ALESSANDRA ASTEGNO

Personal details
Date of birth: 17/05/1980.
Nationality: Italian

Researcher unique identifiers:
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Career breaks
January 2015- June 2015: Maternity Leave
October 2020- February 2021: Maternity Leave

Education
- 2010: Master degree cum laude in Agri-Food Biotechnology, University of Verona.
- 2010: PhD in Applied Biotechnologies, University of Verona.
- 2004: Degree (5 years) cum laude in Agro-industrial Biotechnology, University of Verona.
- 1999: High school diploma.

Current position
2022-present: Associate Professor of Biochemistry (BIO/10), Dept of Biotechnology, University of Verona

Previous positions
- 2011-2022: Assistant Professor of Biochemistry (BIO/10), Dept of Biotechnology, University of Verona.
- 2019: Visiting researcher in Biochemistry, CIC bioGUNE Research Center (Spain).
- 2010-2011: Postdoctoral Fellow in Biochemistry, University of Verona
- 2007-2010: PhD Fellow, Laboratory of Biochemistry, Dept of Biotechnology, University of Verona.
- 2004: Visiting scholar, University of Manchester, UK.

Awards and qualifications
- 29 September 2023: Qualification as Full Professor of Biochemistry in Italian Universities.
- 24 September 2018: Qualification as Associate Professor of Biochemistry in Italian Universities.
- 2019: Winner, International Mobility Grant, University of Verona, for research at CIC bioGUNE Research Center, Spain
- 2017: winner of an Italian FFABR (“Fondo per il Finanziamento delle Attività Base di Ricerca”, Italian Law 232/2016) research fund. Amount: € 3000.

Current teaching activities in degree programs at the University of Verona
- Biochemistry (BIO/10) (9 CFU, 72 hours), single-cycle degree program in Pharmacy.
- Nutritional Biochemistry (BIO/10) (4 CFU, 32 hours), degree program in Innovation and Sustainability in Industrial Food Production.
- Enzymology in Medical Biotechnology (BIO/10) (6 CFU, 48 hours), international Master's degree program in Molecular and Medical Biotechnology.

Current institutional roles at the University of Verona
- Member of the Academic Board of the PhD Program in Molecular, Industrial, and Environmental Biotechnologies, University of Verona.
- Member of the Quality Assurance (AQ) Committee for the Master's degree program in Molecular and Medical Biotechnology, and for the single-cycle degree program in Pharmacy.
- Member of the Quality Assurance (AQ) Committee for Research, Dep of Biotechnology.
- Member of the Quality Assurance (AQ) Committee for the PhD Program in Molecular, Industrial, and Environmental Biotechnologies.
- Member of the Teaching Committee for the single-cycle degree program in Pharmacy and for the Master's degree program in Molecular and Medical Biotechnology.
- Member of the selection committee for the awarding of scholarships to foreign students for the Master's degree program in Molecular and Medical Biotechnology.
- Member of the Committee for the evaluation of applications for external teaching positions, Department of Biotechnology.

Supervision activities

- Supervisor of > 40 experimental theses for the Bachelor's Degree in Biotechnology (L2) and the Master's Degree in Molecular and Medical Biotechnology (LM9), University of Verona.
- Supervisor of 3 PhD students and co-supervisor of 4 PhD students (BIO/10) at the University of Verona.
- Supervisor of > 10 research fellows and postdoctoral researchers (BIO/10), University of Verona.

Scientific interests

My scientific career focused, as a general topic, on the structure-function relationships in enzymatic proteins, both in eukaryotes and bacteria. These enzymes have been investigated by using a multidisciplinary methodological approach, including kinetic studies, structural studies and protein-ligand interaction studies. My group has wide expertise in recombinant protein production and protein engineering, enzymology, biochemistry and biophysics applied to characterize the following protein families in different organisms:

