



Decreto

Nomina Commissione Giudicatrice per il seguente appalto:

FORNITURA DI UN “SISTEMA DI IMAGING SPATIAL TRANSCRIPTOMICS (IST)” PER IL CENTRO PIATTAFORME TECNOLOGICHE DELL’UNIVERSITA’ DI VERONA nell’ambito del “Progetto di ammodernamento delle Grandi Attrezzature Scientifiche dell’Ateneo di Verona” (ex DMIUR n.1274 del 10.12.21 – art. 1, c. 1, lett. C) **CUP B35I22000910004 (APP. CPT 2404 – CIG B135721EA5) – COD. GARA UBUY G00362.**

**IL DIRETTORE
RESPONSABILE DEL CDR
Centro Piattaforme Tecnologiche**

VISTI:

- lo Statuto dell’Università di Verona;
- il Regolamento di Ateneo per l’Amministrazione, la Finanza e la Contabilità D.R. 1315/2017;
- il Codice dei Contratti Pubblici D.Lgs. n. 36 del 31 marzo 2023;

PRESO ATTO delle “Linee guida per la costituzione dei Seggi di gara e delle Commissioni Giudicatrici per l’affidamento dei contratti pubblici dell’Università di Verona”, approvate con Decreto direttoriale, rep. 11451 prot. 464112 del 21.11.2023;

RICHIAMATI i seguenti provvedimenti:

- il decreto del Direttore Generale Rep. n. 4041/2024 Prot n. 167775 del 09/04/2024 che ha approvato il progetto di acquisizione della fornitura descritta in oggetto (in conformità a quanto previsto all’art. 41, commi 12 e 13, del D.Lgs. 36/2023);
- il proprio Decreto Rep. n. 4107/2024 Prot n. 168980 del 11/04/2024 con cui è stata autorizzata la procedura aperta, sopra soglia comunitaria, ai sensi dell’art. 71 del D.Lgs. 36/2023, espletata in modalità telematica sulla piattaforma certificata del [Portale Appalti UBUY-UNIVR](#) per l’appalto della fornitura descritta in oggetto, da aggiudicarsi con il criterio dell’offerta economicamente più vantaggiosa ai sensi dell’art. 108, comma 1, del D.Lgs. 36/2023;

CONSIDERATO che è stata attivata la procedura di gara sopra descritta in modalità telematica tramite il sistema di *e-procurement* “PortaleAppalti” – UBUY di Ateneo, così sintetizzata:

- **Tipologia del contratto:** contratto d’appalto passivo;
- **Oggetto:** **App. CPT 2404** “FORNITURA DI UN “SISTEMA DI IMAGING SPATIAL TRANSCRIPTOMICS (IST)” PER IL CENTRO PIATTAFORME TECNOLOGICHE DELL’UNIVERSITA’ DI VERONA inserito nel “Progetto di ammodernamento delle Grandi Attrezzature Scientifiche dell’Ateneo di Verona” (ex DMIUR n.1274 del 10.12.21 – art. 1, c. 1, lett. C) CUP B35I22000910004;
- **Sistema di gara:** procedura aperta, sopra soglia comunitaria, ai sensi dell’art. 71 del D.Lgs. 36/2023 espletata in modalità telematica sul portale appalti certificato di Ateneo UBUY - Cod. G00362;
- **CIG B135721EA5 CUI F93009870234202300001;**
- **RdA WEB:** n. 24 del 23.02.2024 pervenuta dal Centro Piattaforme Tecnologiche;
- **Durata e termini di consegna:** i beni devono essere consegnati ed installati dall’operatore economico, secondo le modalità indicate dettagliatamente nel capitolato tecnico di gara;
- **Base d’asta:** € 350.000,00 oltre IVA (*Oneri per la sicurezza per rischi interferenti pari a € 0,00*);
- **Criterio di aggiudicazione:** l’appalto sarà aggiudicato sulla base del criterio dell’offerta economicamente più vantaggiosa, ai sensi dell’art. 108 del D.Lgs. 36/2023, individuata sulla base del miglior rapporto qualità/prezzo, assegnando 20 punti all’offerta economica e 80 punti all’offerta tecnica, mediante i criteri e correlati punteggi individuati nella relazione del RUP;
- **Pubblicazioni:** il bando è stato pubblicato nella Banca dati nazionale dei contratti pubblici, sulla Gazzetta Ufficiale dell’Unione europea S 73/2024 avviso n. 216145-2024 in data 12.04.2024 e all’albo ufficiale di Ateneo rep. 897/2024 prot. 171633 del 15.04.2024;
- **Responsabile Unico del Progetto (art. 15 del D.Lgs 36/2023):** dott. Marco Giarola, Responsabile tecnico del Centro Piattaforme Tecnologiche dell’Università di Verona;
- **Direttore dell’esecuzione del contratto (art. 114 del D.Lgs. 36/2023):** dott.ssa Monica Castellucci, afferente al Centro Piattaforme Tecnologiche.

DATO ATTO che ai sensi dell’art. 93, comma 1, del D.Lgs. 36/2023 la nomina dei commissari e la costituzione della commissione devono avvenire dopo la scadenza del termine fissato per la presentazione delle offerte;

VERIFICATO che entro il termine di scadenza fissata nel bando delle ore 11.00 del 20.05.2024 sono pervenute le offerte telematiche tramite il portale Appalti UBUY da parte dei seguenti operatori economici:



- 1) Euroclone S.p.A. - Viale Liguria 40, Milano - C.F. 08126390155 (Prot. n. 195373 del 17.05.2024)
2) Diatech Lab Line Srl - Via Ignazio Silone 1/b, Jesi (AN) - C.F. 02047250424 (Prot. n.195965 del 17.05.2024)

RILEVATO che

- nel caso di aggiudicazione con il criterio dell'offerta economicamente più vantaggiosa, la valutazione delle offerte dal punto di vista tecnico ed economico è demandata a una commissione giudicatrice, secondo quanto prescritto dall'art. 93, comma 1, del D.Lgs. 36/2023;
- l'art. 93, commi 2 e 3 del citato decreto, stabiliscono le prescrizioni per la nomina della commissione giudicatrice per la valutazione delle offerte dal punto di vista tecnico ed economico, che può essere presieduta e composta da dipendenti della stazione appaltante, in possesso del necessario inquadramento giuridico e di adeguate competenze professionali. Della commissione giudicatrice può far parte anche il RUP, in quanto in possesso delle necessarie conoscenze tecniche e scientifiche inerenti la strumentazione descritta in oggetto;
- il comma 4 dell'art. 93 del citato decreto, prevede che la commissione possa riunirsi con modalità telematiche che salvaguardino la riservatezza delle comunicazioni, utilizzando la piattaforma di approvvigionamento digitale per la valutazione della documentazione di gara e delle offerte dei partecipanti.

RILEVATO che i componenti sono stati individuati tra il personale in servizio presso l'Ateneo, secondo regole di competenza e trasparenza, nelle persone del Dott. Marco Giarola, RUP e Responsabile tecnico del Centro Piattaforme Tecnologiche dell'Università di Verona, della Dott.ssa Monica Castellucci, afferente al Centro Piattaforme Tecnologiche e della Prof.ssa Elena Zenaro afferente al Dipartimento di Medicina (Sezione Patologia generale), quali membri della Commissione, in possesso dell'adeguata professionalità, per la valutazione dell'offerta pervenuta, come da curricula vitae pubblicati sul profilo della stazione appaltante;

VERIFICATO che, come richiamato nell'art. 3, comma 7 delle Linee Guida, i componenti della Commissione hanno dichiarato l'inesistenza delle cause di incompatibilità e/o ragioni di astensione e conflitti di interesse, anche potenziale, di cui all'art. 93, comma 5, lett. a) b) c) e all'art. 16 del Codice, dell'art. 35-bis del D.Lgs.165/2001, nonché dell'art. 6-bis della 241/1990;

DATO ATTO che i curricula vitae degli stessi e il presente provvedimento saranno pubblicati ai sensi degli artt. 27 e 28, comma 2, del D.Lgs. 36/2023;

EVIDENZIATO che, ai sensi dell'art. 3, comma 9 delle Linee Guida, l'incarico di Commissario di gara affidato a personale interno dell'Ateneo è svolto a titolo gratuito;

DECRETA

Art. 1) di nominare la Commissione Giudicatrice per la valutazione delle offerte pervenuta per la FORNITURA DI UN "SISTEMA DI IMAGING SPATIAL TRANSCRIPTOMICS (iST)" PER IL CENTRO PIATTAFORME TECNOLOGICHE DELL'UNIVERSITA' DI VERONA inserito nel "Progetto di ammodernamento delle Grandi Attrezzature Scientifiche dell'Ateneo di Verona" (ex DMIUR n.1274 del 10.12.21 – art. 1, c. 1, lett. C) CUP B35I22000910004- (APP. CPT 2404 – CIG B135721EA5) - COD. UBUY G00362 nelle persone di seguito indicate:

- | | |
|-------------------------------|---|
| - Dott. Marco Giarola | <i>Componente esperto interno effettivo</i> |
| - Dott.ssa Monica Castellucci | <i>Componente esperto interno effettivo</i> |
| - Prof.ssa Elena Zenaro | <i>Componente esperto interno effettivo</i> |

Art. 2) di dare atto che ai suddetti componenti della Commissione non spetterà alcun compenso, trattandosi di personale interno alla stazione appaltante;

Art. 3) di ottemperare, ai sensi dell'art. 28, comma 2, del D.Lgs. n. 36/2023, all'obbligo di pubblicazione del presente provvedimento di nomina, unitamente ai *curricula* dei commissari.

IL DIRETTORE
Prof. Leonardo Chelazzi

Il presente documento è firmato digitalmente e registrato nel sistema di protocollo dell'Università di Verona, ai sensi degli articoli 23-bis e 23-ter e ss. del D.lgs. 82/2005 e s.m.i.

Marco Giarola

Curriculum Vitae et Studiorum

Verona, 14/05/2024

DATI ANAGRAFICI:

Nome e Cognome: Marco Giarola
Luogo e Data di Nascita: Verona, 9 Maggio 1978;
Indirizzo: Via Gran Sasso 11, Buttapietra, Verona;
Cellulare: +39 347 7080430
E-Mail: marco.giarola@univr.it
Patente: Tipo B
Codice Fiscale: GRLMRC78E09L781T

Pubblicazioni	62
Citazioni	1272
h-index	21

Scopus 14-05-2024

ESPERIENZE FORMATIVE:

- **Doctor of Philosophy (Ph.D.)** in Nanotecnologie e Nanomateriali per Applicazioni Bio-Mediche, (XXV ciclo - anno 2010) presso la Facoltà di Scienze Matematiche, Fisiche e Naturali dell'Università degli Studi di Verona, discussa in data 26/04/2013. Titolo "*Polarized micro-Raman studies at 180 and 90 degrees geometries*".
- **Laurea specialistica in Fisica e Tecnologie Biomediche** (classe 20/s) conseguita il 20 Febbraio 2008 presso la facoltà di Scienze Matematiche, Fisiche e Naturali dell'Università degli Studi di Trento, durante l'anno accademico 2006/2007. Titolo della tesi: "*Indagini micro-spettroscopiche di tessuti adiposi*". Votazione 110/110.
- **Laurea in Fisica applicata** (classe 25) conseguita il 14 Dicembre 2005 presso l'Università degli Studi di Trento, Facoltà di Scienze Matematiche, Fisiche e Naturali, durante l'anno accademico 2004/2005. Titolo della tesi: "*Caratterizzazione con spettroscopie FTIR e XRD di idruri di magnesio*". Votazione 90/110.
- **Diploma** di Maturità Tecnica conseguito presso l'istituto Tecnico Agrario "M. A. Bentegodi" di Buttapietra, Verona, nell'anno scolastico 1996/1997. Votazione 42/60.

ESPERIENZE PROFESSIONALI:

- **Contratto di lavoro a tempo indeterminato** Categoria D – posizione Economica D1 – Area Tecnica, Tecnico-Scientifica ed Elaborazione Dati, da giugno 2018 ad oggi, presso il Centro Piattaforme Tecnologiche dell'Università degli Studi di Verona.
- **Contratto di lavoro a tempo determinato** Categoria D – posizione Economica D1 – Area Tecnica, Tecnico-Scientifica ed Elaborazione Dati, nel periodo febbraio 2017 a maggio 2018, presso il Centro Piattaforme Tecnologiche dell'Università degli Studi di Verona.
- **Contratto di lavoro a tempo determinato** Categoria D – posizione economica D1 – Area Tecnica, Tecnico-Scientifica ed Elaborazione Dati, nel periodo maggio 2015 a febbraio 2017 presso il dipartimento di informatica dell'Università degli Studi di Verona.
- **Assegno di ricerca** nel periodo da maggio 2013 ad aprile 2015, dal titolo “membrane nano composite avanzate ed elettrocatalizzatori innovativi per celle a combustibile ed elettrolita polimerico a lunga durata (NAMED-PEM): caratterizzazione fisico-chimica con tecniche di spettroscopia vibrazionale IR e micro-Raman” presso il dipartimento di informatica dell'Università degli Studi di Verona.
- **Assegno di ricerca** nel periodo da aprile 2011 a maggio 2013, dal titolo “Materiali nanocristallini avanzati per applicazioni in nanomedicina: caratterizzazione vibrazionale e spettroscopica” presso il Dipartimento di Informatica dell'Università degli Studi di Verona.
- **Assegno di ricerca** nel periodo da marzo 2010 a febbraio 2011, dal titolo “analisi e interpretazione di spettri di diffusione Raman di sistemi nano strutturati luminescenti a base di ossidi terre rare” presso il Dipartimento di Informatica dell'Università degli Studi di Verona.
- **Assegno di ricerca** nel periodo da agosto 2008 a febbraio 2010, dal titolo “analisi e interpretazione di spettri di diffusione Raman di sistemi composti a base di ossidi e contenenti terre rare” presso il Dipartimento di Informatica dell'Università degli Studi di Verona.
- **Stage formativo** nel periodo marzo-luglio 2008, presso il laboratorio di Micro-Spettroscopia Vibrazionale del Dipartimento di Informatica dell'Università degli Studi di Verona. Lo stage consiste nello studio e applicazione della spettroscopia vibrazionale Raman a microsonda e micro-spettroscopia FTIR.
- **Stage formativo** presso il laboratorio IdEA del Dipartimento di Fisica dell'Università degli Studi di Trento nel periodo maggio-novembre 2005. Lo stage consisteva nello studio e applicazione di tecniche di sputtering per la deposizione di film sottili su silicio e la relativa caratterizzazione con tecniche di spettroscopia infrarossa e diffrazione di raggi X.

PARTECIPAZIONE “ATTIVA” IN PROGETTI DI RICERCA:

- **Progetto PRIN** 2010-2011 dal titolo “Membrane nanocomposite avanzate ed elettrocatalizzatori innovativi per celle a combustibile ad elettrolita polimerico a lunga durata (NAMED-PEM)”, (maggio 2013 a gennaio 2016);
- **Progetto UE** n. 689868 dal titolo “Sonic Drilling coupled with Automated Mineralogy and chemistry On-Line-OnMine-Real-Time (SOLSA)”, (dal 1 febbraio 2016 al 17 febbraio 2017);
- **Progetto** “Verona Nanomedicine Initiative”, progetto finanziato dalla fondazione CariVerona (2011-2014)
- **Progetto UE** dal titolo “Structured Scintillators for Medical Imaging” STRING

INCARICHI:

- **Responsabile Tecnico presso il Centro Piattaforme Tecnologiche (CPT) dell’Università di Verona.** Da novembre 2022 ad oggi.
- A.A. 2010-2011 / 2011-2012 / 2012-2013
Esercitatore del corso di Fisica 1 con laboratorio per il corso di Laurea in Matematica Applicata, presso la Facoltà di Scienze Matematiche, Fisiche e Naturali dell’Università degli Studi di Verona.
- A.A. 2011-2012
Docente del corso Attività propedeutiche: Fisica per il Corso di Laurea in Scienze delle Attività Motorie e Sportive, presso la Facoltà di Scienze Motorie, dell’Università degli Studi di Verona.
- A.A. 2009-2010 e 2010-2011
Professore a contratto del corso di Fisica 1 con laboratorio per il Corso di Laurea in Matematica Applicata, presso la Facoltà di Scienze Matematiche, Fisiche e Naturali dell’Università degli Studi di Verona.

