**Curriculum vitae** of **MARCO RINALDO OGGIONI**, born in Legnano (Italy) on January 1st 1965. Italian and German citizen.

**CONTACT**

Dip di Farmacia e Biotecnologie, University of Bologna, Via Irnerio 42, 40126 Bologna, IT [marcorinaldo.oggioni@unibo.it](mailto:marcorinaldo.oggioni@unibo.it)

**POSITION**

2020- Professor of Microbial Genetics, Dip. Farmacia e Biotecnologie FaBiT, Università di Bologna, Bologna, Italy.

2025- Emeritus Professor, Dept of Genetics and Genome Biology, University of Leicester, Leicester, UK.

**PREVIOUS POSITIONS**

2015-2020 Honorary Consultant Microbiologist, University Hospitals of Leicester NHS Trust, Leicester, UK.

2013-2025 Professor, Dept of Genetics and Genome Biology, University of Leicester, Leicester, UK.

1993-2013 Consultant Clinical Microbiologist, Siena University Hospital (Azienda Ospedaliera Univ. Senese), Siena, Italy

1993-2013 Professor of Microbiology (non-tenure) at the Medical School, University of Siena, Siena, Italy.

**EDUCATION/SERVICES**

2023- Registration with the Medical Council of Bologna (Ordine dei Medici)

2022- Steering group Italian Society of General Microbiology SIMGBM

2019- Fellow of the International Society of Antimicrobial Chemotherapy FISAC

2015-18 Chair of the ESCMID Study Group for Infectious Diseases of the Brain (ESGIB)

2015- Fellow of the UK Higher Education Academy FHEA

1994 Specialisation Degree in Microbiology and Virology, University of Siena, Italy

1990 Medical Degree, Medical School of the University of Verona, Italy

GRANTS (current)

IT

2025-26 Human Technopole grant 25-G-ROUND-1, 2068360. Spatial sequencing of perfused spleens. PI

2024-28 EU grant GAP–101186900 BactEradiX. Coll.

2024-26 GSK Contract Research In vivo models for pathogen research. PI.

2024-27 EU grant GAP-101131231 AMRAMR. PI

2023-25 PRIN PNRR grant P2022M8KYE. The innate immune reaction to invasive infection in human organs. PI.

2023-26 Cystic Fibrosis Foundation FFC grant FFC#13/2023. Aptides for the prevention of Pseudomonas infections. CoI.

2023-26 Ricerca Finalizzata RF-2021-12375437. RNA vaccine for S. pneumoniae and MTB. CoI.

2022-25 EU grant PNRR PE13 INF-ACT PE00000007. Emerging Infectious Diseases. CoI

2022-25 PRIN 2020 grant 202089LLEH. The CoDiCo (colonisation to disease concepts) project. PI.

2022-23 Fondazione del Monte. 1360bis/2021. Migratory birds and risk of viral spillover. CoI.

UK

2022-27 BRC NIHR203327. Leicester NIHR Biomedical Research Centre. CoI.

2022-25 BHF Project Grant PG/22/11117. Epigenetic phase variation of periodontal bacteria. CoI.

**CLINICAL TRIALS:**

2023-26 MOISE, CE-AVEC:668/2023/Sper/AOUBo of 19/10/2023. End date 18/10/2026. Scientific responsible.

2021-25 TIMOLD, ClinicalTrials.gov NCT05255042, REC: 21/PR/0287, IRAS 293486. End date: 31/12/2025. Chief Invest.

2018-25 TIMID, ClinicalTrials.gov NCT04620824, REC 18/EM/0057, IRAS 219992, End date: 31/12/2025. Chief Invest.

2019-21 Pollution and Health (PHN), REC 19/NW/0584, IRAS 264311, End date: 31/08/2021. Chief Invest.

**PATENTS:**

2009Antigenic protein fragments of *Streptococcus pneumoniae*, International patent WO/2009/115509.

**RESEARCH INTERESTS:** Analysis of the molecular basis of mechanisms involved in the interaction of bacterial pathogens with their environment - the human host - by use of genomic tools and the study of microbial physiology. Most recent contributions were the identification of phase variable epigenetic control in bacteria and bacterial replication within a subset of tissue macrophages prior to invasive disease. Additional interests include investigation into the molecular determinants of antimicrobial drug resistance and mechanisms governing mobile genetic elements.