- **Metabolic enzymes involved in cysteine biosynthesis in eukaryotes and bacteria**. My laboratory is investigating the reaction mechanisms of catalysis and regulation of enzymes involved in H2S biogenesis in eukaryotic and bacterial cells. H2S has emerged as a multifunctional signaling molecule in human pathogens and targeting the enzymes involved in its metabolism represent an optimal strategy for versatile antibiotic/drug therapies.
- **Calcium sensors (calmodulin and centrins) and the mechanisms by which these proteins regulate complex molecular calcium dependent processes in different organisms.** My lab has been systematically cloning and studying the structural, metal and target-peptide binding properties of different member of calmodulin and centrin proteins in Arabidopsis and in human pathogens using complementary biophysical and structural approaches. This has allowed significant steps forward in the understanding if these proteins act as true Ca2+ sensors and how they contribute to Ca2+ signalling in distinct ways.
- **Cyclophilins and their interaction with cyclosporin A.** My research activity focused also on the characterization of enzymes with a peptidyl-prolyl isomerases (PPIases) activity from pathogens. These enzymes, also known as cyclophilins, are crucial for different biological processes and represent attractive drug candidates for the development of new molecules with antimicrobial activity.

Funded Projects

- 2023: Project funded by the Veneto Region under the European Social Fund. "Identification of Bioactive Molecules in Nutraceuticals and Bee Products and Study of Their Potential Neuroprotective Effect." Co-supervisor.
- 2022: PRIN 2022 project (MUR; European Union – NextGenerationEU). "Hydrogen sulfide metabolism in Pseudomonas aeruginosa (patho)physiology." Unit Coordinator.
- 2022: Project funded by the Spanish Ministry of Science and Innovation (MICINN). "Structural Basis of CBS Domain-Mediated Regulation of the Enzyme Cystathionine Beta-Synthase and the Magnesium Transporter CNNM1 (CBS-CNNM1)." Participant.
- 2021: CIFRE PhD program (ANRT, French Ministry of Higher Education and Research). Partners: University of Montpellier, University of Verona, Oenobrands. "Identification and characterization of C-S lyase enzymes for aroma release in beer and wine." Supervisor of the PhD research activity (Luigi Clerat) at the University of Verona.
- 2020: Joint Project, University of Verona. "Exploring the natural biodiversity of C-S lyase enzymes in lactic acid bacteria for food and food-related applications." Co-supervisor.
- 2019: Research contract with Oenobrands. "Production of the recombinant enzyme C-S lyase from Lactobacillus delbrueckii subsp. bulgaricus." Principal Investigator.
- 2019: CooperInt grant (international academic mobility), University of Verona / CIC bioGUNE (Spain). "Structure-function-activity studies on Toxoplasma gondii transsulfuration enzymes." Principal investigator.
- 2019: Joint Project, University of Verona. "Green fluorescent protein-based biosensor for multiplexed detection of heavy metals in natural waters." Principal Investigator.
- 2018: PRIN 2017 project. "Regulatory signals and redox systems in plant growth-defence trade-off." Unit Coordinator.
- 2017-2020: Project "3S-4H - Safe, Smart, Sustainable Food for Health." Participant.
- 2016: Joint Project, University of Verona. "Engineering a fusion enzyme for determination of bioactive amines." Principal Investigator.
- 2016: Joint Project, University of Verona. "Improving wine aroma complexity by directed evolution of non-Saccharomyces yeast enzymes." Participant.
- 2014: Joint Project, University of Verona. "Engineering volatile thiol release for improved wine aroma: directed evolution of yeast cystathionine beta-lyase." Participant.

Invited lectures/seminars and organization of meetings (last ten years)

