

CURRICULUM VITAE

Gian Paolo Tonini

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Education

Degree

July 1973 Degree in Biology, University of Genoa, Italy

Specialty

December 1995 Specialty in Genetics, University of Pavia, Italy

December 1983 Specialty in Molecular Biology, University of Milano, Italy

Training

- 2009 Visiting Professor, Chiba Cancer Center, Chiba, Tokyo, Japan.
- 2001 Visiting Professor, Department of Hematology and Oncology, Children's Hospital of Philadelphia, Philadelphia, USA
- 1993-1995: Visiting Scientist Laboratory of Molecular Biology, National Cancer Research Institute, Genoa, Italy
- 1990 Visiting Fellow, German Cancer Center, Heidelberg, Germany
- 1986-1989 Visiting Scientist, National Cancer Institute, Frederick, USA.

Professional Experience

- 2013-present: Director of the Neuroblastoma Laboratory, Istituto di Ricerca Pediatrica (IRP), Città della Speranza, Padua, Italy
- 2000-2012: Deputy Head of Laboratory of Genetics Population, National Cancer Research Institute (IST), Genoa, Italy
- 1991-1999: Deputy Head of Laboratory of Oncology, G. Gaslini Children's Hospital, Genoa, Italy
- 1977-1990: Staff Assistant in the Laboratory of Hematology/Oncology, G. Gaslini Children's Hospital, Genoa, Italy
- 1976: Fellowship at the Laboratory Hematology/Oncology, G. Gaslini Children's Hospital, Genoa, Italy.
- 1974-1975: Staff assistant at the Transplantation Center, San Martino Hospital, Genoa, Italy.

Publications

Number of papers = 174

Review articles

Number of reviews = 12

Book chapter

- Tonini G.P.: Antineoplastic Drugs Modulating C-Myc Expression In K562, Induce Erythroid Differentiation And Modify, With Ifn, Susceptibility To Nk Cell Mediated Lysis. The Role Of Pharmacology In Pediatric Oncology. Edited By: D.G. Poplack, L. Massimo And P. Cornaglia-Ferraris. Martinus Nijhoff Publishers, Dordrecht, 295-301, 1986.
- D'onofrio C., Tomini G.P.: Oncogeni E Genetica Dei Tumori. In: Dal Dna Alle Malattie Ereditarie. Edited By: G. Romeo. Casa Editrice Ambrosiana, 1986, 291-304.
- Verdone G. and Tonini G.P., N-myc in Neuroblastoma and Relation with Classical Prognostic Factors of the Disease: in Oncogenes in Pediatric Tumors, Tonini G.P., Massimo L., Cornaglia-Ferraris P. Editors, Harwood Academic Publishers, 1988, 11-30.

- Parodi M.T., Tonini G.P. Drugs Used in Cancr Therapy Induce Cell Differentiation of K562 In Vitro and Change the Transferrin Receptor Membrane Expression and C-myc Oncogene Expression: in Pediatric Tumors, Tonini G.P., Massimo L., Cornaglia-Ferraris P. Editors, Harwood Academic Publishers, 1988, 194-214.
- Tonini G.P. Cellular Oncogene and Suppressor Genes: in Molecular Genetics of Pediatric Solid Tumors, Basic Concepts and Recent Advances, Tonini G.P., Sansone R., Thiele C.J. Harwood Academic Publishers, 1992, 165-186.
- Valenti C and Tonini G.P. Human Neuroblastoma, Recent Advances in Clinical and Genetic Analysis, Schwab M., Tonini G.P., Benard J. Editors, Harwood Academic Publishers, 1993, 162-175.
- Tonini G.P. Molecular Biology of Childhood Cancer: in Neoplastic Disease of Childhood, Pochedly C. Editor, Harwood Academic Publisher, 1994, 19-36.
- Tonini G.P. Pediatric Solid Tumors: Molecular Genetics: in Encyclopedia of Cancer, Bertino J.R. Editor, Academic Press, 1997, 1212-1239.
- Maris J.M. and Tonini G.P. Genetics of Familial Neuroblastoma: in Neuroblastoma, Brodner G.M., Sawada T., Tsuchida Y., Voute P.A. Editors, Elsevier Science, 2000, 125-136.
- Tonini G.P. Pediatric Cancers, Molecular Features: in Encyclopedia of Cancer, 2nd Edition, Bertino J.R. Editor, Academic Press, 2002, 409-417.