PRINCIPALI COMPETENZE SCIENTIFICHE

Tecniche spettroscopiche: Spettroscopia vibrazionale Raman, spettroscopia di fluorescenza, spettroscopia FT-IR e ATR, imaging vibrazionale.

Applicazioni della spettroscopia micro-Raman a sistemi micro- e nano-strutturati
Caratterizzazione di sistemi compositi, sia cristallini che amorfi con tecniche di spettroscopia vibrazionale.

Queste tematiche di ricerca sono state ampiamente sviluppate portando una produzione scientifica di più di 60 lavori su riviste internazionali sottoposte a “peer-review”, con

1272 citazioni, 256 co-Autori ed un h-index di 21 (fonte Scopus 14-05-2024).

CAPACITÀ RELAZIONALI ED ORGANIZZATIVE DELL'ATTIVITÀ SCIENTIFICA

- Ottima competenza nella progettazione, gestione ed implementazione dell'attività scientifica di laboratorio, acquisita durante lo sviluppo dei laboratori di Fisica del Dipartimento di Informatica dell'Università degli Studi di Verona con specifico riferimento nell'impiego di tecniche di spettroscopia ottica e vibrazionale per studi nei campi della fisica dello stato solido e della materia condensata.
- Ottima predisposizione per il lavoro di gruppo e di coordinamento, ulteriormente sviluppata grazie ad una esperienza di oltre 12 anni in gruppi di ricerca.

ATTIVITÀ DI REVISORE

Revisore per conto di riviste scientifiche internazionali, quali:

Journal of Raman Spectroscopy, The Journal of Physical Chemistry, Journal of Cluster Science, Microscopy Research and Technique, Polymer, Crystals

ATTESTATI E CORSI DI FORMAZIONE

- **Corso “Gestione della sicurezza nell’uso di sorgenti di radiazioni ottiche coerenti”** rilasciato dal Servizio di Prevenzione e Protezione dell'Università degli Studi di Verona il 11/04/2016.
- **Corso “Ruolo dei dispositivi di protezione collettiva nel laboratorio biologico e nel laboratorio di analisi”** rilasciato dal Servizio di Prevenzione e Protezione dell'Università degli Studi di Verona il 08/10/2014.

CONOSCENZE LINGUE STRANIERE:

- Inglese livello buono.

CONOSCENZE INFORMATICHE:

- Ottima conoscenza del sistema operativo Microsoft Windows 10 e precedenti, di browser Internet e pacchetto Office.
- Ottima conoscenza dei programmi di elaborazione dati (Origin, Opus, Matlab, LabSpec 5-6).
- Buona conoscenza del programma di dinamica vibrazionale Crystal06.

PUBBLICAZIONI SCIENTIFICHE:

1. A. KUMAR, M. CASSETTA, M. GIAROLA, M. ZANATTA, M. LE GUEN, G. D. SORARU, AND G. MARIOTTO (2021) "Thermal Annealing and Phase Transformation of Serpentine-Like Garnierite" *Minerals*, 11.
2. A. N. BARBOSA, N. S. FIGUEROA, M. GIAROLA, G. MARIOTTO, AND F. L. FREIRE, (2020) "Straightforward identification of monolayer WS₂ structures by Raman spectroscopy" *Materials Chemistry and Physics*, 243.
3. R. MILAZZO, M. LINSER, G. IMPELLIZZERI, D. SCARPA, M. GIAROLA, A. SANSON, G. MARIOTTO, A. ANDRIGHETTO, A. CARNERA, AND E. NAPOLITANI, (2020) "P-type doping of Ge by Al ion implantation and pulsed laser melting" *Applied Surface Science*, 509.
4. G. PEZZOTTI, Y. FUJITA, F. BOSCHETTO, W. L. ZHU, E. MARIN, E. VANDELLE, B. J. MCENTIRE, S. B. BAL, M. GIAROLA, K. MAKIMURA, AND A. POLVERARI, (2020) "Activity and Mechanism of Action of the Bioceramic Silicon Nitride as an Environmentally Friendly Alternative for the Control of the Grapevine Downy Mildew Pathogen *Plasmopara viticola*" *Frontiers in Microbiology*, 11.
5. S. MARIA, Z. MARCO, B. EVGENY, B. MAURO, K. ARUN, G. MARCO, S. ANDREA, O. BEATE, D. NICOLA, G. STEFANO, M. GINO, M. MAURIZIO & L. LUCA (2018) "Mineralogical investigations using XRD, XRF, and Raman spectroscopy in a combined approach", *Journal of Raman Spectroscopy*, 49, 1023-1030.
6. A. GAROLLA, I. SABOVIC, S. TESCARI, L. DE TONI, M. MENEGAZZO, I. COSCI, V. DE FILIPPIS, M. GIAROLA & C. FORESTA (2018) "Impaired sperm function in infertile men relies on the membrane sterol pattern", *Andrology*, 6, 325-334.
7. E. DASHJAV, Q. MA, Q. XU, C.-L. TSAI, M. GIAROLA, G. MARIOTTO & F. TIETZ (2018) "The influence of water on the electrical conductivity of aluminum-substituted lithium titanium phosphates", *Solid State Ionics*, 321, 83-90.
8. I. RIMMAUDO, A. SALAVEI, E. ARTEGIANI, D. MENOSSI, M. GIAROLA, G. MARIOTTO, A. GASPAROTTO & A. ROMEO (2017) "Improved stability of CdTe solar cells by absorber surface etching", *Solar Energy Materials and Solar Cells*, 162, 127-133.
9. G. MAGGIONI, S. CARTURAN, L. FIORESE, N. PINTO, F. CAPROLI, D. R. NAPOLI, M. GIAROLA & G. MARIOTTO (2017) "Germanium nitride and oxynitride films for surface passivation of Ge radiation detectors", *Applied Surface Science*, 393, 119-126.
10. M. GIAROLA, A. SANSON, F. TIETZ, S. PRISTAT, E. DASHJAV, D. RETTENWANDER, G. J. REDHAMMER & G. MARIOTTO (2017) "Structure and Vibrational Dynamics of NASICON-Type LiTi₂(PO₄)₃", *The Journal of Physical Chemistry C*.
11. S. CORRADETTI, S. M. CARTURAN, A. ANDRIGHETTO, G. MARIOTTO, M. GIAROLA, A. FABRIZI, A. MADDALENA & L. BIASETTO (2017) "Graphene derived lanthanum carbide targets for the SPES ISOL facility", *Ceramics International*, 43, 10824-10831.
12. A. SANSON, M. GIAROLA, G. MARIOTTO, L. HU, J. CHEN & X. XING (2016) "Lattice dynamics and anharmonicity of CaZrF₆ from Raman spectroscopy and ab initio calculations", *Materials Chemistry and Physics*.
13. V. ALLODI, S. BRUTTI, M. GIAROLA, M. SGAMBETTERA, M. A. NAVARRA, S. PANERO & G. MARIOTTO (2016) "Structural and spectroscopic characterization of A nanosized sulfated TiO₂ Filler and of nanocomposite nafion membranes", *Polymers*, 8.
14. A. SANSON, G. S. POKROVSKI, M. GIAROLA & G. MARIOTTO (2015) "Vibrational dynamics of rutile-type GeO₂ from micro-Raman spectroscopy experiments and first-principles calculations", *EPL (Europhysics Letters)*, 109, 26007.
15. M. CATALANO, A. BLOISE, V. PINGITORE, E. CAZZANELLI, M. GIAROLA, G. MARIOTTO & E. BARRESE (2015) "Synthesis and characterization of Zn-doped enstatite", *Applied Physics A*, 1-8.
16. A. SANSON, E. NAPOLITANI, A. CARNERA, G. IMPELLIZZERI, M. GIAROLA & G. MARIOTTO (2014) "A non-destructive approach for doping profiles characterization by micro-Raman

- spectroscopy: the case of B-implanted Ge", *Journal of Raman Spectroscopy*, 45, 197-201.
17. B. ROSSI, A. FONTANA, M. GIAROLA, G. MARIOTTO, A. MELE, C. PUNTA, L. MELONE, F. TORALDO & F. TROTTA (2014) "Glass-like dynamics of new cross-linked polymeric systems: Behavior of the Boson peak", *Journal of Non-Crystalline Solids*, 401, 73-77.
18. A. QUARANTA, S. CARTURAN, A. CAMPAGNARO, M. DALLA PALMA, M. GIAROLA, N. DALDOSSO, G. MAGGIONI & G. MARIOTTO (2014) "Highly fluorescent xerogels with entrapped carbon dots for organic scintillators", *Thin Solid Films*, 553, 188-192.
19. V. CRUPI, A. FONTANA, M. GIAROLA, S. LONGEVILLE, D. MAJOLINO, G. MARIOTTO, A. MELE, A. PACIARONI, B. ROSSI, F. TROTTA & V. VENUTI (2014) "Vibrational density of States and elastic properties of cross-linked polymers: combining inelastic light and neutron scattering", *Journal of Physical Chemistry B*, 118, 624-33.
20. M. CATALANO, A. BLOISE, V. PINGITORE, D. MIRIELLO, E. CAZZANELLI, M. GIAROLA, G. MARIOTTO & E. BARRESE (2014) "Effect of Mn doping on the growth and properties of enstatite single crystals", *Crystal Research and Technology*, 49, 736-742.
21. S. BRUTTI, R. SCIPIONI, M. A. NAVARRA, S. PANARO, V. ALLODI, M. GIAROLA & G. MARIOTTO (2014) "SnO₂-Nafion nanocomposite polymer electrolytes for fuel cell applications", *Int. J. Nanotechnol.*, 11, 14.
22. L. ZENNARO, M. MAGRO, F. VIANELLO, A. RIGO, G. MARIOTTO, M. GIAROLA, E. FRONER & M. SCARPA (2013) "Stable Aqueous Solutions of Naked Titanate Nanotubes", *Chemphyschem : a European journal of chemical physics and physical chemistry*, 14, 2786-2792.
23. F. TIETZ, T. WEGENER, M. T. GERHARDS, M. GIAROLA & G. MARIOTTO (2013) "Synthesis and Raman micro-spectroscopy investigation of Li₇La₃Zr₂O₁₂", *Solid State Ionics*, 230, 77-82.
24. A. SANSON, E. NAPOLITANI, G. IMPELLIZZERI, M. GIAROLA, D. DE SALVADOR, V. PRIVITERA, F. PRIOLO, G. MARIOTTO & A. CARNERA (2013) "Investigation of germanium implanted with aluminum by multi-laser micro-Raman spectroscopy", *Thin Solid Films*, 541, 76-78.
25. A. SANSON, E. NAPOLITANI, M. GIAROLA, G. IMPELLIZZERI, V. PRIVITERA, G. MARIOTTO & A. CARNERA (2013) "Non-Conventional Characterization of Electrically Active Dopant Profiles in Al-Implanted Ge by Depth-Resolved Micro-Raman Spectroscopy", *Applied Physics Express*, 6, 042404.
26. A. SANSON, M. GIAROLA, E. NAPOLITANI, G. IMPELLIZZERI, V. PRIVITERA, A. CARNERA & G. MARIOTTO (2013) "Study of carrier concentration profiles in Al-implanted Ge by micro-Raman spectroscopy under different excitation wavelengths", *Journal of Raman Spectroscopy*, 44, 665-669.
27. A. SANSON, M. GIAROLA, M. BETTINELLI, A. SPEGHINI & G. MARIOTTO (2013) "Polarized micro-Raman spectroscopy and ab initio phonon modes calculations of LuPO₄", *Journal of Raman Spectroscopy*, 44, 1411-1415.
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- M. GIAROLA & G. MARIOTTO (2013) "Spectroscopic characterization of graphene films grown on Pt(111) surface by chemical vapor deposition of ethylene", *Journal of Raman Spectroscopy*, 33, 1393-1397.
32. A. SANSON, E. NAPOLITANI, G. IMPELLIZZERI, M. GIAROLA, D. DE SALVADOR, V. PRIVITERA, F. PRIOLO, G. MARIOTTO & A. CARNERA (2012) "Investigation of germanium implanted with aluminum by multi-laser micro-Raman spectroscopy", *Thin Solid Films*, DOI 10.1016/j.tsf.2012.11.133.
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 39. M. GIAROLA, G. MARIOTTO & D. AJO (2012) "Micro-Raman investigations on inclusions of unusual habit in a commercial tanzanite gemstone", *Journal of Raman Spectroscopy*, 43, 556-558.
 40. S. CARTURAN, D. DE SALVADOR, O. LYTOVCHENKO, A. MAZZOLARI, G. MAGGIONI, M. GIAROLA, G. MARIOTTO, A. CARNERA, G. D. MEA & V. GUIDI (2012) "Germanium strips for channeling: Study of the crystal quality after slicing and chemical etching", *Materials Chemistry and Physics*, 132, 641-651.
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 42. P. HARO-GONZALEZ, M. PEDRONI, F. PICCINELLI, L. L. MARTIN, S. POLIZZI, M. GIAROLA, G. MARIOTTO, A. SPEGHINI, M. BETTINELLI & I. R. MARTIN (2011) "Synthesis, characterization and optical spectroscopy of Eu³⁺ doped titanate nanotubes", *Journal of Luminescence*, 131, 2473-2477.
 43. M. GIAROLA, A. SANSON, A. RAHMAN, G. MARIOTTO, M. BETTINELLI, A. SPEGHINI & E. CAZZANELLI (2011) "Vibrational dynamics of YPO₄ and ScPO₄ single crystals: An integrated study by polarized Raman spectroscopy and first-principles calculations", *Physical Review B*, 83, 224302.
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47. A. QUARANTA, E. CATTARUZZA, F. GONELLA, G. PERUZZO, M. GIAROLA & G. MARIOTTO (2010) "Field-assisted solid state doping of glasses for optical materials", *Optical Materials*, 32, 1352-1355.
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51. M. GIAROLA, A. SANSON, F. MONTI, G. MARIOTTO, A. SPEGHINI & G. SALVIULO (2010) "Vibrational dynamics of anatase TiO_2 : Polarized Raman spectroscopy and ab initio calculations", *Physical Review B*, 81.
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53. A. ROMEO, S. BUECHELER, M. GIAROLA, G. MARIOTTO, A. N. TIWARI, N. ROMEO, A. BOSIO & S. MAZZAMUTO (2009) "Study of CSS- and HVE-CdTe by different recrystallization processes", *Thin Solid Films*, 517, 2132-2135.
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PARTECIPAZIONE A CONVEGNI:

- VII International Discussion Meeting on Relaxation in Complex Systems, Barcellona (Spagna), 21-26 Agosto 2013

B. Rossi, A. Fontana, M. Giarola, G. Mariotto, A. Mele, F. Trotta "New insights in the networking properties of cross-linked cyclodextrin-based polymers by low-frequency Raman scattering"
- XII International Conference on the Structure of Non-Crystalline Materials, Riva del Garda, Tn (Italia), 7-12 Luglio 2013

B. Rossi, A. Fontana, M. Giarola, G. Mariotto, A. Mele, F. Trotta, F. Rossi, "Glass-like dynamics of new cross-liked polymeric systems: behavior of the Boson peak"
- IV National Conference CD.TE.C (Chemistry and Technology of Cyclodextrin), Giardini Naxos, Me (Italia), 9-11 Maggio 2013

B. Rossi, V. Crupi, A. Fontana, M. Giarola, D. Majolino, G. Mariotto, A. Mele, F. Trotta, V. Venuti, "Cyclodextrin nansoponges: a thorough investigation of structural and dynamic properties by vibrational spectroscopy and numerical simulation methods"

- GISR 2012 "II Congresso Nazionale di Spettroscopie Raman ed Effetti Ottici Non Lineari", Bologna, (Italia), 6-8 Giugno 2012

M. Giarola, A. Sanson, M. Bettinelli, A. Speghini, G. Mariotto "Polarized Micro-Raman spectroscopy and quantum-mechanical calculations on single crystals of lutetium orthophosphate".

