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Born in Naples 07/01/1976

Current Position: PostDoc
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Supervisor: Adrianna Ianora/Giovanna Romano
Appointed on project: PharmaSea

EDUCATION/TRAINING/EXPERIENCE

Institute and Location	Degree/Function	Year	Field of Study
University of Naples "Federico II"	Master Degree	2000	Biology
University of Naples "Federico II"	Certified by the board of Italian Biologist	2001	Biology
University of Naples "Federico II"/ Zoological Station Of Naples "Anton Dohrn"	Training	2000/2001	Biochemistry and Molecular Biology
University of Naples "Federico II"/ Zoological Station Of Naples "Anton Dohrn"	PhD	2001/2005	Molecular and Cellular Biology and Pathology
Institut de Genetique et Biologie Cellulaire et Moleculaire. Strasbourg, France	Post Doc	2005/2007	Neuroscience Molecular and Cellular Biology
Fondazione Santa Lucia, Roma/ Ceinge, Napoli	Post Doc	2008	Behavioral Neuroscience Lab
Angelini Acraf, Formia/ Ceinge, Napoli	Post Doc	2008/2009	Human genetics and cancer Lab
Ceinge, Napoli	Temporary Research Associate	2009/2010	Human genetics and cancer Lab
Zoological Station Of Naples "Anton Dohrn"	Temporary Research Associate	2013/2014	Ecology and Evolution of Plankton Laboratory
Zoological Station Of Naples "Anton Dohrn"	Temporary Research Associate	2014/2015	Ecology and Evolution of Plankton Laboratory
Zoological Station Of Naples "Anton Dohrn"	Temporary Research Associate	2015/2016	Integrated Marine Ecology Section

Interessi di ricerca:

Una piccola goccia di oceano contiene migliaia di organismi viventi dalle più disparate caratteristiche fisiche e fisiologiche utilizzabili in campo biotecnologico. Infatti alcune

microalghe che popolano anche i nostri mari, chiamate diatomee, producono molecole con attività farmacologica e nutraceutica.

L'obiettivo del mio progetto è studiare il contenuto genomico e proteico di alcune specie di diatomee, selezionate in base all'attività farmacologica che esercitano su cellule di altri organismi viventi. Mediante tecniche di biologia molecolare e cellulare e di bioinformatica, lo studio cerca di capire i geni coinvolti nella fisiologia e metabolismo di tali microalghe e lo schema di sintesi delle molecole responsabili dell'attività farmacologica.

In a little ocean drop, there are thousands of living microorganisms with many diverse forms and metabolisms that can be useful by a biotechnological point of view. Indeed, some microalgae called diatoms, living also in our seas, are able to produce molecules with pharmacological and nutraceutical activity.

My project objective is the study of the genomic and proteomic content of selected diatoms, based on their ability to pharmacologically interfere on cells from other organisms. Using bioinformatics and molecular and cellular biological methods, the study try to understand which genes are involved in the physiology and metabolism of such microalgae and the pathways responsible for the synthesis of bioactive metabolites.

Journal Papers

1: Di Dato V, Musacchia F, Petrosino G, Patil S, Montresor M, Sanges R, Ferrante MI.

Transcriptome sequencing of three *Pseudo-nitzschia* species reveals comparable gene sets and the presence of Nitric Oxide Synthase genes in diatoms. *Sci Rep.* 2015 Jul 20;5:12329. doi: 10.1038/srep12329

2: Carotenuto M, Pedone E, Diana D, de Antonellis P, Džeroski S, Marino N, Navas L, Di Dato V, Scoppettuolo MN, Cimmino F, Correale S, Pirone L, Monti SM, Bruder E, Zenko B, Slavkov I, Pastorino F, Ponzoni M, Schulte JH, Schramm A, Eggert A, Westermann F, Arrigoni G, Accordi B, Basso G, Saviano M, Fattorusso R, Zollo M.

Neuroblastoma tumorigenesis is regulated through the Nm23-H1/h-Prune C-terminal interaction. *Sci Rep.* 2013;3:1351. doi: 10.1038/srep01351

3: Cimmino F, Scoppettuolo MN, Carotenuto M, De Antonellis P, Di Dato V, De Vita G, Zollo M.

Norcantharidin impairs medulloblastoma growth by inhibition of Wnt/ β -catenin signaling. *J Neurooncol.* 2012 Jan;106(1):59-70. doi:10.1007/s11060-011-0645-y. Epub 2011 Jul 7.

4: Virgilio A, Spano D, Esposito V, Di Dato V, Citarella G, Marino N, Maffia V, De Martino D, De Antonellis P, Galeone A, Zollo M.

Novel pyrimidopyrimidine derivatives for inhibition of cellular proliferation and motility induced by h-prune in breast cancer. *Eur J Med Chem.* 2012 Nov;57:41-50. doi:10.1016/j.ejmech.2012.08.020. Epub 2012 Aug 23

- 5: Spano D, Marshall JC, Marino N, De Martino D, Romano A, Scoppettuolo MN, Bello AM, Di Dato V, Navas L, De Vita G, Medaglia C, Steeg PS, Zollo M.

Dipyridamole prevents triple-negative breast-cancer progression. *Clin Exp Metastasis*. 2013 Jan;30(1):47-68. doi: 10.1007/s10585-012-9506-0

- 6: Zollo M, Di Dato V, Spano D, De Martino D, Liguori L, Marino N, Vastolo V, Navas L, Garrone B, Mangano G, Biondi G, Guglielmotti A.

Targeting monocyte chemoattractant protein-1 synthesis with bindarit induces tumor regression in prostate and breast cancer animal models. *Clin Exp Metastasis*. 2012 Aug;29(6):585-601. doi: 10.1007/s10585-012-9473-5. Epub 2012 Apr 7

- 7: Liguori L, Andolfo I, de Antonellis P, Aglio V, di Dato V, Marino N, Orlandi NI, De Martino D, Capasso M, Petrosino G, Schramm A, Navas L, Tonini GP, Eggert A, Iolascon A, Zollo M.

The metallophosphodiesterase Mpped2 impairs tumorigenesis in neuroblastoma. *Cell Cycle*. 2012 Feb 1;11(3):569-81. doi: 10.4161/cc.11.3.19063. Epub 2012 Feb 1.

- 8: Castelletti D, Fiaschetti G, Di Dato V, Ziegler U, Kumps C, De Preter K, Zollo M, Speleman F, Shalaby T, De Martino D, Berg T, Eggert A, Arcaro A, Grotzer MA.

The quassinoid derivative NBT-272 targets both the AKT and ERK signaling pathways in embryonal tumors. *Mol Cancer Ther*. 2010 Dec;9(12):3145-57. doi: 10.1158/1535-7163.MCT-10-0539. Epub 2010 Oct 1.

- 9: Nitsch R, Di Dato V, di Gennaro A, de Cristofaro T, Abbondante S, De Felice M, Zannini M, Di Lauro R.

Comparative genomics reveals a functional thyroid-specific element in the far upstream region of the PAX8 gene. *BMC Genomics*. 2010 May 14;11:306. doi: 10.1186/1471-2164-11-306.

- 10: Napolitano F, Pasqualetti M, Usiello A, Santini E, Pacini G, Sciamanna G, Errico F, Tassone A, Di Dato V, Martella G, Cuomo D, Fisone G, Bernardi G, Mandolesi G, Mercuri NB, Standaert DG, Pisani A.

Dopamine D2 receptor dysfunction is rescued by adenosine A2A receptor antagonism in a model of DYT1 dystonia. *Neurobiol Dis*. 2010 Jun;38(3):434-45. doi: 10.1016/j.nbd.2010.03.003. Epub 2010 Mar 19.

- 11: Alotaibi H, Yaman E, Salvatore D, Di Dato V, Telkoparan P, Di Lauro R, Tazebay UH.

Intronic elements in the Na⁺/I⁻ symporter gene (NIS) interact with retinoic acid receptors and mediate initiation of transcription. *Nucleic Acids Res*. 2010 Jun;38(10):3172-85. doi: 10.1093/nar/gkq023. Epub 2010 Jan 31.

12: Chun JT, Di Dato V, D'Andrea B, Zannini M, Di Lauro R.

The CRE-like element inside the 5'-upstream region of the rat sodium/iodide symporter gene interacts with diverse classes of b-Zip molecules that regulate transcriptional activities through strong synergy with Pax-8. *Mol Endocrinol.* 2004 Nov;18(11):2817-29.