Curriculum vitae

PERSONAL INFORMATION

Angelo N. Felline

+390592058592

anfelline@unimore.it

https://www.csbl.unimore.it/

ORCID 0000-0002-0417-8442

SKYPE angelofelline

Date of birth June 25, 1981 | Nationality Italian

WORK EXPERIENCE

2020 – Today Fixed-term Research Assistant

University Of Modena & Reggio Emilia – Department Of Life Sciences
Via Campi 103, 41125, Modena, Italy

PostDoctoral research fellow on the project:: *"Hyponatremia and syndrome of inappropriate antiduresis in cancer: integrated in silico, in vitro, and in vivo approaches towards the discovery of therapeutic agents targeting vasopressin signaling"*.

2019 – 2020 Post Doctoral Research Fellowship

University Of Modena & Reggio Emilia – Department Of Life Sciences
Via Campi 103, 41125, Modena, Italy

PostDoctoral research fellow on the project: *"Computational tools to infer the structural determinants of conformational diseases and discover/design small chaperones with therapeutic potential"* (PI: F. Fanelli), Fondo di Ateneo per la Ricerca 2018 (2018-2021).

2016 – 2019 Post Doctoral Research Fellowship

University Of Modena & Reggio Emilia – Department Of Life Sciences
Via Campi 103, 41125, Modena, Italy

PostDoctoral research fellow on the project: *"Genomic and pharmacological therapeutic approaches to target dominant mutations in Rhodopsin"* (PI di Unitá di Ricerca: F. Fanelli), Fondazione Roma Grant (2015-2019).

2014 – 2016 Post Doctoral Research Fellowship

University Of Modena & Reggio Emilia – Department Of Life Sciences
Via Campi, 41125, Modena, Italy

PostDoctoral research fellow on the project: *"Structure-based development of anti-cancer agents inhibiting the oncogenic activity of AKAP-Lbc"* (PI: F. Fanelli), AIRC grant N. IG14811 (2014-2018) .

2011 – 2014 Post Doctoral Research Fellowship

University Of Modena & Reggio Emilia – Department Of Chemistry (2011 – 2012), Department Of Life Sciences (2012 – 2014), Via Campi, 41125, Modena, Italy

PostDoctoral research fellow on the project: *"Integrated in Silico, in Vitro, and in Vivo Studies Towards the Design of Molecules with Therapeutic Potential for Retinitis Pigmentosa"* (PI: F. Fanelli), Telethon Italy Grant N. GGP11210 (2011-2014).

EDUCATION AND TRAINING

2008 – 2011

PhD in Neurosciences

University Of Modena & Reggio Emilia – Department Of Chemistry

Via Campi 183, 41125, Modena, Italy

Thesis Title: *Development of computational strategies for protein structural/dynamic analyses: focus on rhodopsin mutations associated with Retinitis Pigmentosa.*

2007

Telethon Foundation Fellowship

University Of Modena & Reggio Emilia – Department Of Chemistry

Via Campi 183, 41125, Modena, Italy

Title: *G protein-coupled receptors: structure-functional analysis of disease-causing mutations.*

2006

MS Degree in Medical Biotechnology

University Of Modena & Reggio Emilia, Modena, Italy

Department Of Chemistry, Faculty of Biosciences & Biotechnology.

Title: *Computational Modeling of Hormone-Independent Active States and Supramolecular Organization of the Thyrotropin Receptor.*

