BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Andrea Rasola	Associate Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Genova, Italy	M.S.	1991	Cell biology and Physiology
University of Torino, Italy	PhD	1996	Human Genetics
University of Pavia, Italy	Specialization Degree	1998	Applied Genetics
INSERM U364, Nice, France	Post-doctoral training	1996	Cell Biology
Institute for Cancer Research, Candiolo, Italy	Post-doctoral training	1999	Cell Biology/Molecular Oncology
University of Padova, Italy	Assistant Professor	2005	Cell Biology/Mitochondrial Physiology/Tumor Metabolism
University of Padova, Italy	Associate Professor	2018	Cell Biology/Mitochondrial Physiology/Tumor Metabolism

A. Personal Statement

I have been working in the field of molecular oncology for more than 20 years, focusing my activity first on the study of dysregulation of apoptosis signalling in cancer and then on metabolic adaptations of tumor cells. I am now studying the process of neoplastic transformation under the original perspective of changes in mitochondrial function that impact both on survival and on bioenergetic alterations of cancer cells. This research line has allowed the identification of mitochondrial kinases and chaperones directly involved in the neoplastic process. My group is presently composed by researchers with different scientific backgrounds, including mitochondrial physiology, molecular oncology, biochemistry and pharmacology, whose merging confers unique possibilities of challenging the complex problem of the role of metabolic changes in tumor development. Moreover, we take advantage of collaborations with many other scientists with expertise that are complementary to ours, such as *in vivo* modeling of the neoplastic process, protein molecular dynamics, synthesis of chemicals to be tested as lead chemotherapeutic compounds. In the years, our achievements have included identification of the roles of mitochondrial kinases in cell death regulation, definition of the pro-neoplastic functions of the mitochondrial chaperone TRAP1, design of peptides that target the glycolytic enzyme hexokinase 2 in mitochondria and can be used as anti-neoplastic tools.

B. Positions and Employment

1989-1991 Internship at the laboratory of Molecular Genetics of the Gaslini Institute, Genova, Italy
1991-1995 PhD in Human Genetics, laboratory of Molecular Genetics of the Gaslini Institute, Genova, Italy
1996-1999 Post-doctoral experience, laboratory of Cellular and Molecular Immunology, INSERM U364, Nice, France
1999-2005 Post-doctoral experience at the Institute for Cancer Research, Candiolo, Torino, Italy
2005-2018 Assistant Professor in the Department of Biomedical Sciences, University of Padova, Italy
From 2018 Associate Professor in the Department of Biomedical Sciences, University of Padova, Italy

Total peer-reviewed publications: 87 articles, six book chapters.

Total citations: 7988; *h* index 45 (Google Scholar, January 23rd, 2025).

D. Editorial Activity

Associate Editor of Cells, Mitochondria Section. Review Editor of Frontiers in Physiology, Mitochondrial Research Section. Co-editor of the Research Topic "Redox and Metabolic Circuits in Cancer" of Frontiers in Oncology.
Referee for several international Journals, including BBA Bioenergetics, Cancer Research, Cell Death and Differentiation, Cell Death and Disease, Cell Reports, EMBO Reports, FEBS Journal, Journal of Biological Chemistry, Journal of Cell Biology, Journal of Cell Physiology, Journal of Cell Science, Journal of Physiology, Oncogene, Oncotarget, Science Signalling.

E. Patents

2020: New anti-tumoral approach: peptides targeting the hexokinase 2 protein.
IT Patent: IT102019000002321; PCT/IB2020/051329

F. Teaching activity

1991-1995. Assistant in the Human and Molecular Genetics course, Medical School, University of Genova.
2006-2009. Tutorial activity for the Natural Science class of the Scuola Galileiana di Studi Superiori, University of Padova.
From 2006. Teaching activity in several courses (General Pathology, Physiology, Oncology, Applied Biology) of the Medical School of the University of Padova.
From 2001. Tutorial activity in around 35 experimental theses (Master and PhD level) of the University of Torino and Padova.

G. Research Support (current)

2021: Research grant PRIN-MIUR (Progetto di Ricerca di Interesse Nazionale, Ministero Università e Ricerca) titled: "TRAPping tumor growth: designing molecules to perturb the chaperone TRAP1, from enzymatic activities to cell-cell interactions" (three years, 622.000 euros; co-PI).

2022: PI in the research grant Marie Skłodowska-Curie Actions (MSCA) Seal of Excellence @UNIPD 2022 to Martina La Spina titled "Neurofibromatosis type 1: Role of Amino acids in Cancer Eradication" (two years, € 100.000)

2023: BIRD project of the University of Padova "Identifying and targeting the crosstalk between metabolism and invasion in neurofibromatosis type 1-related tumors" (two years, € 37.900; PI)

2023: PRIN-MIUR project (Progetto di Ricerca di Interesse Nazionale, Ministero Università e Ricerca) intitolato: "The mitochondrial chaperone TRAP1 in redox biology: from biochemistry to functional effects in cancer cell models" (two years, € 200.000; PI)

2023: AIRC (Associazione Italiana Ricerca Cancro) Investigator Grant titled "Tracking metabolic changes for targeting malignant peripheral nerve sheath tumors" (five years, € 940.000; PI)

2024: Cariparo (Cassa di Risparmio di Padova e Rovigo) Foundation research grant titled "The Role of Amino Acid Metabolism in Cancer Spreading: a Liability for the Eradication of Malignant Peripheral Nerve Sheath Tumors" (three years, € 370.000; PI)

Padova, January 23rd 2025

Andrea Rasola