**CATERINA MARCHIÒ**
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Pathology Unit, FPO-IRCCS Candiolo Cancer Institute, strada provinciale 142, 10060 Candiolo

**CURRENT POSITION**

**University of Turin**, Dept. of Medical Sciences — Turin, Italy
Associate Professor, Pathology — Since Oct 2018

**EDUCATION**

**University of Turin**, Dept. of Medical Sciences — Turin, Italy
Specialist in Pathology — 2014

**University of Turin**, Dept. of Biomedical Sciences & Human Oncology — Turin, Italy
PhD, Oncology and Pathology — 2008

**University of Turin** — Turin, Italy
MD, School of Medicine — 2004

**RESEARCH INTERESTS**

Breast cancer pathology, spanning from histopathogenesis of breast carcinomas to molecular pathology of special histologic types of breast cancer and genetics of HER2-positive carcinomas. A specific interest in HER2-equivocal breast cancer has been funded by the Italian Association of Cancer Research (AIRC), Regione Piemonte and the Ministry of University, Education and Research (detailed below). Parallel interests involve the preanalytical phase in pathology aimed at standardizing workflows and methods (including high throughput genomics and imaging) applied to tissue samples in order to guarantee the reliability of –omic results and foster their translation to the bedside in the context of precision medicine.

**GRANTS**

◊ **As a PI:**

- *AIRC*, Italian Association for Cancer Research – Investigator Research Grant IG22850 (2019)
- *AIRC*, Italian Association for Cancer Research - Young Investigator Research Grant MFAG13310 (2012)
- *Regione Piemonte*, Young Investigator Research Grant (2009)

◊ **As Unit coordinator:**

- *Erasmus+*, 2014-1-IT01-KA202-002607 "Cytest - Cytological Training At European Standard Through Telepathology" (2014)
- *PRIN*, Projects of Relevant Scientific National Interest - Ministry of University, Education and Research, Prot. 2015HAJH8E (2016)
- Italian Ministry of Health, GR-2018- 12367431 (2019)
- Ministry of University, Education and Research, Excellence in Medical Sciences exploiting -omic analyses (2018)
- *AIRC*, Italian Association for Cancer Research - Research Grant – MultiUnit 5 per 1000-cod. 21091.

◊ **As a Collaborator:**

- *H2020-SC1-2016-2017*, EU project 733112 – "SPIDIA4P - SPIDIA for Personalized Medicine - (2016)

- *EU Grant Sixth Framework Programme* - IMPACTS (Contract nr. LSHG-CT-2007-037211) (2008)
- *PRIN*, Projects of Relevant Scientific National Interest - Ministry of University, Education and Research (2009)
- *Compagnia di San Paolo* - Special Project "Oncology" (2009)
- *Cassa di Risparmio di Torino* (Progetto Alfieri) (2009)
- *AIRC*, Italian Association for Cancer Research - Investigator Grant (2008)

**RESEARCH EXPERIENCE**

**University of Turin, Institut Curie** Turin and Paris
Assistant Professor of Pathology 2014-2018

Development of independent research projects in the field of breast cancer, with a particular focus on HER2 equivocal breast carcinomas by involving internal and external collaborators with specific funding dedicated to the projects. In addition, part of the activity has been dedicated to molecular characterization of special entities in breast pathology as well as molecular testing in specific clinical settings, even outside breast cancer. Finally, the impact of formalin fixation on molecular testing using archival tissue samples has been studied with investigation of alternative fixatives to be used in diagnostic laboratories.

**Memorial Sloan Kettering Cancer Center, Dept. of Pathology** New York City, NY
Visiting Research Scholar 2014

Focused training on massive parallel sequencing analysis applied to archival tissue samples leading to characterization of the mutational repertoire of some special histologic types of breast cancer and to the description of a recurrent hotspot mutation of the *PRKD1* gene characterizing polymorphous low grade adenocarcinomas of the salivary glands

**Harvard University, Boston Children's Hospital** Boston, MA
Visiting Research Scholar 2013-2014
*In collaboration with*
**University of Turin, Dept. of Medical Sciences** Turin, Italy
Pathologist in training 2009-2014

During the pathology training the research activity has dealt with i) issues connected to the application of *in situ* and PCR-based techniques to ameliorate HER2 testing in diagnostic pathology, and ii) *in vitro* studies on breast cancer cells including setting up 3D cultures, creating and characterizing primary cell cultures, participating to the creation and proteomic characterization of an *in vitro* model of HER2 positive breast cancer cell line expressing truncated HER2 fragments

**University of Turin, Dept. of Biomedical Sciences and Human Oncology** Turin, Italy
Research Fellow 2008-2009

- Led a study on neoadjuvant breast cancer patients: patient enrolment, sample collection and genomic analyses

**Breakthrough Breast Cancer Research Centre, Molecular pathology lab** London, UK
Clinical Research Fellow 2006-2008
*In collaboration with*
**University of Turin, Dept. of Biomedical Sciences and Human Oncology** Turin, Italy
PhD student 2005-2008

- Characterized micropapillary carcinomas of the breast (mixed and pure forms) by microarray-based comparative genomic hybridization (aCGH) and next generation sequencing (latter task based on the ongoing collaboration with the new Reis-Filho's lab at MSKCC-NYC)
- Identified presence of chromosome 17 centromere amplification in breast cancer by aCGH

- Examined the influence of oestrogen receptor status in HER2 positive breast carcinomas by aCGH
- Characterized *HER2* and *TOP2A* amplicons in breast cancer cell lines and tissue samples by aCGH

**CLINICAL ACTIVITY**

Consultant histopathologist at the Pathology Unit of FPO-IRCCS Candiolo Cancer Institute; diagnostic activity focused on breast pathology and molecular diagnostics of solid tumors, including sign-out for *in situ* hybridization, sequencing (by Sequenom MassARRAY and Sanger) and RNA-based assays applied to diagnostics.

**TEACHING & MENTORING EXPERIENCE**

**Post-Doctoral Fellowships Fondazione Umberto Veronesi** Turin, Italy
Dept. of Medical Sciences, University of Turin, 2017 and 2018

**University of Turin, Medical School** Turin, Italy
Pathology (5th year)

**University of Turin, Dental School** Turin, Italy
Pathology (3rd year)

**University of Turin, Laboratory technician programme** Turin, Italy
Diagnostic techniques and cervico-vaginal cytology (2nd year)

**Eraweb (Erasmus–Western Balkans)** Turin, Italy
Supervision of post-graduate students, PhD students and post-Docs in the Eraweb project at the University of Turin

**RELATED PROFESSIONAL EXPERIENCE**

**Associate Editor** for npg Breast Cancer, Pathobiology

***Ad hoc* reviewer** for peer reviewed journals, including:
- Annals of Oncology, since 2019
- Endocrine Related Cancer, since 2018
- Journal of National Cancer Institute, since 2015
- Journal of Pathology, since 2015
- Virchows Archiv, since 2015
- PlosOne, since 2012
- BMC Cancer, since 2011
- Histology&Histopathology, since 2010
- The Journal of Clinical Pathology, since 2008

***Ad hoc* reviewer** of grant proposals for:
- The French National Cancer Institute (INCa), 2015-2018
- The Dutch Cancer Society, since 2014
- The National Science Center, Poland, since 2014

**HONORS**

**Mayent-Rotschild grantee** as Visiting Professor at Institut Curie, Paris - France.

**Secretary** of the working group on pre-analytical issues in surgical pathology created by the European Working Group of Molecular Pathology within the European Society of Pathology.

**Secretary** of the working group of Pathology and Biobanking of Alliance Against Cancer (ACC).

**Scientific Director** of the scientific committee of the patient advocate association R.a vi. (Ricominciare a Vivere).

**PUBLICATION TRACK RECORD**

**Number of peer reviewed papers**: 152
**Citations:** 5112
**H index:** 39 (Scopus)

I hereby authorize to personal data treatment (D. LGS. 196/2003 art. 13).

Turin, June 21th 2022