E. Cazzanelli, G. Chiarello, T. Caruso, M. Castriota, A. Politano, M. Giarola e G. Mariotto "Crescita via CVD e caratterizzazione di grafene su Pt (111)"

B. Rossi, V. Crupi, M. Giarola, D. Majolino, G. Mariotto, A. Mele, F. Trotta, V. Venuti "Studio delle proprietà di reticolazione in polimeri a base di ciclodestrine tramite spettroscopia vibrazionale"

A. Sanson, M. Giarola, E. Napolitani, G. Impellizzeri, D. De Salvador, V. Privitera, F. Priolo, G. Mariotto, A. Carnera "Studio del Germanio impiantato Alluminio mediante spettroscopia micro-Raman".

- CNR Institute for Chemical and Physical Processes - 1st GENERAL MEETING 2012, Cetraro (CS), 21-23 May 2012

B. Rossi, V. Allodi, N. Daldosso, M. Giarola, G. Mariotto, S. Caponi, A. Fontana, V. Crupi, D. Majolino, V. Venuti, A. Mele, F. Trotta "Towards an understanding of the cross-linking properties of a new class of cyclodextrins-based polymers: an experimental-numerical study"

- E-MRS 2012 Spring Meeting, Strasburgo (Francia), 14-18 Maggio 2012.

A. Sanson, E. Napolitani, G. Impellizzeri, M. Giarola, D. De Salvador, S. Boninelli, V. Privitera, F. Priolo, G. Mariotto, A. Carnera. "Micro-Raman spectroscopy investigation of Ge doped with Al by ion implantation".

G. Mariotto, M. Giarola, T. Wegener, M.-T. Gerhards, F. Tietz "Synthesis and Raman micro-spectroscopy investigation of $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ "

E. Cazzanelli, G. Chiarello, T. Caruso, M. Castriota, A. Politano, M. Giarola, G. Mariotto "Growth and characterization of graphene layers deposited on Pt (111) surface"

- 13th International workshop on complex systems, Andalo, Trento, (Italia), 18-22 Marzo 2012

B. Rossi, S. Caponi, S. Corezzi, V. Crupi, D. Fioretto, A. Fontana, M. Giarola, D. Majolino, G. Mariotto, A. Mele, F. Trotta, V. Venuti, "Effect of cross-linking and branching on the molecular properties of cyclodextrin-based polymers: a vibrational spectroscopy study"

- SAMIC 2011 "Syntheses and Methodologies in Chemical Sciences" Bressanone (Italia) – 4-7 Dicembre 2011

M. Pedroni, F. Piccinelli, S. Polizzi, M. Giarola, G. Mariotto, M. Bettinelli, A. Speghini "Colloidal alkaline earth nanoparticles with efficient upconversion properties"

- II European Conference on Cyclodextrins, Asti (Italia), 2-4 ottobre 2011

B. Rossi, A. Mele, S. Caponi, A. Fontana, M. Giarola, G. Mariotto, S. Corezzi, D. Fioretto, F. Trotta "New insight in the connectivity properties of cyclodextrin nanosponges by low frequency Raman scattering"

- X Convegno Nazionale Materiali Nanofasici, Bologna (Italia) 6-8 Settembre 2011.

L. Mocellin, M. Pedroni, F. Piccinelli, S. Polizzi, M. Giarola, G. Mariotto, M. Bettinelli, A. Speghini, "Colloidal zinc tungstate: interesting luminescent material for biomedical applications"

- RAA 2011 "6th International Congress on the Application of Raman Spectroscopy in Art and Archaeology" Parma, (Italia) 5-8 Settembre 2011.

Marco Giarola, Gino Mariotto, Marianna Barberio and David Ajò "Raman spectroscopy as seen from a gemological and jewelistic point of view"

- Science at IPCF conference series: "Chemical and physical properties of nanostructured disordered materials: interface and size confinement effects", Pisa (Italia) 7-8 Luglio 2011

B. Rossi, S. Caponi, S. Corezzi, D. Fioretto, A. Fontana, M. Giarola, G. Mariotto, A. Mele, F. Trotta, G. Viliani, "New insights in the connectivity properties of cross-linked polymeric systems by low-frequency Raman scattering: the case of cyclodextrin nanosponges"

- Workshop sulla Materia Soffice – Parma (Italia), 25-27 Febbraio 2011

B. Rossi, A. Mele, S. Caponi, M. Giarola, A. Fontana, G. Viliani, G. Mariotto, "New insights on the connectivity properties of Cyclodextrin nanosponges: a low-frequency Raman scattering investigation"

- SAMIC 2010 "Chemistry for Energy and Life Sciences" Bressanone, Bolzano (Italia) 28 Novembre – 1 Dicembre 2010

M. Pedroni, F. Piccinelli, S. Polizzi, M. Giarola, G. Mariotto, M. Bettinelli, A. Speghini "Lanthanide doped nanocrystalline alkaline earth fluorides: synthesis, structural, morphological and spectroscopic investigation"

- IX Brazilian MRS Meeting 2010, Ouro Preto-Mg (Brasile) 24-28 Ottobre 2010

K. Upendra Kumar, C. K. Jayasankar, F. Piccinelli, M. Bettinelli, C. Cannas, M. Giarola, G. Mariotto, A. Speghini "Synthesis, structural and luminescence properties of Ln³⁺-doped nanocrystalline NaNbO₃"

- XV International Symposium on Small Particles and Inorganic Clusters (ISSPIC-XV), Oaxaca (Messico) 19-24 Settembre 2010

K. Upendra Kumar, F. Piccinelli, M. Bettinelli, C. Cannas, C.K. Jayasankar, M. Giarola, G. Mariotto, A. Speghini "Ln³⁺-doped nanocrystalline NaNbO₃: structural, morphological and spectroscopic characterization"

- ESTE 2010 and Workshop on Luminescence, Wroctaw & Piechowice (Polonia), 04-09 Settembre 2010

M. Pedroni, F. Piccinelli, S. Polizzi, M. Giarola, G. Mariotto, M. Bettinelli, A. Speghini “Lanthanide doped nanocrystalline alkaline earth fluorides: synthesis, structural, morphological and spectroscopic investigation”
- XXII International Conference on Raman Spectroscopy, Boston, Massachusetts, (USA) 8-13 Agosto 2010.

B. Rossi, M. Giarola, G. Mariotto, E. Ambrosi, and H. L. Monaco “Raman Scattering Study of Ligand-Binding Interactions in SOUL Protein Single Crystals” AIP Conf. Proc. 1267, 644 (2010).
- XXII International Conference on Raman Spectroscopy, Boston, Massachusetts, (USA) 8-13 Agosto 2010.

A. Picco, E. Bonera, E. Grilli, M. Giarola, G. Mariotto, D. Chrastina, and M. Guzzi. “Determination of Raman Efficiency in SiGe Alloys” AIP Conf. Proc. 1267, 251 (2010).
- XXII International Conference on Raman Spectroscopy, Boston, Massachusetts, (USA) 8-13 Agosto 2010.

M. Giarola, A. Sanson, A. Rahman, B. Rossi, M. Bettinelli, A. Speghini, E. Cazzanelli, G. Mariotto. “Vibrational Dynamics Of YPO₄ And ScPO₄ Single Crystals: An Integrated Study By Polarized Raman Scattering Experiments And Simulations.” AIP Conf. Proc. 1267, 1135 (2010).
- 17th International Conference on Dynamical Processes in Excited States of Solids Argonne, Illinois (USA) 20-25 Giugno 2010

: K. Upendra Kumar, F. Piccinelli, M. Giarola, G. Mariotto, C.K. Jayasankar, S. Polizzi, M. Bettinelli, A. Speghini “Structural and morphological characterization and spectroscopic investigations on lanthanide doped nanocrystalline Y₃Ga₅O₁₂”
- Conference on "Frontiers in Water Biophysics", Trieste (Italia), 23-26 Maggio 2010

B. Rossi, A. Mele, M. Giarola, V. Venuti, V. Crupi, D. Majolino, G. Viliani, “Hydration properties of cyclodextrin nanosponges investigated by vibrational spectroscopy”
- III Forum nazionale dei giovani ricercatori di scienza e tecnologia dei materiali Padova (Italia) 22-24 Marzo 2010

M. Pedroni, F. Piccinelli, M. Giarola, G. Mariotto, C. Cannas, M. Bettinelli, A. Speghini “Synthesis and characterization of colloidal zirconia doped with Eu³⁺ and Tb³⁺”
- III Forum nazionale dei giovani ricercatori di scienza e tecnologia dei materiali Padova (Italia) 22-24 Marzo 2010

T. Passuello, F. Piccinelli, M. Giarola, G. Mariotto, M. Bettinelli, A. Speghini “Synthesis, structural and spectroscopic characterization of nanocrystalline GdF₃ doped with lanthanide ions”
- XII International Workshop on Complex Systems, Andalo, Trento (Italia), 15-18

Marzo 2010

B. Rossi, M. Giarola, G. Mariotto, E. Ambrosi, H. L. Monaco, "Raman scattering study of ligand-binding interactions in SOUL protein single crystals"

- XII International Workshop on Complex Systems, Andalo, Trento (Italia), 15-18 Marzo 2010.

M. Giarola, A. Sanson, A. Rahman, B. Rossi, M. Bettinelli, A. Speghini, E. Cavalli, E. Cazzanelli and G. Mariotto. "Polarized raman spectra of yttrium and lutetium orthophostates: a comparison between experiments and simulation".

- XVIII International Conference on "Horizons in Hydrogen Bond Research" Parigi (Francia), 14-18 Settembre 2009.

B. Rossi, M. Giarola, G. Mariotto, E. Ambrosi, H. L. Monaco "Micro-structural investigation of SOUL protein single crystals Raman scattering experiments and numerical simulation".

- 20st European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes, and Nitrides (DIAMOND 2009), Atene (Grecia) 6-10 Settembre 2009.

M. Castriota, E. Cazzanelli, D. Pacilè, L. Papagno, C. O. Girit, J. C. Meyer, A. Zettl, M. Giarola and G. Mariotto, "Spatial dependence of Raman frequencies in ordered and disordered monolayer graphene".

- VII International Conference on f Elements, ICfE 7, Cologne (Germania), 23-27 Agosto, 2009.

L. Nodari, F. Piccinelli, M. Giarola, G. Mariotto, S. Polizzi, M. Bettinelli, A. Speghini "Single crystal and nanocrystalline Pr^{3+} doped lutetium phosphate: a comparative analysis of the f-f luminescence properties".

- VII Convegno nazionale INSTM sulla scienza e tecnologia dei materiali, Green Park Resort, Tirrenia, Pisa (Italia), 9-12 Giugno 2009

T. Passuello, F. Piccinelli, M. Bettinelli, M. Giarola, G. Mariotto, A. Speghini "Luminescent lanthanide doped lutetium oxyfluorides: synthesis, structural characterization, vibrational and luminescence properties".

- II Workshop Phonon Spectroscopy. Puszczkowo (Polonia) 27-30 Maggio 2009

M. Giarola, A. Sanson, G. Mariotto, F. Monti, G. Salviulo, A. Speghini and M. Bettinelli "Vibrational dynamics of TiO_2 anatase: a comparison between experiments and simulation".

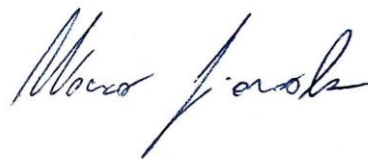
- XXI Congresso GNSR 2009 – Materiali innovativi: il contributo della spettroscopia. Milano (Italy) 10-13 Febbraio 2009.

M. Giarola, B. Rossi, G. Mariotto, E. Mosconi, M. Fontanella, I. Scambi, P. Marzola, A. Sbarbati "Vibrational and structural investigations of white adipose tissue".

- XI International Workshop on Disordered Systems, Andalo, Trento (Italia), 17-20 Marzo, 2008.

M. Giarola, G. Guella, G. Mariotto, F. Monti, B. Rossi, A. sbarbati "Vibrational and structural investigations of adipose tissue"

Tutto quanto dichiarato corrisponde a verità e le dichiarazioni rese sono rilasciate ai sensi degli articoli 46 e 47 del D.P.R. 445/2000

A handwritten signature in dark ink, appearing to read "Moro J. orob". The signature is fluid and cursive, with a long horizontal stroke at the end.

Curriculum Vitae

ELENA ZENARO, PhD

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PERSONAL INFORMATION

Family name: Zenaro

First name: Elena

Date of birth: July 19, 1978

Citizenship: Italian

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Personal website page: dp.univr.it/~zenaro/

Researcher unique identifier: ORCID: 0000-0003-3928-6272

EDUCATION

April 2009 Ph.D. in Molecular and Cellular Biology and Pathology.

Faculty of Medicine, Department of Pathology, University of Verona, Italy.

February 2003 Master's degree in Biotechnology carrying out a research project at the University of Helsinki in collaboration with the University of Verona, Faculty of Mathematical, Physical and Natural Science, Italy.

July 1997 Baccalaureate

High school for laboratory technicians, E. Fermi Institute, Verona, Italy.

WORK EXPERIENCE

Current position

December 2021 – present

Assistant Professor (RTDb). Section of General Pathology, Department of Medicine, Faculty of Medicine, University of Verona, Italy.

Previous positions

April 2009 – November 2021

Postdoctoral position. Section of General Pathology, Department of Medicine, Faculty of Medicine, University of Verona, Italy.

Supervisor: *Prof. G. Constantin.*

January 2005 – December 2008

Ph.D. student, Faculty of Medicine, Department of Pathology, University of Verona, Italy.

Supervisor: *Prof. S. Dusi.*

The project focused on the modulation of human dendritic cell activity by pathogens. Her main interest was to understand innate immunity mechanisms during infectious diseases. She independently carried out two main projects on the role of human dendritic cells in the immunological response to pathogens. Both projects were

successful, and Dr. Zenaro is the first author and wrote the drafts of the manuscripts published in 2007 in Eur. J. Immunol. and in 2009 in J. Leukoc. Biol.

October 2004 – December 2004

Research fellow, Department of Biotechnology, University of Verona, Italy.

Supervisor: Prof. H. Monaco and Prof. J.R. van der Meer.

The project focused on the characterization of the crystallography structure of the transcriptional regulator HbpR.

