

## EDUCATION

- Sept. 2010 Doctor of Philosophy in Chemistry, The University of Warwick, UK  
*Equipollenza*: riconosciuto equipollente al titolo di Dottore di Ricerca ai sensi del DPR 11 luglio 1980, n. 382 con decreto MIUR, Prot.n.0000506 - 14/03/2017
- Nov. 2006 Diploma di Laurea in Chimica (5 years Chemistry degree), University of Trieste, IT

## HABILITATIONS (ITALIAN ASN)

- Full Professor (ASN fascia I) Biophysics (02/D1 - FISICA APPLICATA, DIDATTICA E STORIA DELLA FISICA)  
Biochemistry (05/E1 - BIOCHIMICA GENERALE)
- Professor (ASN fascia II) Theoretical Physics - Soft Matter (02/B2 - FISICA TEORICA DELLA MATERIA)  
Physical Chemistry (03/A2 - MODELLI E METODOLOGIE PER LE SCIENZE CHIMICHE)  
Chemistry (03/B1 - FONDAMENTI DELLE SCIENZE CHIMICHE E SISTEMI INORGANICI)  
Chemical Technologies (03/B2 - FONDAMENTI CHIMICI DELLE TECNOLOGIE)

## POSITIONS

- Nov. 2023 - Consultant for peptides and antibodies software development (Product Manager)  
Nov. 2024 Cresset, Cambridge, UK
- Nov. 2021 - Research Collaborator and Project PI  
Nov. 2023 Istituto Italiano di Tecnologia (IIT), Genova, IT  
*Project*: **Computational design of theragnostic nanobodies: targeting missense mutants in metastatic breast cancer cells**  
*Funding*: AIRC - Italian Association for Cancer Research (2021-2025 PI: S. Fortuna)
- Nov. 2018 - Researcher / Assistant Professor  
Ott. 2021 Dept. of Chemical and Pharmaceutical Sciences (DSCF), University of Trieste, IT
- Nov. 2017 - Postdoctoral Researcher and Junior PI  
Nov. 2018 Dept. of Chemical and Pharmaceutical Sciences (DSCF), University of Trieste, IT  
*Project*: **Computational design of customised nanobodies for oncology applications: prognostic candidates for HER2 as first case**  
*Funding*: AIRC - Italian Association for Cancer Research (2017-2020 PI: S. Fortuna)
- Apr. 2016 - Talents3 fellow  
Sep. 2017 University of Nova Gorica, Slovenia & SISSA, Trieste, IT  
*Group*: Prof. Ario de Marco and Prof. Alessandro Laio  
*Project*: **Computational design of customised nanobodies for biotechnological applications: the optimisation of stable humanised, high affinity therapeutic candidates for HER2 as first test case**  
*Funding*: Area Science Park, IT, European Social Fund - 2014/2020 Regional Operative Programme (proposal NB4HER2, 2016-2017 PI: S. Fortuna)
- Nov. 2013 - Postdoctoral Researcher and Coordinator of the MoNaLiSA Theory Group  
Mar. 2016 Department of Medical and Biological Sciences, University of Udine, IT  
*Group*: Prof. Giacinto Scoles  
*Project*: **Multiscale Modelling for the development of novel peptide-based nanodevices**  
*Funding*: 7FP, Ideas, ERC Advanced Grant: Molecular Nanotechnology For Life Science Application: QUantitative Interactomics for Diagnostics, Proteomics and QUantitative Oncology, (Quidroquo) (proposal n. 269025, 2011-2016 PI: G. Scoles)

Oct. 2012 -  
Sep. 2013 Postdoctoral Researcher  
Department of Medical and Biological Sciences, University of Udine, IT  
Group: Prof. Giacinto Scoles  
Project: **Molecular Simulations for Nanomedicine**  
Funding: AIRC 5x1000 Special program 2011: Application of advanced Nanotechnology in the development of Cancer Diagnostics tools (Rif. 12214, 2012-2014, PI: G. Toffoli, Co-PI: G. Scoles)

