



STEFANO ALCARO

NET4SCIENCE



UMG

**UNIVERSITY-BUSINESS COLLABORATION
IN A TIME OF RECOVERY AND RESILIENCE**

Rome, February 22-23, 2022

PITCH SESSION: SUSTAINABILITY IN ACTION



PON
RICERCA
E INNOVAZIONE
2014 - 2020



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www.net4science.com





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from Erasmus to an academic spinoff



2009

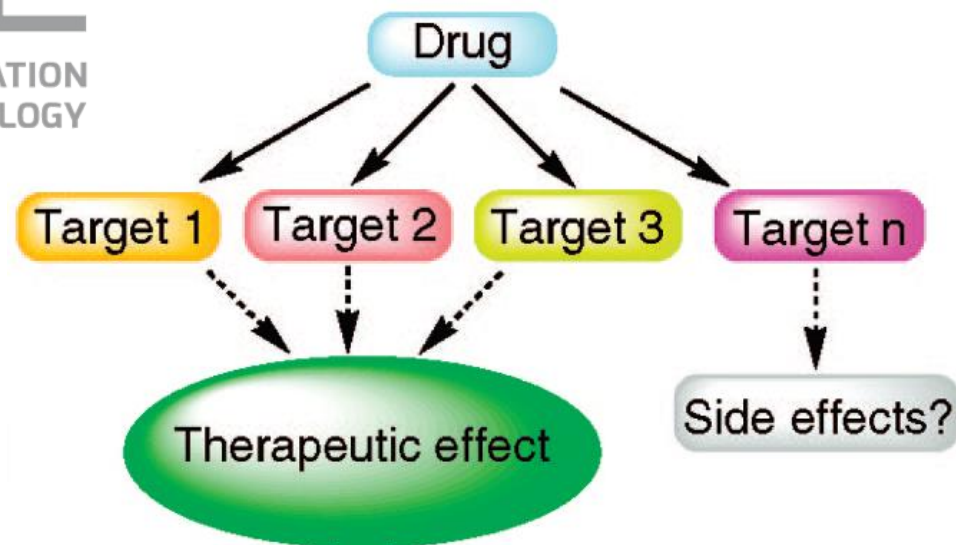
Erasmus link with Porto

2014

COST Action MuTaLig

2018

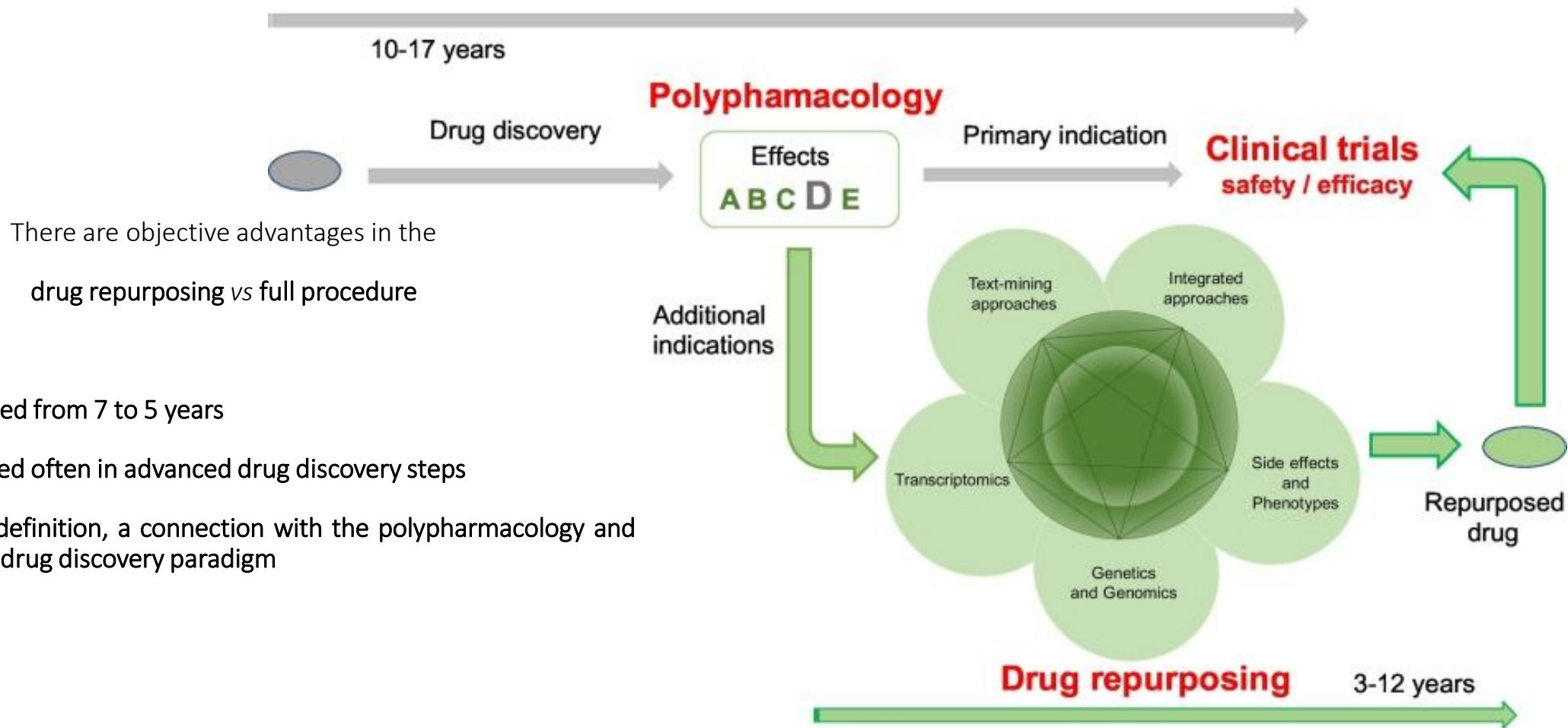
Net4Science





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One drug — Multiple target Polypharmacology & Drug Repurposing

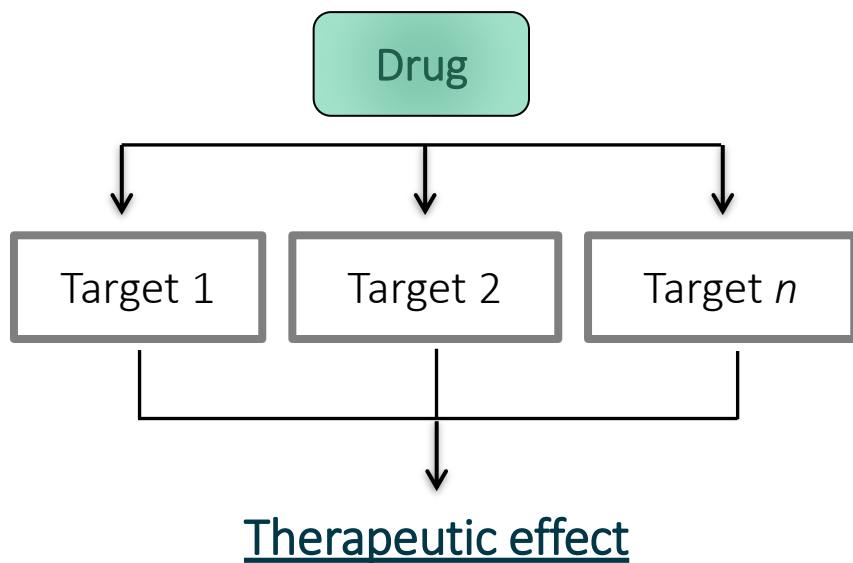


1. time is reduced from 7 to 5 years
2. money is saved often in advanced drug discovery steps
3. there is, by definition, a connection with the polypharmacology and multi-targeting drug discovery paradigm



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One drug — Multiple target Polypharmacology & Drug Repurposing



- ↑ Efficacy
- ↑ Drug-Drug Interaction
- ↑ Chemical incompatibility
- ↑ Toxicity



Alcaro, S. and Ortuso, F.; *Multi-target drug discovery: An opportunity for novel and repurposed bioactive compounds* Eur J Med Chem. 2020, 192, 112188



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Spin-off proposed by the Med Chem research Dipartimento di Scienze della Salute – UMG di Catanzaro



Pharma-Biotech

- Elucidation of chemical action/reaction mechanisms
- Multi-target drug optimization
- Repurposing of proprietary compounds



Agri-food Nutraceuticals

- Identification of natural bioactive components
- Poly-pharmacological profiling
- Valorization of typical natural products



Expert Training

- Enhancing the multi-target / poly-pharmacology knowledge
- Advanced courses for professional experts
- Linking complementary skills



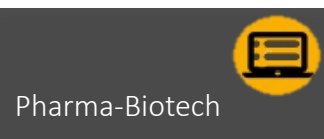
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Spinoff Profile



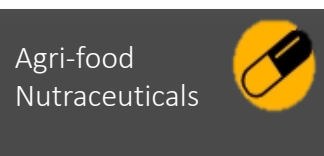
Net4Science is an academic spinoff that offers services to pharma/biotech and agrifood/nutraceutical companies interested to speed up the drug discovery process or to clarify the mechanism of action of their bioactive compounds.

