

# Curriculum Vitae

Lara Gibellini, PhD

## PERSONAL INFORMATION

Name: Lara Gibellini  
 Date of birth: 08/29/1982  
 Nationality: Italian  
 Fiscal code: GBLLRA82M69F257H  
 Address: University of Modena and Reggio Emilia  
 Via Campi 287, 41125 Modena (Italy)  
 Phone: +39 059 205 5726  
 E-mail: lara.gibellini@unimore.it

## CURRENT POSITION

2022 - present **Associate Professor** of General Pathology  
 University of Modena and Reggio Emilia

## EDUCATION

2007-2010 **Ph.D. in Clinical and Experimental Medicine**  
 University of Modena and Reggio Emilia  
 2004-2006 **M.Sc. in Medical Biotechnology** (110/110 cum laude)  
 University of Modena and Reggio Emilia  
 2004 **ERASMUS project – Turku university** (Turku, Finland)  
 2001-2004 **B.Sc. in Biotechnology** (110/110 cum laude)  
 University of Modena and Reggio Emilia

## PROFESSIONAL EXPERIENCE

2023 “Abilitazione Scientifica Nazionale” Prima Fascia in General Pathology and Clinical Pathology (06/A2)  
 2019-2022 **Assistant professor** of General Pathology (University of Modena and Reggio Emilia, Italy)  
 2018 “Abilitazione Scientifica Nazionale” Seconda Fascia in General Pathology and Clinical Pathology (06/A2)  
 2018-2019 **Senior postdoc** (Dept. of Medical and Surgical Sciences for Children and Adults, University of Modena and Reggio Emilia, Italy)  
 2017-2018 **Senior postdoc** (Infectious Disease Clinics, University Hospital, Italy)  
 2012-2016 **Senior postdoc** (Department of Surgery, Medicine, Dentistry and Morphological Sciences, University of Modena and Reggio Emilia, Italy)  
 2010-2012 **Junior Postdoc** (Department of Biomedical Sciences, University of Modena and Reggio Emilia, Italy)

## HONORS AND AWARDS

2020-2025 Selected as International Society of Advancement of Cytometry (ISAC) Marylou Ingram Scholar ([isac-net.org/Marylou-Ingram-Scholars](http://isac-net.org/Marylou-Ingram-Scholars))  
 2017 Best oral presentation (Infection Lab, Bologna, October 2-3, 2017)  
 2016 Student Grant to participate to 16<sup>th</sup> European Bioenergetic Conference (EBEC)  
 2014 Best oral presentation, Italian Group of Biomembrane and Bioenergetics (Matera, May 29-31, 2014)  
 2011 Best oral presentation, Italian Group of Biomembrane and Bioenergetics (Roma, May 24-27, 2011)

## PROFESSIONAL MEMBERSHIPS

2010-now	Italian Group of Biomembrane and Bioenergetics (GIBB)
2020-now	International Society for Advancement of Cytometry (ISAC)
2023-now	Network Italiano per la Bioterapia dei Tumore (NIBIT)
2023-now	American Association for Cancer Research (AACR)
2025-now	Italian Foundation of Lymphomas (FIL)

## TEACHING ACTIVITIES

2019-present	General Pathology, B.Sc. Nursing (36 hours)
2019-present	General Pathology, B.Sc. Medical radiology techniques for imaging and radiotherapy (24 hours)
2022-present	General Pathology, B.Sc. Cardiovascular pathophysiology and cardiovascular perfusion (24 hours)
2022-present	General Pathology, B.Sc. Health Care (20 hours)
2023-present	Molecular Oncology, B.Sc. Biomedical laboratory technician (8 hours)
2023-present	Molecular Oncology, M.Sc. Medicine and Surgery (37,5 hours)
2023-present	Molecular Oncology, M.Sc. Dentistry (25 hours)

## POSITIONS AF ACADEMIC RESPONSIBILITY

2021-now	Communication referent for the Department of Medical and Surgical Sciences for Children and Adults
2023-now	Member of Joint Commission Teachers-Students

## ORAL PRESENTATION AT NATIONAL AND INTERNATIONAL MEETINGS

Title: The upregulation of the mitochondrial Lon protease during HAART-induced lipodystrophy is caused by oxidative stress rather than mtDNA depletion.

