/adolescents*". **Matteo Fracella**, Leonardo Sorrentino, Federica Frasca, Mirko Scordio, Giuseppe Oliveto, Agnese Viscido, Camilla Bitossi, Alessandra D'auria, Stefania Rossi, Lucia Gabriele, Anna R. Ciccaglione, Roberto Bruni, Laura Petrarca, Enrica Mancino, Raffaella Nenna, Fabio Midulla, Guido Antonelli, Alessandra Pierangeli, Carolina Scagnolari.

ROMA (ORAL PRESENTATION)

2022 - Presenting author - 21° CONGRESSO SOCIETÀ ITALIANA DI MALATTIE INFETTIVE E TROPICALI (SIMIT)

ABSTRACT TITLE: "*Inflammasome but not type III Interferon response is increased in children/adolescents with long COVID*". **Matteo Fracella**, Leonardo Sorrentino, Federica Frasca, Mirko Scordio, Giuseppe Oliveto, Carla Selvaggi, Agnese Viscido, Camilla Bitossi, Alessandra D'auria, Laura Petrarca, Enrica Mancino, Raffaella Nenna, Fabio Midulla, Guido Antonelli, Alessandra Pierangeli, Carolina Scagnolari

LISBON (ORAL PRESENTATION)

2022 - Presenting author - 32° EUROPEAN CONGRESS OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES (ESCMID)

ABSTRACT TITLE: "*How bacterial vaginosis influence the innate immune response to HPV in cervical cells*". **Matteo Fracella**, Mirko Scordio, Leonardo Sorrentino, Federica Frasca, Giuseppe Oliveto, Agnese Viscido, Federica Di Lella, Massimo Gentile, Carolina Scagnolari, Valeria Pietropaolo, Nadia Recine, Guido Antonelli, Alessandra Pierangeli.

RIMINI (ORAL PRESENTATION)

2022 - Presenting author - XLIX CONGRESSO NAZIONALE AMCLI

ABSTRACT TITLE: "*Dysregulation of IFN pathways in anal cells from HIV-1 men during HPV infection*". **Matteo Fracella**, Mirko Scordio, Leonardo Sorrentino, Federica Frasca, Giuseppe Oliveto, Agnese Viscido, Letizia Santinelli, Eugenio Nelson Cavallari, Gabriella D'Ettorre, Paolo Gozzo, Guido Antonelli, Carolina Scagnolari, Alessandra Pierangeli.

PUBLICATIONS

N.1

Mancon A, Pellegrinelli L, Romano G, Vian E, Biscaro V, Piccirilli G, Lazzarotto T, Uceda Renteria S, Callegaro A, Pagani E, Masi E, Ferrari G, Galli C, Centrone F, Chironna M, Tiberio C, Falco E, Micheli V, Novazzi F, Mancini N, Alice TG, Cerutti F, Pomari E, Castilletti C, Lalle E, Maggi F, **Fracella M**, Ravanini P, Faolotto G, Schiavo R, Lo Cascio G, Acciarri C, Menzo S, Baldanti F, Antonelli G, Pierangeli A, Pariani E, Piralla A; AMCLI-GLiViRe Working Group. Multicenter Cross-sectional Study on the Epidemiology of Human Metapneumovirus in Italy, 2022-2024, With a Focus on Adults Over 50 Years of Age. *J Infect Dis*. 2025 Jul 16;232(Supplement_1):S109-S120. doi: 10.1093/infdis/jiaf111. Citations (1), IF 4.5

N.2

Passerini S, **Fracella M**, Ferlosio A, Moens U, Scagnolari C, Antonelli G, Ciotti M, Pietropaolo V. Investigation of mRNA expression levels of DNA damage response genes in Merkel Cell Polyomavirus-positive Merkel Cell Carcinoma: a pilot study. *Discov Oncol*. 2025 May 21;16(1):852. doi: 10.1007/s12672-025-02651-8. Citations (0), IF 2.9

N.3

Bitossi C, Frasca F, D'Auria A, **Fracella M**, Radocchia G, Trancassini M, Petrarca L, La Regina D, Troiani P, Gentile M, Pietropaolo V, Midulla F, Cimino G, Antonelli G, Pierangeli A, Scagnolari C. Elexacaftor/tezacaftor/ivacaftor (ETI) therapy modifies the expression of interferon beta and inflammatory genes in the airways of adult patients with cystic fibrosis: a pilot study. *Mol Cell Biochem*. 2025 Jun 25. doi: 10.1007/s11010-025-05331-x. Citations (0), IF 3.7

N.4

Pierangeli A, Turriziani O, **Fracella M**, Campagna R, Frasca F, D'Auria A, Scagnolari C, Roberto P, Cinti L, D'Ettorre G, Ceccarelli G, Petrarca L, Nenna R, Midulla F, Galardo G, Antonelli G. The added value of diagnostics to characterize age-specific patterns of respiratory viral infections and coinfections and to detect emerging threats. *BMC Infect Dis*. 2025 Mar 25;25(1):404. doi: 10.1186/s12879-025-10693-0. Citations (0), IF 3.0

N.5

Bitossi C, **Fracella M**, Viscido A, Diaco F, Pecoraro C, Troiani P, Cimino G, d'Ettorre G, Trancassini M, Pierangeli A, Antonelli G, Scagnolari C. A family cluster of persistent *Pandora* infection in cystic fibrosis. *J Immunoassay Immunochem*. 2025 Mar 4;46(2):201-206. doi: 10.1080/15321819.2025.2462807. Citations (1), IF 1.16

N.6

Toscanelli W*, **Fracella M***, De Angelis M*, Scagnolari C, Sorrentino L, Piselli E, Marcocci ME, Midulla F, Mancino E, Nenna R, Petrarca L, Palamara AT, Antonelli G, Pierangeli A, Nencioni L. NRF2 Antioxidant Response and Interferon- Stimulated Genes Are Differentially Expressed in SARS-CoV-2-Positive Young Subjects. *Immun Inflamm Dis*. 2025 Jan;13(1):e70109. doi: 10.1002/iid3.70109.*These authors contributed equally to this manuscript. Citations (1), IF 2.7

N.7

Maddaloni L, Bugani G, Santinelli L, Lazzaro A, Frasca F, **Fracella M**, Ceccarelli G, Mastroianni CM, Scagnolari C, d'Ettorre G. Gut TLRs and IFN pathways mRNA expression and frequencies of CD4+T cell expressing CD38 or HLA- DR go in parallel during HIV immunopathogenesis. *Immunol Lett*. 2025 Jan 5;272:106973. doi: 10.1016/j.imlet.2025.106973. Citations (0), IF 2.8

N.8

Bordi L, D'Auria A, Frasca F, Mazzotta V, Mazzetti P, **Fracella M**, d'Ettorre G, Antonelli G, Pistello M, Antinori A, Viscidi RP, Maggi F, Lalle E, Scagnolari C. MPXV infection impairs IFN response but is partially sensitive to IFN- γ antiviral effect. *Med Microbiol Immunol*. 2024 Nov 11;213(1):25. doi: 10.1007/s00430-024-00808-w. Citations (3), IF 3.0

N.9

Puxeddu M, Donalisio M, Bugert JJ, Corona A, Cocomazzi P, Milani M, Hucke F, Arduino I, Esposito F, Moretti P, Ortore MG, Nalli M, Manetto S, Mazzocanti G, Bigogno C, Dondio G, Sciò P, Coluccia A, **Fracella M**, Antonelli G, Lembo D, Tramontano E, Silvestri R, Mastrangelo E, La Regina G. 4-(3-Phenylsulfonylindol-2-yl)-1-(pyridin-2-yl)piperazinyl-methanones as Potent Inhibitors of both SARS-CoV-2 and HCoV-OC43 Viruses. *ACS Infect Dis*. 2024 Sep 13;10(9):3158-3175. doi: 10.1021/acsinfecdis.4c00108. Citations (1), IF 3.8

N.10

Passerini S*, **Fracella M***, Benvenuto D, Bugani G, D'Auria A, Coratti E, Babini G, Moens U, Cavallari EN, Torti C, Antonelli G, Ciccozzi M, Pierangeli A, d'Ettorre G, Scagnolari C, Pietropaolo V. High rates of anal Merkel Cell Polyomavirus and HPV co-infection among people living with HIV. *J Med Virol*. 2024 Aug;96(8):e29883. doi: 10.1002/jmv.29883.* These authors contributed equally to this manuscript. Citations (2), IF 4.6

N.11

Frasca F, Sorrentino L, **Fracella M**, D'Auria A, Coratti E, Maddaloni L, Bugani G, Gentile M, Pierangeli A, d'Ettorre G, Scagnolari C. An Update on the Entomology, Virology, Pathogenesis, and Epidemiology Status of West Nile and Dengue Viruses in Europe (2018-2023). *Trop Med Infect Dis*. 2024 Jul 20;9(7):166. doi: 10.3390/tropicalmed9070166. Citations (16), IF 2.6

