Massimo Oggioni

Sesso: Maschile **Data di nascita:** 16/06/1986 **Nazionalità:** Italiana

Incarico attuale: DIRIGENTE CON INCARICO PROFESSIONALE DI BASE

Specialista in Microbiologia e Virologia

ESPERIENZA LAVORATIVA

[01/11/2022 – Attuale] **Dirigente Biologo**

ASST Brianza - Ospedale di Vimercate

Città: Vimercate | **Paese:** Italia

U.O. Microbiologia e Virologia Clinica - Direttore Dr. Pierluigi Congedo

Routine diagnostica Microbiologica: Lettura e interpretazione piastre di coltura, isolamento e identificazione ceppi batterici e fungini mediante sistemi automatizzati e semi automatizzati (MALDI-TOF e VITEK-2), indagini micologiche, valutazione dell'antibiotico sensibilità mediante sistemi semi automatizzati (VITEK-2), manuali (Kirby Bauer, E-test, microdiluizione in brodo), identificazione e valutazione dei meccanismi di resistenza batterica mediante saggi di conferma fenotipica e genotipica per la produzione di beta-lattamasi a spettro esteso (ESBL), AmpC e carbapenemasi (KPC, VIM, IMP, NDM, OXA-48 like, etc.).

Lettura vetrini parassitologici (parassitosi intestinali e ematiche), micobatteriologici (Auramina-Rodamina, Ziehl Neelsen, Kinyoun). Esecuzione di test rapidi, test immunocromatografici, test immunoenzimatici, etc.

Routine diagnostica di Biologia Molecolare Microbiologica: Allestimento e valutazione di saggi molecolari per la diagnosi di infezioni respiratorie batteriche e virali e di infezioni sessualmente trasmissibili. Utilizzo di piattaforme di biologia molecolare (Sistema Genexpert, FilmArray BioFire, SD Biosensor M10) per la diagnosi rapida di infezioni del torrente circolatorio, tubercolari e non (MTB-NTM), da *Clostridioides difficile*, polmoniti acquisite in seguito a ventilazione meccanica (VAP e pre-VAP), infezioni del Sistema Nervoso Centrale.

Routine diagnostica Virologica: Gestione e utilizzo di piattaforme di biologia molecolare per l'esecuzione di saggi quantitativi e qualitativi per la ricerca di CMV-DNA, EBV-DNA, Pneumocystis-DNA su campioni di sangue intero, BAL, BA, urina, tamponi buccali, etc. Esecuzione controlli di qualità esterni (VEQ Regione Lombardia e UK-NEQAS). Redazione, aggiornamento e ottimizzazione di istruzioni operative (I.O.) interne relative alla Microbiologia. Gestione degli ordini inerenti alla Microbiologia, Virologia e Biologia Molecolare Microbiologica.

Routine diagnostica Sieroinfettivologica: Metodiche automatizzate di diagnostica sierologica virale (sistema Abbott Alinity i, ROCHE Cobas 8000, sistema LIAISON XL DiaSorin, sistema Lotus VirClia). Diagnostica sierologica Epatiti virali, HIV, sifilide. Diagnostica infezioni in gravidanza gruppo TORCH ed erpetici. Diagnostica tubercolare mediante Quantiferon TB Gold. Diagnostica varia (HHV6, Borrelia, Leptospira, Galattomannano, etc). Metodiche manuali/semi-automatizzate di diagnostica sierologica: VDRL-RPR-TPPA, Test di conferma Immunoblot per HIV.

Gestione controlli di qualità interni (CQI) ed esterni (VEQ-NEQAS), redazione di documentazione per la qualità del laboratorio.

Settori di attività: Batteriologia e Micologia, Parassitologia, Micobatteriologia, Virologia, Biologia Molecolare, Sierologia infettivologica

[16/10/2019 – 31/10/2022] **Dirigente Biologo**

Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico

Città: Milano | **Paese:** Italia

U.O.C. Laboratorio Analisi Centrale - Direttore Prof. Ferruccio Ceriotti - U.O.S. Laboratorio di Virologia

Routine diagnostica Virologica: Supervisione e validazione attività di diagnostica molecolare virologica e sierologica. Ricerca mediante piattaforma PCR Real time Multiplex di Virus respiratori in campioni/tamponi respiratori. Ricerca mediante piattaforma PCR Real time Multiplex di patogeni responsabili di malattie sessualmente trasmesse. Ricerca di agenti virali in liquor, sangue intero, plasma, urine (CMV, EBV, JCV, BKV, HHV-6, HHV-7, HHV-8, VZV, POLIOVIRUS, BKV, ENTEROVIRUS, ADENOVIRUS etc.). Determinazione della viremia plasmatica mediante PCR Real Time di HIV, HCV, HBV. Determinazione del genotipo di HCV. Determinazione della presenza di HPV in tamponi cervicali. Gestione e supervisione processo COVID, diagnostica di SARS-CoV-2, gestione identificazioni varianti del virus mediante PCR Real Time. Sequenziamento NGS di SARS-CoV-2. Gestione flussi Regionali dei tamponi molecolari, antigenici, sierologici, sequenziamento di SARS-CoV-2.

Routine diagnostica Sieroinfettivologica: Metodiche automatizzate di diagnostica sierologica virale (sistema ROCHE Cobas 8000, sistema LIAISON XL DiaSorin, sistema IMMUNOMAT, sistema THUNDERBOLT). Diagnostica infezioni in gravidanza gruppo TORCH. Diagnostica tubercolare mediante Quantiferon TB Gold. Valutazione risposta immunitaria nel paziente immunosoppresso/ trapiantato mediante Quantiferon CMV e Elispot CMV. Metodiche manuali/semi-automatizzate di diagnostica sierologica: , VDRL-RPR-TPPA, Test di conferma Immunoblot per HIV, HCV e Toxoplasma (Westernblot di confronto Madre figlio/a). Allestimento e lettura vetrini in immunofluorescenza per la diagnosi sierologica di HHV8.

Gestione controlli di qualità interni (CQI) ed esterni (VEQ-NEQAS), redazione di documentazione per la qualità del laboratorio.

Settore Core-Lab Urgenze: Diagnostica d'urgenza di Chimica Clinica (Sistema Roche cobas 8000, 402, etc.),

Ematologia (lettura e interpretazione emocromi) (Sistema DASIT XN-Automation), Coagulazione (Sistema ACL Top 550

Werfen), esami Urine chimico fisico e lettura del sedimento urinario. Gestione del Liquor in urgenza.

Settori di attività: Virologia, Sieroinfettivologia, Biologia Molecolare, Urgenze Core-Lab.

[02/05/2018 – 30/09/2019] **Dirigente Biologo**

CASA DI CURA DI LECCO - "Beato Luigi Talamoni"

Città: Lecco | **Paese:** Italia

Dirigente Biologo presso il Laboratorio Analisi Chimico-Cliniche e Microbiologiche.

Referente per la Microbiologia Clinica

Referente per la VEQ Regionale (Valutazione esterna di qualità)

Routine diagnostica Batteriologica: (indagini colturali, rapide, immunocromatografiche, identificazioni e valutazione antibiotico sensibilità mediante sistemi manuali e automatizzati (VITEK2)), lettura e valutazione esami parassitologici.

Routine diagnostica Biochimica clinica: analisi chimico cliniche (Sistema Beckman Coulter), routine diagnostica ematologica (lettura e interpretazione esami emocromocitometrici mediante sistema Sysmex XN-1000 ed esecuzione/lettura/interpretazione vetrini ematologici/formula leucocitaria), routine diagnostica coagulazione (Sistema Werfen ACL), routine diagnostica esami urine chimico fisico (Sistema ARKRAY) e lettura sedimento urinario (Sistema Menarini Sedimax2) , lettura e interpretazione tracciati elettroforetici sieroproteici (Sistema SEBIA). Esecuzione e interpretazione tests per gruppi sanguigni, test di Coombs diretti e indiretti etc. Esecuzione esami in urgenza.

Routine prelievi campioni biologici: Esecuzione prelievi microbiologici (tamponi faringei, tamponi uretrali, annessi cutanei etc). Esecuzione prelievi ematici.

Gestione ed esecuzione controlli di qualità esterni (VEQ Regione Lombardia, One world etc.) e controlli di qualità interni integrati (Astra etc). Redazione, aggiornamento e ottimizzazione procedure interne relative alle attività diagnostiche.

Settori di attività: Microbiologia, Chimica Clinica, Ematologia e Coagulazione.

[27/10/2017 – 30/04/2018] **Dirigente Biologo**

HUMANITAS SAN PIO X

Città: Milano | **Paese:** Italia

Laboratorio Analisi - Servizio di Medicina di Laboratorio

Referente per la Microbiologia Clinica

Routine diagnostica Batteriologica: (indagini colturali, rapide, immunocromatografiche, identificazioni e valutazione dell'antibiotico sensibilità mediante sistemi manuali e automatizzati (VITEK2)).

Routine diagnostica Biochimica clinica: routine diagnostica di biochimica clinica (Sistema COBAS Roche), routine diagnostica ematologica (lettura e interpretazione esami emocromocitometrici mediante sistema Sysmex XN-1000 ed esecuzione/lettura/interpretazione vetrini ematologici/ formula leucocitaria), routine diagnostica coagulazione (Sistema Sysmex CS-2500), routine diagnostica esami urine chimico fisico e lettura sedimento urinario (Sistema Sysmex US-3500 e UF-1000i) , lettura e interpretazione tracciati elettroforetici sieroproteici (Sistema SEBIA). Esecuzione e interpretazione tests per gruppi sanguigni, test di Coombs diretti e indiretti etc.