Oct. 2010 -  
Sept. 2012 Postdoctoral Researcher  
CNR-IOM and Sissa, Trieste, IT  
Project: **Computational microscopy and spectroscopy of metal-supported organometallic nanostructures**  
Funding: PRIN - MIUR, IT: Controlling the structure and function of metallorganic nanostructures on metal surfaces (2010-2013, PI: M.G. Betti, Co-PI: S. Fabris)

Mar. 2007 -  
Jul. 2010 Graduate Student (Supervisor: Prof. A. Troisi), Department of Chemistry and Centre for Scientific Computing, University of Warwick, UK  
Project: **Modelling Techniques for the study of Molecular Self-Organisation**  
Funding: The Leverhulme Trust: Agent Based Modeling of molecular self-organization (2007-2010, PI:A.Troisi)

**MEMBERSHIPS** Committee Member of the IOP Liquids and Complex Fluids Group (2015-2019)  
Associate Member of the Institute of Physics (IOP, 2008-)  
Associate Member of the Royal Society of Chemistry (RSC, 2008-)  
Member of the European Physical Society (EPS, 2017-)  
Member of the Biochemical Society (2017-)

#### ORGANISATION OF SCIENTIFIC MEETINGS

2017 Organiser  
IOP Workshop: **Self-Assembly, Recognition and Applications (SARA) 2017**  
14 Dec.2017, Lincoln, UK

2016 Organiser  
IOP Workshop: **Self-Assembly, Recognition and Applications (SARA) 2016**  
9 Dec.2016, Edimburgh, UK

#### PEER REVIEW

PRIZES IOP Liquids and Complex Fluids Group

JOURNALS J. Chem. Theory Comput., J. Phys. Chem. B/C/Lett, ACS Chem. Neurosci., ACS Comb. Sci., J. Chem Inf. Model. (ACS), Surf. Sci., J. Mol. Struct. (Elsevier), J. Biomol. Struct. Dyn. , Free Radic. Res. (Taylor & Francis), Microb. Cell. Fact. (BioMed Central), Int. J. Mol. Sci. (MDPI), Sci. Rep. (Springer Nature).

GRANTS I am scientific referee for the following National Science Councils:

- National Research Foundation of South Africa (NRF, 2015-2017)
- Irish Research Council (2017-)
- National Science Center, Poland (Narodowe Centrum Nauki, NCN, 2019-)
- Ministry of Education, University, and Research, Italy (MIUR, 2019 -)

## Funding Record

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### RESEARCH GRANTS AS PI

- 2021-2024 **Investigator Grant (IG), Italian Association for Cancer Research - AIRC (IT)**  
Computational design of theragnostic nanobodies: targeting missense mutants in metastatic breast cancer cells (PI; 409,000€; 5 years)
- 2021-2022 **Annual Open Grant, Alternatives Research & Development Foundation - ARDF (US)**  
De-novo engineered antibody fragments: validation of the first in-silico pipeline for antibody discovery (PI; 40,000\$; 1 year)
- 2019-2020 **Annual Open Grant, Alternatives Research & Development Foundation - ARDF (US)**  
In silico design of customised high-affinity antibody fragments (PI; 39,980\$; 1 year)
- 2017-2020 **My First Airc Grant (MFAG), Italian Association for Cancer Research - AIRC (IT)**  
Computational design of customised nanobodies for oncology applications: prognostic candidates for HER2 as first case (PI; 225,000€; 3 years)
- 2017 **Research Fund, The Royal Society of Chemistry (UK)**  
Computational design of bidentate binders of increased affinity and selectivity (PI; £2,800; 1 year)
- 2016-2017 **Talents3 Research Fellowship, European Social Fund - 2014/2020 Regional Operative Programme**  
Computational design of customised nanobodies for biotechnological applications: the optimisation of stable, humanised, high affinity therapeutic candidates for HER2 as first test case (PI; 52,380€; 18 months)

