

PERSONAL INFORMATION Doctor Annamaria Di Fiore**EDUCATION**

- 20/12/22 **Biologist State Exam**
- 11/2019-
1/2023 **PhD Student in Molecular Medicine (XXXV cycle),**
Molecular Oncology Laboratory – Department of Molecular Medicine
“La Sapienza” University of Rome
Research activity: “Characterization of the mechanisms involved in KCASH oncosuppressors regulation”
- 23/10/2019 **Masters’ Degree in Genetic and Molecular Biology**
Faculty of Mathematical, Physical and Natural Sciences
“La Sapienza” University of Rome
Thesis: “Study of transcriptional regulation of KCASH2 oncosuppressor”
Grade: 110/110 cum Laude
- 16/03/2017 **Bachelors’ Degree in Biological Sciences**
Faculty of Mathematical, Physical and Natural Sciences
“La Sapienza” University of Rome
Thesis: “Adeno-associated viruses: between their use in gene therapy and hepatocellular carcinoma”

**TRAINING COURSES and
RESEARCH EXPERIENCE**

- 01/11/2019 – today **Scientific research activity as a Molecular Medicine PhD student**
Molecular Oncology Laboratory –Department of Molecular Medicine – “La Sapienza” University of Rome
- 09/2018 – 10/2019 **Scientific Research activity as a Masters’ degree intern**
Molecular Oncology Laboratory –Department of Molecular Medicine – “La Sapienza” University Rome
- 07/2021 -09/2021 **Attended the training course "Preclinical experimentation and animal welfare" organized by the Research and services center “SPBA”.**
“La Sapienza” University Rome

12/2022

Attended the training course “Preclinical Trials and Animal Welfare Training (FSPBA)”.

This course is mandatory to perform the functions a, b, c, d provided for by art. 23 par. 2 d.lgs. 26/2014

“La Sapienza” University Rome

MAIN RESEARCH TOPICS:

- Study of KCTD1 role in the negative regulation of the Hedgehog signaling pathway.
- Inhibition of the oncogenic Hedgehog signaling pathway by KCASH2 modulation in vitro and in vivo (mouse models)
- Study of the interaction between the Hh suppressor KCASH2 tumor suppressor and the mitotic checkpoint protein MAD2 and their biological role in cell cycle regulation
- Exploring the mechanism involved in transcriptional regulation of KCASH2 oncosuppressor

Personal Skills:

Mother tongue

Italian

Other languages	COMPREHENSION		SPOKEN		WRITTEN PRODUCTION
	Listening	Reading	Interaction	Oral Production	
English	B2	B2	B2	B2	B2

Levels: A1/A2: Basic - B1/B2: Intermediate - C1/C2: Advanced
Common European Framework of Reference for Language skills

Communication skills

- Excellent propensity to listen.
- Excellent ability to communicate effectively and to strive both singularly and in a group.
- Great ability to critically illustrate and analyze the content of scientific works.
- Great ability to divulge personal scientific works in a critical and exhaustive manner to both specialized and general audiences.

Organizational and management skills

- Excellent ability to design and carry out a scientific project in a biological and biotechnological field.
- Excellent adaptability and resilience in situations under pressure.
- Effective time management, organizational and interpersonal skills & problem-solving skills, with the ability to multi-task and prioritize.
- Responsible for the correct functioning and use of various technical tools, of relationships with various specialists and with providers of the necessary reagents for the continuity of every day experimental procedures.

Computer skills

- Good mastery of the main operational systems: Microsoft Windows and MacOS.
- Good mastery of the Microsoft Office packet (Word, Excel, PowerPoint) and Adobe (Acrobat)
- Good mastery of data banks and software/analysis tools (PubMed, Blast, IMAGEJ, UniProt, The Promoter Inspector Genomatix, PyMol, EMBOSS, Methprimer)

Other skills

- Good statistical skills: statistical analysis of experimental data and graphical representations.

Technical skills

- Work with murine models.
- Genotyping and classic PCR
- Generation of primary cell cultures.
- Maintenance and pharmacological treatment of primary and immortalized cell cultures
- Immunofluorescence staining of cells and tissues
- Transient transfection of nucleic acids with electroporation or liposomic agents
- Lentivirus production
- Cell transduction with lentiviral vectors
- RNA and DNA extraction and purification, RT-PCR and Q-PCR
- Chromatin immunoprecipitation (ChIP) assay
- Crispr/Cas9 technology for the generation of stable syngeneic cell lines
- Protein extraction, Bradford Assay, Western Blot
- Immunoprecipitation
- Cultivation and isolation of bacterial cultures, bacterial transformation and DNA purification techniques
- Bacterial cloning
- Clonogenic Assays and Proliferative Tests: BrdU/EdU
- Flow Cytometry (FACS Calibur)