Esecuzione esami in urgenza.

Gestione ed esecuzione controlli di qualità esterni (VEQ Regione Lombardia). Redazione, aggiornamento e ottimizzazione procedure interne relative alle attività diagnostiche.

Settori di attività: Microbiologia, Chimica Clinica, Sierologia, Ematologia e Coagulazione.

[01/01/2017 – 07/2017] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Reparto di Medicina di Laboratorio – Settore di Micobatteriologia (Resp: Dr.ssa E. Mazzola) - S.C. Analisi Chimico Cliniche e Microbiologia.

Routine diagnostica per l'infezione tubercolare. Lettura microscopici (auramina). Gestione colturali solidi (*Löwenstein–Jensen)*, gestione colturali liquidi (sistema BACTEC BD), identificazione ceppi mediante genotipizzazione (ibridazione inversa), esecuzione antibiogrammi di primo livello e secondo livello, rilevazione molecolare mediante ibridazione inversa di mutazioni di resistenza ai farmaci anti tubercolari di 1 e 2 livello.

Routine diagnostica per micobatteriosi (micobatteri non tubercolari).

Gestione della Ceppoteca Regionale (Regione Lombardia) per Mycobacterium tuberculosis

[15/03/2016 – 15/03/2017] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Assegnatario della BORSA DI STUDIO della Regione Lombardia per lo studio: "Sorveglianza epidemiologica dell'infezione tubercolare" nell'ambito del progetto regionale: "Tipizzazione molecolare dei ceppi di Mycobacterium tuberculosis".

[01/02/2016 – 01/01/2017] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Reparto di Medicina di Laboratorio – Settore di Biologia Molecolare (Resp: Dr.ssa D. Fanti) - S.C. Analisi Chimico Cliniche e Microbiologia.

Ricerca mediante piattaforma PCR Real time Multiplex di Virus respiratori in campioni/tamponi respiratori. Ricerca mediante piattaforma PCR Real time Multiplex di patogeni responsabili di malattie sessualmente trasmesse. Ricerca di agenti virali in liquor, sangue intero, plasma, urine (CMV, EBV, JCV, BKV, HHV-6, HHV-7, HHV-8, VZV, POLIOVIRUS, etc.). Determinazione della viremia plasmatica mediante PCR Real Time di HIV, HCV, HBV, CMV. Valutazione e analisi delle farmacoresistenze di HIV (trascrittasi inversa, proteasi e integrasi). Determinazione della presenza di HPV in tamponi cervicali. Esecuzione e interpretazione dei MIRU/VNTR per la tipizzazione molecolare di ceppi di M. tuberculosis. Gestione controlli di qualità interni (CQI) ed esterni (VEQ-NEQAS), redazione di documentazione per la qualità del laboratorio.

[15/03/2015 – 14/03/2016] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Assegnatario della BORSA DI STUDIO della Regione Lombardia per lo studio: "Sorveglianza epidemiologica dell'infezione tubercolare" nell'ambito del progetto regionale: "Tipizzazione molecolare dei ceppi di Mycobacterium tuberculosis".

[01/01/2015 – 31/01/2016] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Reparto di Medicina di Laboratorio – Settore di Batteriologia (Resp: Dr.ssa C. Vismara) - S.C. Analisi Chimico Cliniche e Microbiologia.

Metodiche di diagnostica batteriologica (semina materiali biologici, colorazione di Gram, lettura microscopici, lettura e interpretazione piastre di coltura, isolamento ceppi batterici, sequenziamento ceppi batterici e fungini, esecuzione e lettura test di sensibilità antibiotica (Sistema MICROSCAN), identificazione ceppi batterici e fungini). Gestione controlli di qualità interni (CQI) ed esterni (VEQ-NEQAS), redazione di documentazione per la qualità del laboratorio.

[01/09/2012 – 31/12/2014] **Specializzando in Microbiologia e Virologia– Università degli Studi di Milano**

ASST Grande Ospedale Metropolitano Niguarda

Città: Milano | **Paese:** Italia

Reparto di Medicina di Laboratorio – Settore di Sierologia (Resp: Dr.ssa D. A. Campisi) - S.C. Analisi Chimico Cliniche e Microbiologia.

Metodiche automatizzate di diagnostica sierologica virale (sistema ARCHITECT ABBOTT, sistema LIAISON XL DiaSorin, sistema ETIMAX DiaSorin,). Metodiche manuali/semi-automatizzate di diagnostica sierologica: Quantiferon TB Gold, VDRL-RPR-TPPA, Test di conferma Immunoblot per HIV, HCV, HEV, Borrelia, Toxoplasma, Treponema, Trypanosoma. Allestimento e lettura vetrini in immunofluorescenza per la diagnosi sierologica (HHV6, HHV8, Coxsackievirus, Legionella, Bartonella, Rickettsia, Amoeba, Leishmania, Coxiella, Adenovirus, Echinococco). Gestione controlli di qualità interni (CQI) ed esterni (VEQ-NEQAS), redazione di documentazione per la qualità del laboratorio. Gestione validazione processi. Controllo, verifica e validazione processi per la sicurezza trasfusionale.

[01/06/2011 – 31/03/2012] **Biotecnologo Medico**

Università degli Studi di Milano Bicocca

Città: Milano | **Paese:** Italia

Laboratorio di Virologia molecolare I piano Dipartimento di Scienze della Salute.

Determinazione della viremia plasmatica del Virus Erpetico Umano 8 (HHV-8) in pazienti affetti da AIDS-KS mediante saggio calibrato di QPCR.

Determinazione della presenza mediante IHC del virus HHV-6 in campioni cervicali, isolamento delle cellule positive mediante LCM (Laser Capture Microdissection) e relativa quantificazione in QPCR; Determinazione della carica di HHV-7 in campioni di saliva e plasma

[01/01/2011 – 31/05/2011] **Biotecnologo**

Ospedale San Raffaele

Città: Milano | **Paese:** Italia

Laboratorio di Virologia umana piano -1, Divisione di Immunologia, Trapianti e Malattie Infettive.

Determinazioni delle viremia plasmatiche di Virus erpetici umani in campioni di plasma mediante saggi calibrati di QPCR. Progettazione sonde e primers per l'identificazione e quantificazione di patogeni parodontali. Allineamenti di sequenze nella verifica di primers e sonde per la ricerca di patogeni parodontali

[01/04/2009 – 31/10/2009] **Biotecnologo**

Università degli Studi di Milano Bicocca

Città: Milano | **Paese:** Italia

Laboratorio di Farmacologia molecolare II piano Dipartimento di medicina sperimentale.

Studio del ruolo delle cellule staminali mesenchimali (MSC) del midollo osseo su cellule del Sistema nervoso centrale. Estrazione di Oligodendrociti da cervello di ratto e MSC da midollo osseo di ratto e relativa co-coltura in vitro

[01/05/2008 – 30/09/2008] **Biotecnologo**

Università degli Studi di Milano Bicocca

Città: Milano | **Paese:** Italia

Laboratorio di Spettrometria di Massa diretto dalla Prof.ssa Rita Grandori.

Studio della struttura secondaria e della sua stabilità della proteina SIC1 mediante analisi in spettrometria di massa, purificazione proteica IMAC, tecniche elettroforetiche, limited proteolysis, geldigestion e zip-tip.

[01/03/2004 – 31/08/2004]

Tirocinante

Facoltà di Tossicologia Ambientale sede in Lodi, Università degli Studi di Milano

Città: Lodi | **Paese:** Italia

Determinazione di metalli pesanti in matrici alimentari. Analisi di micotossine in matrici

ISTRUZIONE E FORMAZIONE

[01/03/2019 – 02/03/2019]

Corso Teorico Pratico: "Diagnostica di Laboratorio: La fase preanalitica e il prelievo di sangue"

Ordine Nazionale dei Biologi - Azienda Ospedaliera di Padova - Università degli Studi di Padova
https://www.aopd.veneto.it/

Indirizzo: Via. N. Giustiniani 1, 35121, Padova, Italia |

Certificazione per prelievi di sangue venoso, liquidi e materiali biologici

[07/2012 – 07/2017]

Diploma di Specializzazione in MICROBIOLOGIA E VIROLOGIA (codice: 36S - Medicina diagnostica e di laboratorio)

Università degli Studi di Milano

Città: Milano | **Paese:** Italia |

Votazione: 70/70 e Lode

Titolo tesi: "VALUTAZIONE FENOTIPICA E GENOTIPICA DI RESISTENZA AI MACROLIDI E AMINOGLICOSIDI IN MYCOBACTERIUM ABSCESSUS COMPLEX"

Sede di Formazione: **ASST Grande Ospedale Metropolitano Niguarda**

[05/06/2017 – 09/06/2017]

Corso Teorico Pratico AMCLI COSP : "Diagnosi di Laboratorio delle parassitosi intestinali ed organo sistemiche"

Associazione Microbiologi Clinici Italiani - Comitato di Studio per la Parassitologia
www.amcli.it

Indirizzo: Via Carlo Farini 81, 20159, Milano, Italia |

[08/2012]

Iscritto all'Albo Professionale Sezione A, ORDINE DEI BIOLOGI

Ordine Nazionale dei Biologi

Città: Roma | **Paese:** Italia |

Numero d'ordine: AA_067068

[07/2012]