Book Editor

- Human Neuroblastoma, Recent Advances in Clinical and Genetic Analysis, Schwab M., Tonini G.P., Benard J. Editors, Harwood Academic Publishers, 1993, 162-175.
- Oncogenes in Pediatric Tumors, Tonini G.P., Massimo L., Cornaglia-Ferraris P. Editors, Harwood Academic Publishers, 1988, 11-30.
- Molecular Genetics of Pediatric Solid Tumors, Basic Concepts and Recent Advances, Tonini G.P., Sansone R., Thiele C.J. Harwood Academic Publishers, 1992 165-186.

Patent

Device for detecting single predefined target molecules, comprises a substrate comprising nanopores functionalized with probe molecules, and a voltage generator for generating a predefined activation voltage across the substrate

Patent Number(s): WO2012160584-A1 ; EP2715344-A1 ; US2014202857-A1

Chip for oligonucleotide molecule detection in medical, botanical, zoo-technical or zoo-prophylactic fields, comprises nanopored silicon nitride membrane

Patent Number(s): WO2011027379-A1 ; EP2473849-A1 ; IT1398771-B ; EP2473849-B1

Device for detecting volatile substances, has probe that is inserted within containment box through analysis opening, so that when probe is treated by sample of substance is examined and inserted within containment box

Patent Number(s): WO2011058592-A1 ; EP2499477-A1 ; US2012266654-A1 ; US8752411-B2

Selected Research Support from 1985 to present

- Neuroblastoma Research Programs for Neuroblastoma Laboratory, Fondazione Italiana per la Lotta al Neuroblastoma, www.neuroblastoma.org.
- Nanomed Lab project: www.Nanomed.unige.it. NANOMED labs aim to develop advanced nanotechnology promoting new knowledge in the fields of genomics, post-genomics and biomedicine in general.
- Ministero dell'Istruzione, Università e Ricerca - Progetti FIRB "Nanobiotecnologie", "Costruzione di prototipi di nanopore array per la definizione di espressione genica su scale temporali del millisecondo per singolo poro"

- Ministero dell'Istruzione, Università e Ricerca - Progetti FAR (Fondo Agevolazioni alla Ricerca): "Sviluppo di microchips a proteine per la rilevazione di markers di interesse diagnostico"
- Ministero della Salute: "Analytical and clinical validation of biomarkers for non-invasive early diagnosis of neurological tumors"
- Ministero della Salute – Direzione Generale della Ricerca Scientifica e Tecnologica: "Identification of tumor biomarkers through a biology-driven integrated approach"
- AIRC (Italian Association for Cancer Research), Inter-Regional Pediatric Grant: "Pediatric Brain Tumors, a multitasking molecular approach to identify new therapies for Medulloblastoma"
- AIRC (Italian Association for Cancer Research): "Role of Schwann stromal cells in growth and dissemination of malignant neuroblasts of Neuroblastic Tumors"
- Italian Neuroblastoma Foundation, Progetto Pensiero: "Pathways diversi coinvolti in tumori pediatrici del SNC: basi molecolari e studi applicativi"
- Italian Neuroblastoma Foundation, Progetto Clinico-Biologico: "Neuroblastoma: programma di sviluppo dell'attività clinica 2009-2011/2005-2008: AIRC (Italian Association for Cancer Research): "Identification of genes related to aggressiveness and poor response in CNS tumours and leukemia in infancy"
- 2000-2003: AIRC (Italian Association for Cancer Research): "Genotype-phenotype association in neuroblastic tumors"
- 2001: UICC fellowship ICRETT for visiting fellow at the University of Pennsylvania (Philadelphia) for the project: "Identification of genes differently expressed in localized and disseminated neuroblastoma tumor samples by DNA microarray analysis"
- 1999-2001: Principal Investigator of project "Identification of chromosomal regions for candidate neuroblastoma genes" funded by Italian Neuroblastoma Association
- 1998-present: Principal Investigator of Bio-molecular Unit project "Diagnostic of Neuroblastoma" funded by Italian Neuroblastoma Association
- 1994-1997: AIRC (Italian Association for Cancer Research): "Studio della progressione tumorale nei tumori solidi in età pediatrica con particolare riferimento al neuroblastoma. Analisi delle alterazioni molecolari di proto-oncogeni e di geni soppressori. Impiego di tali alterazioni come fattori prognostici di malattia"
- 1990-1993: AIRC (Italian Association for Cancer Research): "Identificazione del locus per il gene soppressore o antioncogene del neuroblastoma sul cromosoma 1p"
- 1987-1990: AIRC (Italian Association for Cancer Research): "Farmaco-resistenza nei tumori pediatrici. Ricerca di specifiche sequenze di DNA correlate alla resistenza ai farmaci in bambini affetti da neoplasia"
- 1985-1987: AIRC (Italian Association for Cancer Research): "Differenziazione cellulare e modulazione dell'espressione di oncogeni indotta da farmaci chemioterapici e IFN in linee leucemiche umane (K562, HL60) e in cellule fresche di neoplasie di pazienti in età pediatrica"