### RESEARCH GRANTS AS CO-PI, WP LEADER, OR TEAM MEMBER

- 2022-2026 **Marie Skłodowska-Curie Innovative Training Networks (MSCA-ITN-2021), Horizon 2020, European Commission**  
STOP SPREAD BAD BUGS: novel antimicrobial approaches to combat multidrug resistance in bacteria  
(workgroup leader, 130,000€; project: 4,028,713.19€; 4 years)
- 2021-2023 **PRIN 2020 (Under 40), The Ministry of Education, University and Research, MIUR, Italy**  
Targeting baCteriAl cell eNvelope of Nocosomial paThogens to ESKAPE resistance  
(Team Member; Unit PI: Rita De Zorzi, University of Trieste, 114,000€; PI: F. Squeglia; project: 489,928€; 3 years)
- 2021-2023 **Marie Skłodowska-Curie Individual Fellowships (MSCA-IF-2020), Horizon 2020, European Commission**  
Sustainable route for circularity of renewable polyesters (RenEcoPol)  
(Team Member; Beneficiary: Anamaria Todea, University of Trieste; Supervisor: Lucia Gardossi; 2 years)
- 2020-2024 **Marie Skłodowska-Curie Innovative Training Networks (MSCA-ITN-EID-2020), Horizon 2020, European Commission**  
Heterogenous biocatalytic reaction cascades training network (INTERfaces)  
(Team Member; local PI: Lucia Gardossi, University of Trieste; project: 3,709,260€; 4 years)

## OTHER FUNDING, AWARDS, AND PRIZES

Feb. 2020	University Research Fund for Young Researchers (FRA, 1 year, 3.000), 2020-2021
Jun. 2016	The Royal Society of Chemistry: Small Grant for Scientific Activities (£732)
Apr. 2016	ERASMUS+ (600€)
Mar. 2016	The Royal Society of Edinburgh and Accademia Nazionale dei Lincei (1,000€)
Jun. 2014	The Royal Society of Edinburgh and Accademia Nazionale dei Lincei (1,600€)
Oct. 2012	SISSA young scientists competition (10,000€)
Jun. 2011	SISSA young scientists competition (6,000€)
Jul. 2009	RSC travel bursaries for conferences attendance (IUPAC conference, £95 and Faraday Discussion, £150)
Jul. 2006	University of Illinois travel bursary (700€) for Summer School attendance

## COMPUTATIONAL GRANTS AS PI

Since 2010 I have been awarded CPU/GPU time with continuity by CINECA (the Italian supercomputing centre for scientific research) and from PRACE (Partnership for Advanced Computing in Europe)