Abilitazione all'esercizio della professione di BIOLOGO

Università degli Studi dell'Insubria

Città: Varese | **Paese:** Italia |

[2010 – 2011]

Laurea Magistrale in Biotecnologie Mediche (LM-9)

Università degli Studi di Milano - Bicocca

Città: Monza | **Paese:** Italia |

Titolo della tesi: "**Rilevamento della viremia plasmatica del Virus Erpetico Umano 8 (HHV8) mediante un saggio calibrato di QPCR: un nuovo marker per il management clinico dei pazienti con KS-AIDS correlato**" Relatore: Dr. Francesco Broccolo

[2008 – 2009]

Laurea Triennale in Biotecnologie indirizzo Sanitario (Classe 1)

Università degli Studi di Milano - Bicocca

Città: Monza | **Paese:** Italia |

Titolo della tesi: "**La proteina TAT come candidato per il vaccino anti HIV-1/AIDS**" Relatore: Prof. Marco Domenico Parenti

[2005]

Diploma superiore: Tecnico di Laboratorio Chimico/Biologico

I.T.S.O.S. "Marie Curie"

Città: Cernusco sul Naviglio | **Paese:** Italia |

COMPETENZE LINGUISTICHE

Lingua madre: italiano

Altre lingue:

inglese

ASCOLTO B1 **LETTURA** B2 **SCRITTURA** B1

PRODUZIONE ORALE B2 **INTERAZIONE ORALE** B1

Livelli: A1 e A2: Livello elementare B1 e B2: Livello intermedio C1 e C2: Livello avanzato

COMPETENZE DIGITALI

Le mie competenze digitali

pacchetto Office, pacchetto OpenOffice, pacchetto LibreOffice | Software gestionali di laboratorio

PUBBLICAZIONI

[2024] **Epidemiological and clinical insights into the enterovirus D68 upsurge in Europe 2021/22 and the emergence of novel B3-derived lineages, ENPEN multicentre study**

Enterovirus D68 (EV-D68) infections are associated with severe respiratory disease and acute flaccid myelitis (AFM). The European Non-Polio Enterovirus Network (ENPEN) aimed to investigate the epidemiological and genetic characteristics of EV-D68 and its clinical impact during the fall-winter season of 2021/22. From 19 European countries, 58 institutes reported 10,481 (6.8%) EV-positive samples of which 1,004 (9.6%) were identified as EV-D68 (852 respiratory samples). Clinical data was reported for 969 cases. 78.9% of infections were reported in children (0-5 years); 37.9% of cases were hospitalised. Acute respiratory distress was commonly noted (93.1%) followed by fever (49.4%). Neurological problems were observed in 6.4% of cases with six reported with AFM. Phylodynamic/Nextstrain and phylogenetic analyses based on 694 sequences showed the emergence of two novel B3-derived lineages, with no regional clustering. In conclusion, we describe a large-scale EV-D68 European upsurge with severe clinical impact and the emergence of B3-derived lineages.

[2024] **Covid-19 in cystic fibrosis patients compared to the general population: Severity and virus-host cell interactions**

Riferimento: Journal of Cystic Fibrosis

ackground: People with cystic fibrosis (pwCF) are considered at risk of developing severe forms of respiratory viral infections. We studied the consequences of COVID-19 and virus-host cell interactions in CF vs. non-CF individuals.

Methods: We enrolled CF and non-CF individuals, with /without COVID-like symptoms, who underwent nasopharyngeal swab for detection of SARS-CoV-2. Gene expression was evaluated by RNA sequencing on the same nasopharyngeal swabs. Criteria for COVID-19 severity were hospitalization and requirement or increased need of oxygen therapy.

Results: The study included 171 patients (65 pwCF and 106 non-CF individuals). Among them, 10 pwCF (15.4 %) and 43 people without CF (40.6 %) tested positive at RT-PCR. Symptomatic infections were observed in 8 pwCF (with 2 requiring hospitalization) and in 11 individuals without CF (6 requiring hospitalization). Host transcriptomic analysis revealed that genes involved in protein translation, particularly ribosomal components, were downregulated in CF samples irrespective of SARS-CoV-2 status. In SARS-CoV-2 negative individuals, we found a significant difference in genes involved with motile cilia expression and function, which were upregulated in CF samples. Pathway enrichment analysis indicated that interferon signaling in response to SARS-CoV-2 infection was upregulated in both pwCF and non-CF subjects.

Conclusions: COVID-19 does not seem to be more severe in CF, possibly due to factors intrinsic to this population: the lower expression of ribosomal genes may downregulate the protein translation machinery, thus creating an unfavorable environment for viral replication.

[2024] **Increased Echovirus 11 circulation disclosed by non-polio enterovirus (NPEV) laboratory-based sentinel surveillance in general population and hospital patients, Northern Italy, 2023**

Riferimento: International Journal of Infectious Diseases

Objectives: Following the alert of echovirus 11 (E-11) infection in neonates in EU/EEA Member States, we conducted an investigation of E-11 circulation by gathering data from community and hospital surveillance of enterovirus (EV) in northern Italy from 01 August 2021 to 30 June 2023.

Methods: Virological results of EVs were obtained from the regional sentinel surveillance database for influenza-like illness (ILI) in outpatients, and from the laboratory database of ten hospitals for inpatients with either respiratory or neurological symptoms. Molecular characterization of EVs was performed by sequence analysis of the VP1 gene.

Results: In our ILI series, the rate of EV-positive specimens showed an upward trend from the end of May 2023, culminating at the end of June, coinciding with an increase in EV-positive hospital cases. The E-11 identified belonged to the D5 genogroup and the majority (83%) were closely associated with the novel E-11 variant, first identified in severe neonatal infections in France since 2022. E-11 was identified sporadically in community cases until February 2023, when it was also found in hospitalized cases with a range of clinical manifestations. All E-11 cases were children, with 14 out of 24 cases identified through hospital surveillance. Of these cases, 60% were neonates, and 71% had severe clinical manifestations.

Conclusion: Baseline epidemiological data collected since 2021 through EV laboratory-based surveillance have rapidly tracked the E-11 variant since November 2022, alongside its transmission during the late spring of 2023.

[2024] **Parechovirus A Circulation and Testing Capacities in Europe, 2015-2021**

Riferimento: Emerging Infectious Diseases

Parechovirus infections usually affect neonates and young children; manifestations vary from asymptomatic to life-threatening. We describe laboratory capacity in Europe for assessing parechovirus circulation, seasonality, and epidemiology. We used retrospective anonymized data collected from parechovirus infection case-patients identified in Europe during January 2015-December 2021. Of 21 laboratories from 18 countries that participated in the study, 16 (76%) laboratories with parechovirus detection capacity reported 1,845 positive samples; 12/16 (75%) with typing capability successfully identified 517 samples. Parechovirus A3 was the most common type (n = 278), followed by A1 (153), A6 (50), A4 (13), A5 (22), and A14 (1). Clinical data from 1,269 participants highlighted correlation of types A3, A4, and A5 with severe disease in neonates. We observed a wide capacity in Europe to detect, type, and analyze parechovirus data. To enhance surveillance and response for PeV outbreaks, sharing typing protocols and data on parechovirus-positive cases should be encouraged.

[2023] **Covid-19 in cystic fibrosis patients compared to the general population: severity and virus-host cell interactions**

Riferimento: Cystic Fibrosis (In submission)

Background: People with cystic fibrosis (pwCF) are considered at risk of developing severe forms of respiratory viral infections. We studied the consequences of COVID-19 and virus-host cell interactions in CF vs. non-CF individuals.

Methods: We enrolled CF and non-CF individuals, with /without COVID-like symptoms, who underwent nasopharyngeal swab for detection of SARS-CoV-2. Gene expression was evaluated by RNA sequencing on the same nasopharyngeal swabs. Criteria for COVID-19 severity were hospitalization and requirement or increased need of oxygen therapy.

Results: The study included 171 patients (65 pwCF and 106 non-CF individuals). Among them, 10 pwCF (15.4%) and 43 people without CF (40.6%) tested positive at RT-PCR. Symptomatic infections were observed in 8 pwCF (with 2 requiring hospitalization) and in 11 individuals without CF (6 requiring hospitalization). Host transcriptomic analysis revealed that genes involved in protein translation, particularly ribosomal components, were downregulated in CF samples irrespective of SARS-CoV-2 status. In SARS-CoV-2 negative individuals, we found a significant difference in genes involved with motile cilia expression and function, which were upregulated in CF samples. Pathway enrichment analysis indicated that interferon signaling in response to SARS-CoV-2 infection was upregulated in both pwCF and non-CF subjects.

Conclusions: COVID-19 does not seem to be more severe in CF, possibly due to factors intrinsic to this population: the lower expression of ribosomal genes may downregulate the protein translation machinery, thus creating an unfavorable environment for viral replication.

