

CURRICULUM VITAE

Name: Vincenzo Dattilo

Place and date of birth: Soveria Mannelli (CZ) - Italy, January 21th, 1986

Citizenship: Italian

Current position: PhD



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EDUCATION

- July 2015:** Passed the government exam and licensed as a professional biologist.
University of Calabria "UNICAL", Italy.
- March 2015:** PhD in Nutrition and Endocrine-Metabolic Sciences at University
"Magna Graecia" of Catanzaro, Campus "S. Venuta", Catanzaro, Italy.
Thesis title: "*Effect analysis of diets rich in polyphenols on the expression of miRNAs in adipose tissue of patients with Metabolic Syndrome*".
- February 2013:** Biostatistic course at University "Magna Graecia" of Catanzaro, Campus "S.
Venuta", Catanzaro, Italy.
Course title: "*Methods of Biostatistic with R*".
- April 2011:** Master's degree in Medical, Veterinary and Pharmaceutical Biotechnology,
University "Magna Graecia" of Catanzaro.
Thesis title: "*Study of interaction between miR-328 and PTPRJ*".
Final mark: 110/110 cum laude.
- October 2008:** Bachelor's degree in Biotechnology, University "Magna Graecia" of
Catanzaro.
Thesis title: "*Quantification of alternative splicing forms of PTPRJ gene
through real-time PCR*".
Final mark: 110/110.
- July 2004:** Scientific Diploma
Final mark: 100/100.

PROFESSIONAL EXPERIENCE

July 2015 to June 2016: Post-doctoral fellow under the supervision of Pr. Nicola Perrotti, Department of Health Science University "Magna Graecia" of Catanzaro, Campus "Salvatore Venuta" Catanzaro, Italy. The project focus on the relevance of the serine-threonine kinase SGK1 on the microRNAs nuclear export in several cancer cell lines as well as in a noncancerous primary fibroblast cell line. Expertise achieved during post-doctoral fellow: i) lentiviral production and cell transduction; ii) nuclear and cytoplasmic RNA extraction; iii) nuclear and cytoplasmic protein extraction; iv) protein immunoprecipitation; v) immunofluorescence.

February 2014 to August 2014: Internship at INSERM UR1148, Laboratory for Vascular Translational Science, 75018 Paris, France. Under the supervision of Pr. Catherine Boileau, the scientific purpose of the internship was to acquire in-depth knowledge of genetic and molecular strategies of disease gene identification in familial forms of thoracic aortic aneurysms. A specialized technical aspect was the use of Next Generation sequencing (NGS). Expertise achieved during these studies includes: i) data analysis from whole exome sequencing; ii) NGS sequencing - Ion Torrent PGM™ technology (Life Technologies); iii) Inheritance studies in cohorts.

June 2012 to March 2015: PhD student in Nutrition and Endocrine-Metabolic Sciences at Department of Health Science University "Magna Graecia" of Catanzaro, Campus "Salvatore Venuta" Catanzaro, Italy.

During his Ph.D program Vincenzo Dattilo has been actively involved in:

1. Isolation and functional characterization of peptide agonists of PTPRJ, a tyrosine phosphatase receptor endowed with tumour suppressor activity. Then, identified peptides have been tested for their effects on proliferative potential of tumour cells (ACS Chemical Biology). Expertise achieved during these studies includes: i) evaluation of tyrosine phosphorylation in cancer cells by Western Blotting; ii) in vitro cytotoxicity assays; iii) cell proliferation assay.
2. Identification of microRNAs targeting receptor protein tyrosine phosphatase PTPRJ in human cancer cells. We proposed that miR-328 exerted its mitogenic activity by negatively regulating PTPRJ and we have demonstrated miR-328 to be one of the main regulator of PTPRJ expression (FEBS JOURNAL). Technical skills acquired during this work include: i) gene cloning; ii) miRNA and gene expression analysis using Real-Time PCR; iii) site-direct mutagenesis; iv) luciferase assay; v) mammalian cell transfection.
3. miRNA expression profile analysis after a 8-week diet naturally rich in polyphenols. We investigated, through qRT-PCR, the expression pattern of 43 different miRNAs (involved in adipogenic differentiation, lipid metabolism, inflammation, oxidative stress or related to polyphenolic treatments) from adipose tissue of subjects with features of the metabolic syndrome after a diet rich in polyphenols compared to a control isoenergetic diet. Technical skills acquired during this work include: i) miRNA extraction from tissue; ii) miRNA expression analysis using Real-Time PCR.

October 2007-June 2012: formative training at Department of Experimental and Clinical Medicine, Molecular Oncology Lab, University "Magna Graecia" of Catanzaro, Campus "S. Venuta", Catanzaro, Italy.

During this period Vincenzo Dattilo has been acquired experience about technical skills and scientific competences.