Score: 110/110 cum laude

PUBLICATIONS

Bibliographic Indexes Google Scholar

- **Papers:** 23; **Citations:** 731
- **H Index:** 14; **i10 Index:** 16

1. **A. Felline**, F. Raimondi, S. Gentile, F. Fanelli (2022) - Structural communication between the GTPase Sec4p and its activator Sec2p: Determinants of GEF activity and early deformations to nucleotide release. Comput. Struct. Biotechnol. J, Vol. 20, 2022, Pages 5162 - 5180.
2. **A. Felline**, M. Seeber, F. Fanelli (2022) PSNtools for standalone and web-based structure network analyses of conformational ensembles. Comput. Struct. Biotechnol. J. 20: 640-649.
3. **A. Felline**, D. Schiroli, A. Comitato, V. Marigo, F. Fanelli (2021) Structure network-based landscape of rhodopsin misfolding by mutations and algorithmic prediction of small chaperone action. Comput. Struct. Biotechnol. J. 19: 6020-6038.
4. F. Fanelli, **A. Felline**, V. Marigo (2021) Structural aspects of rod opsin and their implication in genetic diseases Pflügers Archiv-European Journal of Physiology 473: 1339-1359.
5. L. Bellucci, **A. Felline**, F. Fanelli (2020) Dynamics and structural communication in the ternary complex of fully phosphorylated V2 vasopressin receptor, vasopressin, and β-arrestin 1 BBA-Biomembranes 1862: 183355.
6. **A. Felline**, M. Seeber, F. Fanelli (2020) webPSN v2. 0: a webserver to infer fingerprints of structural communication in biomacromolecules. Nucleic Acids Research 48: W94-W103.
7. **A. Felline**, L. Belmonte, F. Raimondi, L Bellucci, F Fanelli (2019) Interconnecting flexibility, structural communication, and function in RhoGEF oncoproteins J. Chem. Inf. Model. 59: 4300-4313.
8. P. Behnen, **A. Felline**, A. Comitato, M. T. Di Salvo, F. Raimondi, S. Gulati, S. Kahremany, K. Palczewski, V. Marigo, F. Fanelli (2018) A Small Chaperone Improves Folding and Routing of Rhodopsin Mutants Linked to Inherited Blindness. iScience 4: 1-19.
9. **A. Felline**, M. Ghitti, G. Musco, F. Fanelli (2017). Dissecting intrinsic and ligand-induced structural communication in the β3 headpiece of integrins. Biochimica et Biophysica Acta - General Subjects 1861: 2367-2381.
10. **A. Felline**, S. Mariani, F. Raimondi, L. Bellucci, F. Fanelli (2017). Structural Determinants of Constitutive Activation of Gα Proteins: Transducin as a Paradigm. J. Chem. Theory Comput. 13: 886-899.
11. F. Fanelli, **A. Felline** (2017) Uncovering GPCR and G Protein Function by Protein Structure Network Analysis. In Computational Tools for Chemical Biology (Martin-Santamaria, S. Ed), Book series Chemical Biology (Series Eds. K. J. Weissman, S. Flitsch, N.J. Westood) The Royal Society of Chemistry Cambridge UK, N. 3, 198-220.
12. F. Fanelli, **A. Felline**, F. Raimondi, M. Seeber (2016). Structure network analysis to gain insights into GPCR function. Biochem. Soc. Trans. 44:613-618.
13. F. Raimondi, **A. Felline**, F. Fanelli (2015). Catching Functional Modes and Structural Communication in Dbl Family Rho Guanine Nucleotide Exchange Factors. J. Chem. Inf. Model. 55: 1878-1893.
14. M. Seeber, **A. Felline**, F. Raimondi, S. Mariani, F. Fanelli (2015). WebPSN: a web server for high throughput investigation of structural communication in bio-macromolecules. Bioinformatics 31: 779-781.
15. S. Mariani, D. Dell'Orco, **A. Felline**, F. Raimondi, F. Fanelli (2013). Network and atomistic simulations unveil the structural determinants of mutations linked to retinal diseases. PLoS Comput. Biol. 9: e1003207.
16. F. Raimondi, **A. Felline**, M. Seeber, S. Mariani, F. Fanelli (2013). A mixed Protein Structure Network and Elastic Network Model approach to predict the structural communication in biomolecular systems. J. Chem. Theory Comput. 9: 2504-2518.
17. F. Raimondi, **A. Felline**, G. Portella, M. Orozco, F. Fanelli (2013). Light on the structural communication in Ras GTPases. J. Biomol. Struct. Dyn. 31: 142-157.
18. F. Fanelli, **A. Felline**, F. Raimondi (2013). Network analysis to uncover the structural communication in GPCRs. Methods Cell. Biol. 117: 43-61.
19. F. Fanelli, M. Seeber, **A. Felline**, D. Casciari, F. Raimondi (2013). Quaternary structure predictions and structural communication features of GPCR dimers. Prog. Mol. Biol. Transl. Sci. 117:105-142.

PUBLICATIONS

20. F. Fanelli, **A. Felline** (2011). Dimerization and ligand binding affect the structure network of A(2A) adenosine receptor. Biochim. Biophys. Acta 1808: 1256-1266.
21. K. Angelova, **A. Felline**, M. Lee, M. Patel, D. Puett, F. Fanelli (2011). Conserved amino acids participate in the structure networks deputed to intramolecular communication in the lutropin receptor. Cell. Mol. Life Sci. 68: 1227-1239.
22. M. Seeber, **A. Felline**, F. Raimondi, S. Muff, R. Friedman, F. Rao, A. Caflisch and F. Fanelli (2011). Wordom: A user-friendly program for the analysis of molecular structures, trajectories, and free energy surfaces. J. Comput. Chem. 32: 1183-1194.
23. **A. Felline**, M. Seeber, F. Rao, F. Fanelli (2009). Computational screening of rhodopsin mutations associated with Retinitis Pigmentosa. J. Chem. Theory Comput. 5: 2472-2485.

