Dottorato di ricerca in
Medicina Molecolare e Biotecnologie Mediche

Le borse di ricerca a disposizione per i Dottorandi del ciclo 39° saranno 20, delle quali:

n. 6 riguarderanno le seguenti Linee di Ricerca:

Gerolama Condorelli

RNA aptamers for cancer treatment and detection. (CN3- National Center for Gene Therapy and Drugs based on RNA Technology; Spoke 6 -RNA Drug Development)

- Esposito CL, Quintavalle C, Ingenito F, Rotoli D, Roscigno G, Nuzzo S, Thomas R, Catuogno S, de Franciscis V, Condorelli G. Identification of a novel RNA aptamer that selectively targets breast cancer exosomes. Mol Ther Nucleic Acids. 2021 Jan 20;23:982-994.
- Affinito A, Quintavalle C, Esposito CL, Roscigno G, Giordano C, Nuzzo S, Ricci-Vitiani L, Scognamiglio I, Minic Z, Pallini R, Berezovski MV, de Francisis V, Condorelli G. Targeting Ephrin Receptor Tyrosine Kinase A2 with a Selective Aptamer for Glioblastoma Stem Cells. Mol Ther Nucleic Acids. 2020 Jun 5;20:176-185.
- Nuzzo S, Roscigno G, Affinito A, Ingenito F, Quintavalle C, Condorelli G. Potential and Challenges of Aptamers as Specific Carriers of Therapeutic Oligonucleotides for Precision Medicine in Cancer. Cancers (Basel). 2019 Oct 10;11(10):1521.

Antonio Feliciello

Novel molecular mechanisms and therapeutic targets for brain tumors. (PE12- A multiscale integrated approach to the study of the nervous system in health and disease; Spoke 3- Neuronal homeostasis and brain-environment interaction)

- Chiuso F, Delle Donne R, Giamundo G, Rinaldi L, Borzacchiello D, Moraca F, Intartaglia D, Iannucci R, Senatore E, Lignitto L, Garbi C, Conflitti P, Catalanotti B, Conte I, Feliciello A. Ubiquitylation of BBSome is required for ciliary assembly and signaling. EMBO Rep. 2023 Apr 5;24(4):e55571.
- Delle Donne R, Iannucci R, Rinaldi L, Roberto L, Oliva MA, Senatore E, Borzacchiello D, Lignitto L, Giurato G, Rizzo F, Sellitto A, Chiuso F, Castaldo S, Scala G, Campani V, Nele V, De Rosa G, D'Ambrosio C, Garbi C, Scaloni A, Weisz A, Ambrosino C, Arcella A, Feliciello A. Targeted inhibition of ubiquitin signaling reverses metabolic reprogramming and suppresses glioblastoma growth. Commun Biol. 2022 Aug 2;5(1):780.
- Senatore E, Chiuso F, Rinaldi L, Intartaglia D, Delle Donne R, Pedone E, Catalanotti B, Pirone L, Fiorillo B, Moraca F, Giamundo G, Scala G, Raffeiner A, Torres-Quesada O, Stefan E, Kwiatkowski M, van Pijkeren A, Morleo M, Franco B, Garbi C, Conte I,

Feliciello A. The TBC1D31/praja2 complex controls primary ciliogenesis through PKA-directed OFD1 ubiquitylation. EMBO J. 2021 May 17;40(10):e106503.

Simona Paladino

Organelle homeostasis in neuronal pathophysiology: study of regulatory mechanisms in the autophagy-endolysosomal pathway and their role in neurodegeneration by using different cellular models of disease. (PE12- A multiscale integrated approach to the study of the nervous system in health and disease; Spoke 3- Neuronal homeostasis and brain-environment interaction)

- Fasano D, Parisi S, Pierantoni GM, De Rosa A, Picillo M, Amodio G, Pellecchia MT, Barone P, Moltedo O, Bonifati V, De Michele G, Nitsch L, Remondelli P, Criscuolo C, Paladino S. Alteration of endosomal trafficking is associated with early-onset parkinsonism caused by SYNJ1 mutations. Cell Death Dis. 2018 Mar 7;9(3):385.
- Amodio G, Moltedo O, Fasano D, Zerillo L, Oliveti M, Di Pietro P, Faraonio R, Barone P, Pellecchia MT, De Rosa A, De Michele G, Polishchuk E, Polishchuk R, Bonifati V, Nitsch L, Pierantoni GM, Renna M, Criscuolo C, Paladino S, Remondelli P. PERK-Mediated Unfolded Protein Response Activation and Oxidative Stress in PARK20 Fibroblasts. Front Neurosci. 2019 Jun 27;13:673.
- De Rosa L, Fasano D, Zerillo L, Valente V, Izzo A, Mollo N, Amodio G, Polishchuk E, Polishchuk R, Melone MAB, Criscuolo C, Conti A, Nitsch L, Remondelli P, Pierantoni GM, Paladino S. Down Syndrome Fetal Fibroblasts Display Alterations of Endosomal Trafficking Possibly due to SYNJ1 Overexpression. Front Genet. 2022 May 13;13:867989.

