BIOGRAPHICAL SKETCH	
NAME: Tiziana Vaisitti, Ph.D.	**POSITION TITLE: Assistant Professor of Medical Genetics**

Professional address: Dept. of Medical Sciences, University of Torino, Via Nizza, 52 - 10126 TORINO. e-mail: tiziana.vaisitti@unito.it

ORCID number: https://orcid.org/0000-0002-3375-6985
Web sites: https://www.dsm.unito.it/do/docenti.pl/Show?_id=tvaisitt#tab-profilo
http://www.progettoeccellenzateseo.unito.it/it/solid_group

Personal Statement

After obtaining a PhD degree in Immunodiagnostic, I continued my training obtaining a 3-year fellowship from the Italian Association for Cancer Research (AIRC). During this period, I spent several periods in Italian and foreign laboratories as visiting scientist. Over these years, my research, in collaboration with other groups, was focused on the identification and functional characterization of recurrently mutated genes in chronic lymphoproliferative syndromes. These studies led to the recognition of mutations in NOTCH1, SF3B1 and BIRC3 in CLL patients and of NOTCH2 in SMZL patients. These mutations were subsequently functionally characterized. Current studies are dedicated to the understanding of the genetic, epigenetic and transcriptomic landscape of Richter's syndrome. From September 2014 to August 2016, I was Visiting Fellow at the Weill Cornell Medicine (New York, NY) working on the set-up of xenograft models of genetically characterized primary cells. These models allow for extensive genetic and molecular characterization of human diseases and can be used as pre-clinical tools to investigate the functional impact of novel drugs. A second topic of the research was the discovery and analysis of host micro-environmental conditions favoring leukemic development and progression, with attention focused on nucleotides/nucleosides and enzymes able to metabolize them, finally creating conditions for tumor progression and immune-escape.
In March 2017, I was appointed Assistant Professor of Medical Genetics at the University of Torino and, as part of the Immunogenetics and Transplant Biology Unit – Città della Salute e della Scienza, I'm part of a multidisciplinary team that works on the identification by NGS of genetic variants responsible for diseases that can lead to organ failure and on the functional validation of selective variants. Specifically, I'm in charge of the technical and analytical parts. Moreover, we are interested in setting up novel assays based on cell-free DNA to monitor and early detect organ rejection.

Positions and Employment

2002-2003: Internal student, Lab of Analytical Chemistry, Dept. of Chemistry, Univ. of Torino, Italy.
2003-2006: Ph.D. student, Lab of Immunogenetics, Dept. of Genetics, Biology and Biochemistry, Univ. of Torino, Italy.
2004: Visiting scientist, Dept. of Evolutionary Biology, Univ. of Siena, Italy.
2007: Visiting scientist, The Feinstein Institute for Medical Research, North Shore-Long Island Jewish, Manhasset, NY.
2009: Visiting scientist, Dept. of Medical Biochemistry and Immunology, Cardiff University.

2007-2009: AIRC/FIRC Fellowship, Lab. of Immunogenetics, Dept. of Genetics, Biology and Biochemistry, Univ. of Torino, Italy.

2009-2014: Senior Post-Doc, Dept. of Medical Sciences and Human Genetics Foundation (HuGeF), Univ. of Turin, Italy.

2014-2016: Visiting Fellow, Dept. of Pathology and Laboratory Medicine, Weill Cornell Medicine, New York, NY.

2017-2018: Assistant Professor of Medical Genetics (RTD A), Dept. of Medical Sciences, University of Torino, Torino, Italy

2018-: Assistant Professor of Medical Genetics (RTD B), Dept. of Medical Sciences, University of Torino, Torino, Italy

2018 -: National Qualification Associate Professor [Abilitazione Scientifica Nazionale professore di seconda fascia (06/N1)]

*2019 -: National professional qualification as Biologist (*AA_082412)

2020 -: National Qualification Associate Professor [Abilitazione Scientifica Nazionale professore di seconda fascia (06/A2)]

2021 -: National Qualification Associate Professor [Abilitazione Scientifica Nazionale professore di seconda fascia (06/A1)]

Teaching duties

2004-2017: Teaching Assistant in Human Genetics, Graduate programme in Biomedical Laboratory Technicians, University of Torino.

2018-: Chair of Human Genetics, Graduate programme in Biomedical Laboratory Technicians, University of Torino.

2018-: Chair of Medical Genetics, Speciality programme in Geriatrics, University of Torino

2018-: Chair of Medical Genetics, Speciality programme in Orthodontics, University of Torino

2018-: Chair of Medical Genetics, Speciality programme in Pediatrics Odontology, Univ. of Torino

2018-: Teaching Member of the Master in "Immunogenetics and transplant biology", Univ. of Torino

2018-: Teaching Member of the PhD School in Biomedical Sciences and Oncology, Univ. of Torino

2019-: Chair of Medical Genetics, Graduate Programme in Nursing (Aosta), University of Torino

Mentoring activity:

- Training of 6 PhD students: PhD program in Biomedical Sciences and Human Oncology, Curriculum in Genetics and curriculum in Immunodiagnostic and PhD in Physiopathology
- Training of 1 MD/PhD student: MD/PhD program, University of Torino
- Training of 3 students: Biomedical Laboratory Technician, University of Torino
- Training of 6 students: Master Degree in Biotechnology, University of Torino