Apr. 2020 - Apr. 2021	CINECA-ISCRA Class B proposal (576,000 GPU hours on M100@CINECA) <b>Computational design of highly specific nanobodies for HER2 isoforms recognition</b>
Nov. 2019 - Ago. 2020	CINECA-ISCRA Class C proposal (36,000 GPU hours on Marconi@CINECA) <b>Targeting the sigma-1 receptor with diazepam scaffold based molecules</b>
May. 2019 - Feb. 2020	CINECA-ISCRA Class C proposal (33,600 GPU hours on Marconi@CINECA) <b>Computational design of peptides for capturing beta-2-microglobulin</b>
Jul. 2018 - Apr. 2019	CINECA-ISCRA Class C proposal (40,000 GPU hours on Marconi@CINECA) <b>Ex-novo optimisation of antibodies fragments</b>
Feb. 2018 - May 2019	CINECA-ISCRA Class B proposal (480,000 GPU hours on Marconi@CINECA) <b>Computational design of customised nanobodies for HER2 recognition</b>
Nov. 2017 - Aug. 2018	CINECA-ISCRA Class C proposal (40,000 GPU hours on Marconi@CINECA) <b>Computational design of peptides for lysozyme recognition</b>
May. 2017 - Feb. 2018	CINECA-ISCRA Class C proposal (38,400 GPU hours on Marconi@CINECA) <b>Scoring functions assessment for nanobodies screening</b>
Jul. 2016 - Apr. 2017	CINECA-ISCRA Class C proposal (50,000 GPU hours on Marconi@CINECA) <b>Predicting the properties of peptoids by molecular dynamics simulations</b>
Nov. 2015 - Dec. 2015	PRACE Preparatory Access (5000 MIC hours on Marenstrum, Spain + 50000 GPU hours on Curie, France) <b>Effect of humanizing mutations on natural nanobodies for the development novel therapeutic agents</b>
Aug. 2015 - May 2016	CINECA-ISCRA Class C proposal (100,800 GPU hours on Galileo@CINECA) <b>Effect of humanising mutations on natural nanobodies for the development novel therapeutic agents</b>
Sep. 2014 - Jul. 2015	CINECA-ISCRA Class C proposal (48,000 GPU hours on Eurora@CINECA) <b>Identification of chemokine receptor/ligand binding configurations for the development enhanced binders for biomolecular recognition</b>
Jul. 2013 - Apr. 2014	CINECA-ISCRA Class C proposal (1,000,000 CPU hours on Fermi@CINECA) <b>Scoring functions Assessment for the development of new peptide-based nanodevices</b>
Oct. 2012 - Oct. 2013	CINECA-ISCRA Class B proposal (3,609,600 CPU hours on Fermi@CINECA) The GW method for the accurate simulation of the photoemission spectra of metal supported metal-phthalocyanine self-assemblies
Oct. 2012 - Jul. 2013	CINECA-ISCRA Class C proposal (1,998,850 CPU hours on Fermi@CINECA) Self-assembled monolayers for the decoupling of molecules from their metallic substrate
Dec. 2011- Dec. 2012	CINECA-ISCRA Class B proposal (161,280 CPU hours on SP6@CINECA): Molecule-substrate interplay and spectroscopic properties of metal-supported metal-phthalocyanine
Sep. 2011 - Jun. 2012	CINECA-ISCRA Class C proposal (20,000 CPU hours on SP6@CINECA) DFT methods for the study of metal phthalocyanine
Dec. 2010 - Sep. 2011	CINECA-ISCRA Class C proposal (20,000 CPU hours on SP6@CINECA) Metalphthalocyanine self-assemblies on metallic surfaces

## Teaching and Supervising

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### TEACHING APPOINTMENTS

2019 - 2021 Assistant Professor, Department of Chemical and Pharmaceutical Sciences, University of Trieste, IT, for the following courses:

2020/2021

- *Drug Analysis (Analisi dei Medicinali)*  
Pharmacy (5 years degree), third year students, summer term, 128 hrs.
- *Molecular Modelling for Life Sciences*  
PhD School in Chemistry, winter term, 16 hrs.
- *Molecular Modelling for Life Sciences*  
Seminar Series for the Marie Skłodowska-Curie Innovative Training Network PhD students, winter term, 16 hrs.

2019/2020

- *Drug Analysis - module (Analisi dei Medicinali - modulo)*  
Pharmacy (5 years degree), third year students, summer term, 60 hrs.
- *Molecular Modelling (Principi di Modellazione Molecolare)*  
Pharmaceutical Chemistry and Technology (CTF, 5 years degree), fourth year students, summer term, 32 hrs.

2016 -  
2017

External Lecturer, Molecular Genetics and Biotechnology PhD, University of Nova Gorica, Slovenia:  
• contributed lectures for the course *Basics in Molecular Biology and Biotechnology* (2hrs)

2014 -  
2018

Contract Professor of *Computer Science - Practical Applications (Idoneità informatica pratica)*, Department of Chemical and Pharmaceutical Sciences, University of Trieste, IT, for the following degrees:  
• Pharmacy (5 years), first year students, summer term, 88 hrs;  
• Pharmaceutical Chemistry and Technology (CTF, 5 years), first year students, winter term, 48 hrs.

