CURRICULUM VITAE
ANTONINO CUCINOTTA

PERSONAL INFORMATION

Name:	Cucinotta, Antonino
Date and place of birth:	03/07/1995, Chieri (TO, Italy)
Nationality:	Italian
Address:	C/da Canalaro-Zurà snc, Furnari (ME)
Work address:	Laboratory of Molecular Oncology, Department of Molecular Medicine, Viale Regina Elena 291, 00161, Rome, Italy
Telephone:	+39 3802869808
Mail address:	antonino.cucinotta@uniroma1.it

WORK EXPERIENCE

Dates (from-to):	**FROM 11/2020-ONGOING (END DATE 05/2024)**
Name and address of employer:	Sapienza University of Rome; Laboratory of Molecular Oncology, Department of Molecular Medicine, Viale Regina Elena 291, 00161, Rome, Italy
Type of business or sector:	Molecular Oncology
Occupation or position held:	Ph.D. Student in Molecular Medicine
Main activities and responsabilities:	Cell biology and molecular biology

EDUCATION

Dates (from-to):	**FROM 11/2020-ONGOING (END DATE 05/2024)**
Name and type of organization providing education and training:	Sapienza University of Rome; Laboratory of Molecular Oncology, Department of Molecular Medicine

Occupation or position held:	Ph.D. student in Molecular Medicine
Principal subjects/occupational skills covered:	The ongoing Ph.D. project, named "Blocking the Hedgehog-dependent tumor growth by a new selective Endoplasmic Reticulum Aminopeptidase 1 inhibitor" aims to identify new ERAP1 inhibitors in Hedgehog Medulloblastoma. Aberrant Hh signalling occurs in a wide range of human cancers, such as medulloblastoma (MB), the most common brain tumor in childhood. Recently, we identified Endoplasmic Reticulum Aminopeptidase 1 (ERAP1), a key player of the immune response, as a new positive regulator of the Hh pathway and essential in promoting stability of GLI1, the final effector of the pathway. The chemical ERAP1 inhibitors identified so far have a broad spectrum of activity against other aminopeptidases. To identify novel selective and effective ERAP1 inhibitors, we performed a docking-based virtual screening of a library of natural compounds against crystallographic structure of the ERAP1 catalytic domain and among eleven selected molecules, we identify compound N1as a potent ERAP1 inhibitor. We demonstrate that this compound, blocking ERAP1 activity, significantly reduces stability of GLI1, thus counteracting Hh signaling, impairs self-renewal ability and clonogenicity of tumor-derived MB stem-like cells and suppresses MB growth *in vitro* and *in vivo*. Our finding strongly indicates N1 as a good candidate for further preclinical studies in the treatment of Hh-dependent tumors. The project is being carried out with different models (cell lines, primary cells and mouse and human brain tissues) and techniques (cell biology, molecular biology). This project is being carried out under the supervision of Prof. Lucia Di Marcotullio, Sapienza University.
Dates (from-to):	**FROM 10/2018-10/2020**
Name and type of organization providing education and training:	Sapienza University of Rome.
Principal subjects/occupational skills covered:	Principal subjects: Biochemical Methods Applied to Neurobiology, Molecular Neurobiology, Molecular Neurobiology II, Neurophysiology of Human Senses, Psychopharmacology, Comparative Neuroanatomy, Psychobiology, Nervous System Stem Cells, Behavioral Neurosciences, Developmental Neurobiology, Cell Neurophysiolgy, Signal Transduction Mechanisms. Occupational Skills: cell biology, molecular biology Master's degree project named "The role of the RNA-binding ubiquitin Ligase MEX3A in the degradation of oncosoppressor RIG-I: a new molecular mechanism involved in Glioblastoma tumorigenesis". Immunoblot analysis, immunoprecipitation, in vivo ubiquitylation assay, cell proliferation assay, mRNA expression analysis, immunohistochemistry and in vitro wound healing assay were used on cell models.