[2023] **Impact of SARS-CoV-2 Omicron and Delta variants in patients requiring intensive care unit (ICU) admission for COVID-19, Northern Italy, December 2021 to January 2022**

Riferimento: Respiratory medicine and research

This multicenter observational study included 171 COVID-19 adult patients hospitalized in the ICUs of nine hospitals in Lombardy (Northern Italy) from December, 1st 2021, to February, 9th 2022. During the study period, the Delta/Omicron variant ratio of cases decreased with a delay of two weeks in ICU patients compared to that in the community; a higher proportion of COVID-19 unvaccinated patients was infected by Delta than by Omicron whereas a higher rate of COVID-19 boosted patients was Omicron-infected. A higher number of comorbidities and a higher comorbidity score in ICU critically COVID-19 inpatients was positively associated with the Omicron infection as well in vaccinated individuals. Although people infected by Omicron have a lower risk of severe disease than those infected by Delta variant, the outcome, including the risk of ICU admission and the need for mechanical ventilation due to infection by Omicron versus Delta, remains uncertain. The continuous monitoring of the circulating SARS-CoV-2 variants remains a milestone to counteract this pandemic.e...

[2022] **Immunogenicity and effectiveness of BNT162b2 COVID-19 vaccine in a cohort of healthcare workers in Milan (Lombardy Region, Northern Italy)**

Riferimento: Epidemiologia & Prevenzione

OBJECTIVES: To evaluate immunogenicity and effectiveness of BNT162b2 COVID-19 vaccine in a cohort of healthcare workers (HCWs).

SETTING AND PARTICIPANTS: In a hospital in Milan, Lombardy, Italy we included HCWs without ("negative cohort") and with ("positive cohort") history of SARS-CoV-2 infection or elevated serum antibody before the vaccination campaign (27.12.2020). Data collection and follow-up covered the period 27.12.2020-13.05.2022.

MAIN OUTCOMES MEASURES: 1) Serum anti-spike-1 (anti-S1) antibody levels after vaccination; 2) Vaccine effectiveness (VE) against SARS-CoV-2 infections (either symptomatic or not) in the negative cohort. Data on infections were extracted from multiple sources (laboratory, accident reports, questionnaires). Vaccination was treated as a time-dependent variable. Using unvaccinated person-time as reference, we calculated hazard ratios (HR) of infections and 95% confidence intervals (95%CI) with a Cox regression model adjusted for gender, age, and occupation. VE was calculated as (1 – HR)×100.

RESULTS: We included 5,596 HCWs, 4,771 in the negative and 825 in the positive cohort. In both cohorts serum anti-S1 antibodies were high one months after the second dose, halved after six months, and returned to high levels after the third dose. In the negative cohort, we identified 1,401 SARS-CoV-2 infections . VE was 70% (95%CI: 54-80, 46 infected) in the first four months after the second dose and later declined to 16% (95%CI: 0-43, 97 infected). After the third dose VE increased to 57% (95%CI: 35-71, 61 infected) in the first month but rapidly declined over time, particularly after three months (24% in the fourth month and 1% afterwards). We estimated that the number of infections avoided by vaccination was 643 (95%CI: 236-1,237).

CONCLUSIONS: In spite of rapidly declining effectiveness, vaccination helped to avoid several hundred infections in our hospital.

[2022] **Prognostic value of mid region-proadremedullin and in vitro interferon gamma production for in-hospital mortality in patients with COVID-19 pneumonia and respiratory failure: an observational prospective study**

Riferimento: MDPI Viruses

Background Coagulopathy and immune dysregulation have been identified as important causes of adverse outcome in coronavirus disease (COVID-19). Mid region-proadremedullin (MR-proADM) is associated with endothelial damage and has recently been proposed as prognostic factor in COVID-19. In non-COVID-19 immunocompromised patients, low in vitro interferon gamma (IFNγ) production correlates with infection risk and mortality.

Methods Prospective, monocentric, observational study. Adult patients consecutively admitted with radiologic evidence of COVID-19 pneumonia and respiratory failure were included. MR-proADM and in vitro IFNγ production were measured at T0 (day 1 from admission) and T1 (day 7 from enrollment).

Results One-hundred patients were enrolled. Thirty-six percent were females, median age 65 (Q1-Q3 54.5-75) years, 58% had ≥1 comorbidity. Only 16 patients had received COVID-19 vaccination before hospitalization. At admission, median PaO2:FiO2 ratio was 241 (157-309) mmHg. Overall, in-hospital mortality was 13%. No association was found between MR-proADM and IFNγ production. MR-proADM levels differed significantly between deceased and survivors both at T0 (1.41 (1.12-1.77) nmol/L compared to 0.79 (0.63-1.03) nmol/L, p<0.001) and T1 (1.67 (1.08-1.96) nmol/L compared to 0.66 (0.53-0.95) nmol/L, p<0.001). In vitro IFNγ production at T0 did not vary between groups, while at T1 differences occurred, although not reaching statistical significance, with lower median values in deceased compared to survivors (Log IFNγ: 0.2 (-0.5-1.1) compared to 1.8 (-0.3-3.0), p=0.083). When only the subset of non-vaccinated patients was considered, both biomarkers at T1 resulted significantly associated with in-hospital mortality. The area under the ROC curve for MR-proADM at T0 to predict in-hospital mortality was 0.87 (95% CI 0.79-0.94), with the best cutoff point at 1.04 nmol/L (92% sensitivity, 75% specificity and 98% negative predictive value).

Conclusions In patients with COVID-19 pneumonia and different degrees of respiratory failure, MR-proADM at admission and during hospitalization resulted strongly associated with in-hospital mortality. Low in vitro IFNγ production after the first week of hospitalization was associated to mortality, significantly only in non-vaccinated patients, possibly identifying the subgroup characterized by a higher degree of immune suppression.

[2022] **Digital RT-PCR Chip method for detection of SARS-CoV-2 virus**

Riferimento: Journal of Immunological Methods

The quantitative RT-PCR method for detection of SARS-CoV-2 is easily affected by sample inhibitors, poor amplification efficiency, less precision in low-concentration samples, and subjective cut-off values. For this purpose a digital RT-PCR method on-chip was developed for detection of the SARS-CoV-2 virus, using two TaqMan™ Assays for quantification of the N Protein (Nucleocapsid) and the S Protein (Spike), and the QuantStudio™ 3D Digital PCR instrument. The method was applied to assess 21 nasopharyngeal swabs of asymptomatic subjects recruited in the UNICORN Study. The digital RT-PCR method is characterized by an higher sensitivity than the quantitative RT-PCR method, even if performed with the same TaqMan™, and can constitute a promising tool for SARS-CoV-2 viral load quantification.

[2022] **Anti-spike antibodies and neutralising antibody activity in people living with HIV vaccinated with COVID-19 mRNA-1273 vaccine: a prospective single-centre cohort study**

Riferimento: The Lancet Regional Health - Europe

Vaccines against COVID-19 are a powerful tool to control the current SARS-CoV-2 pandemic. A thorough description of their immunogenicity among people living with HIV (PLWHIV) is necessary. We aimed to assess the immunogenicity of the mRNA-1273 vaccine among PLWHIV.

In this prospective cohort, adult PLWHIV outpatients were enrolled during the Italian vaccination campaign. Enrolment was allowed irrespective of ongoing combination antiretroviral therapy (ART), plasma HIV viral load and CD4+ T cell count. A two-dose regimen of mRNA-1273, with

administrations performed 28 days apart, was employed. The primary outcomes were anti-spike (anti-S) antibody titres and neutralising antibody activity, assessed 28 days after completing the vaccination schedule. A convenient sample of individuals not affected by HIV was also collected to serve as control (referred as healthy-donors, HDs).

We enrolled 71 PLWHIV, mostly male (84·5%), with a mean age of 47 years, a median CD4+ T cell count of 747·0 cells per μL and a median HIV viral load <50 copies/mL. COVID-19-experienced PLWHIV displayed higher anti-S antibody titres (p=0·0007) and neutralising antibody activity in sera (p=0·0007) than COVID-19-naïve PLWHIV. When stratified according to CD4+ T cell count (<350 cells/μL, 350-500 cells/μL, >500 cells/μL), anti-S antibody titres (6/71, median 2173 U/mL [IQR 987-4109]; 7/71, 5763 IU/mL [IQR 4801->12500]; 58/71, 2449 U/mL [IQR 1524-5704]) were not lower to those observed among HDs (10, median 1425 U/mL [IQR 599-6131]). In addition, neutralising antibody activity, stratified according to the CD4+ T cell count (6/71, median 1314 [IQR 606-2477]; 7/71, 3329 IU/mL [IQR 1905-10508]; 58/71, 1227 U/mL [IQR 761-3032]), was like those displayed by HDs (10, median 2112 U/mL [IQR 719-8889]).

In our cohort of PLWHIV with well-controlled ART, stable viral suppression and robust CD4+ T cell count, inoculation with mRNA-1273 vaccine given 4 weeks apart produced detectable humoral immune response, similar to individuals without HIV infection, supporting vaccination in PLWHIV.

[2022] **Clinical characteristics of healthcare workers with SARS-CoV-2 infection after vaccination with BNT162b2 vaccine**

Riferimento: BMC Infectious Diseases

Background: The pandemic of coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), had a significant impact worldwide. Vaccines against COVID-19 appear as a tool able to curb out mortality and reduce the circulation of the virus. Little is known so far about the clinical characteristics of individuals who developed SARS-CoV-2 infection after having received the vaccination, as well as the temporal relationship between vaccine administration and symptoms onset.

Methods: Retrospective cohort study among the 3219 healthcare workers (HCWs) of the Fondazione IRCCS Ospedale Maggiore Policlinico of Milano who received a full immunization with the BNT162b2 vaccine and who developed SARS-CoV-2 infection (documented through positive RT-PCR on nasopharyngeal swab) in March–April 2021.