Lucio Pastore

Development of innovative strategies for cancer immunotherapy and identification of modulating factors. (CN3- National Center for Gene Therapy and Drugs based on RNA Technology; Spoke 8-Platform for DNA/RNA delivery)

- Feola S, Capasso C, Fusciello M, Martins B, Tähtinen S, Medeot M, Carpi S, Frascaro F, Ylosmäki E, Peltonen K, Pastore L, Cerullo V. Oncolytic vaccines increase the response to PD-L1 blockade in immunogenic and poorly immunogenic tumors. Oncoimmunology. 2018 May 7;7(8):e1457596.
- Vitale M, Scialò F, Passariello M, Leggiero E, D'Agostino A, Tripodi L, Gentile L, Bianco A, Castaldo G, Cerullo V, De Lorenzo C, Pastore L. Oncolytic Adenoviral Vector-Mediated Expression of an Anti-PD-L1-scFv Improves Anti-Tumoral Efficacy in a Melanoma Mouse Model. Front Oncol. 2022 May 20;12:902190.
- Tripodi L, Sasso E, Feola S, Coluccino L, Vitale M, Leoni G, Szomolay B, Pastore L, Cerullo V. Systems Biology Approaches for the Improvement of Oncolytic Virus-Based Immunotherapies. Cancers (Basel). 2023 Feb 17;15(4):1297.

Roberta Russo

Integrative omics approaches to identify disease-relevant molecular targets and pathways in hereditary red blood cell defects. (CN3- National Center for Gene Therapy and Drugs based on RNA Technology; Spoke 1-Genetic Diseases)

- Zaninoni A, Marra R, Fermo E, Consonni D, Andolfo I, Marcello AP, Rosato BE, Vercellati C, Barcellini W, Iolascon A, Bianchi P, Russo R. Evaluation of the main

regulators of systemic iron homeostasis in pyruvate kinase deficiency. Sci Rep. 2023 Mar 16;13(1):4395.
- Andolfo I, Monaco V, Cozzolino F, Rosato BE, Marra R, Cerbone V, Pinto VM, Forni GL, Unal S, Iolascon A, Monti M, Russo R. Proteome alterations in erythrocytes with PIEZO1 gain-of-function mutations. Blood Adv. 2023 Jan 3:bloodadvances.2022008673.
- Rosato BE, Marra R, D'Onofrio V, Del Giudice F, Della Monica S, Iolascon A, Andolfo I, Russo R. SEC23B Loss-of-Function Suppresses Hepcidin Expression by Impairing Glycosylation Pathway in Human Hepatic Cells. Int J Mol Sci. 2022 Jan 24;23(3):1304

Massimo Zollo

Studies on the Neurodevelopmental disorder NMIHBA (MIM: 617413) by RNA technology and gene transfer. (CN3- National Center for Gene Therapy and Drugs based on RNA Technology; Spoke 1-Genetic Diseases)

- Bibbò F, Sorice C, Ferrucci V, Zollo M. Functional Genomics of PRUNE1 in Neurodevelopmental Disorders (NDDs) Tied to Medulloblastoma (MB) and Other Tumors. Front Oncol. 2021 Oct 22;11:758146
- Baple EL, Houlden H, Zollo M, Crosby AH. Reply: PRUNE1: a disease-causing gene for secondary microcephaly. Brain. 2017 Oct 1;140(10):e62.
- Zollo M, et al. PRUNE is crucial for normal brain development and mutated in microcephaly with neurodevelopmental impairment. Brain. 2017 Apr 1;140(4):940-952.

<u>Le restanti n. 14 borse saranno a scelta tra le seguenti linee di ricerca:</u>

Felice Amato

Development of advanced tools based on primary nasal and intestinal epithelial cells for the functional study of genomic variations for personalized medicine approaches.