Publications

- Angrisani A*, **Di Fiore A***, De Smaele E., Moretti M. (2021). **The emerging role of the KCTD proteins in cancer**. CELL COMMUNICATION AND SIGNALING, vol. 19, ISSN:1478-811X, doi: 10.1186/s12964-021-00737-8 Impact factor 7.54
***These authors contributed equally**
- Angrisani A*, **Di Fiore A***, Di Trani C. A., Fonte S., Petroni M., Lospinoso Severini L., Bordin F., Belloni L., Ferretti E., Canettieri G., Moretti M., De Smaele E. (2021). **Specific Protein 1 and p53 Interplay Modulates the Expression of the KCTD-Containing Cullin3 Adaptor Suppressor of Hedgehog 2**. FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY, vol. 9, p. 1-16, ISSN:2296-634X, doi: 10.3389/fcell.2021.638508 Impact factor 6.081.
***These authors contributed Equally**

Citarella A, Catanzaro G, Besharat ZM, Trocchianesi S, Barbagallo F, Gosti G, Leonetti M, **Di Fiore A**, Coppola L, Autilio TM, Spinello Z, Vacca A, De Smaele E, Venneri MA, Ferretti E, Masuelli L, Po A. **Hedgehog-GLI and Notch Pathways Sustain Chemoresistance and Invasiveness in Colorectal Cancer and Their Inhibition Restores Chemotherapy Efficacy**. Cancers (Basel). 2023 Feb 25;15(5):1471. doi: 10.3390/cancers15051471. PMID: 36900263; PMCID: PMC10000782. Impact factor 6.571

Awards

Award for the best poster presentation:

33rd AICC (Italian Cell Culture Association) ANNUAL CONFERENCE: International meeting on cancer metabolism. Hybrid meeting. Onsite in Torino city or online. Poster, Di Fiore et al., **“KCTD1 inhibits the Hedgehog/Gli1 pathway through the stabilization of the oncosuppressor KCASH2”**.

Abstract and posters

Di Fiore et al., **“KCTD1 inhibits the Hedgehog/Gli1 pathway through the stabilization of the oncosuppressor KCASH2”**. 33rd AICC (Italian Cell Culture Association) ANNUAL CONFERENCE: International meeting on cancer metabolism. Hybrid meeting. Onsite in Torino city or online. Poster,

Citarella...Di Fiore et al., **“Hedgehog-GLI and NOTCH signaling pathways induce chemotherapeutic resistance and mesenchymal phenotype in Colorectal cancer organoids”**.34th International AICC ANNUAL CONFERENCE: Organoids as models of human diseases. University of Campania “L. Vanvitelli” (Napoli). Poster,

Di Fiore et al., **“KCTD1: a new modulator of the KCASH family of oncosuppressors”**.SIPMET CONGRESS 2022 "PATHOPHYSIOLOGY OF DISEASE". Marche Polytechnic University (Ancona). Poster,

Bordin...Di Fiore et al., **“Characterization of the hect-e3ubiquitin ligase Smurf1 as a new possible modulator of the hedgehog signaling pathway”**. SIPMET CONGRESS 2022 "PATHOPHYSIOLOGY OF DISEASE". Marche Polytechnic University (Ancona). Poster

Di Fiore et al., **“The KCTD1 protein negatively regulates the hedgehog signaling through interaction with the oncosuppressor KCASH2 and its stabilization”**. Molecular Pathology: from bench to bedside- SIPMeT Young Scientist Meeting 2021 (Perugia) Poster,

Bordin.... Di Fiore et al., **“New insights into the role of the hect-e3 ligase Smurf2 in the modulation of the hedgehog pathway”**.Molecular Pathology: from bench to bedside- SIPMeT Young Scientist Meeting 2021 (Perugia) Poster,

Fonte.... Di Fiore et al., **“loss of KCASH2 causes a change in permeability of both blood brain barrier and blood testis barrier in a mouse model”**.Molecular Pathology: from bench to bedside- SIPMeT Young Scientist Meeting 2021 (Perugia) Poster,

Di Fiore et al., **“Role of KCTD15 and its parologue KCTD1 in modulation of hedgehog inhibitor KCASH2”**.AMP (The Association for Molecular Pathology) Congress 2020, Online Meeting. Poster,

Scientific fundings

Awarded the Sapienza “University research starting grant”, year 2021for the research: **“Role of KCTD15 and its parologue KCTD1 in the regulation of the tumor KCASH2 suppressor”**.

Awarded the Sapienza “University research starting grant”, year 2022 for the research: **“KCTD1: a new modulator of Hedgehog signaling”**.

Dati personali Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n.196; Codice in materia di protezione dei dati personali”.

La Sottoscritta Annamaria Di Fiore dichiara di essere consapevole che il presente curriculum vitae sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione “Amministrazione trasparente”, nelle modalità e per la durata previstadal d.lgs. n. 33/2013, art. 15.

Data 24/03/2023

f.to Annamaria Di Fiore