Results: Overall, we have identified 15 HCWs with SARS-CoV-2 infection after vaccination, 7 (46.7%) of them were male and the mean age was 38.4 years (SD 14). In 4 of them, the presence of SARS-CoV-2 anti-nucleocapsid (anti-N) antibodies was assessed before vaccination and resulted positive in 1 case. In all HCWs the presence of SARS-CoV-2 anti-spike (anti-S1) antibodies was assessed, on average 42.2 days after the completion of vaccination, with a mean value of 2055 U/mL (SD 1927.3). SARS-CoV-2 infection was ascertained on average 56.2 days after vaccination. The mean cycle threshold (Ct) of SARS-CoV-2 PCR was 26.4, the lineage was characterized in 9 HCWs. None of the HCWs reported a primary or secondary immunodeficiency. Regarding symptoms, they were reported only by 7 (46.7%) HCWs and appeared on average 55 days after the second dose of vaccination. Of those who reported symptoms, one (14.3%) had fever, 7 (100%) rhinitis/conjunctivitis, 4 (57.1%) taste and smell alterations, none had respiratory symptoms, 4 headache/arthralgia (57.1%) and 1 gastrointestinal symptom (14.3%). All symptoms disappeared in a few days and no other unclassified symptoms were reported.

Conclusions: Infections occurring after vaccination with the BNT162b2 vaccine are mostly asymptomatic and are not associated with the serum titre of anti-S1 antibodies. We did not find a predominance of specific viral variants, with several lineages represented.

[2021] **Re-emergence of enterovirus D68 in Europe after easing the COVID-19 lockdown, September 2021**

Riferimento: Eurosurveillance

We report a rapid increase in enterovirus D68 (EV-D68) infections, with 139 cases reported from eight European countries between 31 July and 14 October 2021. This upsurge is in line with the seasonality of EV-D68 and was presumably stimulated by the widespread reopening after COVID-19 lockdown. Most cases were identified in September, but more are to be expected in the coming months. Reinforcement of clinical awareness, diagnostic capacities and surveillance of EV-D68 is urgently needed in Europe.

[2021] **Trends and risk factors of SARS-CoV-2 infection in asymptomatic blood donors**

Riferimento: Transfusion

Background: A large proportion of SARS-CoV-2 infected individuals does not develop severe symptoms. Serological tests help in evaluating the spread of infection and disease immunization. The aim of this study was to prospectively examine the trends and risk factors of SARS-CoV-2 infection in blood donors.

Study design & methods: We screened 8798 asymptomatic donors presenting in Milan from July 2020 to February 2021 (10, 680 presentations) before the vaccination campaign for antinucleoprotein (NP) antibodies, and for anti-spike receptor binding domain (RBD) antibodies and nasopharyngeal swab PCR in those who tested positive.

Results: The prevalence of anti-NP+/RBD+ tests increased progressively with time up to ~15% ($p<0.0001$), preceded by a peak of PCR+ tests. Anti-RBD titers were higher in anti-NP IgG+/IgM+ than in IgG+/IgM- individuals, and in those with a history of infection ($P<0.0001$); of these 197/630 (~31.2%) displayed high titers (>80 AU/mL). Anti-RBD titers declined during follow-up, depending on baseline titers ($P<0.0001$) and time ($P=0.025$). Risk factors for seroconversion were a later presentation date and non-O ABO blood group ($P<0.001$). A positive PCR was detected in 0.7% of participants in the absence of SARS-CoV-2 viremia.

Conclusions: During the second wave of SARS-CoV-2 infection in Northern Italy, we detected an increase in seroprevalence in healthy blood donors from ~4 to ~15%, with a trend paralleling that observed in the general population. Seroconversion was more frequent in carriers of non-O blood groups. The persistence of anti-RBD antibodies was short-lived.

[2021] **Increased Risk of Urticaria/Angioedema after BNT162b2 mRNA COVID-19 Vaccine in Health Care Workers Taking ACE Inhibitors**

Riferimento: Vaccines

Urticarial eruptions and angioedema are the most common cutaneous reactions in patients undergoing mRNA COVID-19 vaccinations. The vasoactive peptide bradykinin has long been known to be involved in angioedema and recently also in urticaria. Bradykinin is mainly catabolized by angiotensin-converting enzyme (ACE), which is inhibited by ACE inhibitors, a commonly employed class of antihypertensive drugs. We evaluated the risk of developing urticaria/angioedema after inoculation with the BNT162b2 mRNA COVID-19 vaccine in a population of 3586 health care workers. The influences of ACE inhibitors and selected potential confounding variables (sex, age, previous SARS-CoV-2 infection, and allergy history) were evaluated by fitting univariate and multivariable Poisson regression models. The overall cumulative incidence of urticaria/angioedema was 1.8% (65 out of 3586; 95% CI: 1.4–2.3%). Symptoms were mild, and no subject consulted a physician. Subjects taking ACE inhibitors had an adjusted three-fold increased risk of urticaria/angioedema (RR 2.98, 95% CI: 1.12–7.96). When we restricted the analysis to those aged 50 years or more, the adjusted RR was 3.98 (95% CI: 1.44–11.0). In conclusion, our data indicate that subjects taking ACE inhibitors have an increased risk of urticaria/angioedema after vaccination with the BNT162b2 mRNA COVID-19 vaccine. Symptoms are mild and self-limited; however, they should be considered to adequately advise subjects undergoing vaccination.

[2021] **Nasopharyngeal Testing among Healthcare Workers (HCWs) of a Large University Hospital in Milan, Italy during Two Epidemic Waves of COVID-19**

Riferimento: Environmental Research and Public Health

Since October 2020, a second SARS-CoV-2 epidemic wave has hit Italy. We investigate the frequency of positive nasopharyngeal swabs among HCWs during the two waves and the association with occupation and demographic characteristics. Methods: this is a retrospective, observational study conducted in a large university hospital in Milan, Northern Italy. We defined two epidemic waves:

1st (February 2020–July 2020) and 2nd (August 2020–January 2021). Occupational and demographic characteristics of HCWs who underwent nasopharyngeal swabs for SARS-CoV-2 were collected. Results: in the 1st wave, 242 positive subjects (7.2%) were found among 3378 HCWs, whereas in the 2nd wave, the positive subjects were 545 out of 4465 (12.2%). In both epidemic waves positive NPSs were more frequent among HCWs with health-related tasks and lower among students ($p < 0.001$). However, in the 2nd wave, workers engaged in non-health-related tasks had a peak of 20.7% positivity. Among 160 positive HCWs in the 1st wave who were tested again in the 2nd wave, the rate of reinfection based on SARS-CoV2 RNA cycle quantification value was 0.6%. Conclusions: during the 2nd epidemic wave, we confirmed a significant impact of COVID-19 among HCWs. The rise of infection rate among HCWs seems to reflect the increasing spread of SARS-CoV-2 among the overall population.

[2021] **SARS-CoV-2 anti-spike antibody titres after vaccination with BNT162b2 in naïve and previously infected individuals**

Riferimento: Journal of Infection and Public Health

Great expectations are placed in vaccines against COVID-19 to control the pandemic. We reviewed the antibody titres in a cohort of healthcare workers (HCWs) vaccinated with BNT162b2 to assess the influence of a previous infection on them. We stratified the results according to the individual history of nasopharyngeal swab (NPS) and symptoms. Among 3475 HCWs the highest titres were recorded among those infected more than 6 months before vaccination, independently of symptoms, followed by those infected less than 6 months before vaccination, especially in those with symptoms, and by uninfected HCWs. Vaccination with BNT162b2 can boost immunity acquired through infection, particularly in those infected more than 6 months before vaccination.

[2021] **Inflammatory biomarkers in pregnant women with COVID-19: a retrospective cohort study**

Riferimento: Scientific reports (Nature group)

Coronavirus disease 2019 (COVID-19) is a pandemic viral disease affecting also obstetric patients and uncertainties exist about the prognostic role of inflammatory biomarkers and hemocytometry values in patients with this infection. To clarify that, we have assessed the values of several inflammatory biomarkers and hemocytometry variables in a cohort of obstetric patients hospitalized with COVID-19 and we have correlated the values at admission with the need of oxygen supplementation during the hospitalization. Overall, among 62 (27.3%) pregnant women and 165 (72.7%) postpartum women, 21 (9.2%) patients received oxygen supplementation and 2 (0.9%) required admission to intensive care unit but none died. During hospitalization leukocytes ($p < 0.001$), neutrophils ($p < 0.001$), neutrophils to lymphocytes ratio ($p < 0.001$) and C reactive protein ($p < 0.001$) decreased significantly, whereas lymphocytes ($p < 0.001$), platelets ($p < 0.001$) and ferritin ($p = 0.001$) increased. Lymphocyte values at admission were correlated with oxygen need, with a 26% higher risk of oxygen supplementation for each 1000 cells decreases. Overall, in obstetric patients hospitalized with COVID-19, C reactive protein is the inflammatory biomarker that better mirrors the course of the disease whereas D-dimer or ferritin are not reliable predictors of poor outcome. Care to the need of oxygen supplementation should be reserved to patients with reduced lymphocyte values at admission.