Educational Activity

- Teacher for Biology Course for Scientific Liceum, at National Cancer Research Institute (IST) School, Genoa, Italy
- 1997-1998: Teaching Professor in Pediatric Oncology (Medical Oncology), Faculty of Medicine and Surgery, (Scuola di Specializzazione in Oncologia), University of Genoa, Genoa, Italy
- Professor at the Ph.D. Course of: "Medicina Rigenerativa ed Ingegneria dei Tessuti", University of Genoa, Italy

Editorial Activity

Manuscript's Reviewer for journals: European Journal Cancer, Oncogene, Lancet Oncology, Cancer Letters, Cancer Research, Clinical Cancer Research, British Journal of Cancer, The Journal of Pathology, International Journal of Cancer, Neuroscience Letters, Genome Biology, Journal of Clinical Pathology, Gene, Chromosome & Cancer, BMC Molecular Biology.

Project's Reviewer for Institutions/Associations: New Zealand Neurological Foundation (New Zealand), Swiss National Science Foundation (Switzerland), National Health and Medical Research Council, Children's Cancer Institute Australia for Medical Research (Australia), Neuroblastoma Society (UK), Research Foundation-Flanders (FWO) (Belgium), Johns Hopkins University School of Medicine (USA).

- Reviewer Committee of Tumor European Project: "Structuring Clinical Research on Rare Cancers in Adults", European Commission (EU), Bruxelles
- 2010-2011 - Reviewer Committee of European Synchrotron Radiation facility (ESRF).

Advisory Committees

- 2015 - present: member of Scientific Advisory Board of International Neuroblastoma Consortium
- 2005-2008: member of the Advisory Board of Advanced in Neuroblastoma Research Association
- 1999-present: member of the Scientific Committee of Italian Neuroblastoma Association
- 1995-present: member of Biology Committee of SIOPEN (Société Internationale d'Oncologie Pédiatrique Européenne Neuroblastoma)
- 1995-2008: Gian Paolo Tonini was involved in the collection of neuroblastoma tumor samples, a tumor Tissue Bank for pediatric cancer (Tonini G.P. Report of the Italian Pediatric Cancer Research Group on the Neuroblastoma Research Programme. Eur. J. Cancer, 28A, 1000-1001, 1993)
- 1989-2004: Head of the Biology of Solid Tumor Study Group from the Italian Association of Pediatric Hematology and Oncology (AIEOP)

Supervisor of Graduate Students and Postdoctoral Fellows

2000-2012 supervisor of postdoctoral fellowships, Translational Paediatric Oncology and Laboratory of Genetics Population National Cancer Research Institute (IST), Genoa, Italy

1980-1999 supervisor of postdoctoral fellowships, Laboratory Hematology/Oncology, G. Gaslini Children's Hospital, Genoa, Italy.

Member of Society

Italian Association of Pediatric Hematology and Oncology (AIEOP)

Société Internationale d'Oncologie Pédiatrique Européenne Neuroblastoma (SIOPEN)

The New York Academy of Sciences (1994-1998).