Annual Meeting of the Italian Group of Biomembrane and Bioenergetics (GIBB), Rome, May 24-27, 2011

Title: Effects of mitochondrial Lon protease downregulation in cancer cells.

Annual Meeting of the Italian Group of Biomembrane and Bioenergetics (GIBB), Padua, June 20-22, 2013

Title: Sirtuin-3 interacts with Lon protease and regulates its acetylation status.

Annual Meeting of the Italian Group of Biomembrane and Bioenergetics (GIBB), Matera, May 29-31, 2014

Title: "Cell power station" (invited speaker)

Trieste Next, Trieste, September 26-28, 2014

Title: Mitochondria, autophagy and apoptosis by flow cytometry. (Invited Speaker)

European Society for Clinical Cell Analysis (ESCCA) Summer School, Valencia, July 3-7, 2017

Title: Polychromatic immunophenotype: settings, compensations, gating strategies. (Invited speaker)

European Society for Clinical Cell Analysis (ESCCA) Summer School, Valencia, July 3-7, 2017

Title: HIV-DNA content in different CD4+ T cell subsets correlates with CD4+ cell: CD8+ cell ratio or lenght of efficient treatment.

Infection Lab, Bologna, October 2-3, 2017

Title: Immunology at the basis of immunotherapy (invited speaker)

Master in Carcinoma Renale, Modena, October 17-18, 2017

Title: LonP1 differently modulates mitochondrial function and bioenergetics of primary versus metastatic colon cancer cells.

First International GIBB meeting, Catania, June 14-16, 2017

Title: Mitochondria and cell death by flow cytometry

CYTO 2018, Prague, april 28 – may 2, 2018

Title: Sleeping guardians: immune cells in immunotherapy.  
Mantova Scienza, Mantova, November 5, 2019

Title: Glycogen metabolism and HIF-1alpha sustain neutrophil extracellular trap formation in COVID-19 pneumonia.  
Virtual CYTO, June 7-10, 2021

Title: Metabolically activated and highly polyfunctional intratumoral VISTA+ regulatory B cells are associated with tumor recurrence in early stage NSCLC.  
Cyto 2024, Edinburgh, May 4-8, 2024

Title: "The immunological perspective: immunosenescence and inflammaging" (invited speaker)  
EDUCATIONAL COURSE: AGING IN LYMPHOMAS  
Torino (Italy), January 31st – February 1st, 2025

Title: "Deep profiling of immune cells in multiple sclerosis" (invited speaker)  
5th INTERNATIONAL TAIWANESE CONGRESS OF NEUROLOGY & ANNUAL MEETING OF TAIWAN NEUROLOGICAL SOCIETY  
Taipei (Taiwan), April 25-28th, 2025

Title: "Methods for quantifying inflammaging in lymphoma and Castelman Disease" (invited speaker)  
EDUCATIONAL COURSE: LYMPHOMA IN PATIENTS WITH IMMUNODEFICIT  
Milano (Italy), May 23rd, 2025

Title: "Unveiling neutrophils' metabolism to set up a new therapy for non-small cell lung" (invited speaker)  
FORBECK FORUM: TARGETING MITOCHONDRIA IN CANCER (IMMUNO)THERAPY  
Pacific Grove (California, USA), May 15-18th, 2025

Title: "Immunological changes in aging" (invited speaker)  
CLINICAL LAB IN THE MANAGEMENT OF AGING DISEASE AND FRAGILE PATIENTS  
Matera (Italy), June 6th, 2025

#### MAIN RESEARCH INTEREST

- Role of metabolism in neutrophils in lung cancer
- Role of immunosenescence and inflammaging in immune cells in multiple sclerosis
- Role of innate and adaptive immunity in aging
- Role of infiltrating T lymphocytes in non-small cell lung cancer