[2020] **Time Length of Negativization and Cycle Threshold Values in 182 Healthcare Workers with Covid-19 in Milan, Italy: An Observational Cohort Study**

Riferimento: Environmental Research and Public Health

Background: Coronavirus Disease 2019 (COVID-19) has rapidly spread worldwide, becoming an unprecedented public health emergency. Rapid detection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) suspected cases is crucial to control the spread of infection. We aimed to evaluate the time length of negativization from the onset of symptoms in healthcare workers (HCWs) with COVID-19, and to evaluate significant variations in cycle threshold (CT) values and gene positivity (E, RdRP, and N genes) among positive individuals who returned to work. Methods: We retrospectively analyzed a consecutive cohort of 182 SARS-CoV-2-positive HCWs in Milan, from 16 March to 30 April 2020. Nasopharyngeal swabs were tested by RT-PCR. Results: Asymptomatic HCWs were 17.6% (32/182), and 58 healed at 30 April 2020. The median time length of negativization was 4 weeks (35% of symptomatic versus 40% of asymptomatic HCWs). Four HCWs, healed at 30 April, turned positive within three weeks during controls set up in the work unit. Three-gene positivity had the greatest variability, and increasing CT values from single- to three-gene

positivity among all age groups were observed. Conclusions: Self-isolation longer than two weeks and prolonged follow-up periods for the staff returning to work after COVID-19 could be the most suitable choices to counter the SARS-CoV-2 spread. Further studies are needed to investigate infectiousness profiles among positive individuals.

[2016] **Modulation of gene expression in Kaposi's sarcoma-associated herpesvirus (KSHV)-infected lymphoid and epithelial cells**

Riferimento: Future Medicine

Aim: To evaluate the gene expression changes that occur soon after the active infection of two susceptible cell types with human herpesvirus 8 (HHV-8). Materials & methods: The expression profile of 282 human genes involved in the inflammatory process was investigated in HHV-8 A1 or C3 subtype-infected and mock-infected human epithelial cells and lymphoid cells. Results: The HHV-8-induced transcriptional profiles in the epithelial and lymphoid cells were very different. A robust increase in the expression was found in genes belonging to different categories, especially the categories of inflammation response and signal transduction. Conclusion: These results indicate that during early infection, HHV-8 induces a variety of cell type-specific processes, thus providing infection signatures useful as potential targets for therapeutic intervention.

[2015] **Evaluation of LIAISON® C. difficile glutamate dehydrogenase and LIAISON® C. difficile toxin A and B in Copan FecalSwabTM samples in a three-step algorithm for the diagnosis of Clostridium difficile infection**

Riferimento: Microbiologia Medica

The presumptive laboratory diagnosis of Clostridium difficile infection is achieved by the means of the detection of a common antigen(glutamate dehydrogenase, GDH) in stool, then confirming the positives either by the detection of toxins A and B or by a molecular test for the detection of pathogenicity locus, encoding for the two toxins and for the binary toxin. A fully automated chemiluminescence system for the GDH antigen (LIAISON®C. difficile GDH) and for the detection of toxins A and B (LIAISON®C. difficile Toxin A and B) (DiaSorin, Gerenzano,Italy) allows for the performance of these tests on large numbers of samples in a short time, ensuring the traceability of the data.

[2015] **Telaprevir-induced moderate cutaneous eruptions associated with HHV-6 reactivation**

Riferimento: Journal of Medical Virology

[2014] **The saliva quantitative PCR assay is inadequate to detect and monitor Human Herpesvirus-7 and -6 reactivation in patients with Pityriasisrosea**

Riferimento: Journal of Clinical Virology

[2012] **Development and Validation of a Dedicated Microarray for the Evaluation of Bovine Mammary Gland Health Status and Milk Quality**

Riferimento: Molecular Biotechnology

The purpose of this study was the output and set up of the milk array, a dedicated array designed to investigate the expression levels of many genes involved in cow mammary gland inflammation and milk production regulation. First, a new targeted genes panel was selected. Successively, the microarray reliability was examined by yellow and dye swap experiments using the normal and mastitic mammary gland samples from the same cow. The sensitivity and reliability were evaluated using different amounts of the same mastitic mammary gland RNA: a good linear regression (R2 = 0.758) was obtained also using only 3 µg of RNA. We used both reverse transcriptase RT-qPCR and the microarray to analyze 100 bovine genes (96 known to be involved in inflammation and milk production regulation and four housekeeping genes) in pooled total RNA isolated from tissue samples. All genes were detectable by RT-qPCR and microarray: a good mean correlation coefficient over all samples of 0.885 showed that both methods were similarly well suited to analyze gene expression in these samples. This report describes the development of small DNA microarray of fully defined genes suitable for analysis of expression of many genes involved in cow mammary gland inflammation and milk production regulation; this platform will prove useful as diagnostic tool prototype to perform a more in-depth analysis of the milk quality and mammary glands health status.

POSTER

[2024] **The contribution of molecular biology in the diagnosis of bacterial gastroenteritis**

Riferimento: 52° CONGRESSO NAZIONALE SIM (Società Italiana di Microbiologia) (Poster)

M.Oggioni, D. Oggioni, V. Marano, C. Siracusa, G. Mitola e P. Congedo

[2024] **Ottimizzazione dell'algoritmo a tre step per la diagnosi di infezione da Clostridioides difficile. L'esperienza di ASST Brianza.**

Riferimento: 51° CONGRESSO NAZIONALE AMCLI (Associazione Microbiologi Clinici Italiani) (Poster)

D. Oggioni, M. Oggioni, V. Marano, A. Romeo e P. Congedo

[2022] **La vaccinazione ad mRNA anti SARS-CoV-2 in bambini nefropatici immunodepressi: lo studio VaRiAn-CoV**

Riferimento: 36° CONGRESSO NAZIONALE SINEPE (Società Italiana Nefrologia Pediatrica) (Poster)

J. Serafinelli, A. Mastrangelo, W. Morello, E. Albion, S. Rotondo, C. Tamburello, V. D'Agostino, G. Filocamo, A. Petaccia, F. Minoia, M. Rossano, A. Valzano, P. Bono, M. Oggioni, F. Ceriotti e G. Montini

[2022] **Monitoraggio dell'infezione da HIV-1 in campioni di plasma: studio di una nuova soluzione sample-to-result**

Riferimento: Congresso Nazionale AMCLI 2022, Rimini (Poster)

A. Parisi, S. Uceda Renteria, A.G. Valzano, P. Bono, F. Ceriotti e M. Oggioni

[2021] **Clinical characteristics of healthcare workers with SARS-CoV-2 infection after vaccination with BNT162b2 vaccine**

Riferimento: ICAR 2021 (Poster)

Andrea Lombardi, Giulia Renisi, Dario Consonni, Massimo Oggioni, Patrizia Bono, Sara Uceda Renteria, Alessandra Piatti, Angela Cecilia Pesatori, Silvana Castaldi, Antonio Muscatello, Luciano Riboldi, Ferruccio Ceriotti, Andrea Gori, Alessandra Bandera

[2021] **Evidence of long-lasting persistance of humoral immunity after COVID-19**

Riferimento: 28th International Symposium on Epidemiology in Occupational Health 2021 (Poster)

Riccardo Ungaro, Simone Villa, Valeria Castelli, Paola Saltini, Antonio Muscatello, Marco Mantero, Stefano Aliberti, Alessandro Nobili, Ciro Canetta, Anna Ludovica Fracanzani, Massimo Oggioni, Andrea Gori, Alessandra Bandera on behalf of the COVID-19 Network working group.

[2021] **Mycoplasma genitalium and mutations associated with macrolide and fluorochinolone resistance**

Riferimento: ECCMID 2021, Online (Poster)

Colonia Uceda Renteria S., Orlandi, A., Viganò C., Melchionna C. and Oggioni M.

[2017] **Malaria e donazione: Screening per anticorpi anti-Plasmodio su donatori di sangue della Lombardia (Maggio 2016 – Maggio 2017)**

Riferimento: Congresso Nazionale AMCLI 2017, Rimini (Poster)

Campisi D.A., Oggioni M., Mercuri M., Rossini S., Cuppari I., Foglieni B. e Raffaele L.

[2017] **Selective testing of at-risk blood donors for Trypanosoma cruzi and Plasmodium spp. in Italy**

Riferimento: ISBT 2017, Guangzhou Blood Center, Cina (Poster)

B. Foglieni, L. Raffaele, A. Berzuini, M. Spreafico, I. Guarnori, M. Oggioni, D. Campisi, S. Rossini and D. Prati.

[2017] **Bordetella pertussis: evaluation of a new Chewmiluminescent test LIAISON® Bordetella pertussis Toxin IgG e IgA**

Riferimento: ECCMID 2017, Vienna (Poster)

Oggioni M. e Campisi D.A.

[2016] **Valutazione di Copan BC+™ per la gestione automatica di emocolture positive: allestimento vetrini e sottocolture**

Riferimento: Congresso nazionale AMCLI 2016, Rimini (Poster)

Bielli A., V. Lepera, M. Oggioni, C. Lacchini, G. Lombardi e C. Vismara

[2016] **Rilevazione di anticorpi anti-HIV1-2: MULTISURE HIV Rapid Test (MP Diagnostic) e recomLine HIV-1 e HIV-2 IgG (Mikrogen Diagnostik) a confronto**

Riferimento: Congresso Nazionale AMCLI 2016, Rimini (Poster)

Lepera V., Oggioni M., Mauri I. e Campisi D.A.