**RECENT PUBLICATIONS (orcid.org/0000-0003-4117-793X):**

* Sharaf S, T Lawes, D Roos, I Okoliegbe, S Alapati, Ao Ribeiro, I Nkene, D Ghezzi, SJ Reid, V Austin, D Ayansina, R Wilson, T Rehman, BJ Parcell, I Mellor, CA Marwick, MR Oggioni, K Hijazi. Universal versus targeted chlorhexidine and mupirocin decolonisation and clinical and molecular epidemiology of Staphylococcus epidermidis bloodstream infections in patients in intensive care in Scotland, UK: a controlled time-series and longitudinal genotypic study. The Lancet Microbe, 2025 June 11; 101118. Doi 10.1016/j.lanmic.2025.101118.
* Davison C, S Tallman, M de St-Croix, MR Oggioni, M Antonio, B Kwambana-Adams, F Freund, S Beleza. Long-term evolution of Streptococcus mitis and Streptococcus pneumoniae leads to higher genetic diversity within rather than between human populations. PLoS Genet 20(6): e1011317, 2024 June 6, doi: 10.1371/journal.pgen.1011317.
* Kareem BO, O Gazioglu, K Mueller Brown, M Habtom, D Glanville, MR Oggioni, PW Andrew, A Ulijasz, NL Hiller, H Yesilkaya. Environmental and genetic regulation of Streptococcus pneumoniae galactose catabolic pathways. Nature Communication, 2024 Jun 17;15(1):5171. doi: 10.1038/s41467-024-49619-w.
* Boggiano B, M Williams Higgins, J Matheson, D Jenkins, MR Oggioni. The contemporaneous healthcare cost of particulate matter pollution for youth and older adult populations. Journal of Environmental Economics and Management. 2024 April 26, 125:102994. Doi: 10.1016/j.jeem.2024.102994.
* Kwun MJ, AV Ion, MR Oggioni, SD Bentley, NJ Croucher. Diverse regulatory pathways modulate bet hedging of competence induction in epigenetically-differentiated phase variants of Streptococcus pneumoniae. Nucleic Acids Res. 2023 Oct 27;51(19):10375-10394. doi: 10.1093/nar/gkad760.
* Apte S, S Bhutda, S Ghosh, K Sharma, TE Barton, S Dibyachintan, O Sahay, S Tang, AR Sinha, J Rakshit, S Roy, A Datey, S Santra, J Joseph, S Sasidharan, S Hammerschmidt, D Chakravortty, MR Oggioni, MK Santra, DR Neill, A Banerjee. A novel innate pathogen sensing strategy involving ubiquitination of bacterial surface proteins. Science Advances. 2023 Mar 22;9(12):eade1851. doi: 10.1126/sciadv.ade1851.
* Kanani T, J Isherwood, K ElSamani, WY Chung, K West, MR Oggioni, G Garcea, A Dennison. Development of a novel ex vivo porcine hepatic segmental perfusion proof-of-concept model towards more ethical translational research. Cureus. 2023 Feb 18. 15(2): e35143. DOI 10.7759/cureus.35143.
* Kanani T, J Isherwood, E Issa, WY Chung, M Ravaioli, MR Oggioni, G Garcea, A Dennison. A Narrative Review of the Applications of Ex-vivo Human Liver Perfusion. Cureus. 2023 Feb 09; 15(2):e34804. DOI: 10.7759/cureus.34804
* Kwun MJ, AV Ion, H-C Cheng, JC D’Aeth, S Dougan, MR Oggioni, DA Goulding, SD Bentley, N Croucher. Post-vaccine epidemiology of serotype 3 pneumococci identifies transformation inhibition through prophage-driven alteration of a non-coding RNA. Genome Medicine. 2022 Dec 20;14(1):144. doi: 10.1186/s13073-022-01147-2
* Yesilkaya H, MR Oggioni, PW Andrew. Streptococcus pneumoniae: captain of the men of death and financial burden. Microbiology (Reading). 2022 Dec 2;168(12):001275. doi: 10.1099/mic.0.001275.
* Oggioni MR, U Koedel. The glymphatic systems: a potential key player in bacterial meningitis. mBio. 2022 Oct 26;13(6):e0235022. doi: 10.1128/mbio.02350-22.
* Nyazika TK, L Sibale, J Phiri, M De Ste Croix, Z Jasiunaite, C Mkandawire, R Malamba, A Kankwatira, M Manduwa, D Ferreira, TS Nyirenda, MR Oggioni, HC Mwandumba, KC Jambo. Intracellular survival of Streptococcus pneumoniae in human alveolar macrophages is 2 augmented with HIV infection. Frontiers in Immunology. 2022 Sept 20; 13:992659. doi: 10.3389/fimmu.2022.992659.
* Hames RG, Z Jasiunaite, G Ercoli, JJ Wanford, D Carreno, K Straatman, L Martinez-Pomares, H Yesilkaya, S Glenn, ER Moxon, PW Andrew, CP Kyriacou, MR Oggioni. Diurnal differences in intracellular replication within splenic macrophages correlates with the outcome of pneumococcal infection. Front Immunol. 2022 Jun 2; 13:907461. doi: 10.3389/fimmu.2022.907461.
* Hames RG, Z Jasiunaite, JJ Wanford, D Carreno, WY Chung, AR Dennison and MR Oggioni. Analysing macrophage infection at the organ level. Methods in Molecular Biology, 2022;2414:405-431. doi: 10.1007/978-1-0716-1900-1\_22.
* Wanford JJ, R Hames, D Carreno, Z Jasiunaite, WY Chung, F Arena, V Di Pilato, K Straatman, K West, R Farzand, M Pizza, L Martinez-Pomares, PW Andrew, ER Moxon, AR Dennison, GM Rossolini, MR Oggioni. Interaction of Klebsiella pneumoniae with tissue macrophages in a murine infection model and ex-vivo porcine organ perfusions: an exploratory investigation. Lancet Microbe. 2021 Dec;2(12):e695-e703. doi: 10.1016/S2666-5247(21)00195-6.
* Carreno D, JJ Wanford, Z Jasiunaite, RG. Hames, WY Chung, AR. Dennison, K Straatman, L Martinez-Pomares, M Pareek, CJ Orihuela, MI Restrepo, WS Lim, PW Andrew, ER Moxon, MR Oggioni. 2021. Splenic macrophages as the source of bacteraemia during pneumococcal pneumonia. EBioMedicine. 2021 Oct 4;72:103601. doi: 10.1016/j.ebiom.2021.103601.
* Huang X, J Wang, J Li, Y Liu, X Liu, Z Li, K Kurniyati, Y Deng, G Wang, J Ralph, M De Ste Croix, S Escobar-Gonzalez, R Roberts, J-W Veening, X Lan, MR Oggioni\*, C Li\*, J-R Zhang\*. Prevalence of Phase Variable Epigenetic Invertons among Host-Associated Bacteria. Nucleic Acids Research 2020 Nov 18; 48(20):11468-11485. doi: 10.1093/nar/gkaa907.