#### FUNDED SCIENTIFIC PROJECT/GRANTS AS PRINCIPAL INVESTIGATOR

1. FAR dipartimentale – Title: Tumor-infiltrating neutrophils in non-small cell lung cancer: role of cellular metabolism – Length: 12 months – Budget: 24.190,00 Euro – Role: PI;
2. PRIN PNRR 2022 – grant number P2022ALFEK – Title: Investigating the role of alpha-synuclein in viral infections within non-neuronal cells: a multidisciplinary study bridging innate immune pathways and cell metabolism (ASYNVIR) - Length: 24 months – Budget: 118.372,00 Euro – Role: PI;
3. FISM 2023 – grant number 2023/PR-Single/011 – Title: MS in the elderly population: immunosenescence, inflamm-aging and their relation to disease severity – Length: 12 months – Budget: 30.000,00 Euro – Role: PI.
4. AIRC 2024 – grant number 30400 – Title: Unveiling neutrophils' metabolism to set up a new therapy for non-small cell lung cancer - Length: 3+2 years – Budget: 633.000,00 Euro – Role: PI.
5. FIL 2025 - Title: Immunosenescence and inflammaging as biomarkers of response to Bispecific MoAbs treatment in elderly FL/DLBCL patients – Length: 2 years – Budget: starting grant to enroll patients across 20 Hematology Unit in Italy – Role: PI.

#### PARTICIPATION AT SCIENTIFIC PROJECT/GRANTS AS COLLABORATOR

Prof. Gibellini has been fully dedicated to the following projects:

1. PRIN 2008 – grant number: 2008LSHCFC\_004 – Title: “Mitochondria as therapeutic therapeutical targets in chronic degenerative diseases” – Lenght: 36 months – Budget: 581.000,00 Euro – Role: collaborator;
2. PRIN 2010/2011 – grant number: 20107Z8XBW\_003 – Title: Mitochondrial mechanisms in carcinogenesis” – Lenght: 36 months – Budget: 920.000,00 Euro – Role: collaborator;
3. AIRC Investigator Grant 2011 – grant number: 11341 – Title: “Lon protease as regulator of mitochondrial functionality: role in tumorigenesis” – Lenght: 36 months – Budget: 220.000,00 Euro – Role: collaborator;
4. FISM 2014 – grant number: 2014/R/16 – Title: respiration and glycolysis in lymphocytes of patients with different forms of multiple sclerosis – Lenght: 12 months – Budget: 30.000,00 Euro – Role: collaborator;
5. AIRC Investigator Grant 2017 – grant number 19786 – Title: Lon protease and mitophagy control in cancer” – Lenght: 60 months – Budget: 393.000,00 Euro – Role: collaborator;
6. AIRC Investigator Grant 2020 – grant number 25073 - Title: Role of exhausted CD8 TILs in the recurrence of resectable non-small cell lung cancer – Lenght: 60 months - Budget: 557.000,00 Euro – Role: collaborator.

### SCIENTIFIC COMMISSIONS

2018 Member of Scientific Commission Under40 Infection Lab 2018, giovani infettivologi a confronto” (Scientific coordinator: Prof. Adriano Lazzarin, Milan)

### PUBLICATIONS

ORCID ID: 0000-0001-8520-7032

Scopus ID: 57202569942

Number of publications (Pubmed): 117

Total citations (Scopus): 11,541

h-index: 42

### SELECTED PRIMARY RESEARCH ARTICLES

\* denotes equal contribution; & denotes equal senior authorship

1. Metabolically activated and highly polyfunctional intratumoral VISTA+ regulatory B cells are associated with tumor recurrence in early-stage NSCLC. Lo Tartaro D, Aramini B, Masciale V, Paschalidis N, Lofaro FD, Neroni A, Borella R, Santacroce E, Ciobanu AL, Samarelli AV, Boraldi F, Quaglino D, Dubini A, Gaudio M, Manzotti G, Reggiani F, Torricelli F, Ciarrocchi A, Neri A, Bertolini F, Dominici M, Filosso PL, Stella F, **Gibellini\*** L, De Biasi\* S, Cossarizza\* A. Mol Cancer. 2025 Jan 14;24(1):16. doi: 10.1186/s12943-024-02209-2.

2. Prognostic immune markers identifying patients with severe COVID-19 who respond to tocilizumab. De Biasi S, Mattioli M, Meschiari M, Lo Tartaro D, Paolini A, Borella R, Neroni A, Fidanza L, Busani S, Girardis M, Coppi F, Mattioli AV, Guaraldi G, Mussini C, Cossarizza A, **Gibellini L**. Front Immunol. 2023 May 5;14:1123807. doi: 10.3389/fimmu.2023.1123807.