RESEARCH EXPERIENCE ABROAD

March 2003 – September 2004

Research fellow in the laboratory of Prof. J.R. van der Meer at EAWAG (Swiss Federal Institute for Environmental Science and Technology, Zurich) and in the Department of Fundamental Microbiology, University of Lausanne, Switzerland.

Supervisor: Prof. J.R. van der Meer.

The project focused on constructing bacterial biosensors for the toxicity assessment of contaminants in an environmental matrix. During this period, dr. Zenaro mainly worked with standard microbiological methods and molecular biology techniques to perform gene mutagenesis and cloning of the protein HbpR, a prokaryotic transcriptional regulator able to measure and report the presence of specific chemical signals. She also contributed to standardizing a method of enriching and separating these transcription regulator mutants by flow cytometry-assisted cell sorting (FACS). Overall, she developed an in vitro system for the enhancement/reduction of the native effector recognition of the HbpR protein. The results obtained by Dr. Zenaro were published in Microbial Biotechnology in 2008.

February 2002 – October 2002

Research activity at the Department of Applied Chemistry and Microbiology, Faculty of Agriculture and Forestry, University of Helsinki, Finland. The research project was part of the experimental thesis for the master in biotechnology. Supervisors: Prof. M. Salkinoja-Salonen and Prof. G. Vallini.

The project focused on the characterization of the *Burkholderia* sp. strain DBT1, an interesting bacterium for bioremediation protocols. This project was successfully carried out and translated into a publication in FEMS Microbiol Lett (2011) in which Dr. Zenaro is co-author.

FELLOWSHIPS, CONTRACTS AND AWARDS

2009 – 2010 Assegno di Ricerca from the Department of Pathology, University of Verona, Italy. Project title: “Ruolo del microambiente nei fenomeni di escape immunologico e nella regolazione della crescita tumorale. Studio di meccanismi che influenzano la risposta all’immunoterapia”.

2010 – 2011 Assegno di Ricerca from the Department of Pathology, University of Verona, Italy. Project title: “Molecular mechanisms controlling leukocyte trafficking in the central nervous system”.

2012 Marco Vergelli Award from the “Associazione Italiana di Neuroimmunologia” for studies on the role of immune cells in Alzheimer’s disease.

2012 – 2015 Assegno di Ricerca from the Department of Pathology, University of Verona, Italy. Project title: “Molecular mechanisms controlling leukocyte trafficking in the central nervous system”.

2015 – 2016 Postdoctoral Research Fellowship from the “Fondazione Umberto Veronesi”. Project

title: “Role of neutrophil trafficking in Alzheimer's disease and identification of novel therapeutic approaches for neurodegenerative disorders”.

- 2016 – 2017 Assegno di Ricerca from the Department of Medicine, University of Verona, Italy. Project title: “Meccanismi di reclutamento di diverse sottopopolazioni leucocitarie in modelli murini transgenici di malattia di Alzheimer”. The research was in the context of the ERC advanced grant “The role of immune cells in Alzheimer’s disease”, Acronym Immunoalzheimer.
- 2019 – 2020 Postdoctoral Research Fellowship from the “Fondazione Umberto Veronesi”. Project title: Neutrophil-microbiome axis controlling brain inflammation in Alzheimer’s disease.
- 2020 – 2021 Postdoctoral Research Fellowship from the “Fondazione Umberto Veronesi”. Project title: Neutrophil-microbiome axis controlling brain inflammation in Alzheimer’s disease.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Experienced in supervising and coaching students and technicians: generate ideas and find creative ways to solve problems in pioneering and innovating solutions. She has an excellent ability to establish effective and constructive interpersonal relationships.

Dr. Zenaro supervised the following students:

- 2003 – 2004. One Master’s Student (*Charles Vidoudez*) of the Department of Fundamental Microbiology, University of Lausanne, Switzerland.
- 2005 – 2009. Two Master’s Students: *Lara Toffali* from the Faculty of Biotechnology and Bioinformatics, University of Verona, Italy; *Maddalena Marconi* from the Faculty of Biology, University of Padua, Italy.
- 2009 – present. Nine Master’s Students from the Faculty of Biotechnology and Bioinformatics, University of Verona (*Gennj Piacentino, Anna Slanzi, Luciana Armiento, Maira Zaniolo, Sara Cremona, Francesca Di Norscia, Deniz Simal Bayulgen, Sara Buscarini, Nisha Pande*); one Master’s Student from the Faculty of Biomolecular and Cellular Science, University of Ferrara, Italy (*Marco Bonani*); five Ph.D. students (*Gennj Piacentino, Giulia Iannoto, Anna Slanzi, Bruno Miguel Dos Santos Lima, Eleonora Terrabuio*).

TEACHING ACTIVITIES

- Teaching activities for the Degree in Nursing, University of Verona, Italy.
 - From the A.A. 2023-2024: Pathophysiology. (30 academic hours).
- Teaching activities for Master students of “Biology for translational research and precision medicine” (LM6). University of Verona, Italy.
 - From the A.A. 2022-2023 till now: Molecular and cellular basis of diseases. (24 academic hours).
- Teaching activities for Master students of “Molecular and medical biotechnology” (LM9). University of Verona, Italy.
 - From the A.A. 2022-2023 to now: Experimental models in biomedical research. (24 academic hours).
- Teaching activities for Master students of the Master's degree in Medicine and Surgery. University of Verona, Italy.
 - From the A.A. 2021-2022 till now: Lecture titled: “Experimental models in biomedical research”. (8 academic hours).

- Teaching activities for Postgraduate Specialization in Clinical Pathology and Clinical Biochemistry. University of Verona, Italy.
 - From the A.A. 2020-2021 till now: Lecture titled: “Experimental models in biomedical research”. (8 academic hours).
- Teaching activities for the integrated course of Physio-pathological Sciences (General Pathology and Internal Medicine), Bachelor's Degree in Speech Therapy, University of Verona, Italy.
 - A.A. 2019-2020: Teaching activities for General Pathology and Immunology course (16 academic hours).
 - A.A. 2020-2021: Teaching activities for General Pathology and Immunology course (20 academic hours).
- Lectures for Ph.D. students of the Doctoral program “Inflammation, Immunity and Cancer” – Ph.D. School in Life and Health Sciences, University of Verona, Italy.
 - A.A. 2016-2017: 2 academic hours, lesson titled: “Gut microbiota in neurodegeneration”. <http://www.dm.univr.it/?ent=ava&cs=627&id=412>.
 - A.A. 2017-2018: 2 academic hours, lesson titled: “Inflammation mechanisms in Alzheimer's disease”. <http://www.dm.univr.it/?ent=ava&cs=627&id=424>.
 - A.A. 2018-2019: 8 academic hours, a course titled: “Gut microbiota in health and disease”. Lecture 1: “Microbiota: the forgotten organ”; Lecture 2: “Role of the microbiota in the regulation of immune system”; Lecture 3: “Microbiota in neurodegenerative diseases”; Lecture 4: “Prebiotics, Probiotics and Postbiotics”. <http://www.dm.univr.it/?ent=ava&cs=627&id=523>.
 - A.A. 2020-2021: 2 academic hours, lesson titled: “Microbiota and mechanisms of immune regulation”. <https://www.dm.univr.it/?ent=oi&ava=1&cs=627&id=619>.
 - A.A. 2022-23: 2 academic hours, lesson titled: “Role of the microbiota in regulating the immune system”. <https://www.dm.univr.it/?ent=persona&id=3962&lang=en#tab-didattica>.
 - A.A. 2023-24: 4 academic hours, lesson titled: “Experimental model in neurodegenerative diseases”.
<https://www.dm.univr.it/?ent=oi&aa=2023%2F2024&codiceCs=DRS-IIICA&codins=DT000486&cs=627&discr=&discrCd=>

INSTITUTIONAL RESPONSIBILITIES

- 2006 – 2009. Ph.D. student representative for the Molecular and Cellular Biology and Pathology doctoral program, University of Verona, Italy.
- 2022 – present. Member of the Executive Council of “Interdepartmental Centre for Experimental Research”. University of Verona, Italy.

MEMBERSHIPS IN SCIENTIFIC SOCIETIES

- 2009 – present. Member of the Italian Society of Neuroimmunology (AINI).
- 2005 – present. Member of the Italian Society of Immunology and Allergology (SIICA).

MAJOR COLLABORATIONS

- *Lavinia Albieri Auber*, Lead of Neurology Research, Swiss Integrative Center for Human Health, Fribourg, Switzerland (experienced researcher in the neuropathology field);
- *Jacopo Sgrignani*, Ph.D., postdoc at IRB (Institute of Research in Biomedicine), Bellinzona, Switzerland (theoretical/experimental biophysical scientist);
- *Andrea Porzionato*, MD, Ph.D., Anatomy Unit, University of Padova, Italy (a pathologist with extensive experience in neurodegeneration);
- *Angelo Antonini*, MD, Ph.D., Parkinson's and Movement Disorders Unit director, University of

- Padova, Italy (a clinical neurologist with long-standing expertise in neurodegenerative diseases);
- *Nicola Vitulo*, Associate Professor in the Biotechnology Department, University of Verona, Italy (bioinformatic expert currently involved in several metagenomics projects);
- *Giovanna Felis*, Associate Professor in the Biotechnology Department, University of Verona, Italy (expert in bacterial taxonomy);
- *Carlo Laudanna*, Director of the Center for Biomedical Computing (CBMC) at the University of Verona, Italy (leukocyte trafficking and bioinformatics);
- *Bruno Bonetti*, MD, Ph.D. (Head of the Neurology Unit at Borgo Trento Verona Hospital);
- *Paul Thompson*, National Institute of General Medical Sciences (NIGMS), USA (PAD biochemistry, inhibitor development, and pre-clinical models of PAD inhibition);
- *Carbiotix AB* (publ). Scheelevägen 22, 223 63 Lund, Sweden (pre-clinical stage therapeutics company).

OBTAINMENT OF FUNDING

- Funding request for a 4-year project entitled "LCN2 as a novel druggable target for AD" in which Dr. Zenaro is the PI (submitted to the Ministry for Universities and Research - call FISA 2022 - FISA-2022-00896). Although the project was positively evaluated and also passed the negotiation phase, the funds allocated to each area did not cover the funding of my project.
- Fondazione Umberto Veronesi, Milano, Italy. Grant "Postdoctoral fellowship – Year 2021". Project title: Neutrophil-microbiome axis controlling brain inflammation in Alzheimer's disease.
Period: January 2021 - December 2021. Amount: 30.000 €. Role in the project: PI.
- Fondazione Italiana Sclerosi Multipla (FISM), Genova, Italy. Pilot Research Project. Project title: Characterization of neutrophil-astrocyte interplay in experimental autoimmune encephalomyelitis.
Period: January 2020 - August 2021. Amount: 24.000 €. Role in the project: PI.
- Fondazione Umberto Veronesi, Milano, Italy. Grant "Postdoctoral fellowship – Year 2020". Project title: Neutrophil-microbiome axis controlling brain inflammation in Alzheimer's disease.
Period: January 2020 - December 2020. Amount: 30.000 €. Role in the project: PI.
- European Research Council (ERC) Starting grant (ERC-2019-STG, LS6 sector, Proposal No. 851415). Project title: "Microbiome-Immune axis ContROLLing Brain Inflammation in Alzheimer's disease". Acronym: MICROBIAL. Positively evaluated but not funded.
- Fondazione Umberto Veronesi, Milano, Italy. Grant "Postdoctoral fellowship – Year 2015". Project title: Role of neutrophil trafficking in Alzheimer's disease and identification of novel therapeutic approaches for neurodegenerative disorders.
Period: January 2015 - December 2015. Amount: 27.000 €. Role in the project: PI.

PARTICIPATION IN OTHER FUNDED INTERNATIONAL AND NATIONAL PROJECTS

- 2016-2022, ERC advanced grant, acronym IMMUNOALZHEIMER, grant agreement nr. 695714, LS6 sector, to study cellular and molecular immune mechanisms leading to neuroinflammation, neurodegeneration and cognitive decline. Project title: The role of immune cells in Alzheimer's disease. Amount: 2.500.000 €; Project duration: 6 years. Role in the project: key investigator.
- 2016-2017, Grant from the Alzheimer Drug Discovery Foundation (ADDF), USA, in collaboration with Prof. Paul Thompson from the University of Massachusetts Medical School, USA. Project title: "Inhibiting Neutrophil Extracellular Trap (NET) formation as a novel therapeutic approach to Alzheimer's disease". Project code: 20151206. Project duration: 12 months. Amount: 150.000\$ USA (85.000\$ for University of Verona and 65.000\$ for Prof. Thompson's lab). Role in the project: key investigator.

- 2010-2014, European Research Council (ERC) Starting grant, acronym NEUOTRAFFICKING, grant agreement nr. 261079, LS6 sector, to study the mechanisms controlling leukocyte migration into the inflamed central nervous system in experimental models of multiple sclerosis and epilepsy; Project duration: 4 years. Project title: “Molecular mechanisms controlling leukocyte trafficking in the central nervous system”. Total amount: 1.200.000 €. Role in the project: key personnel.
- 2010-2011, Fondazione Italiana Sclerosi Multipla (FISM), Genoa, Italy. Project title: Role of T-cell immunoglobulin and mucin domain (TIM)-1 in leukocyte trafficking in the inflamed central nervous system. Project code: 2010/R/13. Project duration: 12 months. Amount: 50.000 €. Role in the project: key personnel.

ACADEMIC-INDUSTRIAL PARTNERSHIPS

Carbiotix AB (Sweden) signed a collaboration agreement with the Department of Medicine at the University of Verona to carry out a research study during 2020. The *in-vivo* research study will be led by Dr. Zenaro in the area of neuroinflammation using Carbiotix Microbiome Modulator Therapeutics (MMT).

EDITORIAL & REVIEWING ACTIVITIES

- Associate Editor of Cellular and Molecular Neurobiology (Springer Nature group).
- Review Editor for Inflammation Pharmacology (specialty section of Frontiers in Pharmacology).
- Review Editor for Neurodegeneration (specialty section of Frontiers in Neuroscience, Frontiers in Neurology and Frontiers in Psychiatry).
- Review Editor for International Journal of Molecular Science, Journal of Neuroimmunology, Scientific Reports, Frontiers in Immunology, Frontiers in Cell and Developmental Biology.
- Editor for: Cell Biology (Science Publishing Group, <http://www.sciencepublishinggroup.com/journal/editorialboard?journalid=111>), Biology (MDPI, https://www.mdpi.com/journal/biology/topic_editors).
- Guest Editor for Frontiers in Neuroscience, Special Issue "Neurodegenerative Diseases: Looking Beyond the Boundaries of the Brain" (Frontiers, <https://www.frontiersin.org/research-topics/14773/neurodegenerative-diseases-looking-beyond-the-boundaries-of-the-brain?>).
- Grant Review Editor for Neurological Foundation (New Zealand) and Association pour la recherche sur la Sclerose Laterale Amyotrophique et autres Maladies du Motoneurone (France).

CERTIFIED RESEARCH TRAINING COURSES

- 2023: Fondazione Guido Bernardini: Course on "The multifaced universe of alternative methods in the day-to-day experimental work", Virtual edition.
- 2022-23: Teaching and learning center, University of Verona: "The basics of teaching" and "Ethics in research".
- 2021: Fondazione Umberto Veronesi: “Research beyond the bench: tips for effective science communication”. Virtual edition.
- 2017: Fondazione Guido Bernardini: Course in “Microbiota and Gnotobiotic Management”, Campus IFOM-IEO, Milan – Italy.
- 2017: Envigo: Course in “Genetic and phenotype - Environment and phenotype - Breeding and budget”, Verona – Italy.
- 2016: ThermoFisher Scientific Course: “StepOnePlus PCR System and Real-Time PCR”, Verona – Italy.
- 2011: European Bitplane User Group Meeting on “IMARIS software”, Heidelberg – Germany.
Courses organized by University of Verona: “Safety management in the use of radiogenic agents” and “Safety management in laboratories”, Verona – Italy.
- 2009: Course of scientific publishing and communication, Verona – Italy.
- 2008:

_C.I.R.S.A.L.: “Introductory course and practical training in small rodents handling techniques”, Verona – Italy.