[2016] **Confronto di due metodi in chemiluminescenza per la ricerca di anticorpi di classe IgG e IgM Virclia Monotest vs Liaison ®**

Riferimento: Congresso nazionale AMCLI 2016, Rimini (Poster)

Bielli A., M. Oggioni, L. Grassi e D.A. Campisi

[2016] **Virus respiratori: due stagioni invernali a confronto**

Riferimento: Congresso Nazionale AMCLI 2016, Rimini (Poster)

Oggioni M., Nava A., Barbera G., Bielli A., Fanti D. e Grassi L.

[2016] **Bordetella pertussis: valutazione dei nuovi test in Chemiluminescenza LIAISON® Bordetella pertussis Toxin IgG e IgA**

Riferimento: Congresso Nazionale AMCLI 2016, Rimini (Poster)

Campisi D.A.P., Oggioni M., Coppola M. e Grassi L.

[2016] **Infezioni sessualmente trasmesse: un anno di esperienza con piattaforma multiplex real-time PCR**

Riferimento: Congresso Nazionale AMCLI 2016, Rimini (Poster)

Nava A., Oggioni M., Torri S., Masola M., Fanti D. e Grassi L.

[2016] **Evaluation of a New automated Gram Smear Reading and Image Acquisition System for the Clinical Microbiology Laboratory**

Riferimento: ECCMID 2016, Amsterdam – MICROBE ASM 2016, Boston (MA) (Poster)

Oggioni M., Grimaldi C., Bielli A., Le pera V., Lacchini C. and Gesu G.P.

[2016] **Evaluation of GeneXpert ® CARBA-R system on pooled surveillance rectal swabs**

Riferimento: ECCMID 2016, Amsterdam (Poster)

Bielli A., Oggioni M., Lacchini C., Lombardi G., Vismara C., Gesu G. P.

[2016] **Automatical digital analysis of chromogenic media MRSA using WASPLabTM Chromogenic Detection Module**

Riferimento: ECCMID 2016, Amsterdam (Poster)

Bielli A., Lacchini C., Oggioni M., Vismara C. Gesu G.

[2015] **Valutazione dell'utilizzo di LIAISON® C. difficile GDH e LIAISON® C. difficile Toxin A&B su campioni in CopanFecalSwab™ in un algoritmo diagnostico a 3 step per la diagnosi di infezione da Clostridium difficile**

Riferimento: Congresso Nazionale AMCLI 2014, Rimini - ECCMID 2015, Copenaghen (Poster)

Oggioni M., Bielli A., Nava A. e Campisi D.A.

[2015] **Valutazione del software WASPLAB™ per l'analisi automatica delle immagini applicato alla lettura di campioni per urinocoltura**

Riferimento: Congresso Nazionale AMCLI 2015, Rimini (Poster)

Bielli A., Oggioni M, Lacchini C, Vismara C. , Grimaldi C., Gesu G.

[2015] **Utilizzo di una metodica in biologia molecolare per lo screening di batteri produttori di carbapenemasi**

Riferimento: Congresso Nazionale AMCLI 2014, Rimini - ECCMID 2015, Copenaghen (Poster)

Bielli A., Cotellessa A., Oggioni M., Nava A., Vismara C. e Gesu G.P.

[2015] **Valutazione del test rapido "MULTISURE HCV ANTIBODY ASSAY" per confermare risultati positivi o di dubbia interpretazione al test di screening sierologico per HCV**

Riferimento: Congresso Nazionale AMCLI 2014, Rimini - ECCMID 2015, Copenaghen (Poster)

Oggioni M., Bielli A., Frigato R., Avanzi M. e Campisi D.A.

[2014] **Preliminary assessmentof the performanceof "ARCHITECT® Anti-HCV" plus "LIAISON® XLMurexHCV-Ab" to confirm doubtful HCV antibodies screening results**

Riferimento: Congresso Nazionale AMCLI 2013, Rimini - ECCMID 2014, Barcellona (Poster)

Oggioni M., Saponaro L., Giannotta S. e Campisi D.A

[2013] **Monitoraggio dell'infezione da BK virus in una popolazione di 636 trapianti di rene**

Riferimento: Congresso Nazionale AMCLI 2013, Rimini (Poster)

Sciota R., Nava A., Oggioni M., Drago M. e Fanti D.

PATENTE DI GUIDA

Automobile: B

CONFERENZE E SEMINARI

[08/09/2024 – 11/09/2024] **52° Congresso Nazionale SIM 2024** Università degli Studi di Pavia

[25/03/2024 – 28/03/2024] **51° Congresso Nazionale AMCLI** Palacongressi, Rimini

[2024] **Ciclo incontri "Sorveglianza Malattie Infettive" Regione Lombardia** Web Webinar - Polis Lombardia

[2023] **Ciclo incontri "Sorveglianza Malattie Infettive" Regione Lombardia** Web Webinar - Polis Lombardia

[26/05/2023 – 26/05/2023] **CORSO AMCLI: Algoritmi clinico-diagnostici nel contesto infettivo: opinioni ed esperienze a confronto**
Ospedale Maggiore della Carità, Novara

[09/05/2023 – 09/05/2023] **Ciclo incontri "Sorveglianza Malattie Infettive" Regione Lombardia** Web Webinar - Polis Lombardia

West Nile e Arbovirosi, Reportistica emoculture, Reportistica WHONET.

[03/04/2023 – 03/04/2023] **Ciclo incontri "Sorveglianza Malattie Infettive" Regione Lombardia** Web Webinar - Polis Lombardia

Focus su Morbillo e Rosolia, Protocollo utilizzo dei test self-sampling per le malattie sessualmente trasmesse.

[28/02/2023 – 28/02/2023] **Ciclo incontri "Sorveglianza Malattie Infettive" Regione Lombardia** Web Webinar - Polis Lombardia

Survey sul consumo di soluzioni idroalcolica e progetto sorveglianza ICA, Dinamiche epidemiologiche e infezione da RSV.

[24/02/2023 – 24/02/2023] **Medicina di Laboratorio: contenuti ed applicazione Delibera n° XI/7044 “Determinazioni in merito all’organizzazione dei Servizi di Medicina di Laboratorio e relativo aggiornamento dei requisiti specifici autorizzativi e di accreditamento”**

Corso di formazione a distanza

Polis Lombardia

[01/12/2022] **"CHANGE, Complessità cliniche in ambito di antimicrobico resistenza: Gestione avanzata"**

Corso FAD ECM - Provider: Asincrona - Change

Crediti formatici ECM: 21

[23/09/2022 – 23/09/2022] **La biologia molecolare protagonista nel percorso diagnostico del laboratorio di microbiologia e virologia**

Centro Congressi "Palazzo delle Stelline", Milano

[15/09/2022 – 15/09/2022] **NUOVE TECNOLOGIE MOLECOLARI NELL'ERA POST-COVID: DAGLI SCREENING AL SEQUENZIAMENTO MASSIVO**

NH Collection Torino Piazza Carlina, Torino

[02/2022] **XLIX Congresso Nazionale AMCLI** Febbraio 2022 – Palacongressi, Rimini

[02/2022] **La meningite meningococcica: caratteristiche, diagnosi e vaccini** Febbraio 2022 - Corso FAD ECM - Ordine Nazionale dei Biologi

Crediti formativi ECM: 3

[02/2022] **Parassitosi cutanee, sottocutanee e muscolari. Cute, sottocute e altre sedi** Febbraio 2022 - Corso FAD ECM - AMCLI – Associazione Microbiologi Clinici Italiani

Crediti formativi ECM: 13,5

[02/2022] **Le nuove frontiere dell'EUCAST... A che punto siamo?** Febbraio 2022 - Corso FAD ECM - AMCLI – Associazione Microbiologi Clinici Italiani

Crediti formativi ECM: 3,6

[02/2022] **Antimicogramma: come, quando e perchè eseguirlo.** Febbraio 2022 - Corso FAD ECM - AMCLI – Associazione Microbiologi Clinici Italiani

Crediti formativi ECM: 3

[02/2022] **Giornata Europea degli antibiotici 2021** Febbraio 2022 - Corso FAD ECM - AMCLI – Associazione Microbiologi Clinici Italiani

Crediti formativi ECM: 2,6

[02/2020] **"La diagnostica ematologica di laboratorio: gestione delle linfocitosi e applicazioni cliniche dei conteggi in automazione"**

Febbraio 2020 - Grand Hotel Nuove Terme, Acqui Terme (AL)

Crediti formativi ECM: 6

[01/2020] **La diagnostica di sierologia infettivologica: criticità e soluzioni** Gennaio 2020 - Riunione Scientifica: ASST Papa Giovanni XXIII (BG)

[05/2019] **Problematiche di interpretazione e refertazione degli esami in Microbiologia e Virologia**

Maggio 2019 – Corso Residenziale ECM - Provider: ASST Lecco (LC)

Crediti formativi ECM: 8

[05/2019] **Blood Online 2018-2019 - Applicazione nella pratica quotidiana dei principi e delle procedure dell'evidence based practice**

Maggio 2019 - Corso FAD ECM - Provider: INFOMEDICA Srl – Formazione & Informazione Medica

Crediti formativi ECM: 24

[03/2019] **Paralisi Flaccide Acute: status dell'eradicazione della poliomielite e problematiche aperte**
Marzo 2019 - Corso FAD ECM - Provider: Istituto Superiore di Sanità
Crediti formativi ECM: 16

[12/2018] **Proteggere dall'influenza con la vaccinazione**
Dicembre 2018 - Corso FAD ECM - Provider: Axenso srl
Crediti formativi ECM: 45