N.12

Pierangeli A, Midulla F, Piralla A, Ferrari G, Nenna R, Pitrolo AMG, Licari A, Marseglia GL, Abruzzese D, Pellegrinelli L, Galli C, Binda S, Cereda D, **Fracella M**, Oliveto G, Campagna R, Petrarca L, Pariani E, Antonelli G, Baldanti F. Sequence analysis of respiratory syncytial virus cases reveals a novel subgroup -B strain circulating in north-central Italy after pandemic restrictions. *J Clin Virol*. 2024 Aug;173:105681. doi: 10.1016/j.jcv.2024.105681. Citations (8), IF 3.4

N.13

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Maddaloni L, Santinelli S, Bugani G, Cacciola E, Lazzaro A, Lofaro C, Caiazzo S, Frasca F, **Fracella M**, Ajassa C, Leanza C, Napoli A, Cinti L, Gaeta A, Antonelli G, Ceccarelli G, Mastroianni CM, Scagnolari C, d'Ettorre G. Differential expression of Type I interferon and inflammatory genes in SARS-CoV-2-infected patients treated with monoclonal antibodies. *Immun Inflamm Dis.* 2023;11:e968. <https://doi.org/10.1002/iid3.968>. Citations (0), IF 2.7

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Mori M, Quaglio D, Calcaterra A, Ghirga F, Sorrentino L, Cammarone S, **Fracella M**, D'Auria A, Frasca F, Criscuolo E, Clementi N, Mancini N, Botta B, Antonelli G, Pierangeli A, Scagnolari C. Natural Flavonoid Derivatives Have Pan-Coronavirus Antiviral Activity. *Microorganisms.* 2023 Jan 25;11(2):314. doi: 10.3390/microorganisms11020314. Citations (16), IF 4.2

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Immune Response to HPV in Cervical Cells. *Pathogens*. 2022 Nov 16;11(11):1361. doi: 10.3390/pathogens11111361. Citations (10), IF 3.3

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Bitossi C, Viscido A, Prezioso C, Brazzini G, Trancassini M, Borrazzo C, Passerini S, Frasca F, Scordio M, Sorrentino L, Oliveto G, **Fracella M**, D'Auria A, Selvaggi C, Cimino G, Midulla F, Pierangeli A, Antonelli G, Moens U, Pietropaolo V, Scagnolari C. High prevalence of Merkel cell polyomavirus is associated with dysregulation in transcript levels of TLR9 and type I IFNs in a large cohort of CF patients from the Italian (Lazio) reference center for cystic fibrosis. *Microb Pathog*. doi: 10.1016/j.micpath.2022.105644. Citations (2), IF 3.5

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SCIENTIFIC BOOKS

Chapter 11 - Interferons in human papillomavirus infection: antiviral effectors or immunopathogenic role?

Fracella M, Bugani G, Maddaloni L, Frasca F, D'Auria A, Santinelli L, Pierangeli A, d'Ettorre G, Scagnolari C. 2025. "*Chapter 11 - Interferons in human papillomavirus infection: antiviral effectors or immunopathogenic role?*" *Drug Discovery Stories – From Bench to Bedside*. 2025, Pages 193-216. ELSEVIER <https://doi.org/10.1016/B978-0-443-23932-8.00011-X>

HONOURS AND AWARDS

[2024]

ICAR-CROI Awards 2024 (DENVER, USA)

ICAR-CROI affiliated event for Italian young investigators. Conference on Retroviruses and Opportunistic Infections (CROI). Abstract: "High rates of anal polyomaviruses and HPV co-infection among people living with HIV"

[2024]

Editorial Choice Paper

Editorial Choice Paper in *Tropical Medicine and Infectious Disease* (MDPI). Article: "An Update on the Entomology, Virology, Pathogenesis, and Epidemiology Status of West Nile and Dengue Viruses in Europe (2018-2023). Frasca F, Sorrentino L, Fracella M, D'Auria A, Coratti E, Maddaloni L, Bugani G, Gentile M, Pierangeli A, d'Ettorre G, Scagnolari C. *Trop Med Infect Dis*. 2024 Jul 20;9(7): 166. ISSN: 24146366. doi: 10.3390/tropicalmed9070166"