3. Immunological signature in human cases of monkeypox infection in 2022 outbreak: an observational study. Agrati C, Cossarizza A, Mazzotta V, Grassi G, Casetti R, De Biasi S, Pinnetti C, Gili S, Mondì A, Cristofanelli F, Lo Tartaro D, Notari S, Maffongelli G, Gagliardini R, **Gibellini L**, Aguglia C, Lanini S, D'Abramo A, Matusali G, Fontana C, Nicastrì E, Maggi F, Girardi E, Vaia F, Antinori A. Lancet Infect Dis. 2023 Mar;23(3):320-330. doi: 10.1016/S1473-3099(22)00662-4.

4. Evidence for mitochondrial Lonp1 expression in the nucleus. **Gibellini L**, Borella R, De Gaetano A, Zanini G, Tartaro DL, Carnevale G, Beretti F, Losi L, De Biasi S, Nasi M, Forcato M, Cossarizza A, Pinti M. Sci Rep. 2022 Jun 27;12(1):10877. doi: 10.1038/s41598-022-14860-0.

5. Molecular and cellular immune features of aged patients with severe COVID-19 pneumonia. Lo Tartaro D, Neroni A, Paolini A, Borella R, Mattioli M, Fidanza L, Quong A, Petes C, Awong G, Douglas S, Lin D, Nieto J, Gozzi L, Franceschini E, Busani S, Nasi M, Mattioli AV, Trenti T, Meschiari M, Guaraldi G, Girardis M, Mussini C, **Gibellini L**, Cossarizza A, De Biasi S. Commun Biol. 2022 Jun 16;5(1):590. doi: 10.1038/s42003-022-03537-z.

6. Redistribution of CD8+ T cell subsets in metastatic renal cell carcinoma patients treated with anti-PD-1 therapy. De Biasi S, Guida A, Lo Tartaro D, Fanelli M, Depenni R, Dominici M, Finak G, Porta C, Paolini A, Borella R, Bertoldi C, Cossarizza A, Sabbatini R, **Gibellini L**. *Cytometry A*. 2022 Jul;101(7):597-605. doi: 10.1002/cyto.a.24562.
7. Plasma Cytokine Atlas Reveals the Importance of TH2 Polarization and Interferons in Predicting COVID-19 Severity and Survival. **Gibellini L**, De Biasi S, Meschiari M, Gozzi L, Paolini A, Borella R, Mattioli M, Lo Tartaro D, Fidanza L, Neroni A, Busani S, Girardis M, Guaraldi G, Mussini C, Cozzi-Lepri A, Cossarizza A. *Front Immunol*. 2022 Mar 21;13:842150. doi: 10.3389/fimmu.2022.842150.
8. Metabolic reprogramming shapes neutrophil functions in severe COVID-19. Borella R, De Biasi S, Paolini A, Boraldi F, Lo Tartaro D, Mattioli M, Fidanza L, Neroni A, Caro-Maldonado A, Meschiari M, Franceschini E, Quaglino D, Guaraldi G, Bertoldi C, Sita M, Busani S, Girardis M, Mussini C, Cossarizza A, **Gibellini L**. *Eur J Immunol*. 2022 Mar;52(3):484-502. doi: 10.1002/eji.202149481.
9. Endogenous control of inflammation characterizes pregnant women with asymptomatic or paucisymptomatic SARS-CoV-2 infection. De Biasi\* S, Tartaro\* DL, **Gibellini\* L**, Paolini A, Quong A, Petes C, Awong G, Douglas S, Lin D, Nieto J, Galassi FM, Borella R, Fidanza L, Mattioli M, Leone C, Neri I, Meschiari M, Cicchetti L, Iannone A, Trenti T, Sarti M, Girardis M, Guaraldi G, Mussini C, Facchinetti F, Cossarizza A. *Nat Commun*. 2021 Jul 29;12(1):4677. doi: 10.1038/s41467-021-24940-w.
10. Identification and characterization of a SARS-CoV-2 specific CD8+ T cell response with immunodominant features. Gangaev A, Ketelaars SLC, Isaeva OI, Patiwaal S, Dopler A, Hoefakker K, De Biasi S, Gibellini L, Mussini C, Guaraldi G, Girardis M, Ormeno CMPT, Hekking PJM, Lardy NM, Toebes M, Balderas R, Schumacher TN, Ovaas H, Cossarizza A, Kvistborg P. *Nat Commun*. 2021 May 10;12(1):2593. doi: 10.1038/s41467-021-22811-y.
11. Circulating mucosal-associated invariant T cells identify patients responding to anti-PD-1 therapy. De Biasi\* S, **Gibellini\* L**, Lo Tartaro\* D, Puccio S, Rabacchi C, Mazza EMC, Brummelman J, Williams B, Kaihara K, Forcato M, Biccato S, Pinti M, Depenni R, Sabbatini R, Longo C, Dominici M, Pellacani G, Lugli E, Cossarizza A. *Nat Commun*. 2021 Mar 15;12(1):1669. doi: 10.1038/s41467-021-21928-4.
12. Altered bioenergetics and mitochondrial dysfunction of monocytes in patients with COVID-19 pneumonia. **Gibellini L**, De Biasi S, Paolini A, Borella R, Boraldi F, Mattioli M, Lo Tartaro D, Fidanza L, Caro-Maldonado A, Meschiari M, Iadisernia V, Bacca E, Riva G, Cicchetti L, Quaglino D, Guaraldi G, Busani S, Girardis M, Mussini C, Cossarizza A. *EMBO Mol Med*. 2020 Dec 7;12(12):e13001. doi: 10.15252/emmm.202013001.
13. Marked T cell activation, senescence, exhaustion and skewing towards TH17 in patients with COVID-19 pneumonia. De Biasi S, Meschiari M, **Gibellini L**, Bellinazzi C, Borella R, Fidanza L, Gozzi L, Iannone A, Lo Tartaro D, Mattioli M, Paolini A, Menozzi M, Milić J, Franceschi G, Fantini R, Tonelli R, Sita M, Sarti M, Trenti T, Brugioni L, Cicchetti L, Facchinetti F, Pietrangelo A, Clini E, Girardis M, Guaraldi G, Mussini C, Cossarizza A. *Nat Commun*. 2020 Jul 6;11(1):3434. doi: 10.1038/s41467-020-17292-4.
14. Impaired Mitochondrial Morphology and Functionality in Lonp1wt/- Mice. De Gaetano A, **Gibellini L**, Bianchini E, Borella R, De Biasi S, Nasi M, Boraldi F, Cossarizza A, Pinti M. *J Clin Med*. 2020 Jun 8;9(6):1783. doi: 10.3390/jcm9061783.
15. LonP1 Differently Modulates Mitochondrial Function and Bioenergetics of Primary Versus Metastatic Colon Cancer Cells.

**Gibellini L**, Losi L, De Biasi S, Nasi M, Lo Tartaro D, Pecorini S, Patergnani S, Pinton P, De Gaetano A, Carnevale G, Pisciotta A, Mariani F, Roncucci L, Iannone A, Cossarizza A, Pinti M.

Front Oncol. 2018 Jul 9;8:254. doi: 10.3389/fonc.2018.00254.

16. HIV-DNA content in different CD4+ T-cell subsets correlates with CD4+ cell: CD8+ cell ratio or length of efficient treatment.

**Gibellini L**, Pecorini S, De Biasi S, Bianchini E, Digaetano M, Pinti M, Carnevale G, Borghi V, Guaraldi G, Mussini C, Cossarizza A, Nasi M.

AIDS. 2017 Jun 19;31(10):1387-1392. doi: 10.1097/QAD.0000000000001510.

17. Anti-TNF- $\alpha$  Drugs Differently Affect the TNF $\alpha$ -sTNFR System and Monocyte Subsets in Patients with Psoriasis.

**Gibellini L**, De Biasi S, Bianchini E, Bartolomeo R, Fabiano A, Manfredini M, Ferrari F, Albertini G, Trenti T, Nasi M, Pinti M, Iannone A, Salvarani C, Cossarizza A, Pellacani G.

PLoS One. 2016 Dec 9;11(12):e0167757. doi: 10.1371/journal.pone.0167757.

18. Inhibition of Lon protease by triterpenoids alters mitochondria and is associated to cell death in human cancer cells.

**Gibellini L**, Pinti M, Bartolomeo R, De Biasi S, Cormio A, Musicco C, Carnevale G, Pecorini S, Nasi M, De Pol A, Cossarizza A.

Oncotarget. 2015 Sep 22;6(28):25466-83. doi: 10.18632/oncotarget.4510.

19. Silencing of mitochondrial Lon protease deeply impairs mitochondrial proteome and function in colon cancer cells.

**Gibellini L**, Pinti M, Boraldi F, Giorgio V, Bernardi P, Bartolomeo R, Nasi M, De Biasi S, Missiroli S, Carnevale G, Losi L, Tesei A, Pinton P, Quaglino D, Cossarizza A.

FASEB J. 2014 Dec;28(12):5122-35. doi: 10.1096/fj.14-255869.

20. Sirtuin 3 interacts with Lon protease and regulates its acetylation status.

**Gibellini L**, Pinti M, Beretti F, Pierri CL, Onofrio A, Riccio M, Carnevale G, De Biasi S, Nasi M, Torelli F, Boraldi F, De Pol A, Cossarizza A.

Mitochondrion. 2014 Sep;18:76-81. doi: 10.1016/j.mito.2014.08.001.

21. The protease inhibitor atazanavir triggers autophagy and mitophagy in human preadipocytes.

**Gibellini L**, De Biasi S, Pinti M, Nasi M, Riccio M, Carnevale G, Cavallini GM, Sala de Oyanguren FJ, O'Connor JE, Mussini C, De Pol A, Cossarizza A.

AIDS. 2012 Oct 23;26(16):2017-26. doi: 10.1097/QAD.0b013e328359b8be.

#### SELECTED REVIEW ARTICLES

Phenotypic, functional, and metabolic heterogeneity of immune cells infiltrating non-small cell lung cancer.

Aramini B, Masciale V, Samarelli AV, Dubini A, Gaudio M, Stella F, Morandi U, Dominici M, De Biasi S, **Gibellini<sup>&</sup> L**, Cossarizza<sup>&</sup> A.

Front Immunol. 2022 Aug 10;13:959114. doi: 10.3389/fimmu.2022.959114.

Cell Death in Coronavirus Infections: Uncovering Its Role during COVID-19.

Paolini A, Borella R, De Biasi S, Neroni A, Mattioli M, Lo Tartaro D, Simonini C, Franceschini L, Cicco G, Piparo AM, Cossarizza A, **Gibellini L**.

Cells. 2021 Jun 23;10(7):1585. doi: 10.3390/cells10071585.

Finding predictive factors for immunotherapy in metastatic renal-cell carcinoma: What are we looking for?

Guida A, Sabbatini R, **Gibellini L**, De Biasi S, Cossarizza A, Porta C.

Cancer Treat Rev. 2021 Mar;94:102157. doi: 10.1016/j.ctrv.2021.102157.

The biology of Lonp1: More than a mitochondrial protease.

**Gibellini L**, De Gaetano A, Mandrioli M, Van Tongeren E, Bortolotti CA, Cossarizza A, Pinti M.

Int Rev Cell Mol Biol. 2020;354:1-61. doi: 10.1016/bs.ircmb.2020.02.005.

Single-Cell Approaches to Profile the Response to Immune Checkpoint Inhibitors.

**Gibellini L**, De Biasi S, Porta C, Lo Tartaro D, Depenni R, Pellacani G, Sabbatini R, Cossarizza A.  
Front Immunol. 2020 Mar 20;11:490. doi: 10.3389/fimmu.2020.00490.

Emerging role of Lon protease as a master regulator of mitochondrial functions.

Pinti M, **Gibellini L**, Nasi M, De Biasi S, Bortolotti CA, Iannone A, Cossarizza A.

Biochim Biophys Acta. 2016 Aug;1857(8):1300-1306. doi: 10.1016/j.bbabbio.2016.03.025.

\*Autorizzo il trattamento dei miei dati personali presenti nel curriculum vitae ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 e del GDPR (Regolamento UE 2016/679) per le finalità di ricerca e selezione del personale.\*

11/07/2025