[09/2018] **Le infezioni batteriche nosocomiali: infezioni gravi da germi MDR** Settembre 2018 - Corso FAD ECM - Provider: Maya Idee Srl
Crediti formativi ECM: 15

[09/2018] **Diagnostica molecolare di patogeni emergenti: West Nile Virus, Usutu Virus, Chikungunya Virus, Zika Virus**
Settembre 2018 - CLONIT CERBA HC ITALIA (Milano)

[08/2018] **Le polmoniti Comunitarie e Ospedaliere** Agosto 2018 - Corso FAD ECM - Provider: Associazione Italiana Pneumologi Ospedalieri (AIPO)
Crediti formativi ECM: 12

[07/2018] **Vaccini e vaccinazioni: strategie e strumenti per la prevenzione delle malattie infettive**
Luglio 2018 - Corso FAD ECM - Istituto Superiore di Sanità, Roma (RM)
Crediti formativi ECM: 18

[05/2018] **Vaccini e malattie prevenibili da vaccinazioni, basi immunologiche e nuovi approcci** Maggio 2018 - Corso FAD ECM - Istituto Superiore di Sanità, Roma (RM)
Crediti formativi ECM: 16

[05/2018] **Ruolo del laboratorio di microbiologia per l'appropriatezza prescrittiva degli antibiotici**
Maggio 2018 - Istituto di Microbiologia - Università degli Studi di Milano (MI) - Provider: ideA-Z
Crediti formativi ECM: 7,8

[05/2018] **Il Laboratorio nella malattia renale cronica**
Maggio 2018 – Aula Magna - ASST Monza Oapedale di Desio, Desio (MB)

[06/2017] **Congresso Nazionale SIV-ISV (Società Italiana di Virologia)** Giugno 2017 - Centro Congressi Fondazione Stelline, Milano

[05/2017] **Evento AMCLI: I micobatteri non tubercolari** Maggio 2017 - Aula Magna, A.O.U. Maggiore della Carità, Novara

[05/2017] **Corso di aggiornamento AMCLI: La fase preanalitica in microbiologia oggi** Maggio 2017 - Aula 601 Dipartimento di Scienze Mediche, Chirurgiche e Odontoiatriche, UNIMI

[04/2017] **27th European Congress of Clinical Microbiology and Infectious Diseases** Aprile 2017 - Messe Prater Wien, Vienna – ECCMID 2017

[11/2016] **Ospedale e territorio: nuove strategie per il contenimento delle infezioni correlate all'assistenza**
Novembre 2016 – Istituto clinico Humanitas, Rozzano

[11/2016] **XLV Congresso Nazionale AMCLI** Novembre 2016 – Palacongressi, Rimini

[09/2016] **Le Infezioni Gastroenteriche di Origine Alimentare**
Settembre 2016 – Corso AMCLI - Grand Doria Hotel, Milano

[06/2016] **American Microbiology Society Congress 2016**
Giugno 2016 – Boston (Massachussets) – MICROBE ASM-ICAAC 2016

[05/2016] **Le zoonosi nel bacino del Mediterraneo** Maggio 2016 – Fondazione Iniziative Zoo Profilattiche e Zootecniche Brescia

[04/2016] **26th European Congress of Clinical Microbiology and Infectious Diseases** Aprile 2016 - Amsterdam – ECCMID 2016

[03/2016] **TB e HIV: Due storie parallele – Towards to end** Marzo 2016 – Milano Acquario Civico

[03/2016] **Il nuovo test Quantiferon TB-PLUS** Marzo 2016 - Corso QIAGEN - Hotel Doria Milano

[11/2015] **La corretta interpretazione dell'antibiogramma** Novembre 2015 – Corso AMCLI - Centro congressi Hotel Michelangelo, Milano

[11/2015] **XLIV Congresso Nazionale AMCLI** Ottobre 2015 - Palacongressi, Rimini

[04/2015] **25th European Congress of Clinical Microbiology and Infectious Diseases** Aprile 2015 - Copenhagen – ECCMID 2015

[04/2015] **Focus ON: Meningiti ed Encefaliti** Aprile 2015 – Corso AMCLI - Ospedale IRCCS Policlinico Cà Granda, Milano

[11/2014] **Garantire la sicurezza alimentare e valorizzare le produzioni: nuove strategie di contenimento dei patogeni negli alimenti**
Novembre 2014 – Auditorium Testori – Palazzo Lombardia, Milano

[11/2014] **XLIII Congresso Nazionale AMCLI** Novembre 2014 - Palacongressi, Rimini

[10/2014] **I Gram-negativi MDR e XDR: dalla prevenzione alla terapia** Ottobre 2014 – Corso AMCLI - Aula Foscoliana – Università degli Studi di Pavia

[06/2014] **XVII Corso avanzato : patogenesi, diagnosi e terapia della infezione-malattia da HBV, HCV e HIV**
Giugno 2014 – Aula Malattie Infettive – IRCCS Fondazione Policlinico S. Matteo, Pavia

[05/2014] **24th European Congress of Clinical Microbiology and Infectious Diseases**
Maggio 2014 - Centre Convencions Internacional, Barcellona – ECCMID 2014

[04/2014] **CRE: La nuova frontiera dell'antibiotico-resistenza. Aspetti diagnostici, clinici e organizzativi**
Aprile 2014 – Aula Magna A.O. Ospedale Niguarda Ca' Granda

[12/2013] **Infezione da HIV: il ruolo del laboratorio**
Dicembre 2013 – Sala Congressi Novotel, Milano – Tavola rotonda DiaSorin

[11/2013] **XLII Congresso Nazionale AMCLI** Novembre 2013 – Palacongressi, Rimini

[10/2013] **Utilizzo dei Test IGRA (Interferon Gamma Release Assays) nella diagnosi e follow-up delle malattie infettive**
Ottobre 2013 -Corso AMCLI - Aula Magna Collegio Ghislieri, Pavia

ORAL COMMUNICATIONS

Oral communications

Novembre 2019 - Sala Napoleonica - Università degli Studi di Milano

V Giornata di studio Interscuole di Ateneo, Giornata Mondiale dell'antibiotico

RELATORE - **Presentazione risultati del progetto OCRA 2015 - 2018**

Novembre 2018 - Sala Napoleonica - Università degli Studi di Milano

IV Giornata di studio Interscuole di Ateneo, Giornata Mondiale dell'antibiotico

RELATORE - **Presentazione risultati del progetto OCRA**

Aprile 2017 - Aula Magna Fondazione IRCCS Istituto Tumori Milano

XII Congresso: La sicurezza trasfusionale

RELATORE: **"Test per M. di Chagas e Malaria nei donatori di sangue: primo report 2016"**

ECCMID 2016, Amsterdam – MICROBE ASM 2016, Boston (MA)

RELATORE: **"Evaluation of a New automated Gram Smear Reading and Image Acquisition System for the Clinical Microbiology Laboratory"**

Ottobre 2016 – AVIS Provinciale Brescia

Oltre confine. La donazione consapevole: Africa sub-sahariana

RELATORE: **"Gestione e metodi di screening : ottimizzazione del risultato"**

Ottobre 2016 – NEWMICRO - Novotel Mestre Castellana, Venezia

La diagnosi molecolare delle malattie infettive: ruolo dell'automazione nella gestione quotidiana programmata e delle urgenze

RELATORE: **"Ottimizzazione dei flussi di lavoro nel laboratorio di biologia molecolare con il sistema ELITe InGenius™"**

Novembre 2016 – Auditorium Giorgio Gaber, Milano

Giornata di Studio Interscuole di Ateneo, Giornata mondiale dell'antibiotico

RELATORE: "Appropriatezza prescrittiva degli antibiotici. Risultati di un'indagine svolta in Campania"

DOCENZE

[01/03/2023 – Attuale] **Formatore per le Cure Primarie (MMG) di Regione Lombardia**

Ambiti Formativi:

- Docente per attività teoriche

- Tirocinio Ospedaliero e Territoriale

Medicina di Laboratorio - Disciplina di Microbiologia e Virologia

[01/07/2023 – Attuale] **Docente di Microbiologia e Virologia**

Docente a contratto presso la Dental Team Academy

[05/10/2021 – 14/12/2021] ~~**Corso di formazione legge 135/90 edizione 2021 - INFERMIERI e OSS**~~

Corso Residenziale dal 05/10/2021 al 14/12/2021. Disciplina di Microbiologia e Virologia

[05/10/2021 – 14/12/2021] **Corso di formazione legge 135/90 edizione 2021 - MEDICI**

Corso Residenziale dal 05/10/2021 al 14/12/2021. Disciplina di Microbiologia e Virologia

DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE (art. 46 e 47 D.P.R. 445/2000)

Il sottoscritto Massimo Oggioni, consapevole che le dichiarazioni false comportano l'applicazione delle sanzioni penali previste dall'art. 76 del D.P.R. 445/2000, dichiara che le dichiarazioni riportate in questo curriculum vitae, redatto in formato europeo, corrispondono a verità.

TRATTAMENTO DEI DATI PERSONALI

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base alla normativa privacy (D.Lgs. n. 196/2003) come integrata dal D.Lgs 101/2018, nonché nel rispetto del Regolamento Europeo in materia di protezione dei dati personali (GDPR 2016/279).

Vimercate, 13/09/2024

FIRMATO

DR. MASSIMO OGGIONI