EDITORIAL ACTIVITIES

Reviewer

2025 - current: Reviewer for "Diagnostic Microbiology & Infectious Disease" (Elsevier)

2024 - current: Reviewer for "New Microbiologica" (Edizioni internazionali S.R.L. EDIMES, Edizioni Medico Scientifiche, Pavia)

2024 - current: Reviewer for "BMC Infectious Diseases" (Springer/Springer Nature)

2022 - current: Reviewer for "Archives of Virology" (Springer/Springer Nature)

SOCIETY MEMBERSHIPS

Young Scientist Membership for "European Society of Clinical Microbiology and Infectious Diseases (ESCMID)"

2025 - 2023 - 2022

Membership for "Società Italiana Microbiologia (SIM)"

2025 - 2024 - 2023 - 2022

Membership for "Società Italiana di Malattie Infettive e Tropicali (SIMIT)"

2024 - 2022

Membership for "International Papillomavirus Conference (IPVC)"

2023

PRESS MEDIA RELEASE

Pierangeli A, Nenna R, Fracella M, Scagnolari C, Oliveto G, Sorrentino L, Frasca F, Conti MG, Petrarca L, Papoff P, Turriziani O, Antonelli G, Stefanelli P, Palamara AT, Midulla F. Genetic diversity and its impact on disease severity in respiratory syncytial virus subtype-A and -B bronchiolitis before and after pandemic restrictions in Rome. J Infect. 2023 Oct;87(4): 305-314. doi: 10.1016/j.jinf.2023.07.008.

The results obtained from the research project were reported in the press review of the Sapienza University of Rome and described in various popular newspapers:

- <https://www.policlinicoumberto1.it/bronchiolite-in-eta-pediatria-la-malattia-associata-allinfezione-da-virus-respiratorio-sinciziale-vrs/>
- <https://www.uniroma1.it/it/notizia/bronchiolite-eta-pediatria-negli-ultimi-anni-casi-piu-gravi-associati-nuove-varianti-del-virus-vrsl>
- <https://www.iss.it/-/bronchiolite-in-eta-pediatria-negli-ultimi-anni-casi-piu-gravi-associati-a-nuove-varianti-del-virus-vrs>
- <https://www.sanita24.ilsole24ore.com/art/medicina-e-ricerca/2023-09-20/la-sapienza-iss-aumentano-casi-gravi-bronchiolite-bambini-varianti-virus-respiratorio-sinciziale>
- <https://www.farmacianews.it/bronchiolite-in-eta-pediatria-aumento-di-casi-gravi-nel-post-covid/>
- <https://www.aboutpharma.com/scienza-ricerca/bronchiolite-nei-bambini-casi-piu-gravi-associati-a-nuove-varianti-del-virus-respiratorio-sinciziale/>
- https://www.quotidianosanita.it/scienza-e-farmaci/articolo.php?articolo_id=116763
- <https://30science.com/2023/09/news/sapienza-iss-casi-piu-gravi-di-bronchiolite-pediatria-per-nuove-varianti-del-virus-vrs>

Fracella M, Mancino E, Nenna R, Virgillito C, Frasca F, D'Auria A, Sorrentino L, Petrarca L, La Regina D, Matera L, Di Mattia G, Caputo B, Antonelli G, Pierangeli A, Viscidi RP, Midulla F, Scagnolari C. Age- related transcript changes in type I interferon signaling in children and adolescents with long COVID. Eur J Immunol. 2024 May;54(5):e2350682. doi:10.1002/eji.202350682.

The results obtained from the research project were reported in the press review of the Sapienza University of Rome and described in various popular newspapers:

- <https://www.uniroma1.it/en/notizia/long-covid-children-and-adolescents>
- https://www.quotidianosanita.it/scienza-e-farmaci/articolo.php?articolo_id=121378
- <https://www.agi.it/salute/news/2024-04-06/salute-long-covid-bambini-legato-alterazioni-molecole>
- <https://www.fortuneita.com/2024/04/05/covid-in-italia-gli-ultimi-dati-e-il-long-covid-dei-giovanissimi/>
- <https://www.dottnet.it/articolo/32536155/da-uno-studio-della-sapienza-passi-avanti-verso-la>
- <https://www.sanitainformazione.it/salute/long-covid-alterazioni-degli-interferoni-legati-alla-sindrome-nei-bambini/>
- <https://scientificult.it/tag/carolina-scagnolari/>