- **2026:** Session Chair, "Proteins in Health and Disease," at the conference *Decoding Protein Function Through Structure and Engineering: A Joint Symposium by the INPEC Network and the SIB Proteins Groups*, Rome, 16–18 September 2026.
- 2026: Member of the Organizing Committee, Italian Congress of Biotechnology (Biotech 2026), University of Verona, June 24-26, 2026.
- 2026: Invited seminar, "Structural and Regulatory Diversity of Cystathionine-β-Synthase: Insights from Pathogen Enzymes." ITACA.SB Workshop Crystallographic Quality and Beyond: Structural Biology at the Core of Rational Drug Design, Rome (Italy), February 11-13, 2026.
- 2026: Invited short course (2 hours), "Application of Targeted Protein Degradation in Infectious Diseases." PhD Program in Molecular, Industrial and Environmental Biotechnologies, University of Verona, January 30, 2026.
- 2024: Invited seminar, "The Large Repertoire of Calmodulin-Related Proteins in Plants and Parasites." 17th International Meeting of the European Calcium Society (ECS2024), Cambridge (UK), September 1-4, 2024.
- 2023: Invited seminar, "Targeting H_2S-Producing Enzymes as an Antimicrobial Strategy." Manchester Institute of Biotechnology, Manchester (UK), September 27, 2023.
- 2022: Invited short course, "Enzyme Therapy: Current Challenges and Future Perspectives." PhD Program in Biotechnology, University of Verona.
- 2022: Session Chair, "Decoding Calcium Signals: Sensors and Effectors." Plant Calcium Signaling Conference (PCS 2022), Milan (Italy), July 11-13, 2022.
- 2021: Selected oral presentation, "Unique Conformation of Cystathionine Beta-Synthase from Toxoplasma gondii." 61st Congress of the Italian Society of Biochemistry and Molecular Biology (SIB), virtual meeting, September 23-24, 2021.
- 2018: Organizer, workshop "Protein Structure-Function Relationship: New Challenges and Advancements." Verona, October 19, 2018.
- 2018: Organizer, National Symposium "Proteine 2018" (Italian Society of Biochemistry and Molecular Biology), Verona, May 28-30, 2018.
- 2018: Organizer, Winter School in Applied Bioinformatics, Alba di Canazei (Italy), January 21-25, 2018.
- 2018: Invited seminar, "Plant Calmodulin-Like Proteins: Calcium Binding and Target Interactions." Proteine 2018, Verona, May 28-30, 2018.
- 2018: Invited seminar, "Towards Understanding Plant Calcium Signaling through Calmodulin-Like Proteins: A Biochemical and Structural Perspective." PhD Program in Biochemistry, Sapienza University of Rome (Italy), March 16, 2018.
- 2018: Invited seminar, "Characterization of Cystathionine γ-Lyase from Toxoplasma gondii: A Target for Drug Development?" 3rd International Conference on Enzymology and Molecular Biology, London (UK), March 5-7, 2018.
- 2018: Invited seminar, "Advances in Biochemical and Structural Understanding of Plant Calmodulin-Like Proteins: The Case of Arabidopsis CML19." University of Milan (Italy), February 15, 2018.
- 2017: Invited seminar, "A Biophysical and Structural Approach to Investigate Calcium Sensor Properties of Plant Calmodulin-Like Proteins." 9th International Conference on Structural Biology, Zurich (Switzerland), September 18–20, 2017.
- 2016: Invited seminar, "Calcium Signaling in Plants through Calmodulin-Like Proteins: Biochemical and Biophysical Characterization of Arabidopsis CML36." National Meeting of the Division of Biological Systems Chemistry, Verona (Italy), September 21-23, 2016.

Public Engagement

- 11 June 2026: PLS Biotechnology – *Biotechnology for the Planet and for Human Health* – PCTO Laboratory, 2026 edition: "Exploring Proteins as Therapeutic Targets." Practical laboratory sessions for high-school students, aimed at providing hands-on experience and illustrating how biotechnology can help address current challenges. Department of Biotechnology, University of Verona.
- 12 June 2025: PLS Biotechnology – *Biotechnology for the Planet and for Human Health* – PCTO Laboratory, 2025 edition: "Proteins as Therapeutic Targets: Cystathionine Gamma-Lyase from* Pseudomonas aeruginosa*." Outreach and educational guidance activity for high-school students. Department of Biotechnology, University of Verona.
- 25–26 February 2026: PLS (National Plan for Scientific Degrees), "Biotechnology in the Laboratory: From DNA to Recombinant Proteins." Outreach and educational guidance activity for high-school students. Department of Biotechnology, University of Verona.