_Postgraduate course in clinical immunology organized by the University of Verona: “Negative regulation of innate immunity”, Verona – Italy.

— 2007:

_Fourth Interactive Course in Cytometry, Modena – Italy.

_Postgraduate course in clinical immunology organized by the University of Verona: “regulation of the allergic response”, Verona – Italy.

— 2006: _Postgraduate course in clinical immunology organized by University of Verona: “Role of NK alloreactivity in allogeneic hematopoietic transplantation”, “Regulatory mechanisms of the immune response”, “Vaccine therapy for tumors”, “The phenomenon of cross-presentation”, “Maturation defects of the antibody response”.

— 2005: Confocal Microscopy course, Bologna – Italy.

SCIENTIFIC ACTIVITY

In February 2003, Dr. Zenaro completed her Biotechnology degree. During her studies, she worked on a research project in collaboration with Prof. M. Salkinoia-Salonen from the University of Helsinki and Prof. G. Vallini from the University of Verona as part of the Erasmus Program. The project's goal was to characterize a bacterial strain that showed potential for use in bioremediation protocols, both phenotypically and phylogenetically. The project was a success, and Dr. Zenaro co-authored a publication in *FEMS Microbiol Lett* (2011) documenting its findings.

After graduation, from May 2003 to September 2004, Dr. Zenaro carried out research activity in Switzerland under the supervision of Prof. J.R. van der Meer at the Institute EAWAG in Zurich. She worked on a European research project aimed at the “Construction of bacterial biosensors based on à la carte regulators”. These biosensors were intended for use in assessing the toxicity of heavy metals in environmental decontamination processes. During this time, Dr. Zenaro utilized standard microbiological methods and molecular biology techniques to perform gene mutagenesis and cloning of HbpR, a prokaryotic transcriptional regulator able to measure and report the presence of specific chemical signals. She also contributed to standardizing a method of enriching and separating these transcription regulator mutants by flow cytometry-assisted cell sorting (FACS). Overall, she developed an *in vitro* system for the enhancement/reduction of the native effector recognition of the HbpR protein. The results obtained by Dr. Zenaro were published in *Microbial Biotechnology* in 2008, documenting the success of this research line.

In 2009 Dr. Zenaro obtained a Ph.D. in Molecular and Cellular Pathology at the University of Verona. During her Ph.D. program, Dr. Zenaro worked in the laboratory of Prof. S. Dusi on immunology projects. Her main interest was to understand innate immunity mechanisms during infectious diseases. She independently carried out two main projects on human dendritic cells' role in immune responses to pathogens. Both projects were successful and Dr. Zenaro is the first author and wrote the drafts of the manuscripts published in 2007 in *Eur. J. Immunol.* and in 2009 in *J. Leukoc. Biol.*. During the same period, Dr. Zenaro also participated in a research project coordinated by Prof. R. Badolato to study the role of G-CSF treatment in patients with severe congenital neutropenia and published the results in 2007 in *Blood*.

Dr. Zenaro has been studying leukocyte trafficking mechanisms in the central nervous system at the Neuro-immunology laboratory of Prof. G. Constantin since April 2009. The laboratory has extensive experience in leukocyte trafficking in the central nervous system and advanced microscopy.

Her project represents a new research line derived from the European Research Council (ERC) starting grant entitled “The molecular mechanisms controlling leukocyte trafficking in the central

nervous system” (Acronym Neurotrafficking), which was mainly focused on studies on multiple sclerosis (MS). Dr. Zenaro's project aimed to open a new line of investigation to study the role of innate immunity cells, particularly neutrophils, in the induction of neurodegeneration and cognitive dysfunction in animal models of Alzheimer's disease (AD). She made a fundamental contribution to obtaining groundbreaking results, representing the central core of the publication on *Nat. Med.* in 2015: “Neutrophils promote Alzheimer's disease-like pathology and cognitive decline via a mechanism dependent on LFA-1 integrin”. Dr. Zenaro is the first author of this study, demonstrating her crucial role in this project. The new research line on AD was further developed in the context of an ERC advanced grant entitled “The role of immune cells in Alzheimer's disease” (Acronym Immunoalzheimer) in which Dr. Zenaro is presently key personnel. Dr. Zenaro also brought another original contribution to the neurodegeneration field by demonstrating a previously unknown role for $\gamma\delta$ T cells in the induction of neuroinflammation and cognitive decline in an animal model of AD, and she contributed to the manuscript writing; she is the first author of this study close to Submission.

Dr. Zenaro independently developed an intravital microscopy setting using two-photon microscopy to elucidate the role of leukocyte trafficking mechanisms in blood vessels and inside the parenchyma of both AD and MS murine models. These efforts led to a review entitled “Use of imaging to study leukocyte trafficking in the central nervous system” (report published in 2013 in *Immunol. and Cell. Biol.*). She also contributed to the study of the intraparenchymal behavior of migrated leukocytes in the inflamed CNS and lymph nodes in experimental autoimmune encephalomyelitis (EAE), the murine model of MS (report published in 2013 in *J. Immunol.*).

Dr. Zenaro also independently set up and directed a new facility to perform cognitive tests necessary to study the role of immune mechanisms in AD-like disease.

Dr. Zenaro also collaborated with the group of Prof. Alberto Mantovani in a research project aimed at elucidating the role of PTX3 in the attenuation of neutrophil recruitment at sites of inflammation by performing intravital microscopy studies to explain the role of pentraxin three on leukocyte rolling and arrest under pathological conditions (manuscript published on *Nat. Immunol.*, 2010).

For her studies on the role of innate immune system mechanisms in CNS inflammatory diseases, Dr. Zenaro received in 2012 the prestigious “Marco Vergelli Award” for talented young investigators from the Italian Association of Neuroimmunology (AINI), and also obtained three awards from the Umberto Veronesi Foundation in 2015, 2020 and 2021.

Dr. Zenaro has dedicated her scientific career to studying innate immunity mechanisms in various pathological contexts. She focused on dendritic cells during her Ph.D. program and neutrophils during her postdoctoral fellowship. In the past few years, her research has focused on the involvement of neutrophils and $\gamma\delta$ T cells in Alzheimer's disease. She has almost completed a research article on this topic, which will soon be submitted. Furthermore, Dr. Zenaro is also collaborating with others to investigate the significance of brain barriers and the relationship between the brain and the gut-brain axis in the neuroimmunology of neurodegenerative diseases.

Currently, Dr. Zenaro is an experienced, highly qualified independent investigator. She has an excellent track record of publications for her career stage and has successfully collaborated with members of her research group and other laboratories. Additionally, she has administrative and managerial experience overseeing mouse behavior and two-photon microscopy facilities.

Dr. Zenaro has expertise in project development for EU grants and has mentored numerous student researchers. She has also received prestigious scientific awards for her contribution to the study of leukocytes in Alzheimer's disease.

PUBLICATIONS AND BIBLIOMETRY

- International peer-reviewed publications: 30 (7 first author, 18 original research, 12 reviews)
- Number of citations: 2229 (tracked by Scopus February 22nd, 2024)
- Scopus **h-index** 2007-2023: **20**
- Submitted Manuscripts: 1
- Conference abstracts: 48

PUBLICATION IN INTERNATIONAL JOURNALS

* indicates equal contribution. # indicates the corresponding author.

Citations reported in Scopus (as of February 22nd, 2024). Impact Factor (IF) from JCRreport2022.

1. [G-CSF treatment of severe congenital neutropenia reverses neutropenia but does not correct the underlying functional deficiency of the neutrophil in defending against microorganisms.](#) Donini M, Fontana S, Savoldi G, Vermi W, Tassone L, Gentili F, **Zenaro E**, Ferrari D, Notarangelo LD, Porta F, Facchetti F, Notarangelo LD, Dusi S, Badolato R. *Blood*. 2007 Jun 1;109(11):4716-23. Epub 2007 Feb 20. PMID: 17311988.
IF: **20.3**. Citation in scopus: **71**.
2. [NADPH oxidase of human dendritic cells: role in Candida albicans killing and regulation by interferons, dectin-1 and CD206.](#) Donini M*, **Zenaro E***, Tamassia N, Dusi S. *Eur J Immunol*. 2007 May;37(5):1194-203. PMID: 17407098.
IF: **5.4**. Citation in scopus: **48**.
3. [Mutant HbpR transcription activator isolation for 2-chlorobiphenyl via green fluorescent protein-based flow cytometry and cell sorting.](#) Beggah S, Vogne C, **Zenaro E**, Van Der Meer JR. *Microb Biotechnol*. 2008 Jan;1(1):68-78. doi: 10.1111/j.1751-7915.2007.00008.x. PMID: 21261823.
IF: **5.7**. Citation in scopus: **25**.
4. [Induction of Th1/Th17 immune response by Mycobacterium tuberculosis: role of dectin-1, Mannose Receptor, and DC-SIGN.](#) **Zenaro E**, Donini M, Dusi S. *J Leukoc Biol*. 2009 Dec;86(6):1393-401. doi: 10.1189/jlb.0409242. Epub 2009 Sep 22. PMID: 19773555.
IF: **5.5**. Citation in scopus: **95**.
5. [Regulation of leukocyte recruitment by the long pentraxin PTX3.](#) Deban L, Russo RC, Sironi M, Moalli F, Scanziani M, Zambelli V, Cuccovillo I, Bastone A, Gobbi M, Valentino S, Doni A, Garlanda C, Danese S, Salvatori G, Sassano M, Evangelista V, Rossi B, **Zenaro E**, Constantin G, Laudanna C, Bottazzi B, Mantovani A. *Nat Immunol*. 2010 Apr;11(4):328-34. doi: 10.1038/ni.1854. Epub 2010 Mar 7. PMID: 20208538.
IF: **30.5**. Citation in scopus: **351**.
6. [Vascular inflammation in central nervous system diseases: adhesion receptors controlling leukocyte-endothelial interactions.](#) Rossi B, Angiari S, **Zenaro E**, Budui SL, Constantin G. *J Leukoc Biol*. 2011 Apr;89(4):539-56. doi: 10.1189/jlb.0710432. Epub 2010 Dec 17. Review. PMID: 21169520.
IF: **5.5**. Citation in scopus: **135**.
7. [Inverse agonism of cannabinoid CB1 receptor blocks the adhesion of encephalitogenic T cells in inflamed brain venules by a protein kinase A-dependent mechanism.](#) Rossi B, **Zenaro E**, Angiari S, Ottoboni L, Bach S, Piccio L, Pietronigro EC, Scarpini E, Fusco M, Leon A, Constantin G. *J Neuroimmunol*. 2011 Apr;233(1-2):97-105. doi: 10.1016/j.jneuroim.2010.12.005. Epub 2011 Jan 7. PMID: 21216016.
IF: **3.3**. Citation in scopus: **20**.

8. [Burkholderia fungorum DBT1: a promising bacterial strain for bioremediation of PAHs-contaminated soils.](#) Andreolli M, Lampis S, **Zenaro E**, Salkinoja-Salonen M, Vallini G. *FEMS Microbiol Lett.* 2011 Jun;319(1):11-8. doi: 10.1111/j.1574-6968.2011.02259.x. Epub 2011 Mar 31. PMID: 21388438.
IF: **2.1**. Citation in scopus: **47**.
9. [Use of imaging to study leukocyte trafficking in the central nervous system.](#) **Zenaro E**, Rossi B, Angiari S, Constantin G. *Immunol Cell Biol.* 2013 Apr;91(4):271-80. doi: 10.1038/icb.2012.81. Epub 2013 Jan 22. Review. PMID: 23337699.
IF: **4**. Citation in scopus: **22**.
10. [ESAT-6 and HspX improve the effectiveness of BCG to induce human dendritic cells-dependent Th1 and NK cells activation.](#) Marongiu L, Donini M, Toffali L, **Zenaro E**, Dusi S. *PLoS One.* 2013 Oct 9;8(10):e75684. doi: 10.1371/journal.pone.0075684. eCollection 2013. PMID: 24130733.
IF: **3.7**. Citation in scopus: **26**.
11. [Regulatory T cells suppress the late phase of the immune response in lymph nodes through P-selectin glycoprotein ligand-1.](#) Angiari S, Rossi B, Piccio L, Zinselmeyer BH, Budui S, **Zenaro E**, Della Bianca V, Bach SD, Scarpini E, Bolomini-Vittori M, Piacentino G, Dusi S, Laudanna C, Cross AH, Miller MJ, Constantin G. *J Immunol.* 2013 Dec 1;191(11):5489-500. doi: 10.4049/jimmunol.1301235. Epub 2013 Oct 30. PMID: 24174617.
IF: **4.4**. Citation in scopus: **34**.
12. [TIM-1 glycoprotein binds the adhesion receptor P-selectin and mediates T cell trafficking during inflammation and autoimmunity.](#) Angiari S, Donnarumma T, Rossi B, Dusi S, Pietronigro E, **Zenaro E**, Della Bianca V, Toffali L, Piacentino G, Budui S, Rennert P, Xiao S, Laudanna C, Casanovas JM, Kuchroo VK, Constantin G. *Immunity.* 2014 Apr 17;40(4):542-53. doi: 10.1016/j.immuni.2014.03.004. Epub 2014 Apr 3. PMID: 24703780.
IF: **32.4**. Citation in scopus: **55**.
13. [Neutrophils promote Alzheimer's disease-like pathology and cognitive decline via LFA-1 integrin.](#) **Zenaro E**, Pietronigro E, Della Bianca V, Piacentino G, Marongiu L, Budui S, Turano E, Rossi B, Angiari S, Dusi S, Montresor A, Carlucci T, Nani S, Tosadori G, Calciano L, Catalucci D, Berton G, Bonetti B, Constantin G. *Nat Med.* 2015 Aug;21(8):880-6. doi: 10.1038/nm.3913. Epub 2015 Jul 27. PMID: 26214837.
IF: **82.9**. Citation in scopus: **506**.
14. [Imaging of Leukocyte Trafficking in Alzheimer's Disease.](#) Pietronigro E, **Zenaro E**, Constantin G. *Front Immunol.* 2016 Feb 15;7:33. doi: 10.3389/fimmu.2016.00033. eCollection 2016. Review. PMID: 26913031.
IF: **7.3**. Citation in scopus: **31**.
15. [The blood-brain barrier in Alzheimer's disease.](#) **Zenaro E**, Piacentino G, Constantin G. *Neurobiol Dis.* 2017 Nov;107:41-56. doi: 10.1016/j.nbd.2016.07.007. Epub 2016 Jul 15. Review. PMID: 27425887.
IF: **6.1**. Citation in scopus: **406**.
16. [Targeting neuroinflammation in the treatment and prevention of Alzheimer's disease.](#) **Zenaro E**, Constantin G. *Drugs of the Future* 42(1):21. January 2017. doi: 10.1358/dof.2017.042.01.2564104. Review.

IF: **0.2**. Citation in scopus: **3**.

