

# Claudia Cantoni

Associate Professor

## EDUCATION AND TRAINING

2001

### **PhD in Immunological Sciences**

Molecular characterization of non MHC-specific receptors expressed by human Natural Killer cells

University of Genova - IT

1995

### **Specialization in Clinical Pathology**

Characterization of receptors specific for HLA-C alleles (p58) expressed by Natural Killer cells - 50/50 cum laude

University of Genova - IT

1990

### **Qualifying examination for the profession of pharmacist**

University of Genova - IT

1989

### **Master's Degree in Pharmacy**

A novel type of GABA receptor in rat spinal cord - 110/110 cum laude

University of Genova - IT

1984

### **High School Diploma**

Foreign Language High School Grazia Deledda - Genova - IT

## PROFESSIONAL HISTORY

2020

**National Academic Qualification (ASN) as Full Professor in General Pathology (Academic Field 06/A2)**

2014 - ongoing

### **Associate Professor - MEDS-02/A (General Pathology)**

Teaching and Research Activities

Department of Experimental Medicine - University of Genova - IT

2013 - ongoing

### **High Specialization Appointment**

Molecular Immunology

IRCCS G. Gaslini Institute - Clinical and Experimental Immunology Lab. - Genova - IT

2012

**National Academic Qualification (ASN) as Associate Professor in General Pathology  
(Academic Field 06/A2)**

2005 - ongoing

**Member of the PhD Program on Clinical and Experimental Immunology**  
University of Genova - IT

2003 – 2004

**Member of the PhD Program on Immunology, Vaccinology and Organ Transplantation**  
University of Genova - IT

2001 - ongoing

**Staff position**

Teaching and Research Activities  
IRCCS G. Gaslini Institute - Clinical and Experimental Immunology Lab. - Genova -IT

2001 - 2020

**Member of the Center of Excellence for Biomedical Research (CEBR)**

Research Activity  
University of Genova - IT

2000 - 2014

**Assistant Professor - MED04 (General Pathology)**

Teaching and Research Activities  
Department of Experimental Medicine - University of Genova - IT

1996 - 2000

**PhD Program on Immunological Sciences**

Research Activity at the National Institute for Cancer Research – Immunopathology Lab.  
University of Genova - IT

1995 - 1996

**Research Fellowship for AIDS research (Istituto Superiore di Sanità)**

Research Activity  
National Institute for Cancer Research – Immunopathology Lab. - Genova - IT

1992 - 1994

**Research Fellowship (Italian Association for Cancer Research)**

Research Activity  
National Institute for Cancer Research - Pharmacology -Lab. - Genova - IT

1990 - 1991

**Research Fellow**

Research Activity  
National Institute for Cancer Research - Pharmacology Lab. - Genova - IT

## **ACADEMIC APPOINTMENTS**

2022 - 2024

**Member of the Department Executive Committee**

Department of Experimental Medicine - University of Genova - IT

[2020 - ongoing](#)

**Member of the Committee for the quality assurance of the teaching in the Master Degree in Medicine**

School of Medical and Pharmaceutical Sciences - University of Genova - IT

[2018 - 2021](#)

**Member of the Department Executive Committee**

Department of Experimental Medicine - University of Genova - IT

[2015 - 2016](#)

**Member of the Committee for the quality assurance of the teaching in the School of Medical and Pharmaceutical Sciences**

School of Medical and Pharmaceutical Sciences - University of Genova - IT

## TEACHING ACTIVITY

Associate Professor at the School of Medical and Pharmaceutical Sciences, University of Genova. Teaching activity in General Pathology and/or Immunology courses at:

- Schools of Medicine, Pharmacy, Nursing, Pediatric Nursing, Medical-Pharmaceutical Biotechnology, Nursing and Obstetric Sciences.
- Specialization Courses in Clinical Pathology and Biochemistry, Oncology, Hospital Pharmacy, Microbiology and Virology.

Supervision of students for thesis preparation.

Teaching and laboratory activities for secondary school students (PCTO, Percorsi per le Competenze Trasversali e per l'Orientamento).

## POSTGRADUATE RESEARCH AND TEACHING ACTIVITY

- Supervision of PhD students for the development of research projects and for PhD thesis preparation
- Member of the PhD Program on Clinical and Experimental Immunology, University of Genova
- Review for PhD Course - Final Examination 2022 - PhD in Experimental and Translational Medicine, University of Insubria
- Review for PhD Course - Final Examination 2021 - PhD in Clinical and Experimental Biomedical Sciences, University of Verona
- International Ph.D. Jury Member for PhD in Veterinary Sciences: Faculty of Veterinary Medicine, University of Ghent, Belgium (2015)

## RESEARCH INTERESTS

Research is mainly focused on the function of human Natural Killer (NK) cells in both physiological and pathological conditions and is witnessed by > 100 publications in international peer-reviewed journals.