Professional Memberships

2006- : SIC Società Italiana di Cancerologia

2006- : EACR European Association for Cancer Research

2009- : EHA European Hematology Association
2012- : ASH American Society of Hematology
2017- : ERIC European Research Initiative on CLL
2019- : SIGU Società Italiana di Genetica Umana

Honors:

2005: Prize for the best graduate student in Biotechnology from the University of Turin
2007: Travel grant by the Società Italiana di Cancerologia, 49° Congress of the Society
2009: Travel grant by the European Hematology Association, 14th Congress of the Society
2011: Mediterranean School of Oncology (MSO) Young Investigator Award (short listed)
2011: AACR-SIC Scholar in Training award from American association for Cancer Research - Società Italiana di Cancerologia
2017: Best abstract presented at the XVII International Workshop on Chronic Lymphocytic Leukemia (iwCLL), May 2017, New York, NY.

Contribution to Science

1. Identification by clinical exome sequencing of genetic variants relevant for the diagnosis of genetic diseases responsible for organ failure (kidney, liver, heart). Dr. Vaisitti is responsible for the sequencing and bioinformatics data analysis.
2. Identification of genetic variants and polymorphisms that can be involved in chronic organ rejection. Dr. Vaisitti is a part of a net of researchers working on the functional validation of genetic variants acting as minor histocompatibility antigens and responsible for organ rejection.
3. Identification of early markers of organ rejection by combining liquid biopsy (cell free DNA) and droplet digital PCR: early detection of cell free DNA from the donor. Dr. Vaisitti is part of a net of researchers working on the set up and validation of protocols based on cfDNA analysis to detect organ rejection.
4. Identification and functional characterization of novel genetic lesions in chronic lymphoproliferative diseases. Dr. Vaisitti is a part of a net of researchers working on the discovery and functional validation of genetic lesions characterizing patients with selected hematological malignancies.
5. Set-up and genetic/transcriptomic analyses of patient-derived xenograft models of Richter's syndrome. Dr. Vaisitti is the PI of projects that aim at genetically and functionally characterize Richter's syndrome cells in a translational perspective
6. Role of nucleotides and nucleotide-metabolizing enzymes in shaping the tumor niche. Dr. Vaisitti is part of a group of researchers dedicated to the functional analysis of these enzymes in hematological cancer (specifically, chronic lymphocytic leukemia).

Scientific output

Publication with Impact Factor (2005-2021): **52;**
Total IF: **462.016;** *Mean IF:* **8.88;** *H-Index (Scopus):* **25;** *Total citations:* **3032**
Chapter in a book: **1**
A complete list of publications is available at: https://www.ncbi.nlm.nih.gov/pubmed/?term=vaisitti+t

Selected lectures and seminars (National and international): 13
Meetings (Oral and Poster presentations): 40

Research Support

Completed research support:

2007 - 2009: 3-year fellowship from the Italian Association for Cancer Research (AIRC/FIRC), "Role of CD38 in the pathogenesis of chronic lymphocytic leukemia (B-CLL)"

2009: Regione Piemonte Ricerca Sanitaria Finalizzata "Pre-clinical evaluation of the use of anti-CD38 antibodies in chronic lymphocytic leukemia (B-CLL)". Role: PI

2014-2017: Italian Ministry of Health, Young Investigator Grant #GR-2011-02349282 "Analysis of the *in vitro* and *in vivo* role of ET-1/ETAR and CD38/CD31 axes in chronic lymphocytic leukemia: prognostic, functional and therapeutic implications" Role: PI of one Unit

2016-2017: Institutional grant by Human Genetics Foundation (HuGeF),. "Design and set-up of novel therapeutic approaches to target B cell malignancies". Role: PI

2017-2019: CRT Foundation – Grant 2017 "Set up of ddPCR-based molecular assays to evaluate clonal evolution and therapeutic response in chronic lymphocytic leukemia". Role: PI.

Ongoing Research support:

2018-2020: Italian Ministry of Health, Young Investigator Grant #GR-2016-02364298 "Highlighting the tumorigenic role of long non coding RNA in patients with Anaplastic Large cell Lymphoma". Role: PI of one Unit.

2018-2019: Ricerca Locale ex-60%, University of Torino "Next Generation sequencing (NGS) to screen for inherited cardiac conditions leading to organ failure". Role: PI

2018-2019: Funds from Verastem Oncology, Inc. "Mechanisms of action of PI3K inhibitors in Richter's syndrome". Role: Co-PI

2019-2020: Ricerca Locale ex-60%, University of Torino "Next Generation sequencing (NGS) to screen for inherited cardiac conditions leading to organ failure". Role: PI

2020-2025: Italian Association for Cancer Research (AIRC) – My First AIRC Grant "Probing Richter's syndrome by multiple "omics" approaches to find its Achille's heel". Role: PI

2021-2023: Research funds from AstraZeneca, "Preclinical evaluation of the therapeutic potential of compounds targeting CDK9, MCL1, BCL2 and Bcl-xL in Richter Syndrome (RS) models". Role: Co-PI