- Terlizzi V, Amato F, Castellani C, Ferrari B, Galietta LJV, Castaldo G, Taccetti G. Ex vivo model predicted in vivo efficacy of CFTR modulator therapy in a child with rare genotype. Mol Genet Genomic Med. 2021 Mar 13: e1656.
- Amato F, Scudieri P, Musante I, Tomati V, Caci E, Comegna M, Maietta S, Manzoni F, Di Lullo AM, De Wachter E, Vanderhelst E, Terlizzi V, Braggion C, Castaldo G, Galietta LJV. Two CFTR mutations within codon 970 differently impact on the chloride channel functionality. Hum Mutat. 2019 Jun;40(6):742-748.
- Terlizzi V, Castaldo G, Salvatore D, Lucarelli M, Raia V, Angioni A, Carnovale V, Cirilli N, Casciaro R, Colombo C, Di Lullo AM, Elce A, Iacotucci P, Comegna M, Cimino R, Quattrucci S, Seia M, Sofia VM, Zarrilli F, Amato F. Genotype-phenotype correlation and functional studies in patients with cystic fibrosis bearing CFTR complex alleles. J Med Genet. 2017 Apr;54(4):224-235.

Rosario Ammendola

Role of NADPH oxidase-dependent Reactive Oxygen Species in the regulation of cancer cells metabolism.

- Pecchillo Cimmino T, Pagano E, Stornaiuolo M, Esposito G, Ammendola R, Cattaneo F. Formyl-Peptide Receptor 2 Signaling Redirects Glucose and Glutamine into

Anabolic Pathways in Metabolic Reprogramming of Lung Cancer Cells. Antioxidants (Basel). 2022 Aug 29;11(9):1692.
- Ammendola R, Parisi M, Esposito G, Cattaneo F. Pro-Resolving FPR2 Agonists Regulate NADPH Oxidase-Dependent Phosphorylation of HSP27, OSR1, and MARCKS and Activation of the Respective Upstream Kinases. Antioxidants (Basel). 2021 Jan 19;10(1):134.
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Immacolata Castellano

Characterization of the biological activities and therapeutic potential of sulfur-containing amino acid derivatives inspired by marine natural products.

- Brancaccio M, Milito A, Viegas CA, Palumbo A, Simes DC, Castellano I. First evidence of dermo- protective activity of marine sulfur-containing histidine compounds. Free Radic Biol Med. 2022 Nov 1;192:224-234.
- Brancaccio M, Russo M, Masullo M, Palumbo A, Russo GL, Castellano I. Sulfur-containing histidine compounds inhibit γ-glutamyl transpeptidase activity in human cancer cells. J Biol Chem. 2019 Oct 4;294(40):14603-14614.
- Castellano I, Seebeck FP. On ovothiol biosynthesis and biological roles: from life in the ocean to therapeutic potential. Nat Prod Rep. 2018 Dec 12;35(12):1241-1250.

Maria Rosaria Catania

Secondary metabolites from microorganisms, plants and animals, and their derivatives as unconventional strategies to counteract antibiotic-resistance and biofilm formation by clinically relevant pathogens.

- Bellavita R, Falanga A, Merlino F, D'Auria G, Molfetta N, Saviano A, Maione F, Galdiero U, Catania MR, Galdiero S, Grieco P, Roscetto E, Falcigno L, Buommino E. Unveiling the mechanism of action of acylated temporin L analogues against multidrug-resistant Candida albicans. J Enzyme Inhib Med Chem. 2023 Dec;38(1):36-50.
- Roscetto E, Bellavita R, Paolillo R, Merlino F, Molfetta N, Grieco P, Buommino E, Catania MR. Antimicrobial Activity of a Lipidated Temporin L Analogue against Carbapenemase-Producing Klebsiella pneumoniae Clinical Isolates. Antibiotics (Basel). 2021 Oct 28;10(11):1312.
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Fabio Cattaneo

Unravelling the role of Formyl Peptide Receptor in cell metabolism and in resistance to apoptosis of cancer cells.

- Pecchillo Cimmino, T., Pagano, E., Stornaiuolo, M., Esposito, G., Ammendola, R., & Cattaneo, F. (2022). Formyl-Peptide Receptor 2 Signaling Redirects Glucose and Glutamine into Anabolic Pathways in Metabolic Reprogramming of Lung Cancer Cells. Antioxidants (Basel, Switzerland), 11(9), 1692.

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- Castaldo, M., Zollo, C., Esposito, G., Ammendola, R., & Cattaneo, F. (2019). NOX2-Dependent Reactive Oxygen Species Regulate Formyl-Peptide Receptor 1-Mediated TrkA Transactivation in SH-SY5Y Cells. Oxidative medicine and cellular longevity, 2019, 2051235.

Paola Costanzo

Investigation of the molecular mechanisms underlying ZNF224 contribution to epigenetic control of chromatin organization and plasticity during tumorigenesis.

- Catapano R, Sepe L, Toscano E, Paolella G, Chiurazzi F, Barbato SP, Bruzzese D, Arianna R, Grosso M, Romano S, Romano MF, Costanzo P, Cesaro E. Biological relevance of ZNF224 expression in chronic lymphocytic leukemia and its implication IN NF-kB pathway regulation. Front Mol Biosci. 2022 Nov 9;9:1010984.
- Cesaro E, Pastore A, Polverino A, Manna L, Divisato G, Quintavalle C, Sanzo MD, Faniello MC, Grosso M, Costanzo P. ZNF224 is a mediator of TGF-β pro-oncogenic function in melanoma. Hum Mol Genet. 2021 Nov 1;30(22):2100-2109.
- Cesaro E, Lupo A, Rapuano R, Pastore A, Grosso M, Costanzo P. ZNF224 Protein: Multifaceted Functions Based on Its Molecular Partners. Molecules. 2021 Oct 18;26(20):6296.

Massimo D'Agostino

Generation of a new label-free intelligent multi-sensor platform for cytoplasmic vacuoles phenotyping in eukaryotic cells applicable from basic biology to drug screening and diagnostics purposes.

- Scerra G, De Pasquale V, Pavone LM, Caporaso MG, Mayer A, Renna M, D'Agostino M. Early onset effects of single substrate accumulation recapitulate major features of LSD in patient-derived lysosomes. iScience. 2021 Jun 10;24(7):102707.
- Scerra G, De Pasquale V, Scarcella M, Caporaso MG, Pavone LM, D'Agostino M. Lysosomal positioning diseases: beyond substrate storage. Open Biol. 2022 Oct;12(10):220155.
- De Pasquale V, Esposito A, Scerra G, Scarcella M, Ciampa M, Luongo A, D'Alonzo D, Guaragna A, D'Agostino M, Pavone LM. N-Substituted l-Iminosugars for the Treatment of Sanfilippo Type B Syndrome. J Med Chem. 2023 Feb 9;66(3):1790-1808.

Paola De Candia

Halting Type 1 Diabetes Progression: Use of Regulatory Extracellular Vesicles

- Di Silvestre D, Garavelli S, Procaccini C, Prattichizzo F, Passignani G, De Rosa V, Mauri P, Matarese G, de Candia P*. CD4+ T-Cell Activation Prompts Suppressive Function by Extracellular Vesicle-Associated MicroRNAs. Front Cell Dev Biol. 2021 Oct 27;9:753884.
- Procaccini C, Garavelli S, Carbone F, Di Silvestre D, La Rocca C, Greco D, Colamatteo A, Lepore MT, Russo C, De Rosa G, Faicchia D, Prattichizzo F, Grossi S, Campomenosi P, Buttari F, Mauri P, Uccelli A, Salvetti M, Brescia Morra V, Vella D, Galgani M, Mottola M, Zuccarelli B, Lanzillo R, Maniscalco GT, Centonze D, de Candia

P, Matarese G. Signals of pseudo-starvation unveil the amino acid transporter SLC7A11 as key determinant in the control of Treg cell proliferative potential. Immunity. 2021 Jul 13;54(7):1543-1560.e6.

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Marina De Rosa

Molecular basis of colorectal cancer onset, progression, and drug response.

- Pagliara V, De Rosa M, Di Donato P, Nasso R, D'Errico A, Cammarota F, Poli A, Masullo M, Arcone R. Inhibition of Interleukin-6-Induced Matrix Metalloproteinase-2 Expression and Invasive Ability of Lemon Peel Polyphenol Extract in Human Primary Colon Cancer Cells. Molecules. 2021 Nov 23;26(23):7076.
- Liccardo R, Sessa R, Trombetti S, De Rosa M, Izzo P, Grosso M, Duraturo F. MiR-137 Targets the 3' Untranslated Region of MSH2: Potential Implications in Lynch Syndrome-Related Colorectal Cancer. Cancers (Basel). 2021 Sep 17;13(18):4662.
- Cammarota F, Conte A, Aversano A, Muto P, Ametrano G, Riccio P, Turano M, Valente V, Delrio P, Izzo P, Pierantoni GM, De Rosa M. Lithium chloride increases sensitivity to photon irradiation treatment in primary mesenchymal colon cancer cells. Mol Med Rep. 2020 Mar;21(3):1501-1508.