- 6 October 2025: Initiative held as part of BIOTECH WEEK 2025: “BIOTECHNOLOGY IN VERONA: PIONEERS YESTERDAY, DRIVERS OF INNOVATION TODAY.” Mini-symposium: “H_2S in *Pseudomonas aeruginosa*: Pathophysiological Mechanisms and Novel Therapeutic Targets.” University of Verona. Initiative promoting the dissemination and sharing of research.
- 11 July 2025: Round table and workshop, “Beneficial Effects of Food-Derived Biomolecules and Nutraceuticals on Health.” University of Verona.
- 12 June 2025: PLS Biotechnology – *Biotechnology for the Planet and for Human Health* – PCTO Laboratory, 2025 edition: “Proteins as Therapeutic Targets: Cystathionine Gamma-Lyase from* Pseudomonas aeruginosa*.” Outreach and educational guidance activity for high-school students. Department of Biotechnology, University of Verona.
- 13 June 2024: PLS Biotechnology – *Biotechnology for the Planet and for Human Health* – PCTO Laboratory, 2024 edition: “Proteins as Therapeutic Targets: Cystathionine Gamma-Lyase from* Pseudomonas aeruginosa*.” Outreach and educational guidance activity for high-school students. Department of Biotechnology, University of Verona.
- 13, 20 and 21 June 2023: DM 934/22 Educational Guidance Activity, “Proteins as Therapeutic Targets.” Guidance activity providing high-school students with experience in active, participatory and laboratory-based subject teaching, based on the scientific method of learning. Department of Biotechnology, University of Verona.

Memberships:
- 2017-present: Member of the Italian Society of Biochemistry and Molecular Biology (SIB)
- 2016-present: Member of the European Calcium Society (ECS)

Citation metrics and publications
The scientific activity of Prof Astegno is documented by 56 peer-reviewed papers.
- GOOGLE SCHOLAR, h-index=22; i10-index 36, citations 1601 (sept 2026) https://scholar.google.it/citations?hl=it&user=1KWW_hoAAAAJ
- ORCID iD: 0000-0002-7341-0970
- https://pubmed.ncbi.nlm.nih.gov/?term=ALESSANDRA%20ASTEGNO

=Corresponding author

1. Favretto F, Fruncillo S, Jiménez-Faraco E, Gago F, Dominici P, Hermoso JA, **Astegno A***. A non-catalytic interaction surface mediates recognition of spliceosomal factors by the *Toxoplasma gondii* cyclophilin TgCyp23. Biochem J. 2026 Oct 7;483(10):1799-1816. doi: 10.1042/BCJ20260439.
2. Conter C, Núñez-Franco R, Pietrafesa D, Fernández-Rodríguez C, Pedretti M, Perbellini E, Mordenti G, Masè N, Dominici P, Majtan T, Falconi M, Martinez-Chantar ML, Jiménez-Osés G, **Astegno A***, Martínez-Cruz LA. A distinct domain organization of cystathionine β-synthase underlies cysteine and H_2S biosynthesis in *Pseudomonas aeruginosa* and *Klebsiella pneumoniae*. Commun Biol. 2026 Jun 29. doi: 10.1038/s42003-026-10520-5.
3. Favretto F, Jiménez-Faraco E, Fruncillo S, Masè N, Dominici P, Hermoso JA, **Astegno A***. Structural and Kinetic Variability of Pathogen Cyclophilins:Functional Diversification and Therapeutic Potential. ACS Infect Dis. 2026 May 8;12(5):1538-1554. doi: 10.1021/acsinfecdis.6c00016.
4. Massa N, Catalano F, Fruncillo S, Troilo F, Mellini M, Favretto F, Leoni L, Rampioni G, Giuffrè A, di Matteo A, **Astegno A***. Distinct contributions of O-acetylserine sulfhydrylases to cysteine biosynthesis in Pseudomonas aeruginosa. Protein Sci. 2026 Mar;35(3):e70498. doi: 10.1002/pro.70498.
5. Lauriola A, Enriqué Steinberg JH, Sarubo M, Maspero E, Rossi FA, Mouri Y, Pedretti M, Hajisadeghian M, Taibi V, Vettori A, Vitulo N, Assfalg M, D'Onofrio M, Rossi M, Yasue A, **Astegno A**, Polo S, Santi S, Kudo Y, Guardavaccaro D. The E3 ligase RNF32 controls the IκB kinase complex and NF-κB signaling in intestinal stem cells. Mol Cell. 2025 Nov 20;85(22):4254-4267.e9. doi:10.1016/j.molcel.2025.10.005. Epub 2025 Oct 29. PMID: 41167191.
6. Favretto F, Fruncillo S, Jiménez-Faraco E, Masè N, Dominici P, de José UP, Muñoz IG, Hermoso JA, **Astegno A***. Redox-dependent activity and thioredoxin interaction of cyclophilin TgCyp21 from Toxoplasma gondii. Int J Biol Macromol. 2025 Nov;330(Pt 1):148019. doi: 10.1016/j.ijbiomac.2025.148019. Epub 2025 Sep 30. PMID: 41038464.
7. Clérat L, Conter C, **Astegno A**, Schneider R, Cavelier F, Vivès E. Exploring Carbon-Sulfur (CS) Lyase Enzymes across Microbial Diversity for Enhanced Thiol Release in Beer and Wine. J Agric Food Chem. 2025 Sep 8. doi:10.1021/acs.jafc.5c07932.
8. Li Z, Kim HJ, Luoni L, Conter C, Masè N, Resentini F, Xie P, **Astegno A***, Bonza MC, Hua J. Evolutionarily conserved BON1 regulates the basal cytosolic Ca2+ level by calmodulin-independent activation of Ca2+