H-index (Scopus): 52

Main research topics:

- Cellular and molecular interactions involving NK cells, tumor cells and tumor microenvironment:
  - identification of ligands recognized by activating NK receptors;

- identification of novel tumor markers;
  - role of tumor microenvironment in the regulation of NK cell function;
  - tumor-derived extracellular vesicles and their interaction with NK cells and cells in the tumor microenvironment;
  - characterization of tumor escape mechanisms from the immune system.
- b) Immune response against Wilms' tumor: cellular and molecular interactions between NK cells and tumor cells and identification of novel therapeutic targets.
- c) Development of proteomic approaches for the identification of membrane proteins expressed by tumor cells and for proteomic profiling of tumor cells.
- d) Interactions between NK cells and virus infected cells:
- effect of viral infection on the expression of NK receptor ligands;
  - characterization of viral escape mechanisms from the immune system.
- National and international collaborations with scientists and research groups working in the field of innate immunity.

## LANGUAGE SKILLS

ENGLISH Proficient

GERMAN Independent

FRENCH Basic

## EXPERIENCE

### MAIN SEMINARS

15-16 Mar 2022

"NK cells and tumor microenvironment in Wilms tumor"

Invited lecture

Highlights in Immunology, Accademia dei Lincei, Roma

### SCIENTIFIC RESPONSIBILITY FOR RESEARCH PROJECTS ACCEPTED FOR FUNDING ON THE BASIS OF COMPETITIVE CALLS INVOLVING PEER REVIEW

Oct 2023 - Feb 2026

"Comparative characterization of Wilms tumor in humans and pigs: in search of the optimal disease model" Role: Principal Investigator

PRIN- Bando 2022 (20227FX7KM)

MIUR - IT

Jul 2022 - Dec 2023

"Il suino quale modello di studio di una neoplasia pediatrica: il tumore di Wilms" Role: Principal Investigator of Operative Unit (PI: Dott. Elisabetta Razzuoli, Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta)

Progetto di Ricerca Regionale 2022-2023

Regione Liguria

Dec 2020 - Nov 2023

“Soluble ligands of NK cell activating receptors as novel predictive serum biomarkers for carotid plaque instability” Role: Principal Investigator of Operative Unit (PI: Prof. Guido Ferlazzo, AOU Policlinico G. Martino, Messina)

Bando Ricerca Finalizzata 2018 (RF2018-12367242)

Ministero della Salute - IT

**2002 - 2003**

“Anticorpi ricombinanti umani per la terapia delle leucemie mieloidi” Role: Principal Investigator of Operative Unit

Progetto strategico “Bersagli biologici della terapia antineoplastica molecolare” Ministero 2002 (BS1.5.1)

Ministero della Salute - IT

**EDITORSHIP OR PARTICIPATION IN EDITORIAL BOARDS OF JOURNALS, PUBLISHING SERIES, ENCYCLOPAEDIAS AND TREATISES**

Review Editor for the Section “NK and Innate Lymphoid Cell Biology” in *Frontiers in Immunology*

**PARTICIPATION IN THE CREATION OF NEW BUSINESS ENTITIES (SPIN-OFFS), DEVELOPMENT, USE AND COMMERCIALISATION OF ACADEMIC PATENTS**

**2014**

“Metodo per l’analisi cinetica di produzione di citochine e/o chemochine da parte di singoli subset di cellule Natural Killer umane” De Maria A, Moretta L, Cantoni C, Bozzano F, Marras F.  
- Numero di deposito: MI2014A001862

National patent

University of Genova - IT

**OTHER EXPERIENCES**

**2022**

Member for a public selection procedure for a Tenure-eligible lecturer in Immunology (Serra Hunter Programme) - Universitat de Barcelona, Spain

**2021**

Member for a public selection procedure for a temporary full time senior researcher (academic discipline MED/04) - University of Insubria

**2021**

Member for a public selection procedure for a temporary full time senior researcher (academic discipline MED/04) - University of Pavia

**2015 - ongoing**

Member of REPRIZE, Register of Expert Peer-Reviewers for Italian Scientific Evaluation, Ministry of Education of the University and Research (MIUR)

**2014 - ongoing**

Reviewer activity for the evaluation of national and international research projects in competitive calls: Projects “Bando di Ateneo 2020 per la ricerca”, University of Parma (2021); Projects dedicated to Researchers RTD, University of Florence (2020); Projects “Assegni di Ricerca Senior”, University of Insubria (2018); CORE Multiannual Thematic Research Programme, Fonds National de la Recherche Luxembourg (2018-2019); Wellbeing of Women Research Grant 2015 - United Kingdom; SIR (Scientific Independence of young Researchers) program (2014).

#### [2010 - ongoing](#)

Reviewer activity for international peer-reviewed journals including *Frontiers in Immunology*, *Immunology Letters*, *Human Immunology*, *PLOS One*, *BMC Cancer*, *Stem Cells International*, *Journal Immunology Research*, *Journal of Leukocyte Biology*, *Molecular and Cellular Probes*, *Advanced Science*, *Experimental Cell Research*, *Cancers*, and *Immunobiology*.

#### [2008](#)

Member for a public selection procedure for an assistant professor (academic discipline MED/04) - University of Siena