TECHNICAL SKILLS AND COMPETENCES

- Storage, culturing, freezing and thawing of cells;
- In vitro cytotoxicity assays (Cell survival estimation by using MTT, CFSE);
- Transfection of mammalian cells with expression vectors;
- Production and transduction of lentivirus and adenovirus;
- RNA/ DNA /Protein/ miRNA extraction from cell lines and tissues;
- Western blot, Immunoprecipitation;
- PCR and qRT-PCR;
- Northern blot;
- Site-directed mutagenesis;
- ELISA, Immunoscreening;
- Fluorescence Microscopy;
- Immunofluorescence;
- Cytofluorimetry;
- cDNA cloning into plasmid vectors, transformation of competent bacteria, plasmid preparation and purification, subcloning;
- Luciferase assays;
- NGS sequencing - Ion Torrent PGM™ (Life Technologies).

PERSONAL SKILLS

Languages

-Mother tongue: **Italian**

-Other languages: **English, French**

COMPUTER SKILLS AND COMPETENCES

- Windows;

- Bioinformatics tools: RNAHybrid, FindTar, miRbase, TargetScan, AmplifX, ImageJ, SIFT, PolyPhen2, Mutation Taster, pMut, AlaMut, ESE2, FruitFly, IGV, NextGene, Polyweb;
- Optical module iQ5 instrument (Bio-rad) and 7500 (Applied Biosystems), Ion Torrent PGM™ (Life Technologies).
- Statistical competences using GraphPad Prism software (Student's t-test, ANOVA with post-tests).

PUBLICATIONS

1. Ortuso F., Paduano F., Carotenuto A., Gomez-Monterrey I., Bilotta A., Gaudio E., Sala M., Artese A., Vernieri E., **Dattilo V.**, Iuliano R., Brancaccio D., Bertamino A., Musella S., Alcaro S., Grieco P., Perrotti N., Croce CM., Novellino E., Fusco A., Campiglia P., Trapasso F. "Discovery of PTPRJ agonist peptides which effectively inhibit in vitro cancer cell proliferation and tube formation". **ACS Chemical Biology** (April 29, 2013. doi: 10.1021/cb3007192, PMID: 23627474). *Impact Factor: 4.995.*
2. Paduano F., **Dattilo V.**, Narciso D., Bilotta A., Gaudio E., Menniti M., Agosti V., Palmieri C., Perrotti N., Fusco A., Trapasso F., Iuliano R. "Protein-tyrosine phosphatase PTPRJ is negatively regulated by microRNA-328". **FEBS JOURNAL**, 2013; 280 (2): 401-12. (doi: 10.1111/j.1742-4658.2012.08624.x, PMID: 22564856) *Impact Factor: 3.902.* [Article was included in the Special Issue of Proteine Tyrosine Phosphatases: From Molecules to Networks January 2013, issue 2 Pages i-v, 323-771].
3. Iuliano R., Vismara M.F., **Dattilo V.**, Trapasso F., Baudi F., Perrotti N. "The role of microRNAs in cancer susceptibility". Review, **BioMed Research International** (March 19, 2013. doi: 10.1155/2013/591931, PMID: PMC3615597). *Impact Factor: 2.476.*
4. Russo E., Andreozzi F., Iuliano R., **Dattilo V.**, Procopio T., Fiume G., Mimmi S., Perrotti N., Citraro R., Sesti G., Constanti A., De Sarro G. "Early molecular and behavioral response to lipopolysaccharide in the WAG/Rij rat model of absence epilepsy and depressive-like behavior, involves interplay between AMPK, AKT/mTOR pathways and neuroinflammatory cytokine release". **Brain Behavior and Immunity** (July 3, 2014. doi: 10.1016/j.bbi.2014.06.016, PMID: 24998197). *Impact Factor: 5.964.*
5. D'Antona L., Amato R., Talarico C., Ortuso F., Menniti M., **Dattilo V.**, Iuliano R., Gigliotti F., Artese A, Costa G., Schenone S., Musumeci F., Abbruzzese C., Botta L., Trapasso F., Alcaro S., Paggi M.G. and Perrotti N. "SI113, a specific inhibitor of the Sgk1 kinase activity that counteracts cancer cell proliferation". **Cellular Physiology and Biochemistry** (March 27, 2015. doi: 10.1159/000374008). *Impact factor: 5.104.*
6. Talarico C., D'Antona L., Scumaci D., Barone A., Gigliotti F., Fiumara C.V., **Dattilo V.**, Gallo E., Visca P., Ortuso F., Abbruzzese C., Botta L., Schenone S., Cuda G., Alcaro S., Bianco C., Lavia P., Paggi M.G., Perrotti N., Amato R.. "Preclinical model in HCC: the SGK1 kinase inhibitor SI113 blocks tumor progression in vitro and in vivo and synergizes with radiotherapy". **Oncotarget** (October 8, 2015. DOI: 10.18632/oncotarget.5527). *Impact factor: 5.168.*
7. Talarico C., **Dattilo V.**, D'Antona L., Barone A., Amodio N., Belviso S., Musumeci F., Abbruzzese C., Bianco C., Trapasso F., Schenone S., Alcaro S., Ortuso F., Florio T., Paggi M., Perrotti N., Amato R. "SI113, a SGK1 inhibitor, potentiates the effects of radiotherapy, modulates the response to oxidative stress and induces cytotoxic autophagy in human glioblastoma multiforme cells". **Oncotarget** (February 2016. DOI: 10.18632/oncotarget.7520). *Impact factor: 5.168.*
8. Talarico C.*, **Dattilo V.***, D'Antona L., Menniti M., Bianco C., Ortuso F., Alcaro S., Schenone S., Perrotti N., Amato R. "SGK1, the New Player in the Game of Resistance: Chemo-Radio Molecular Target and Strategy for Inhibition". **Cellular Physiology and Biochemistry** (October 24, 2016. DOI: 10.1159/000447885). *Impact factor: 5.104.* *Sharing first authorship.
9. Bilotta A., **Dattilo V.**, D'Agostino S., Belviso S., Scalise S., Bilotta M., Gaudio E., Paduano F., Perrotti N., Florio T., Fusco A., Iuliano R., Trapasso F. "A novel splice variant of the protein tyrosine phosphatase PTPRJ that encodes for a soluble protein involved in angiogenesis". **Oncotarget**