Modules taught:

academic year 2017/18

*Practical Informatics (Idoneità informatica pratica)*, Pharmacy, summer term, 88 hrs.  
*Practical Informatics (Idoneità informatica pratica)*, CTF, winter term, 48 hrs.

academic year 2016/17

*Practical Informatics (Idoneità informatica pratica)*, Pharmacy, summer term, 88 hrs.  
*Practical Informatics (Idoneità informatica pratica)*, CTF, winter term, 48 hrs.

academic year 2015/16

*Practical Informatics (Idoneità informatica pratica)*, Pharmacy, summer term, 88 hrs.  
*Practical Informatics (Idoneità informatica pratica)*, CTF, winter term, 48 hrs.

academic year 2013/14

*Practical Informatics (Idoneità informatica pratica)*, Pharmacy, summer term, 78 hrs.

2008 -  
2010

Laboratory Demonstrator for Undergraduate Students, Department of Chemistry, University of Warwick, UK:  
• 1st year *Mathematics* (10hrs, 160 students);  
• 2nd year *Statistical Mechanics Workshop* (6hrs, 100 students);  
• 3rd year *Computational Chemistry Workshop* (2hrs, 100 students).

### MENTORING AND SUPERVISING

- Federico Nolasco (PhD student, Nov.2021-Nov.2024)  
*Characterisation of antibody fragments*
- Patricio German Barletta (ICTP-TRIL postdoctoral fellow, since Aug.2021-Aug.2023)  
*In silico design of customised high-affinity antibody fragments*
- Marco De Conto (predoctoral, MSc Pharmaceutical Chemistry and Technology)  
*Computational design of biotheranostics*
- Theo Battista (postdoctoral fellow, Jul.2021 - Jun. 2022)  
*Expression and purification of antibody fragments for oncology applications*
- Nikola Minovski (postdoctoral fellow, Mar. 2020 - Feb. 2021)

*In silico design of customised high-affinity antibody fragments*

- Hendrik Vondracek (postdoctoral fellow, Nov. 2019 - Feb. 2021)

*Atomic Force Microscopy (AFM) and electrochemical measurements*

- Barbara Medagli (postdoctoral fellow, Oct. 2017 - Sep. 2020)

*Expression and purification of antibody fragments for oncology applications*

- Luciana Gneo (postdoctoral fellow, Dec. 2017 - May 2019)

*Characterisation of antibody fragments for oncology applications (AFM)*

- Cedrix Dongmo (predoctoral ICTP-TRIL fellow, Jan. 2014 - Oct. 2014)

*Molecular Dynamics simulations of biomolecules*

#### **THESIS (Co)SUPERVISOR**

- 2022
- Marco De Conto (MSc Pharmaceutical Chemistry and Technology) University of Trieste, Trieste, Italy  
Thesis: *In silico design of antibody fragments for (bio)molecular detection and theragnostic applications: the example of p53 reactivation*
- 2021
- Damiano Baroni (MSc Chemistry), University of Trieste, Trieste, Italy  
Thesis: *Computational Methods for the rational mutagenesis of cutinaes*
  - Sara Raso (MSc Medical and Pharmaceutical Biotechnologies)  
Thesis: *Dall'ottimizzazione in silico alla provetta: produzione, caratterizzazione di nanobody e test preliminari su linee cellulari di carcinoma mammario Her2 positive come nuova prospettiva per il cancro al seno*
- 2017
- Katja Pracek (BSc Bioinformatics), University of Primorska, Koper, Slovenia  
Thesis: *Homology modeling and molecular simulations of the camelid nanobodies as therapeutic tools in the treatment of sarcoma*

#### **PHD THESIS EXTERNAL EXAMINER**

- 2019
- Ornela Maloku, PhD program in Computer science, Mathematics and Physics, University of Udine, Italy
- 2018
- Nikhil Agrawal, School of Pharmacy and Pharmacology, University of KwaZulu-Natal, Durban, South Africa