pumps in Arabidopsis. Proc Natl Acad Sci U S A. 2025 Jun 10;122(23):e2504457122. doi: 10.1073/pnas.2504457122.
9. Conter C, Núñez-Franco R, Al-Sadeq DW, Fernández-Rodríguez C, Goikoetxea-Usandizaga N, Nasrallah GK, Nomikos M, Martinez-Chantar ML, **Astegno A**, Jiménez-Osés G, Martínez-Cruz LA. The disease-linked R336C mutation in cystathionine β-synthase disrupts communication with the PLP cofactor, yet maintains the enzyme's overall structural integrity. FEBS J. 2025 May 6. doi: 10.1111/febs.70116.
10. Favretto F, Jiménez-Faraco E, Catucci G, Di Matteo A, Travaglini-Allocatelli C, Sadeghi SJ, Dominici P, Hermoso JA, **Astegno A***. Evaluating the potential of non-immunosuppressive cyclosporin analogs for targeting Toxoplasma gondii cyclophilin: Insights from structural studies. Protein Sci. 2024 Oct;33(10):e5157.
11. Pedretti M, Fernández-Rodríguez C, Conter C, Oyenarte I, Favretto F, di Matteo A, Dominici P, Petrosino M, Martinez-Chantar ML, Majtan T, **Astegno A***, Martínez-Cruz LA. Catalytic specificity and crystal structure of cystathionine γ-lyase from Pseudomonas aeruginosa. Sci Rep. 2024 Apr 23;14(1):9364.
12. Al-Sadeq D, Conter C, Thanassoulas A, Al-Dewik N, Safieh-Garabedian B, Luis Alfonso Martínez-Cruz LA, Nasrallah G, **Astegno A***, Nomikos M. Biochemical and structural impact of two novel missense mutations in cystathionine beta-synthase gene associated with homocystinuria. Biochem J. 2024 Apr 2:BCJ20240012.
13. Caruso L, Mellini M, Catalano Gonzaga O, **Astegno A**, Forte E, Di Matteo A, Giuffrè A, Visca P, Imperi F, Leoni L, Rampioni G. Hydrogen sulfide production does not affect antibiotic resistance in Pseudomonas aeruginosa. Antimicrob Agents Chemother. 2024 Apr 3;68(4):e0007524.
14. Catalano F, Santorelli D, **Astegno A**, Favretto F, D'Abramo M, Del Giudice A, De Sciscio ML, Troilo F, Giardina G, Di Matteo A, Travaglini-Allocatelli C. Conformational and dynamic properties of the KH1 domain of FMRP and its fragile X syndrome linked G266E variant. Biochim Biophys Acta Proteins Proteom. 2024 Apr 17;1872(4):141019.
15. Pedretti M, Favretto F, Troilo F, Giovannoni M, Conter C, Mattei B, Dominici P, Travaglini-Allocatelli C, Di Matteo A, **Astegno A**. Role of myristoylation in modulating PCaP1 interaction with calmodulin. Plant Physiol Biochem. 2023 Oct;203:108003. doi: 10.1016/j.plaphy.2023.108003.
16. Conter C, Favretto F, Dominici P, Martinez-Cruz LA, **Astegno A***. Key substrate recognition residues in the active site of cystathionine beta-synthase from Toxoplasma gondii. Proteins. 2023 Oct;91(10):1383-1393.