17. [NETosis in Alzheimer's Disease](#). Pietronigro EC, Della Bianca V, **Zenaro E**, Constantin G. *Front Immunol.* 2017 Mar 2;8:211. doi: 10.3389/fimmu.2017.00211. eCollection 2017. Review. PMID: 28303140.
IF: **7.3**. Citation in scopus: **94**.
18. [Blockade of \$\alpha 4\$ integrins reduces leukocyte-endothelial interactions in cerebral vessels and improves memory in a mouse model of Alzheimer's disease](#). Pietronigro E*, **Zenaro E***, Della Bianca V, Ghasemi S, Nagarajan R, Constantin G. *Sci Rep.* 2019 Aug 19; 9(1):12055. doi: 10.1038/s41598-019-48538-x. PMID: 31427644.
IF: **4.6**. Citation in scopus: **37**.
19. [LFA-1 Controls Th1 and Th17 Motility Behavior in the Inflamed Central Nervous System](#). Dusi S, Angiari S, Pietronigro EC, Lopez N, Angelini G, **Zenaro E**, Della Bianca V, Tosadori G, Paris F, Amoroso A, Carlucci T, Constantin G, Rossi B. *Front Immunol.* 2019 Oct 18;10:2436. doi: 10.3389/fimmu.2019.02436. PMID: 31681316.
IF: **7.3**. Citation in scopus: **18**.
20. [The emerging role of neutrophils in neurodegeneration](#). Rossi B, Constantin G, **Zenaro E**[#]. *Immunobiology.* 2019 Nov 9. doi: 10.1016/j.imbio.2019.10.014. Review. PMID: 31740077.
IF: **2.8**. Citation in scopus: **23**.
21. [In vitro models of neurodegenerative diseases](#). Slanzi A, Iannoto G, Rossi B, **Zenaro E**, Constantin G. *Front. Cell Dev. Biol.*, 2020 13 May. doi.org/10.3389/fcell.2020.00328. Review. PMID: 32528949.
IF: **5.5**. Citation in scopus: **133**.
22. [Common peripheral immunity mechanisms in multiple sclerosis and Alzheimer's disease](#). Rossi B, Santos-Lima B, Terrabuio E, **Zenaro E**, Constantin G. *Front. Immunol.*, 2021 Feb 19. doi.org/10.3389/fimmu.2021.639369. PMID: 33679799.
IF: **7.3**. Citation in scopus: **32**.
23. [The role of neutrophils in the dysfunction of central nervous system barriers](#). Santos-Lima B., Pietronigro EC, Terrabuio E, **Zenaro E**[#], and Constantin G[#]. *Frontiers in Aging Neuroscience.* 2022 August, 14;1663-4365. doi: 10.3389/fnagi.2022.965169. PMID: 36034148
IF: **4.8**. Citation in scopus: **9**.
24. [Editorial: Neurodegenerative Diseases: Looking Beyond the Boundaries of the Brain](#). Gutiérrez-Ospina g, Perez-Cruz C, **Zenaro E** and Zille M. *Frontiers in Neuroscience.* 2022 June, 23. doi: 10.3389/fnins.2022.929786. PMID: 35812215
IF: **4.3**. Citation in scopus: **0**.
25. [Neutrophils inhibit \$\gamma\delta\$ T cell functions in the imiquimod-induced mouse model of psoriasis](#). Costa S, Bevilacqua D, Cavegion E, Gasperini S, **Zenaro E**, Donini M, Dusi S, Pettinella F, Constantin G, Lonardi S, Vermi W, De Sanctis F, Ugel S, Cestari T, Abram C, Lowell CA, Rodegher A, Tagliaro F, Girolomoni G, Cassatella MA, Scapini P. *Frontiers in Immunology.* 2022 November, 15. Doi:10.3389/fimmu.2022.1049079.
IF: **7.3**. Citation in scopus: **0**.

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27. [Alpha4 beta7 integrin controls Th17 cell trafficking in the spinal cord leptomeninges during experimental autoimmune encephalomyelitis.](#)
Rossi B, Dusi S, Angelini G, Bani A, Lopez N, Della Bianca V, Pietronigro EC, **Zenaro E**, Zocco C and Constantin G.
Front Immunol. 2023 Apr 18;14:1553. <https://doi.org/10.3389/fimmu.2023.1071553>.
PMID: 37143680
IF: **7.3**. Citation in scopus: **2**.
28. [An isoform of the giant protein titin is a master regulator of human T lymphocyte trafficking.](#)
Toffali L, D'Ulivo B, Giagulli C, Montresor A, **Zenaro E**, Delledonne M, Rossato M, Iadarola B, Sbarbati A, Bernardi P, Angelini G, Rossi B, Lopez N, Linke WA, Unger A, Di Silvestre D, Benazzi L, De Palma A, Motta S, Constantin G, Mauri P, and Laudanna C.
Cell Reports. 2023 May 18; 42(5):112516. <https://doi.org/10.1016/j.celrep.2023.112516>.
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29. [The role of the CD8+ T cell compartment in ageing and neurodegenerative disorders.](#)
Terrabuio E, **Zenaro E**, Constantin G. Front Immunol. 2023 Jul 28;14:1233870. doi: 10.3389/fimmu.2023.1233870. PMID: 37575227.
IF: **7.3**. Citation in scopus: **1**.
30. [Plasmacytoid Dendritic Cell, Slan⁺-Monocyte and Natural Killer Cell Counts Function as Blood Cell-Based Biomarkers for Predicting Responses to Immune Checkpoint Inhibitor Monotherapy in Non-Small Cell Lung Cancer Patients.](#)
Pettinella F, Lattanzi C, Donini M, Caveggion E, Marini O, Iannoto G, Costa S, **Zenaro E**, Fortunato TM, Gasperini S, Giani M, Belluomini L, Sposito M, Insolda J, Scaglione IM, Milella M, Adamo A, Poffe O, Bronte V, Dusi S, Cassatella MA, Ugel S, Pilotto S, Scapini P. Cancers (Basel). 2023 Nov 3;15(21):5285. doi: 10.3390/cancers15215285. PMID: 37958458.
IF: **5.2**. Citation in scopus: **0**.

MANUSCRIPT IN PREPARATION

1. *Pathogenic signature of $\gamma\delta$ T cells promotes neutrophil responses and neuropathological features of Alzheimer's disease.* **Zenaro E**, Ghasemi S, Pietronigro E, Slanzi A, Terrabuio E, Santos-Lima BM, Calgaro M, Risso D, Vitulo N, D'Ulivo B, Lopez N, Iaia S, Iannoto G, Turano E, Nagarajan R, Tosadori G, Della Bianca V, Dusi S, Arioli J, Rossi B, Castellucci M, Bonetti B, Constantin G. Manuscript close to submission.

PRESENTATIONS AS INVITED SPEAKER

- Presentation title: *Exploring the Role of the Neutrophils in Alzheimer's Disease Pathogenesis*. 5th World Aging and Rejuvenation Conference, July 17-18, 2023 Frankfurt (Germany).
- Presentation title: *Characterization of neutrophil-astrocyte interplay in experimental autoimmune encephalomyelitis*. Annual Scientific Congress Italian MS Society and its Foundation. May 26th 2022, Rome (Italy).

- Presentation title: *Systemic inflammation in Alzheimer's disease: a role for circulating neutrophils*. V Congress of Italian Society for Cytometric Cell Analysis, Immunology panel. May 21st 2021, Virtual edition.
- Presentation title: *How Polymorphonuclear Leukocytes (PMNs) can lead to a Chronic Disease: Alzheimer's*. Biomarkers in Rheumatic Diseases. 7th edition of GISEA International Meeting, Section of Biomarkers of inflammation. December 16th 2016, Rome (Italy).
- Presentation title: *Vascular Inflammation and Neutrophil Trafficking in Alzheimer's Disease*. More than neurons: toward a less neurocentric view of brain disorders. Session of neural stem cells, neuro-glia-vascular interactions, blood brain barrier and gut-brain axis. December 3rd 2016, Turin (Italy).
- Presentation title: *Neutrophils Induce Alzheimer's-Like Disease via LFA-1-Integrin*. The Joint 28th European Society for Microcirculation (ESM) 8th European Vascular Biology Organisation (EVBO) Meeting, Panel of endothelial activation and endothelial-leukocyte interaction. June 4th 2015, Pisa (Italy).

ORAL PRESENTATIONS AT MEETINGS

- *Tim-1 controls neutrophil trafficking and contributes to the induction of cognitive decline and neuropathological changes in animal models of Alzheimer's disease*. XXVI AINI Congress and 16th ESNI Course. June 2017, Venezia, Italy.
- *Neutrophils induce Alzheimer's-like disease via LFA-1-integrin and neutrophil extracellular traps*. IX National Conference of the Italian Society of Immunology, Clinical Immunology and Allergology - May 2014, Florence, Italy.
- *A role for neutrophils in the induction of Alzheimer's disease*. XXII AINI Congress of Italian Association of Neuroimmunology – September 2012, Catania, Italy.
- *Vascular inflammation and leukocyte trafficking in an experimental model of Alzheimer's disease*. Congress of Italian Association of Neuroimmunology – September 2011 Pollenzo (CN), Italy.
- *Two-photon microscopy studies of Th17 cell trafficking in an experimental model of epilepsy*. Congress of Italian Association of Neuroimmunology – September 2010, Stresa (VB), Italy.
- Effects of Mycobacterium tuberculosis on DC apoptosis, maturation and oxygen free radicals production. 21st Annual Meeting EMDS (European Macrophage & Dendritic cells Society) – September 2007, Innsbruck, Austria.
- *NADPH oxidase activity and zymosan uptake regulation in human dendritic cells*. 40th Annual Scientific Meeting of the European Society for Clinical Investigation. March 2006 – Prague, Czech Republic.
- *Espressione e regolazione della NADPH ossidasi in cellule dendritiche umane*. II Workshop SIICA, Settembre 2005 – Siena, Italy. Presentation awarded for the Scientific Value.
- *Bacterial biosensors based on à la carte regulators*. 63rd annual assembly of SSM Lugano, March 2004 – Lugano, Switzerland.

POSTER PRESENTATIONS

- **E. Zenaro**, B. Santos-Lima, E. Pietronigro, A. Slanzi, E. Terrabuio, A. Suli, N. Lopez, S. Ghasemi, B. D'Ulivo, G. Angelini, A. Bani, E. Turano, M. Calgaro, G. Tosadori, N. Vitulo, D. Risso, R. Nagarajan, V. Della Bianca, D. Bayulgen, B. Rossi, S. Iaia, G. Iannoto, S. Dusi, M. Castellucci, F. Calzetti, Y. Yoshikai, A. Hayday, B. Bonetti & G. Constantin. *$\gamma\delta$ T cells play a role in the pathogenesis of Alzheimer's Disease*. XIV SIICA National Congress, May 22/25, 2023, Verona, Italy. Selected poster that won the prize for the best poster presented at the congress.
- N. Lopez, A. Slanzi, B. Santos-Lima, E. Terrabuio, A. Bani, A. Suli, G. Angelini, E. Pietronigro, B. Rossi, **E. Zenaro** and G. Constantin. *$\gamma\delta$ T cell-mediated neurotoxicity in in vitro models of Alzheimer's disease*. Poster presentation at the XXIX AINI Congress, Verona (Italy), September 16-19, 2021.

- G. Angelini, B. Rossi, S. Dusi, N. Lopez, A. Bani, A. Slanzi, B. Santos-Lima, E. Terrabuio, A. Suli, E. Pietronigro, **E. Zenaro**, G. Constantin. *LFA-1 integrin controls microglia-neutrophil interaction in the central nervous system during experimental autoimmune encephalomyelitis*. Oral presentation at the XXIX AINI Congress, Verona 16-19 september 2021.
- G. Angelini, B. Rossi, S. Dusi, N. Lopez, A. Bani, A. Slanzi, B. Santos Lima, E. Terrabuio, A. Suli, E. Caterina Pietronigro, **E. Zenaro**, G. Constantin. *LFA-1 integrin controls microglia-neutrophil interaction in the central nervous system during experimental autoimmune encephalomyelitis*. Oral presentation at the 15th ISNI congress, Virtual edition 8-12 november 2021.
- E. Terrabuio, E. Pietronigro, E. Zenaro, B. Santos-Lima, A. Bani, A. Suli, B. Rossi, G. Angelini, V. Della Bianca, A. Poli, F. Di Norscia, N. Bragato, G. Constantin. *A role for CD8+ t cell dysregulation in the pathogenesis of Alzheimer's like disease*. Oral presentation at the XXX AINI Congress, Riccione (Italy), May 16-19, 2022.
- A. Bani, N. Lopez, E. Terrabuio, A. Slanzi, G. Angelini, B. Rossi, E. Pietronigro, A. Poli, A. Suli, B. M. dos Santos Lima, E. Zenaro, V. della Bianca, F. di Norscia, N. Bragato, G. Constantin. *Understanding neuroinflammation by studying immune cell interactions with central nervous system-resident cells*. Poster presentation at the XXX AINI Congress, Riccione (Italy), May 16-19, 2022.
- E. Terrabuio, E. Pietronigro, **E. Zenaro**, B. Santos-Lima, A. Bani, A. Suli, B. Rossi, G. Angelini, V. Della Bianca, A. Poli, F. Di Norscia, N. Bragato, G. Constantin. *Pathogenic immune profile of CD8+ t cells promotes memory decline and neuropathological hallmarks of Alzheimer's disease*. Oral presentation at the SIICA 2022 – XIII National Congress, September May 23-26, 2022, Naples (Italy).
- E. Terrabuio, E. Pietronigro, **E. Zenaro**, B. Santos-Lima, A. Bani, A. Suli, N. Vitulo, M. Calgaro, D. Risso, G. Tosadori, B. Rossi, G. Angelini, V. Della Bianca, A. Poli, F. Di Norscia, N. Bragato, G. Constantin. *Dramatic changes in the immunological brain landscape of Alzheimer's-like mice sustain disease progression*. Oral presentation at the 2022 BiTS Meeting, 27-29 June 2022, Verona (Italy).
- B. Santos-Lima, **E. Zenaro**, A. Slanzi, E. Pietronigro, N. Lopez, E. Terrabuio, N. Vitulo, V. Della Bianca, G. Angelini, A. Bani, A. Suli, G. Constantin. *Intestinal dysbiosis promotes immune dysregulation in an animal model of Alzheimer's disease*. Poster presentation at the AAIC conference, July 26-30, 2021, Denver (USA).
- B. Santos-Lima, **E. Zenaro**, A. Slanzi, E. Pietronigro, N. Lopez, E. Terrabuio, N. Vitulo, V. Della Bianca, G. Angelini, A. Bani, A. Suli, G. Constantin. *Intestinal dysbiosis promotes immune dysregulation in an animal model of Alzheimer's disease*. The 15th International Conference on Alzheimer's and Parkinson's Diseases, April 2021, Virtual edition.
- J. Arioli, A. Slanzi, **E. Zenaro**, S. Dusi, E. Pietronigro, B. Rossi, N. Lopez, D. Gioco, G. Angelini, G. Constantin. *TIM-1 glycoprotein mediates neutrophil-dependent damage during brain neuroinflammation*. XXVIII AINI Congress, May 6-9 2019. Camogli (GE), Italy.
- G. Iannoto, E. Terrabuio, **E. Zenaro**, S. Ghasemi, A. Slanzi, B. Dos Santos Lima, E. Pietronigro, V. Della Bianca, S. Iaia, R. Nagarajan, F. Paris, B. D'ulivo, G. Constantin Constantin. *CD4+ T cells infiltrate the brain and contribute to disease pathogenesis in mice with Alzheimer's-like disease through an $\alpha 4\beta 1$ integrin-dependent mechanism*. XXVIII AINI Congress, May 6-9 2019. Camogli (GE), Italy.
- E. Terrabuio, G. Iannoto, **E. Zenaro**, S. Ghasemi, A. Slanzi, B. Dos Santos Lima, E. Pietronigro, V. Della Bianca, S. Iaia, R. Nagarajan, B. D'ulivo, F. Paris, G. Constantin. *CD8+ T cells contribute to memory impairment and neuropathological changes in transgenic mice with Alzheimer's-like disease*. XXVIII AINI Congress, May 6-9 2019. Camogli (GE), Italy.
- J. Arioli, **E. Zenaro**, A. Slanzi, S. Angiari, E. Pietronigro, V. Della Bianca, Rajasekar Nagarajan, E. Terrabuio, B. M. Santos Lima, G. Constantin. *Inhibition of TIM-1 glycoprotein rescues memory and reduces neuropathological changes in Alzheimer's like disease*. AD/PD2019,