Selected Conference Director, Organizer, Session Chair, Invited Talk

- 04/2015 "Neuroblastoma: from MYCN gene amplification to coding sequence mutations" Baylor College of Medicine, Texas Children's Cancer Centers.
- 12/2014 "Neuroblastoma: esiste un ruolo del cromosoma 17 nel neuroblastoma? Il Cromosoma dell'anno: IL CROMOSOMA 17, Società Italiana di Genetica Umana, Padova.
- 05/2014 "Genomic Instability Model for Metastatic Neuroblastoma Carcinogenesis by Dictionary Learning Algorithm" Advanced In Neuroblastoma Research, Cologne, Germany.
- 02/2015 Invited speaker "Identificazione delle mutazioni somatiche nel neuroblastoma ad alto rischio" Corso di Oncologia Pediatrica, Istituto G. Gaslini, Genoa, Italy.
- 12/2014 "Whole Exome Sequencing defines mutations associated to high risk Neuroblastoma aggressiveness" Dept. of Molecular Medicine and Medical Biotechnologies, University Federico II of Naples, CEINGE- Advanced Biotechnologies, Naples, Italy
- 11/2014 Invited speaker "Organizzazione del Laboratorio Neuroblastoma" Institute of Molecular Biology and Pathology, IBPM, National Research Council, CNR, Rome, Italy

- 11/2014 Invited speaker “Dal sequenziamento del singolo gene al sequenziamento di tutto l’esoma” Clinical and Molecular Epidemiology, IRCCS San Raffaele Pisana, Rome, Italy
- 10/2009 “Role of soluble factors in growth and dissemination of malignant neuroblasts and Schwann stromal cells of Neuroblastic Tumors” Congresso Società Italiana di Carcinogenesis, Milano, Italy.
- 05/2010 Invited Speaker “Neuroblastoma patients' risk evaluation by OMICs analysis” Istituto Oncologico di Ricerca (IOR) Bellinzona, Svizzera.
- 12 November 2003: Official Speaker/ Invited Speaker on “Influenza dell’ambiente sui tumori nel bambino: un esempio, il disastro di Chernobyl”, World Trade Center Genoa Spa and National Cancer Research Institute-IST, Genoa, Italy.
- 6-7 May 2003: Director of the Advanced Course on “Comparative Genomic Hybridization (CGH)” National Cancer Research Institute-IST (Istituto Nazionale per la Ricerca sul Cancro-IST), San Martino Hospital, Genoa, Italy.
- 3-4 October 2002: Director of the Advanced Course on “First Theoretic and Pratical Course in Microarrays Technologies” “1° corso teorico-pratico sulla tecnologia dei microarrays”, Accademia Nazionale di Medicina, Dipartimento di Pediatria, Università degli Sudi di Padova, Padua, Italy. National Academy of Medicine, Pediatric Department University of Padua, Italy.
- 1-4 May 1994: Director of the Advanced Course on “Cell Differentiation and Death”, International School of Medical Sciences, Ettore Majorana Centre for Scientific Culture, Trapani, Italy.
- 6-11 May 1992: Director of the Advanced Course on “Cell Differentiation and Death” International School of Pediatric Sciences, Department of Pediatric Hematology and Oncology “G. Gaslini” Children’s Hospital, Genoa, Italy.
- 17-19 May 1990: Director of the Course "Gli oligonucleotidi in Biologia Molecolare" International School of Pediatric Sciences, G.Gaslini Children's Hospital, Genoa, Italy.
- 16-22 August 1990: Invited speaker at the Section of the "Induced differentiation of malignant cells", International Cancer Congress (UICC), Hamburg.
- 3-7 Sptember 1989: Co-Chairman at the Symposium "Molecular genetics of pediatric tumors", 5th European Conference on Clinical Oncology, London, U.K.
- 7-10 May 1987: Official speaker/Invited Speaker at the First Advanced Course on "Cancer Associated Viruses in Childhood". International School of Medical Sciences, Ettore Majorana Centre for Scientific Culture, Trapani, Italy.
- 5-7 June 1986: Director of the Advanced Course on "Oncogenes in pediatric tumors". International School of Medical Sciences, Ettore Majorana Centre for Scientific Culture, Erice, Trapani, Italy.
- 2-7 December 1985: Invited speaker at the International School of Pediatric Science, Advanced Course "Uso di Tecniche di Genetica Molecolare di Genetica Umana", "Patologia correlata agli Oncogeni", G.Gaslini Children's Hospital, Genova, Italy.
- 2-10 May 1979: Official/Invited speaker at "Nuovi Metodi Diagnostici nell’Esplorazione dell’Emostasi". Scuola Superiore di Scienze Mediche, “ Hemathology and Pediatric Oncology”, Ettore Majorana Centre for Scientific Culture, Trapani, Italy.