(December 29, 2016. DOI: 10.18632/oncotarget.14350). *Impact factor*: 5.168.

10. **Dattilo V.***, D'Antona L.*, Talarico C., Capula M., Catalogna G., Iuliano R., Schenone S., Roperto S., Bianco C., Perrotti N., Amato R. "SGK1 affects RAN/RANBP1/RANGAP1 via SP1 to play a critical role in pre-miRNA nuclear export: a new route of epigenomic regulation". **Scientific Reports** (March 30, 2017. DOI: 10.1038/srep45361). *Impact factor*: 4.259. *Sharing first authorship.
11. Catalogna G., Talarico C., **Dattilo V.**, Gangemi V., Calabria F., D'Antona L., Schenone S., Musumeci F., Bianco C., Perrotti N., Amato R. & Cascini G. L.. "The SGK1 kinase inhibitor SI113 sensitizes therapeutic effects of the ⁶⁴CuCl₂ in human glioblastoma multiforme cells". **Cellular Physiology and Biochemistry** (Aug 25, 2017. DOI: 10.1159/000480328). *Impact factor*: 5.104.
12. Enrico Iaccino, Selena Mimmi, **Vincenzo Dattilo**, Fabiola Marino, Patrizio Candeloro, Antonio Di Loria, Danilo Marimpietri, Antonio Pisano, Francesco Albano, Eleonora Vecchio, Simona Ceglia, Gaetanina Golino, Antonio Lupia, Giuseppe Fiume, Ileana Quinto and Giuseppe Scala. "Monitoring multiple myeloma by idiotype-specific peptide binders of tumor-derived exosomes". **Molecular Cancer** (Oct 13, 2017. DOI: 10.1186/s12943-017-0730-8). *Impact factor*: 6.204.

POSTERS

1. **Vincenzo Dattilo**, Anna Bilotta, Francesco Paduano, Federica Barbieri, Alessandra Pattarozzi, Miranda Menniti, Lucia D'Antona, Rosario Amato, Nicola Perrotti, Francesco Trapasso, Tullio Florio, Alfredo Fusco and Rodolfo Iuliano. "Alternative splicing regulation in tumour cells of gene encoding the tyrosine phosphatase PTPRJ". **55th Annual Meeting of the Italian Cancer Society** (Catanzaro, 23-26 September 2013).
2. A. Bilotta, F. Paduano, F. Ortuso, E. Gaudio, **V. Dattilo**, R. Iuliano, N. Perrotti, A. Carotenuto, S. Alcaro, E. Novellino, A. Fusco, P. Campiglia, F. Trapasso. "PTPRJ agonist peptides effectively inhibit in vitro cancer cell proliferation and tube formation". **55th Annual Meeting of the Italian Cancer Society** (Catanzaro, 23-26 September 2013).
3. Francesco Paduano, **Vincenzo Dattilo**, Domenico Narciso, Anna Bilotta, Eugenio Gaudio, Miranda Menniti, Valter Agosti, Camillo Palmieri, Nicola Perrotti, Alfredo Fusco, Francesco Trapasso, and Rodolfo Iuliano. "miR-328 down-regulates the expression of protein-tyrosine phosphatase PTPRJ". **55th Annual Meeting of the Italian Cancer Society** (Catanzaro, 23-26 September 2013).

REFEREES

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Pr. Catherine Boileau, PharmD, PhD

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