GRANTS

2021 FAR 2021 Progetti Dipartimentali: *"Wordom: a user-friendly program for big-data analyses of conformational ensembles"*

PARTICIPATION IN FUNDED RESEARCH PROJECTS:

01/03/2020 – Today PRIN2017 (2019-2023) “Hyponatremia and syndrome of inappropriate antiduresis in cancer: integrated in silico, in vitro, and in vivo approaches towards the discovery of therapeutic agents targeting vasopressin signaling” (PI: F. Fanelli)

01/07/2019 – 28/02/2020 Fondo di Ateneo per la Ricerca 2018 (2018-2021) “Computational tools to infer the structural determinants of conformational diseases and discover/design small chaperones with therapeutic potential” (PI: F. Fanelli)

01/07/2016 – 30/06/2019 Fondazione Roma Grant (2015-2019) “Genomic and pharmacological therapeutic approaches to target dominant mutations in Rhodopsin” (PI di Unitá di Ricerca: F. Fanelli)

01/02/2014 – 31/01/2016 AIRC grant N. IG14811 (2014-2018) "Structure-based development of anti-cancer agents inhibiting the oncogenic activity of AKAP-Lbc" (PI: F. Fanelli)

01/01/2011 – 31/12/2014 Telethon Italy Grant N. GGP11210 (2011-2014) “Integrated in Silico, in Vitro, and in Vivo Studies Towards the Design of Molecules with Therapeutic Potential for Retinitis Pigmentosa” (PI: F. Fanelli)

TEACHING

A.A 2020 – 2021	Molecular Simulations & Precision Medicine (32h) – University Of Modena & Reggio Emilia – Master Degree in Medical Biotechnology
A.A 2021 – 2022	Molecular Simulations & Precision Medicine (32h) – University Of Modena & Reggio Emilia – Master Degree in Medical Biotechnology

THESIS CO-SUPERVISOR

A.A. 2021/2022	V. Bonetti, "Structure Network Analysis to decipher protein function" – University Of Modena & Reggio Emilia – Master Degree in Experimental and Applied Biology.
A.A. 2020/2021	S. Gentile, "Activation of a Rab GTPase by its Guanine Nucleotide Exchange Factor: Insight from Molecular Dynamics Simulations" – University Of Modena & Reggio Emilia – Master Degree in Industrial Biotechnology.
A.A. 2020/2021	E. Busi, "Structural fingerprints of rod opsin mutants linked to autosomal dominant Retinitis Pigmentosa" – University Of Modena & Reggio Emilia – Bechelor Degree in Biotechnology.
A.A. 2019/2020	L. Sassi, "Structure network analysis of adRP rod opsin mutants" – University Of Modena & Reggio Emilia – Bechelor Degree in Biotechnology.
A.A. 2018/2019	A. Gennari, "A web server for high-throughput investigation of structural communication in biomacromolecules: benchmarks and applications" – University Of Modena & Reggio Emilia – Bechelor Degree in Biotechnology.
A.A. 2013/2014	F.D. Lofaro, "Rhodopsin mutants linked to Retinitis Pigmentosa: search for a bridge between defects in fold and in subcellular localization" – University Of Modena & Reggio Emilia – Bechelor Degree in Biotechnology.
A.A. 2011/2012	G. Schenetti, "Structure network analysis of G protein-coupled receptors" – University Of Modena & Reggio Emilia – Bechelor Degree in Biotechnology.

PROFESSIONAL SKILLS

Scientific Software

- Visualization: vmd, pymol, chimera
- Analysis: wordom, Bio3D, R, Julia
- Molecular Dynamics Package: Gromacs

Programming

- Compiled: C, C++
- Scripting: Python, Ruby, R, Julia
- Web Development: HTML, Js, CSS, PHP

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C1	C1

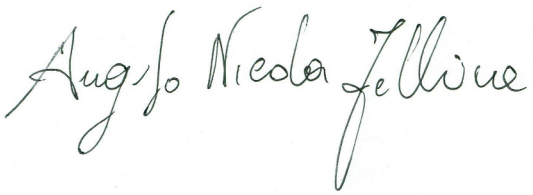
Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Other Skills

- competent with Linux, Windows
- competent with Microsoft Office & LibreOffice programmes

Driving licence A, B

Dichiaro che le informazioni riportate nel presente Curriculum Vitae sono esatte e veritiere. Dichiaro di essere consapevole di quanto comporta l'affermazione della veridicità di quanto sopra rappresentato e di essere a conoscenza delle sanzioni penali di cui all'art. 76 del D.P.R. 28.12.2000, n.445 Testo unico delle disposizioni legislative e regolamentari in materia di documentazione amministrativa" ed in particolare di quanto previsto dall'art. 495 del Codice Penale in caso di dichiarazioni mendaci o di false attestazioni. Autorizzo il trattamento dei dati personali, ai sensi e per gli effetti del D.Lgs. 30.6.2003, n.196 "Codice in materia di protezione dei dati personali".



October 14, 2022