17. Fernández-Rodríguez C, Conter C, Oyenarte I, Favretto F, Quintana I, Martinez-Chantar ML, **Astegno A***, Martínez-Cruz LA. Structural basis of the inhibition of cystathionine γ-lyase from Toxoplasma gondii by propargylglycine and cysteine. Protein Sci. 2023 Apr;32(4):e4619.
18. Favretto F, Jiménez-Faraco E, Conter C, Dominici P, Hermoso JA, **Astegno A***. Structural Basis for Cyclosporin Isoform-Specific Inhibition of Cyclophilins from Toxoplasma gondii. ACS Infect Dis. 2023 Feb 10;9(2):365-377.
19. Bombardi L, Favretto F, Pedretti M, Conter C, Dominici P, **Astegno A***. Conformational Plasticity of Centrin 1 from Toxoplasma gondii in Binding to the Centrosomal Protein SFI1. Biomolecules. 2022 Aug 13;12(8):1115.
20. Conter C, Fruncillo S, Favretto F, Fernández-Rodríguez C, Dominici P, Martínez-Cruz LA, **Astegno A***. Insights into Domain Organization and Regulatory Mechanism of Cystathionine Beta-Synthase from Toxoplasma gondii. Int J Mol Sci. 2022 Jul 25;23(15):8169.
21. Troilo F, Pedretti M, Travaglini-Allocatelli C, **Astegno A***, Di Matteo A. Rapid kinetics of calcium dissociation from plant calmodulin and calmodulin-like proteins and effect of target peptides. Biochem Biophys Res Commun. 2022 Jan 29;590:103-108.
22. Pedretti M, Bombardi L, Conter C, Favretto F, Dominici P, **Astegno A***. Structural Basis for the Functional Diversity of Centrins: A Focus on Calcium Sensing Properties and Target Recognition. Int J Mol Sci. 2021 Nov10;22(22):12173.
23. Fernández-Rodríguez C, Oyenarte I, Conter C, González-Recio I, Núñez-Franco R, Gil-Pitarch C, Quintana I, Jiménez-Osés G, Dominici P, Martinez-Chantar ML, **Astegno A***, Martínez-Cruz LA. Structural insight into the unique conformation of cystathionine β-synthase from Toxoplasma gondii. Comput Struct Biotechnol J. 2021 Jun 6;19:3542-3555.
24. Conter C, Bombardi L, Pedretti M, Favretto F, Di Matteo A, Dominici P, **Astegno A***. The interplay of self-assembly and target binding in centrin 1 from Toxoplasma gondii. Biochem J. 2021 Jul 16;478(13):2571-2587.
25. **Astegno A**, Conter C, Bertoldi M, Dominici P. Structural Insights into the Heme Pocket and Oligomeric State of Non-Symbiotic Hemoglobins from Arabidopsis thaliana. Biomolecules. 2020 Nov 29;10(12):1615.
26. Conter C, Fruncillo S, Fernández-Rodríguez C, Martínez-Cruz LA, Dominici P, **Astegno A***. Cystathionine β-synthase is involved in cysteine biosynthesis and H2S generation in Toxoplasma gondii. