PERSONAL INFORMATION **Martina CECI**

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Researcher unique identifier (ORCID) orcid.org/0000-0002-4550-8823

Sex Female | Born 06th October 1992 (Pescara, Italy) | Nazionality Italian

## WORK EXPERIENCE

Jun 2019-current

### Research fellowship

Cancer Pathology Laboratory, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy

Project " Molecular determinants of tumor growth":

I. analysis of the role of Trop-2 in the autophagic process in human cancer cell models;

II. development of a highly sensitive and specific method to measure Trop-2 serum levels in patients with colorectal cancer.

Supervisor: Prof. Marco Trerotola

Jun 2018-may 2019

### Research Internship

Cancer Pathology Laboratory, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy
Research projects:

I. morpho-functional analysis of cells expressing molecular determinants of growth and metastasis through *in vitro* and *in vivo* growth assays, flow cytometry, Western Blotting and confocal microscopy;

II. therapeutic efficacy of anti-Trop-2 anticancer drugs: *in vitro* characterization of the activity, potency and specificity of anti-Trop-2 anticancer drugs on parental and transfected cancer cell lines, set-up of dose-response curves and identification of the EC50; *in vivo* tumor growth inhibition assays by xenografts in immunodeficient mouse models.

Supervisors: Prof. Saverio Alberti, Dott.ssa Emanuela Guerra

Mar 2017-mar 2018

### MSc Research Internship for experimental thesis

Department of Biomedical and Neuromotor Sciences - DIBINEM of University of Bologna, and Centre for Applied Biomedical Research - CRBA of the St'Orsola-Maplpighi University Hospital,Bologna, Italy.

The aim of the thesis was to investigate the morpho-functional role of Trasportin-3 (TNPO3) in muscle differentiation in order to clarify the pathogenesis of Limb-Girdle Muscular Dystrophy type 1F, LGMD1F.

The approach used involved the use of murine myoblasts and human satellite cells induced to differentiate in a myogenic sense; these were evaluated in the different phases of proliferation and differentiation by analyzing the gene expression of myogenic regulatory factors and of main muscle-specific proteins. The gene and protein expression and localization in the different differentiation stages of TNPO3 were subsequently evaluated. In addition, the differentiation process was studied from the point of view of gene expression of the main muscle-specific miRNAs isolated from the exosomes contained in the cells and released into the culture medium.

Jan 2014-sep 2014

### BSc Research Internship for experimental thesis

Istituto Zooprofilattico Sperimentale dell' Abruzzo e del Molise "G. Caporale" of Teramo, Italy

The thesis was aimed at the production of monoclonal antibodies specific for *Escherichia coli O104: H4* and their use in a new diagnostic method that involved the use of magnetic microbeads conjugated to the mAb to increase the isolation efficiency of the pathogen in the milk matrix.

## EDUCATIONAL AND TRAINING

2015-2018
*Graduation on 14th mar 2018*

### Master's degree in ***Medical Biotechnology*** (LM-9)

**110/110 *cum laude***

Alma Mater Studiorum of Bologna, Italy

Experimental thesis entitled "Limb-Girdle Muscular Dystrophy type 1F, LGMD1F: in vitro approach to the role of Transportin-3 in the pathogenetic mechanism"

Supervisor: Prof.ssa Giovanna Cenacchi

2011-2014
*Graduation on 15th dec 2014*

### Bachelor's Degree in ***Biotechnology*** (L-2)

**110/110 *cum laude***

University of Teramo, Italy

Experimental thesis entitled "Production of monoclonal antibodies for the isolation of Eschierichia coli O104:H4 with immunomagnetic beads"

Supervisor: Prof. Pietro Giorgio Tiscar

2007-2011 **Scientific High school diploma**

"Corradino D'Ascanio", Montesilvano (PE), Italy

## PERSONAL SKILLS

**Other language** English intermediate level B2

**Job-related skills**

*Molecular Biology:*
DNA/RNA/protein extraction, genomic and plasmidic DNA extraction, design of primers; PCR, RT-PCR and Real-Time PCR; enzymatic digestion, gene cloning techniques, bacterial coltures, Crispr/Cas9.

*Biochemistry:*
Bacterial recombinant protein expression, SDS-PAGE, Western blot, Enzyme-linked immunosorbent assay (ELISA); immunofluorescence; purification of proteins from cell culture supernatants and/or ascites by affinity chromatography with Protein G-Sepharose; fluorescent labeling of monoclonal antibodies by molecular exclusion chromatography with Alexa fluorophore.

*Cellular Biology:*
Cell cultures, stable and transient cell transfection; single cell clonal selection of resistant transfected cells; cell viability assay with crystal violet; batch production of proteins from serum-free CHO-S cultures; flow cytometry and analysis of the binding to the surface epitope with fluorescent antibodies in live cells.

*Preclinical experimentation* in xenograft mouse models: subcutaneous injection of tumor cells in immunodeficient mice (nude/nude CD1), tumor volume measurements, intravenous injection of anticancer drugs, sacrifice.

## COURSES

10th mar, 2021 Liquid nitrogen safety training, Nippon Gases Pharma Srl, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy

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| 14th jan, 2021 | Fundamentals of Flow Cytometry by Dr. Rachael Walker, Babraham Institute Cambridge |
| 04th nov, 2020 | Confocal Microscopy, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy |
| 13th jun, 2019 | Liquid nitrogen safety training, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy |
| 29th nov, 2018 | Correct use of ultracentrifuges and high performance, ensuring maximum productivity and safety by Dr. Valerio Silei of Beckman Coulter Srl, Center for Advanced Studies and Technology (CAST), "G. d'Annunzio" University, Chieti, Italy. |

## PEER-REVIEWED PUBLICATION

Trerotola M., Guerra E., Ali Z., Aloisi AL., **Ceci M.,** Simeone P., Acciarito A., Zanna P., Vacca G., D'Amore A., Boujnah K., Garbo V., Moschella A., Lattanzio R., and Alberti S. Trop-2 cleavage by ADAM10 is an activator switch for cancer growth and metastasis. *Neoplasia* 23(4): 415-428 (2021). PMID: 33839455 DOI: 10.1016/j.neo.2021.03.006

## ABSTRACTS

I. Alberti S., Guerra E., **Ceci M**., Ali Z., Aloisi AL., Simeone P., Garbo V., Moschella A., Lattanzio R., Trerotola M., Trop-2 cleavage by ADAM10 is an activator switch for cancer growth and metastasis. *EACR 2021 Virtual Congress*, 09-12 June 2021.

II. Alberti S., Guerra E., Lattanzio R., **Ceci M**., Boujnah K., Relli V., Garbo V., Moschella A., Altomare DF., Depalo R., Trerotola M., E-cadherin inactivation by Trop-2 drives EMT-less metastatic relapse in triple-negative breast cancer. *ESMO Breast Cancer Virtual Congress*, 05-08 May 2021.

III. Alberti S., Trerotola M., Relli V., Lattanzio R., **Ceci M**., Boujnah K., Garbo V., Moschella A., Querzoli P., Pedriali M., Antolini L., Guerra E. Trop-2 inactivation of E-cadherin drives triple negative breast cancer relapse, *San Antonio Breast Cancer Virtual Symposium*, San Antonio, TX (USA). 8-11 December 2020.

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Chieti, May 2021