## Conferences Contributions: Oral

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- (16) *A computational protocol for the in silico maturation of antibody fragments*  
European Biophysical Societies' Association Global Summit - EBSA 2023  
Stockholm, Sweden (31 Jul. - 4 Aug. 2023)
- (16) *Automatic screening of enzymes for synthesis and biodegradation of renewable polyesters*  
COZYME - Computational Redesign of Enzymes Meeting - Fuengirola, Spain (March 20, 2023)
- (14) *A Computational Protocol for the in Silico Maturation of Antibody Fragments*  
CLINAM 12/2020 Conference and Exhibition: European & Global Summit for Cutting-Edge Medicine  
Basel, Switzerland (25-28 Oct. 2020).
- (13) *Computational design of peptide based architectures for biomarker recognition*  
CLINAM 9/2016 Conference and Exhibition: European & Global Summit for Cutting-Edge Medicine  
Basel, Switzerland (26-29 Jun. 2016).
- (12) *Self-organisation of surface adsorbed molecular monolayers: does the surface matter?*  
Nanomaterials for Technology Workshop - Department of Chemical and Process Engineering, University of Strathclyde, Glasgow, UK (20-21 Jun. 2016).
- (11) *Computational design of peptide-based architectures for protein recognition*  
IOP Conference: The Physics of Soft and Biological Matter 2016  
Cambridge, UK (6-8 Apr. 2016).
- (10) *Computationally engineered binders for protein recognition*  
Workshop in honor of Giacinto Scoles: From Intermolecular Forces to Frontiers in Nanoscience and Nanomedicine - ICTP, Trieste, Italy (21-22 Jan. 2016).
- (9) *Computational design of peptide based binders for biomarker recognition*  
EMBO Workshop: Advances in Protein-Protein Interaction Analysis Modulation  
Hyères, France (9-12 Sep. 2014).
- (8) *Structure of self-assembled iron-phthalocyanines on the Au(110) surface through STM imaging and DFT calculations*  
Science through Scanning Probe Microscopy - Bologna, Italy (12-13 Dec. 2013).
- (7) *Structure and electronic properties of self-assembled transition metal phthalocyanines (M=Fe,Co,Ni,Cu,Zn) on the Au(110) surface*  
CMD-24, ECOSS-29, ECSCD-11, CMMP-12  
Edinburgh International Conference Centre, Edimburgh, UK (3-7 September 2012).
- (6) *Self-organisation of surface adsorbed molecular monolayers: an agent-based view*  
Thomas Young Centre workshop: Thermodynamics and Kinetics of Surfaces and Interfaces from Simulations - University College London, UK (22-24 Jun. 2011).
- (5) *Agent Based modelling of realistic molecules*  
ECCS'10 European Conference on Complex Systems - Lisbon, Portugal (13-17 Sep. 2010).
- (4) *Monte Carlo simulation of polydisperse spheres on a spherical droplet*  
CCP5 Workshop: Particle Adsorption at Soft Interfaces  
University of Warwick, UK (8 Jul. 2010).
- (3) *Agent Based algorithm for the study of molecular self-organisation*  
European Conference on Complex Systems  
University of Warwick, UK, (21-25 Sep. 2009).
- (2) *Agent Based modelling for molecular self-organisation*  
European Dynamics Days 2009  
Göttingen, Germany (31 Aug. - 4 Sep. 2009).
- (1) *Agent Based algorithm for the study of molecular self-organisation*  
EPSRC Network Mathematical Challenges of Molecular Dynamics  
University of Bath, UK (13-15 Jul. 2009).

## Invited Seminars

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- (16) *Computational design of peptide-based architectures for protein recognition* - Department of Physics, University of Lisboa, Portugal (9 October 2019).
- (15) *Computational design of peptide-based architectures for protein recognition* - Department of Computational Biochemistry and Drug Design, Kemijski intitut (KI) - National Institute of Chemistry, Ljubljana, Slovenia (21 May 2018).
- (14) *Computational design of peptide-based architectures for protein recognition* - Department of Biological Sciences and Engineering, University of Nova Gorica, Vipava, Slovenia (16 May 2017).
- (13) *Computational design of peptide-based architectures for protein recognition* - Faculty of Chemistry, University of Murcia, Spain (20 May 2016).
- (12) *Computational design of peptide-based architectures for protein recognition* - Department of Chemistry University of Sheffield, Sheffield, UK (29 Apr. 2016).
- (11) *Computational design of peptide-based architectures for protein recognition* - Department of Chemical and Process Engineering, University of Strathclyde, Glasgow, UK (2 Mar. 2016).
- (10) *Computational design of peptide-based nano-devices* - MoNaLiSA Fourth Midsummer Meeting, ELETTRA Synchrotron Light Laboratory, Trieste, Italy (5 Jun. 2015).
- (9) *Coupled binders for the development of novel nanodevices for protein recognition* - MoNaLiSA Third Midsummer Meeting, Department of Medical and Biological Sciences, University of Udine, Italy (11 Jul. 2014).
- (8) *Estimating peptides-protein binding affinities for the development of new peptide-based nanodevices for protein recognition* - MoNaLiSA Second Midsummer Meeting, Department of Medical and Biological Sciences, University of Udine, Italy (26 Jul. 2013).
- (7) *Auto-assemblamento molecolare tra laboratorio e calcolatore* (Molecular self-assembly through laboratory and computer), Department of Medical and Biological Sciences, University of Udine, Italy (7 Mar. 2013).
- (6) *Modelling techniques for the study of self-organised surface adsorbed molecular monolayers* - Department of Information Sciences, Ochanomizu University, Tokyo, Japan (24 Jul. 2012).
- (5) *Agent Based Modelling for the study of Molecular Self-Organisation* - Physics Department, University of Modena, Italy (19 May 2011).
- (4) *Agent Based Modelling for the study of Molecular Self-Organisation* - ELETTRA Synchrotron Light Laboratory, Trieste, Italy (7 Apr. 2010).
- (3) *Agent Based Modelling for the study of Molecular Self-Organisation* - Complexity Forum, Complexity Science Doctoral Training Centre, University of Warwick, UK (17 Feb. 2010).
- (2) *An Agent-Based Model for Molecular Self-Organization* - CSC@Lunch Seminars, Centre for Scientific Computing, University of Warwick, UK (2 Feb. 2009).
- (1) *Il caos quantistico nelle reazioni chimiche triatomiche* (Quantum Chaos in Triatomic Chemical Reactions) - Chemistry Department, University of Perugia, Italy (30 Jan. 2007).