Gabriella Esposito

Skin and retinal disorders as primary targets of innovative therapies for the treatment of rare genetic diseases characterized by nonsense mutations.

- Karali M, Testa F, Di Iorio V, Torella A, Zeuli R, Scarpato M, Romano F, Onore ME, Pizzo M, Melillo P, Brunetti-Pierri R, Passerini I, Pelo E, Cremers FPM, Esposito G, Nigro V, Simonelli F, Banfi S. Genetic epidemiology of inherited retinal diseases in a large patient cohort followed at a single center in Italy. Sci Rep. 2022 Dec 2;12(1):20815.
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- Fioretti T, Auricchio L, Piccirillo A, Vitiello G, Ambrosio A, Cattaneo F, Ammendola R, Esposito G. Multi-Gene Next-Generation Sequencing for Molecular Diagnosis of Autosomal Recessive Congenital Ichthyosis: A Genotype-Phenotype Study of Four Italian Patients. Diagnostics (Basel). 2020 Nov 24;10(12):995.

Mario Galgani

Investigating cellular and molecular features of immune responses in the pathogenesis of autoimmune diseases.

- Bruzzaniti S, Piemonte E, Mozzillo E, Bruzzese D, Lepore MT, Carbone F, de Candia P, Strollo R, Porcellini A, Marigliano M, Maffeis C, Bifulco M, Ludvigsson J, Franzese A, Matarese G, Galgani M. High levels of blood circulating immune checkpoint molecules

in children with new-onset type 1 diabetes are associated with the risk of developing an additional autoimmune disease. Diabetologia. 2022 Aug;65(8):1390-1397.
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- Terrazzano G, Bruzzaniti S, Rubino V, Santopaolo M, Palatucci AT, Giovazzino A, La Rocca C, de Candia P, Puca A, Perna F, Procaccini C, De Rosa V, Porcellini C, De Simone S, Fattorusso V, Porcellini A, Mozzillo E, Troncone R, Franzese A, Ludvigsson J, Matarese G, Ruggiero G, Galgani M. Type 1 diabetes progression is associated with loss of CD3+CD56+ regulatory T cells that control CD8+ T-cell effector functions. Nature Metabolism 2:142-152 (2020).

Domenico Grieco

Cdk1 dependent control of chromosome segregation

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- Serpico AF, Febbraro F, Pisauro C, Grieco D. Compartmentalized control of Cdk1 drives mitotic spindle assembly. Cell Rep. 2022 Jan 25;38(4):110305.
- Serpico AF, Grieco D. Recent advances in understanding the role of Cdk1 in the Spindle Assembly Checkpoint. F1000Res. 2020 Jan 28;9:F1000 Faculty Rev-57.

Giulia Frisso

Integrative omics approaches to study cardiac organoids for a novel personalized medicine approach to arrhythmogenic cardiomyopathy

- Monda E, Rubino M, Palmiero G, Verrillo F, Lioncino M, Diana G, Cirillo A, Fusco A, Dongiglio F, Caiazza M, Altobelli I, Mauriello A, Guarnaccia N, Scatteia A, Cesaro A, Pacileo G, Sarubbi B, Frisso G, Bauce B, D'Andrea A, Dellegrottaglie S, Russo MG, Calabrò P, Limongelli G. Multimodality Imaging in Arrhythmogenic Left Ventricular Cardiomyopathy. J Clin Med. 2023 Feb 16;12(4):1568.
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- Brancaccio M, Mennitti C, Cesaro A, Monda E, D'Argenio V, Casaburi G, Mazzaccara C, Ranieri A, Fimiani F, Barretta F, Uomo F, Caiazza M, Lioncino M, D'Alicandro G, Limongelli G, Calabrò P, Terracciano D, Lombardo B, Frisso G, Scudiero O. Multidisciplinary In-Depth Investigation in a Young Athlete Suffering from Syncope Caused by Myocardial Bridge. Diagnostics (Basel). 2021 Nov 19;11(11):2144.

Annalisa Lamberti

Design of hybrid nanoparticle devices based on mesoporous silica nanoparticles (MSNs) loaded with Photoluminescent Ruthenium(II) Complexes (RuPOPs), for the selective diagnosis and therapy of cancer disease.