- 14th International Conference on Alzheimer's and Parkinson's Diseases, March 26-31, 2019. Lisbon, Portugal.
- V. Della Bianca, R. Nagarajan, G. Iannoto, E. Terrabuio, A. Slanzi, **E. Zenaro**, S. Ghasemi, E. Pietronigro, B. M. Santos Lima, G. Constantin. *Calcium dobesilate inhibits neutrophil adhesion and improves memory in a mouse model of Alzheimer's disease*. AD/PD2019, 14th International Conference on Alzheimer's and Parkinson's Diseases, March 26-31, 2019. Lisbon, Portugal.
 - G. Iannoto, E. Terrabuio, A. Slanzi, **E. Zenaro**, S. Ghasemi, E. Pietronigro, V. Della Bianca, R. Nagarajan, B. M. Santos Lima, G. Constantin. *A role for T cells in the induction of memory deficit in mice with Alzheimer's-like disease*. AD/PD2019, 14th International Conference on Alzheimer's and Parkinson's Diseases, March 26-31, 2019. Lisbon, Portugal.
 - E. Pietronigro, **E. Zenaro**, S. Dusi, V. Della Bianca, A. Slanzi, R. Nagarajan, G. Iannoto, E. Terrabuio, S. Ghasemi, B. M. Santos Lima, G. Constantin. *Alpha-4-integrins mediates leukocyte trafficking and contribute to memory impairment and neuropathological changes in transgenic animals with Alzheimer's-like disease*. AD/PD2019, 14th International Conference on Alzheimer's and Parkinson's Diseases, March 26-31, 2019. Lisbon, Portugal.
 - A. Slanzi, **E. Zenaro**, E. Pietronigro, V. Della Bianca, E. Terrabuio, S. Iaia, R. Nagarajan, N. Lopez, S. Ghasemi, G. Constantin. *Blockade of TIM-1 glycoprotein has therapeutic effect in mice with Alzheimer's-like disease*. XXVII AINI congress, May 7-10, 2018. Trieste, Italy.
 - G. Iannoto, A. Slanzi, R. Nagarajan, V. Della Bianca, **E. Zenaro**, E. Pietronigro, E. Terrabuio, S. Iaia, N. Lopez, S. Ghasemi, G. Constantin. *A role for T cells in the induction of memory deficit in mice with Alzheimer's-like disease*. XXVII AINI congress, May 7-10, 2018. Trieste, Italy.
 - **Zenaro E**, Piacentino G, Pietronigro E, Della Bianca V, Carlucci T, Dusi S, Nagarajan R, Iannoto G, Bonani M, Saatchi T, Constantin G. *Blockade of alpha4 integrins ameliorates cognitive dysfunction and neuropathological changes in transgenic animals with Alzheimer's-like disease*. 13th International Conference on Alzheimer's and Parkinson's Diseases. April 2017, Vienna, (Austria).
 - Pietronigro E, Della Bianca V, Piacentino G, **Zenaro E**, Carlucci T, Dusi S, Nagarajan R, Iannoto G, Bonani M, Saatchi T, Constantin G. *LFA-1 integrin mediates neutrophil trafficking in the brain in mouse models of Alzheimer's disease and contributes to disease pathology*. 13th International Conference on Alzheimer's and Parkinson's Diseases. April 2017, Vienna, (Austria).
 - Constantin G, Della Bianca V, Pietronigro E, **Zenaro E**, Nagarajan R, Toffali L, Mirenda M, Bauer J. *Treatment with calcium dobesilate reduces neuroinflammation and improves cognition in a mouse model of Alzheimer's disease*. XXVI AINI Congress and 16th ESNI Course. June 2017, Venezia, (Italy).
 - Pietronigro E, Della Bianca V, **Zenaro E**, Nagarajan R, Thompson P, Constantin G. *Inhibition of protein arginine deiminases improves cognition and reduces neuropathological changes in mouse models of Alzheimer's disease*. XXVI AINI Congress and 16th ESNI Course. June 2017, Venezia, (Italy).
 - **Zenaro E**, Pietronigro E, Della Bianca V, Piacentino G, Constantin G. *Blockade of neutrophil adhesion has therapeutic effect in animal models of Alzheimer's disease*. Annual Meeting of the Society for Leukocyte Biology and Neutro 2016, "Inflammation, Immunity and Cancer: Neutrophils and Other Leukocytes". September 2016, Verona (Italy).
 - Piacentino G, **Zenaro E**, Pietronigro E, Della Bianca V, Carlucci T, Dusi S, Constantin G. *Neutrophils infiltrate the brain and induce cognitive deficit in animal models of Alzheimer's disease via alpha4 integrins*. XXV AINI Congress. May 2016, Lecce, (Italy).
 - **Zenaro E**, Pietronigro E, Della Bianca V, Piacentino G, Marongiu L, Turano E, Bonetti B, Constantin G. *Neutrophils induce Alzheimer's-like disease via LFA-1-integrin and neutrophil extracellular traps*. FENS Forum, July 2014, Milan (Italy).
 - **Zenaro, E**, Pietronigro, V. della Bianca, S. Budui, E. Losso, S. Angiari, B. Rossi, S. Gaspari, G. Berton, G. Constantin. *A role for vascular inflammation and leukocyte trafficking in the*

- pathogenesis of alzheimer-like disease*. International Symposium on "Biology and Translational Aspects of Neurodegeneration" – March 12-14, 2012 Venice – Italy.
- **Zenaro E**, Budui S, Pietronigro E, Della Bianca V, Rossi B, Angiari S, Losso E, Donnarumma T, Constantin G. *Vascular inflammation and leukocyte trafficking in an experimental model of Alzheimer's disease*. Alzheimer's Association International Conference on Alzheimer Disease — July 16 - 21, 2011– Paris, France.
 - **Zenaro E**, Budui S, Pietronigro E, Della Bianca V, Rossi B, Angiari S, Losso E, Donnarumma T, Constantin G. *Vascular inflammation and leukocyte trafficking in an experimental model of alzheimer's disease*. Molecular Mechanisms of Neurodegeneration (5th Meeting) — May 13-15, 2011 – Milan, Italy.
 - S. Angiari, B. Rossi, L. Piccio, B.H. Zinselmeyer, S.D. Bach, S. Budui, **E. Zenaro**, A. H. Cross, M. J. Miller and G. Constantin. *P-selectin glycoprotein ligand-1 (PSGL-1) controls suppressor activity by CD4+CD25+FOXP3+ regulatory T cells*. 10th International congress of neuroimmunology (ISNI) – October 26- 30 2010 – Sitges, Barcelona, Spain.
 - **Zenaro E.**, Donini M. e Dusi S. Department of Pathology, Section of General Pathology, University of Verona, Verona, Italy. *Dectin-1 engagement by M. tuberculosis enables human DC to induce Th1/Th17 response*. International congress on cytokines in immune regulation and disease. Palazzo dei Congressi, Auditorium, December 4-6, 2008. Florence – Italy.
 - **Zenaro E.**, Donini M. e Dusi S. Department of Pathology, Section of General Pathology, University of Verona, Verona, Italy. *Induction of Th1/Th17 immune response by Mycobacterium tuberculosis: role of cytokines produced by human dendritic cells and pathogen recognition receptors involved*. 22nd Annual Meeting EMDS - Diversity and Plasticity of the Innate Immune Response. Brescia (Italy), School of Medicine, University of Brescia - September 18th-20th, 2008 – Brescia, Italy.
 - **E. Zenaro**, M. Donini, M. Marconi, S. Dusi. Department of Pathology, Section of General Pathology, University of Verona, Verona, Italy. *Interferon alpha and gamma improve NADPH oxidase-mediated Candida albicans killing by human dendritic cells: receptor mechanisms of NADPH oxidase regulation by yeasts*. Poster presentation. Poster Session 1 07/09/2006, PA-1225. 1st Joint Meeting of European National Societies of Immunology - 16th European Congress of Immunology. September 6-9, 2006 – Paris, France.
 - **E. Zenaro**, A. Baehler, D. Tropel and J.R. van der Meer. Department of Fundamental Microbiology - Bâtiment de Biologie, University of Lausanne. *Bacterial biosensors based on à la carte regulators*. Poster presentation P129. Exploring prokaryotic diversity – The Operon, EMBL – April 22-26, 2004 - Heidelberg, Germany.

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Location and date: Verona, Italy, on February 22nd, 2024.

The declarant,

ELENA ZENARO



CURRICULUM VITAE

PERSONAL INFORMATION

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EDUCATION:

- 1) **2011** - PhD IN TRANSLATIONAL BIOMEDICAL SCIENCE – MOLECULAR AND CELLULAR BIOLOGY AND PATHOLOGY
UNIVERSITY OF VERONA (ITALY) – PATHOLOGY AND DIAGNOSTIC DEPARTMENT, GENERAL PATHOLOGY SECTION.
PROJECT TITLE: “ANALYSIS OF THE MOLECULAR MECHANISM WHEREBY IL-10 REGULATES GENE EXPRESSION OF PRO- AND ANTI-INFLAMMATORY CYTOKINES IN LPS-TREATED MONOCYTES AND NEUTROPHILS”.
- 2) **2006** - GRADUATION IN MOLECULAR DIAGNOSTIC CL.6/S (MAXIMUM SCORE, WITH HONOR)
UNIVERSITY OF CAMERINO – MACERATA (ITALY)
THESIS TITLE: “COLD CASE, FASCICLE N. 2736/1980 MACERATA REPUBLIC PROCEDURE: IDENTIFICATION OF MITOCHONDRIAL DNA IN BONE SAMPLES”.
- 3) **2004** - GRADUATION IN APPLIED BIOLOGY CL.12 (MAXIMUM SCORE, WITH HONOR)
UNIVERSITY OF CAMERINO – MACERATA (ITALY)
THESIS TITLE: “CORNEAS FOR TRANSPLANTATION: VALUATION PROCEDURE AND AMNIOTIC MEMBRANE UTILIZATION”.

WORK EXPERIENCE/TRAINING/COURSES:

- 1) **08/01/2018:** TECHNICAL MANAGER
UNIVERSITY OF VERONA (ITALY) - (CPT – CENTRO PIATTAFORME TECNOLOGICHE) – GENOMICS AND TRANSCRIPTOMICS PLATFORM.
- 2) **01/02/2015 – 30/04/2015:** RESEARCH GUEST
UNIVERSITY OF UTRECHT UMC (THE NETHERLANDS) – DEPARTMENT OF REUMATHOLOGY AND CLINICAL IMMUNOLOGY, LABORATORY OF TRANSLATIONAL IMMUNOLOGY
PROJECT TITLE: “GENOMEWIDE ANALYSIS OF THE CHROMATIN STATE IN HUMAN MONOCYTES PURIFIED FROM SYSTEMIC SCLEROSIS (SSc) PATIENTS AND FROM HEALTHY CONTROLS”.
- 3) **01/03/2013 – 31/12/2017:** RESEARCH FELLOWSHIP
UNIVERSITY OF VERONA (ITALY) - PATHOLOGY AND DIAGNOSTIC DEPARTMENT, GENERAL PATHOLOGY SECTION.

PROJECT TITLE: “DEVELOPMENT OF A NEW STRATEGY FOR IDENTIFYING AND QUANTIFYING CIRCULATING microRNA (miRNA) TO USE AS BIOMARKERS FOR THE DIAGNOSIS OF CARDIOVASCULAR DISEASES”.

- 4) **01/03/2012 – 28/02/2013**: RESEARCH FELLOWSHIP
UNIVERSITY OF VERONA (ITALY) - PATHOLOGY AND DIAGNOSTIC DEPARTMENT, GENERAL PATHOLOGY SECTION.
PROJECT TITLE: “MOLECULAR BASES OF SPECIFIC RESPONSES ACTIVATED VIA TLR4 AND OTHER “PRR” RECEPTOR IN HUMAN NEUTROPHILS, MONOCYTES AND DENDRITIC CELLS”.
- 5) **01/01/2009 – 31/12/2011**: PhD COURSE IN TRANSLATIONAL BIOMEDICAL SCIENCE – MOLECULAR AND CELLULAR BIOLOGY AND PATHOLOGY
UNIVERSITY OF VERONA (ITALY) - PATHOLOGY AND DIAGNOSTIC DEPARTMENT, GENERAL PATHOLOGY SECTION.
PROJECT TITLE: “ANALYSIS OF THE MOLECULAR MECHANISM WHEREBY IL-10 REGULATES GENE EXPRESSION OF PRO- AND ANTI-INFLAMMATORY CYTOKINES IN LPS-TREATED MONOCYTES AND NEUTROPHILS”.
- 6) **01/01/2007 - 30/11/2008**: RESEARCH FELLOWSHIP
UNIVERSITY OF VERONA (ITALY) - PATHOLOGY DEPARTMENT, IMMUNOLOGY SECTION.
PROJECT TITLE: “PRECONDITIONING EFFECT OF CD8 T LYMPHOCYTE; POSSIBLE IMPORTANCE IN THE VACCINE DEVELOPMENT”.
- 7) **05/11/2012 – 07/11/2012**: WORKSHOP SIICA, 2nd CONFERENCE OF TRANSLATIONAL MEDICINE PATHOGENESIS AND THERAPY OF IMMUNE-MEDIATED DISEASES (HUMANITAS, ROZZANO (MI)).
- 8) **02/11/2010 – 04/11/2010**: WORKSHOP SIICA, INNATE IMMUNITY IN THE PATHOGENESIS OF IMMUNE-MEDIATED HUMAN DISEASE (HUMANITAS, ROZZANO (MI)).
- 9) **26/10/2009 – 27/10/2009**: LECTURE COURSE (SIICA), HOST-PATHOGEN INTERACTION: RECOGNITION AND ESCAPE (HUMANITAS, ROZZANO (MI)).
- 10) **09/2005-06/ 2006**: UNIVERSITY OF CAMERINO (ITALY) – MOLECULAR AND CELLULAR BIOLOGY LABORATORY: PREPARATION OF THESIS
- 11) **01/2004 – 05/2004**: EYE BANK REGIONE MARCHE – A.S.U.R. N°6 FABRIANO (AN - ITALY)

PUBLICATIONS:

PEER REVIEWED PAPERS

- 1) PETTINELLA F., MARIOTTI B., LATTANZI C., BRUDEREK K., DONINI M., COSTA S., MARINI O., IANNOTTO G., GASPERINI S., CAVEGGION E., CASTELLUCCI M., CALZETTI F., BIANCHETTO-AGUILERA F., GARDIMAN E., GIANI M., DUSI S., CANTINI M., VASSANELLI A., PAVONE D., MILELLA M., PILOTTO S., BIONDANI P., HOING B., SCHLEUPNER M.C., HUSSAIN T., HADASCHIK B., KASPAR C., VISCO C., TECCHIO C., KOENDERMAN L., BAZZONI F., TAMASSIA N., BRANDAU S., CASSATELLA M.A. and SCAPINI P. (2023)

Surface CD52, CD84 and PTGER2 mark mature PMN-MDSCs from cancer patients and G-CSF-treated donors.