Title of qualification awarded:	Master's degree in Neurobiology (LM-6, D.M 2017),Vote 110/110 summa cum laude.
Dates (from-to):	**FROM 10/2014-10/2018**

Name and type of organization providing education and training:	University of Messina
Principal subjects/occupational skills covered:	General competences on Biology, Cytology, Histology, Physics and Chemistry, Comparative Anatomy, Informatics, Botanics, Zoology, Mathematics, Organic Chemistry, Microbiology, Molecular Biology, Ecology, Comparative Hematology, Clinical Diagnostic in Animals, Vertebrates Evolutive Biology, Genetics, Animal and Plant Physiology, Pharmacology, Biochemistry, and Genomics. Thesis project "RNA and mRNA editing in mammalian cells"
Title of qualification awarded:	Bachelor's degree in Biological sciences (L-13, D.M. 270/2010), Vote 107/110

TRAINING

Dates (from-to):	**FROM 07/2019-10/2020**
Name and type of organization providing education and training:	Sapienza University of Rome, Laboratory of Molecular Oncology, Department of Molecular Medicine
Dates (from-to):	**FROM 01/2018-06/2018**
Name and type of organization providing education and training:	Laboratory of Clinical and Pathological Analysis - Hospital Agency "Papardo", Messina (Italy). Tutor: Dr. Giuseppe Falliti.

OTHER CERTIFICATION

Dates: Name:	**11/2022** FELASA Accredited Course F 023/09 for *rats* and *mice* species: Functions A, B, C and D
Dates: Name:	**07/2018** English IELTS, Europass Level B2

CONGRESS PARTECIPATION

Dates: Name:	**12/2021 - Poster presentation** MOLECULAR PATHOLOGY: FROM BENCH TO BEDSIDE- SIPMeT Young Scientist Meeting, Perugia (Italy)
Dates: Name:	**03/2022 – Oral presentation** ABCD National Ph.D. Meetingg, Salerno (Italy)

Dates:	**09/2022 – Oral presentation**
Name:	FISV Congress "3R: Research, Resilience, Reprise", Portici (Italy)

Dates:	**10/2022 – Oral presentation**
Name:	5th Brain Storming Research Assembly For Young Neuroscientists (BraYn), Roma (Italy)

PERSONAL SKILLS AND COMPETENCES

Mother tongue:	Italian
Other languages:	English (IELTS, Europass Level B2)
Social skills and competences:	Good communication skills, acquired during the studies in Italy and good ability to work in team, in international groups and in multidisciplinary projects.
Organizational skills and competences:	Good organizational skills acquired during the studies in Italy and during my Ph.D. activity: good autonomy, ability to plan and organize projects. High predisposition to teamwork and multidisciplinary project organization. High flexibility and adaptability.
Technical skills and competences:	**Data analysis:** Adobe Photoshop, Image J, Image Lab, GraphPad. Use of various DataBases and tools: NCBI, PDB, BLAST, GenScript, OncoMX, Uniprot, Biorender, STRING. **Cell culture:** Primary murine and human cells (murine medulloblastoma cells and human glioblastoma cells), immortalized murine and human cell lines. **Immunofluorescence and histology:** Tissue preparation of histological samples: fixation, freezing, immunofluorescence. Cell preparation for immunofluorescence: fixation and permeabilization. **Molecular Biology techniques:** Plasmidic and genomic DNA extraction, DNA mutagenesis, cloning, RNA extraction, reverse transcription, PCR, quantitative real time PCR, ubiquitination assays, gel electrophoresis, luciferase report assays. **Analysis of proteins:** Protein extraction and western blot analysis, protein post-translational modifications analysis; *in vivo* and *in vitro* immunoprecipitation. **Cellular biology:** DNA and siRNA transfection, cell treatments, BrdU and EDU assay, production and use of lentiviral vectors. **Animal (scientific procedures):** manipulation of mice and mice's brain tissues, tail cutting, toe clipping, anesthetic and euthanasic techniques.