- Carrese B, Cavallini C, Sanità G, Armanetti P, Silvestri B, Calì G, Pota G, Luciani G, Menichetti L, Lamberti A. Controlled Release of Doxorubicin for Targeted Chemo-

Photothermal Therapy in Breast Cancer HS578T Cells Using Albumin Modified Hybrid Nanocarriers. Int J Mol Sci. 2021 Oct 18;22(20):11228.
- Sanità G, Armanetti P, Silvestri B, Carrese B, Calì G, Pota G, Pezzella A, d'Ischia M, Luciani G, Menichetti L, Lamberti A. Albumin-Modified Melanin-Silica Hybrid Nanoparticles Target Breast Cancer Cells via a SPARC-Dependent Mechanism. Front Bioeng Biotechnol. 2020 Jul 8;8:765.
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Massimo Mallardo

Deciphering the role of Sting in the innate immunity. The Innate immune recognition represents the basic cellular responses to mutual interaction of the host cells with the invading microbes. Moreover, it is essential to the onset and maintenance of adaptive immunity and fully integrates the cancer–immunity cycle. The Stimulator of interferon genes (STING) is considered to be a crucial target to activate innate immunity.

- Caiazza C, Brusco T, D'Alessio F, D'Agostino M, Avagliano A, Arcucci A, Ambrosino C, Fiume G, Mallardo M. The Lack of STING Impairs the MHC-I Dependent Antigen Presentation and JAK/STAT Signaling in Murine Macrophages. Int J Mol Sci. 2022 Nov 17;23(22):14232.
- Vecchio E, Caiazza C, Mimmi S, Avagliano A, Iaccino E, Brusco T, Nisticò N, Maisano D, Aloisio A, Quinto I, Renna M, Divisato G, Romano S, Tufano M, D'Agostino M, Vigliar E, Iaccarino A, Mignogna C, Andreozzi F, Mannino GC, Spiga R, Stornaiuolo M, Arcucci A, Mallardo M, Fiume G. Metabolites Profiling of Melanoma Interstitial Fluids Reveals Uridine Diphosphate as Potent Immune Modulator Capable of Limiting Tumor Growth. Front Cell Dev Biol. 2021 Sep 17;9:730726.
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Danilo Swann Matassa

Evaluating ribosome collisions on CAG expansions, proteostasis and translational stress responses in Spinocerebellar Ataxia type 3.

- Avolio R, Agliarulo I, Criscuolo D, Sarnataro D, Auriemma M, Pennacchio S, Calice G, Ng MY, Giorgi C, Pinton P, Cooperman B, Landriscina M, Esposito F, Matassa DS. Cytosolic and mitochondrial translation elongation are coordinated through the molecular chaperone TRAP1 for the synthesis and import of mitochondrial proteins. bioRxiv [Preprint]. 2023 Jan 19:2023.01.19.524708.
- Avolio R, Järvelin AI, Mohammed S, Agliarulo I, Condelli V, Zoppoli P, Calice G, Sarnataro D, Bechara E, Tartaglia GG, Landriscina M, Castello A, Esposito F, Matassa DS. Protein Syndesmos is a novel RNA-binding protein that regulates primary cilia formation. Nucleic Acids Res. 2018 Dec 14;46(22):12067-12086.
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stress adaptive response of cancer cells: a novel role for the heat shock protein TRAP1. Cell Death Dis. 2013 Oct 10;4(10):e851.

Alfredo Nicosia

Identification and co-delivery by virus and mRNA vectors of immunomodulators, to overcome the issue of newly expressed therapeutic proteins' and/or molecular scissors' immunogenicity for more effective Gene Therapy applications.

- D'Alise AM, Nocchi L, Garzia I, et al. Adenovirus Encoded Adjuvant (AdEnA) anti-CTLA-4, a novel strategy to improve Adenovirus based vaccines against infectious diseases and cancer. Front Immunol. 2023;14:1156714.
- Gentile C, Finizio A, Froechlich G, et al. Generation of a Retargeted Oncolytic Herpes Virus Encoding Adenosine Deaminase for Tumor Adenosine Clearance. Int J Mol Sci. 2021;22(24):13521.
- Esposito I, Cicconi P, D'Alise AM, et al. MHC class II invariant chain-adjuvanted viral vectored vaccines enhances T cell responses in humans. Sci Transl Med. 2020;12(548):eaaz7715.

Chiara Pagliuca

Improving the knowledge on Helicobacter pylori infection: evaluation of direct/indirect effect of commensal microbiota on H. pylori virulence to develop innovative therapeutic solutions.

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