## REFEREED PAPERS IN JOURNALS:

1. S. La Manna, A. Cugudda, F.A. Mercurio, M. Leone, S. Fortuna, C. Di Natale, E. Lagreca, P.A. Netti, V. Panzetta, D. Marasco  
**PEGylated SOCS3 Mimetics Encapsulated into PLGA-NPs as Selective Inhibitors of JAK/STAT Pathway in TNBC Cell**  
*Int. J. Nanomedicine*, 2024, 19, 7237-7251.
2. G.P. Barletta, R. Tandiana, M. Soler, S. Fortuna\*, W. Rocchia  
**Locuaz: an in silico platform for protein binders optimization**  
*Bioinformatics*, 2024, 40 (8), btae492.
3. D. Zampieri, M. Romano, S. Fortuna, E. Amata, M. Dichiarà, G. Cosentino, A. Marrazzo, M.G. Mamolo  
**Design, Synthesis, and Cytotoxic Assessment of New Haloperidol Analogues**  
*Molecules*, 2024, 29(11), 2697.
4. M. Iacomino, N. Houerbi, S. Fortuna, J. Howe, S. Li, G. Scorrano, A. Riva, K.-W. Cheng, M. Steiman, I. Peltekova, A. Yusuf, S. Baldassari, S. Tamburro, P. Scudieri, I. Musante, A. Di Ludovico, S. Guerrisi, G. Balagura, A. Corsello, S. Efthymiou, D. Murphy, P. Uva, A. Verrotti, C. Fiorillo, M. Delvecchio, A. Accogli, M. Elsabbagh, H. Houlden, S.W. Scherer, P. Striano, F. Zara, T.-F. Chou, V. Salpietro  
**Allelic heterogeneity and abnormal vesicle recycling in PLAA-related neurodevelopmental disorders**  
*Front. Mol. Neurosci.*, 2024, 17, 1268013.
5. R. Tandiana, G.P. Barletta, M.A. Soler, S. Fortuna\*, W. Rocchia  
**Computational Mutagenesis of Antibody Fragments: Disentangling Side Chains from G Predictions**  
*J. Chem. Theory Comput.*, 2024, 20, 6, 26302642.
6. A.R. Buzatu, M.A. Soler, S. Fortuna, O. Ozkilinc, D.M. Dreavă, I. Bitcan, V. Badea, P. Giannozzi, F. Fogolari, L. Gardossi, F. Peter, A. Todea, C.G. Boeriu  
**Reactive natural deep eutectic solvents increase selectivity and efficiency of lipase catalyzed esterification of carbohydrate polyols**  
*Catal. Today*, 2024, 426, 114373.
7. A.R. Buzatu, M.A. Soler, O. Ozkilinc, S. Fortuna, D.M. Dreavă, I. Bitcan, P. Giannozzi, F. Fogolari, L. Gardossi, F. Peter, A. Todea, C.G. Boeriu  
**Lipase-catalysed esterification in a reactive natural deep eutectic solvent leads to lauroylcholine chloride rather than glucose ester**  
*React. Chem. Eng.*, 2024, 9, 2623-2634.
8. G. Scorrano, G. DOnofrio, A. Accogli, M. Severino, R. Buchert, U. Kotzaeridou, G. Iapadre, G. Farello, M. Iacomino, F. Dono, L. Di Francesco, M.F. Fiorile, S. La Bella, A. Corsello, E. Caln, G. Di Rosa, E. Gitto, A. Verrotti, S. Fortuna, M.A. Soler, F. Chiarelli, B. Oehl-Jaschkowitz, T.B. Haack, F. Zara, P. Striano, V. Salpietro  
**A PAK1 mutational hotspot within the regulatory CRIPaK domain is associated with severe neurodevelopmental disorders in children**  
*Pediatr. Neurol.*, 2023, 149, 84-92.
9. D. Zampieri, A. Calabretti, M. Romano, S. Fortuna, S. Collina, E. Amata, M. Dichiarà, A. Marrazzo, M.G. Mamolo  
**Cytotoxicity profiles and neuroprotective properties of the novel ifenprodil analogues as sigma ligands**  
*Molecules*, 2023, 28(8), 3431.
10. M.A. Soler, N. Minovski, W. Rocchia, S. Fortuna\*  
**Replica-exchange optimization of antibody fragments**  
*Comput. Biol. Chem.*, 2023, 103, 107819.
11. A. Alsadig, B. Abbasgholi-NA, H. Vondracek, Ba. Medagli, S. Fortuna, P. Posocco, P. Parisse, H. Cabrera, L. Casalis  
**DNA-Directed Protein Anchoring on Oligo/Alkanethiol-Coated Gold Nanoparticles: A Versatile Platform for Biosensing Applications**  
*Nanomaterials*, 2023, 13(1), 78.

12. D. Zampieri, S. Fortuna, M. Romano, A. De Logu, G. Cabiddu, A. Sanna, M.G. Mamolo  
**Synthesis, Biological Evaluation and Computational Studies of New Hydrazone Derivatives Containing 1,3,4-Oxadiazole as Antitubercular Agents**  
*Int. J. Mol. Sci.*, 2022, 23(23), 15295.
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