N4S offers the following services:



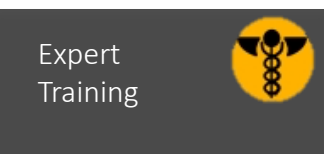
Pharma-Biotech

Development of specific platforms for the **multi-target** and **poly-pharmacology** drug discovery and applications to clients' case studies.



Agri-food
Nutraceuticals

Valorization, using the **poly-pharmacology** and **multi-target** paradigms, of bioactive natural components from typical agrifood products, with the purpose to promote their use as functional foods or nutraceuticals.




Expert
Training


Training experts in the field of **multi-target** and **poly-pharmacology** field, by means of formative events, meeting and schools.




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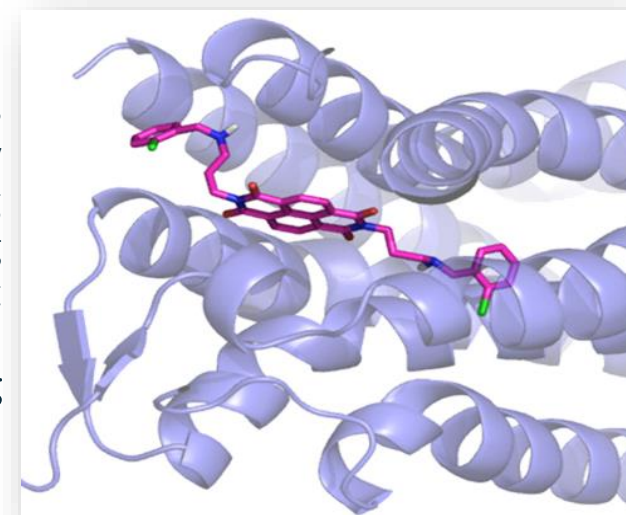


Pharma-Biotech 

Agri-food
Nutraceuticals 

Expert Training 


The preclinical services are based on a virtual platform specifically created for the client(s). It is based on the concept of Chemotheca, developed by our research team within the COST Action MuTaLig and designed to speed-up the **multi-target** drug discovery. Expected applications, manly against complex diseases, are related to **novel** identification bioactive **multi-target agents** or to the **drug repurposing**.






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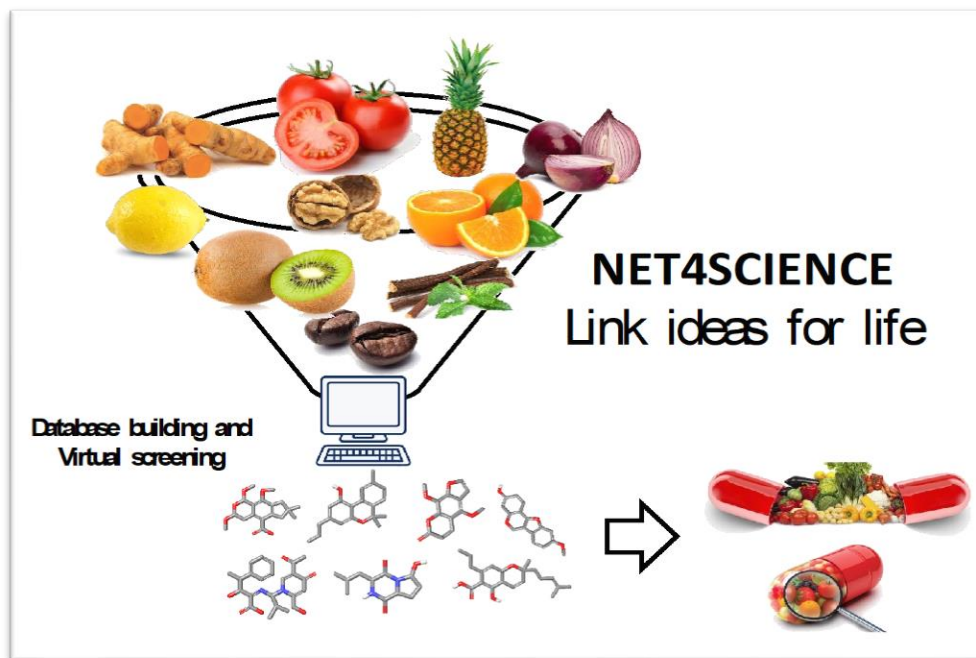
Pharma-Biotech 


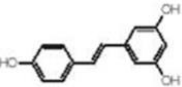

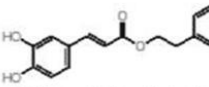



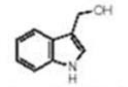

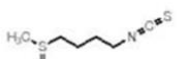
Agri-food
Nutraceuticals 

Expert Training 



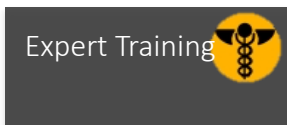
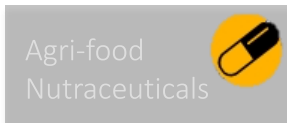
The agrifood/nutraceuticals world is often not characterized by hi-quality research and certification features. **Net4Science** proposes to companies and public institutions to support the identification and valorization of natural components by means of the **multi-target** and **poly-pharmacology** paradigm. The expected applications can involve typically Mediterranean, Exotic and Asian natural sources.



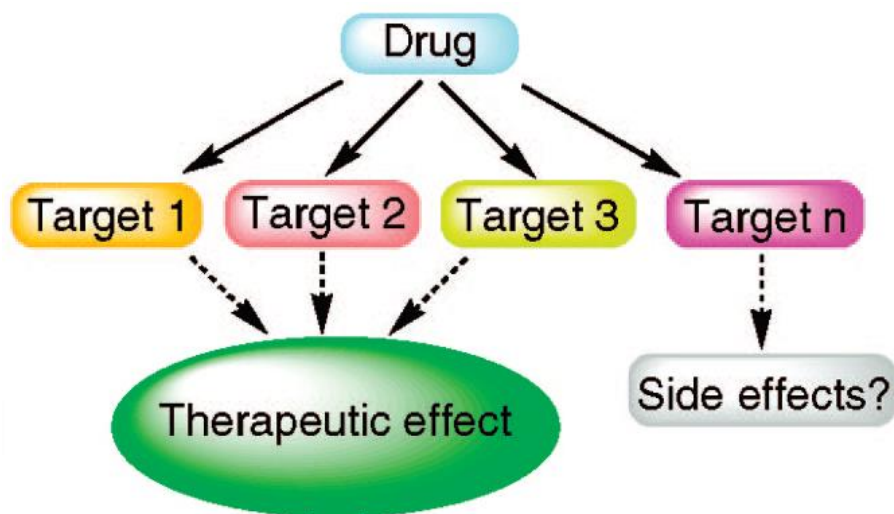
	 Resveratrol
	 Caffeic acid phenethyl ester
	 Diallyl sulphide
	 Indole-3-carbinol
	 Sulphoraphane



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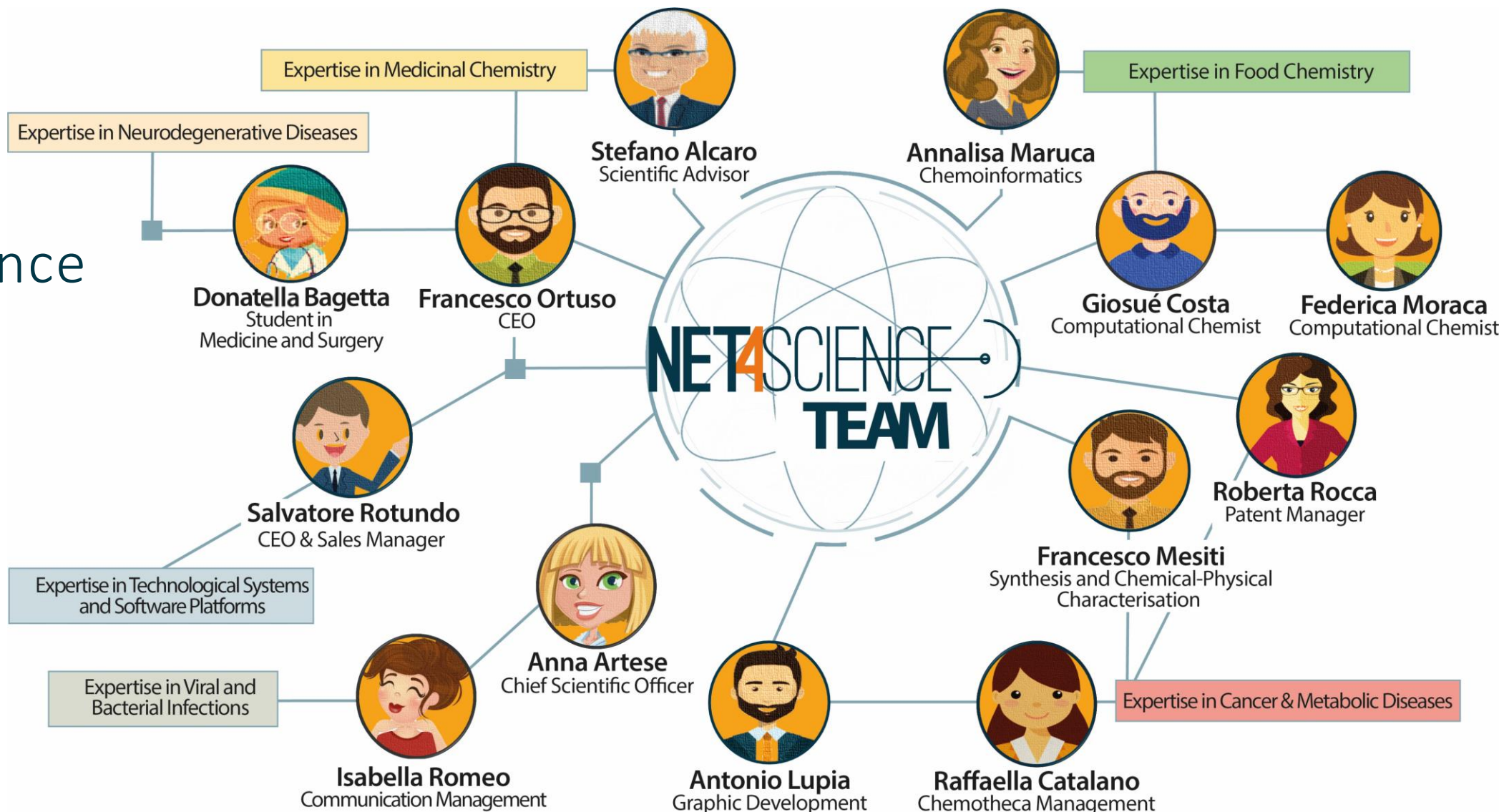
There are no experts in the fields of **multi-target** and **poly-pharmacology**. Masters and specific PhD programs require the cooperation among Universities, Private and Public institutions. **Net4Science** will promote this network focusing on the state-of-the-art scientific knowledge maturing in the last few years.





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Net4Science Team



The components of **N4S** team achieved economic / business skills through **"TalentLab Course"** specialization within *Calabrialnova Project*



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Link Ideas for Life

Welcome to the official
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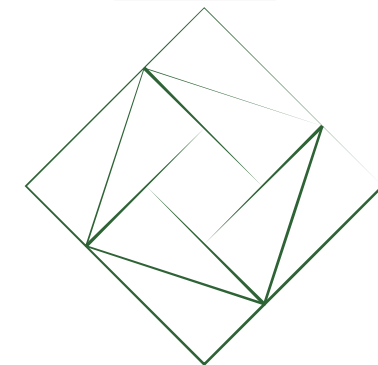


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2021: cooperation with CRISEA



Net4Science starts formally its collaboration with CRISEA center in April 2021. The agreement is based on mutual benefits essentially for scientific and training purposes.



CRISEA



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2021: cooperation with CRISEA



- Peer reviewed publications in nutraceutical field
- International scientific meetings
- Mobility of PON PhD students and COVID FISR project
- Dissemination event with MUR PON R&I





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Peer reviewed publications in nutraceutical field



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Abstract

*Natural products.
The next frontier against Alzheimer's Disease?*

Journal of
**Medicinal
Chemistry**

ACS Publications



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International Scientific meetings



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MedChem2021

Paul Ehrlich Virtual Meeting

July 26th - 28th

#PEVM2021



#PEVM2021



ORGANIZED BY



P Ehrlich



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Scientific network in 2021



Mobility of PON PhD students



UNIVERSITÀ
DEGLI STUDI
DI PALERMO

COVID FISR project



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DEGLI STUDI
DI CAGLIARI



UNIVERSITÀ
DI PAVIA

UNIVERSITA' DEGLI STUDI DI ROMA
 **TorVergata**



Università
di **Genova**



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Dissemination event with PON R&I



Net4Science has continued its experience in the dissemination and active meeting participation. **Net4Science YouTube channel** directly linked at our web site describes them. These activities started immediately after the COVID-19 emergency.



3rd Net4Science workshop:

“Ricerca scientifica e valorizzazione aziendale”

La nutraceutica nell’innovazione rurale e agroindustriale

presso la sala convegni del Centro CRISEA - Località Condoleo, Belcastro (CZ)
Sabato 18 Dicembre 2021 - ore 09:30



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Diretta Live sul canale





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THANK YOU!



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