In: Cell Reports Medicine

UNDER REVISION

IF:

- 2) ZANARDI F.; DE CIUCEIS C.; NEVA A.; CASTELLUCCI M.; ROTTA G.; ALMICI E.; BIANCHETTI A.; BRAGA S.; MONTANI A.; FERRARO R.M.; BORGHESI A.; TOMASONI L.R.; MASNERI S.; LANUTI P.; SALVETTI M.; AGABITI ROSEI C.; ROCCARO A.M.; RUSSO D.; CASTELLI F.; MAROLDI R.; MUIESAN M.L.; MARCHISIO M.; PIOVANI G.; ALMICI C. (2023)
Endothelial activation and damage in COVID-19 ARDS patients: linking the single endothelial cells transcriptome to in vitro dysfunctionality
In: Nature Cell Biology **UNDER REVISION** **IF:**

- 3) TAMASSIA N.; BIANCHETTO-AGUILERA F.; GASPERINI S.; GRIMALDI A.; MONTALDO C; CALZETTI F.; GARDIMAN E.; SIGNORETTO I.; CASTELLUCCI M.; BARNABA V.; TRIPODI M.; CASSATELLA M.A. (2021)
The slan antigen identifies the prototypical non-classical CD16 +-monocytes in human blood
In: Frontiers in Immunology **IF: 8.787**

- 4) CASSATELLA M.A.; CALZETTI F.; FINOTTI G.; TAMASSIA N; BIANCHETTO-AGUILERA F.; CASTELLUCCI M.; CAVALLINI C.; MATTE' A.; GASPERINI S.; BENEDETTI F.; BONIFACIO M.; TECCHIO C.; SCAPINI P. (2021)
CD66b-CD64dimCD115- cells in the human bone marrow represent neutrophil-committed progenitors
In: Nature Immunology **IF: 25.600**

- 5) ZENARO E., GHASEMI S., PIETRONIGO E., SLANZI A., TERRABUIO E., SANTOS-LIMA B., CALGARO M., RISSO D., VITULO N., D'ULIVO B., LOPEZ N., IAIA S., IANNOTTO G., TURANO E., NAGARAJAN R., TOSADORI G., DELLA BIANCA V., DUSI S., ARIOLI J., ROSSI B., CASTELLUCCI M., BONETTI B. (2021)
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- 10) TAMASSIA N., ZIMMERMANN M., CASTELLUCCI M., OSTUNI R., BRUDEREK K., SHILLING B., BRANDAU S., BAZZONI F., NATOLI G. AND CASSATELLA M.A. (2013)
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- 11) ROSSATO M., CURTALE G., TAMASSIA N. CASTELLUCCI M., MORI L., GASPERINI S., MARIOTTI B., DE LUCA M.C., MIROLO M., CASSATELLA M.A., LOCATI M., AND BAZZONI F. (2012)
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In: PNAS 109, (45): E3101-10 **IF: 9.681**

- 12) TAMASSIA N., CASTELLUCCI M., ROSSATO M., GASPERINI S., BOSISIO D., GIACOMELLI M., BADOLATO R., CASSATELLA M.A., BAZZONI F. (2010)
Uncovering an IL-10-dependent NF- κ B recruitment to the IL-1ra promoter that is impaired in STAT3 functionally defective patients.
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- 13) V.MONSURRÒ, S.BEGHELLI, R.WANG, S.BARBI, S.COIN, G. DI PASQUALE, S.BERSANI, CASTELLUCCI M., C.SORIO, S.ELEUTERI, A.WORSCHKECH, J.A.CHIORINI, P.PEDERZOLI, H.ALTER, F.M.MARINCOLA, A.SCARPA (2010)
Anti-viral state segregates two molecular phenotypes of pancreatic adenocarcinoma: Potential relevance for adenoviral gene therapy.
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ABSTRACTS

- 1) CASTELLUCCI M., MARIOTTI B., MOKRY M., ROSSATO M., RADSTAKE T., BIANCHETTO F., TAMASSIA N., M.A. CASSATELLA AND BAZZONI F. (2016)
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ORAL PRESENTATION

- 2) MARIOTTI B., CASTELLUCCI M., BIANCHETTO F., TAMASSIA N., M.A. CASSATELLA AND BAZZONI F. (2016)
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In: X National Congress of the Italian society of immunology, clinical immunology and allergology. ABSTRACT BOOK, pp.7 W2.2
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- 3) CASTELLUCCI M., ROSSATO M., TAMASSIA N., GASPERINI S., B. MARIOTTI, M.A. CASSATELLA AND BAZZONI F. (2015)
Histone deacetylase 2 couples Interleukin-10 anti-inflammatory activity with Interleukin-8 transcriptional repression: implication for Chronic obstructive pulmonary disease patients.
In: 4th European Congress of Immunology (ECI). ABSTRACT BOOK, pp. 227 WS.C.08.06
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ORAL PRESENTATION

- 4) MARIOTTI B., BIANCHETTO F., TAMASSIA N., ROSSATO M., CASTELLUCCI M., OSTUNI R., M.A. CASSATELLA AND BAZZONI F. (2015)
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- 5) GHASEMI S., CASTELLUCCI M., GASPERINI S., MARIOTTI B., TAMASSIA N., AND BAZZONI F. (2015)
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- 6) CASTELLUCCI M., ROSSATO M., TAMASSIA N., GASPERINI S., M.A. CASSATELLA AND BAZZONI F. (2014)
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In: IX National Conference of the Italian society of immunology, clinical immunology and allergology.
Florence, Italy, 28-31 May 2014.
ORAL PRESENTATION

- 7) CASTELLUCCI M., ROSSATO M., TAMASSIA N., GASPERINI S., M.A. CASSATELLA AND BAZZONI F. (2014)
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In: 48th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI).
Hutrecht, Netherlands, 30 April-03 May 2014.
POSTER PRESENTATION

- 8) CASTELLUCCI M., ROSSATO M., TAMASSIA N., GASPERINI S., BAZZONI F. (2013)
Interleukin-10 suppresses CXCL8 gene transcription in LPS-stimulated monocytes via modulation of histone deacetylases (HDACs) recruitment.
In: 15th International Congress of Immunology (ICI). ABSTRACT BOOK, pp. 380 P02.03.03
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- 9) MARIOTTI B., ROSSATO M., CASTELLUCCI M., GASPERINI S., BAZZONI F. (2013)
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- 10) ZIMMERMANN M., TAMASSIA N., CASTELLUCCI M., ROSSATO M., BAZZONI F., CASSATELLA M.A. (2013)
Chromatin configurations correlate with the differential capacity of human neutrophils and monocytes to express IL-6 in response to LPS.
In: Front. Immunol. Conference Abstract: doi: 10.3389/conf.fimmu.2013.02.01100
15th International Congress of Immunology (ICI).
Milan, Italy, 22-27 August 2013.

- 11) ROSSATO M., CURTALE G., TAMASSIA N., CASTELLUCCI M., MORI L., GASPERINI S., MARIOTTI B., CASSATELLA M.A., BAZZONI F. (2013)
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- 12) CASTELLUCCI M., ROSSATO M., TAMASSIA N., GASPERINI S., BAZZONI F. (2013)
Role of HDAC in interleukin-10 (IL-10)-mediated suppression of interleukin-8 (CXCL8).
In: EUROPEAN JOURNAL OF CLINICAL INVESTIGATION, Vol. 43 SUPPLEMENT 1
47th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI).
Albufeira, Portugal, 17-20 April 2013.
POSTER PRESENTATION
- 13) CASTELLUCCI M., TAMASSIA N., GASPERINI S., ROSSATO M., BAZZONI F. (2012)
IL-10 modulates LPS-induced IL-1ra, CXCL8 and TNF- α transcription by different mechanisms in human neutrophils and monocytes.
In: EUROPEAN JOURNAL OF CLINICAL INVESTIGATION, Vol. 42 SUPPLEMENT 1
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POSTER PRESENTATION
- 14) CASTELLUCCI M., TAMASSIA N., GASPERINI S., ROSSATO M., BAZZONI F. (2011)
IL-10 inhibits LPS-induced CXCL8 and TNF- α transcription by different mechanism in human neutrophils and monocytes.
In: MINERVA MEDICA Vol. 102, SUPPL. I No. 5 (OTTOBRE 2011) (pag.149).
2011 Joint Annual Meeting SIICA, Riccione-Italy, 28 September – 01 October 2011.
ORAL PRESENTATION
- 15) ROSSATO M., CURTALE G., CASTELLUCCI M., MORI L., GASPERINI S., MIROLO M., CASSATELLA M.A., LOCATI M., BAZZONI F. (2011).
MicroRNA-187 mediates IL-10 suppression of pro-inflammatory cytokine production by TLR4-stimulated monocytes.
In: MINERVA MEDICA Vol. 102, SUPPL. I No. 5 (OTTOBRE 2011) (pag.20)
2011 Joint Annual Meeting SIICA, Riccione-Italy, 28 September – 01 October 2011.
- 16) CASTELLUCCI M., TAMASSIA N., GASPERINI S., BAZZONI F. (2011)
IL-10 enhances the recruitment of NF- κ B to the IL-1ra promoter in human neutrophils and monocytes stimulated with LPS.
In: TOLL 2011, ABSTRACT BOOK - Decoding Innate Immunity
TOLL 2011, Riva del Garda, Italy, May 04-07 2011.
POSTER PRESENTATION
- 17) CASTELLUCCI M., TAMASSIA N., GIACOMELLI M., GASPERINI S., ROSSATO M., BADOLATO R., CASSATELLA M.A., BAZZONI F. (2010)
Interleukin-10 enhances the recruitment of NF- κ B to the Interleukin-1 receptor antagonist promoter in human neutrophils and monocytes stimulated with lipopolysaccharide.
In: EUROPEAN JOURNAL OF CLINICAL INVESTIGATION, Vol. 40 SUPPLEMENT 1 (pag.45).
44th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI). Bari-Italy, 24 – 27 February 2010.
POSTER PRESENTATION (POSTER AWARD)

- 18) TAMASSIA N., CASTELLUCCI M., ROSSATO M., GASPERINI S., BOSISIO D. GIACOMELLI M., BADOLATO R., CASSATELLA M.A., BAZZONI F. (2010)
Uncovering an IL-10-dependent NF- κ B recruitment to the IL-1ra promoter that is impaired in STAT3 functionally defective patients.
In: FEBS-SPECIAL MEETING “Jak-Stat Signaling: from basic to disease”
Vienna, Austria, 10-13 February 2010.
POSTER PRESENTATION
- 19) TAMASSIA N., CASTELLUCCI M., ROSSATO M., GASPERINI S., BOSISIO D. GIACOMELLI M., BADOLATO R., CASSATELLA M.A., BAZZONI F. (2010)
Uncovering an IL-10-dependent NF- κ B recruitment to the IL-1ra promoter that is impaired in STAT3 functionally defective patients.
In: “First IRE annual workshop – Chromatin remodelling and human disease”
Roma-Italy, 3-4 December 2009.
POSTER PRESENTATION
- 20) MONSURRO' V., BEGHELLI S., WANG R., BARBI S., COIN S., DI PASQUALE G., BERSANI S., CASTELLUCCI M., SORIO C., ELEUTERI S., WORSCHKECH A., CHIORINI J.A., PEDERZOLI P., ALTER H., MARINCOLA F.M., SCARPA A. (2009)
Anti-viral state segregates two molecular phenotypes of pancreatic adenocarcinoma: Potential relevance for adenoviral gene therapy.
In: IMMUNOTHERAPY (ABSTRACT), Vol. 32, Number 9 (pag.990)
24th Annual Meeting of the International Society for Biological Therapy of Cancer (ISBTC).
Washington DC, October 2009.
- 21) TAMASSIA N., GIACOMELLI M., CASTELLUCCI M., GASPERINI S., ROSSATO M., CASSATELLA M.A., BAZZONI F. (2009)
IL-10 enhances the recruitment of NF- κ B to the IL-1ra promoter in human neutrophils and monocytes stimulated with LPS.
In: EUROPEAN JOURNAL OF IMMUNOLOGY, SUPPLEMENT 1/09 Vol. 39 (2009) (pag. 135). 2nd European Congress of Immunology – Berlin, Germany, September 13-16 2009.
POSTER PRESENTATION

TECHNICAL SKILLS AND COMPETENCES:

Cellular Biology:

- isolation and purification by negative/positive selection, of different leukocyte population;
- immunophenotyping of leukocytes population and activation;
- primary cell and cell line culture;
- Gene silencing (AMAXA).

Molecular Biology:

- Library preparation for next generation sequencing (NGS)
- Single cell analysis with 10X Genomics Technology
- Single cell analysis with BD Rhapsody Technology
- Library quantification and sequencing in the Illumina NextSeq500 and MiSeqDX
- Analysis of promoter/enhancer occupancy by ChIP assay;
- Analysis of epigenetic chromatin modification by ChIP assay;
- Nucleic acid purification and quantification (DNA, RNA), RNA reverse-transcription (cDNA), analysis of transcriptional activity by RT-qPCR;
- Gene expression analysis by RT-qPCR and by large scale array;

Immunological Techniques:

- extraction of nuclear, cytoplasmic and total proteins;
- protein analysis by Western Blotting;
- protein analysis by immunoprecipitation;
- analysis of secreted cytokines/chemokines by ELISA.

Bioinformatic:

- identification of genomic sequence/promoter within the databases (ENSEMBL); sequence alignment with "Clustal W";
- analysis of transcription binding site with "rVista" software;
- primers design
- statistical analysis with statistical software "Graph pad prism".
- Writing scientific articles and participating in drafting research projects

TUTORING

2016-2017: Tutoring on genome wide characterization of Long Non-Coding RNAs in CD14+ monocytes (Student: Cristina Bacca)

2011-2012: Tutoring on HDACs role in the IL-10-mediated inhibition of CXCL8 transcription (Student: Marco Brugnara)

AWARDS:

- 1) **Poster Award 2010**: 24/02/2010 – 27/02/2010: 44th annual Scientific Meeting of the European Society for clinical investigation (Bari, Italy 2010).
- 2) **Travel grant**: 17/04/2013 – 20/04/2013: 47th Annual Scientific Meeting of the European Society for Clinical Investigation (ESCI). (Albufeira, Portugal).
- 3) **Travel grant**: 28/05/2014 – 31/05/2014: IX National Conference of the Italian society of immunology, clinical immunology and allergology (SIICA). (Florence, Italy).
Travel grant: 06/09/2015 – 09/09/2015: 4th European Congress of Immunology (ECI). (Vienna, Austria).
- 4) **Mobility grant COOPERINT 2015** supported by University of Verona to carry out the activities of research at UNIVERSITY MEDICAL CENTRE (UMC) OF UTRECHT (THE NETHERLANDS) – DEPARTMENT OF REUMATHOLOGY AND CLINICAL IMMUNOLOGY, LABORATORY OF TRANSLATIONAL IMMUNOLOGY.

MOTHER TONGUE: ITALIAN

OTHER LANGAUGES: ENGLISH

- Reading Good
- Writing Good

INFORMATICAL KNOWLEDGE:

- Good knowledge of Office packages (Word, Excel, PP), Internet Explorer and e-mail.

I authorize the use of my personal data according to Legislative Decree N°196/03

Monica Castellucci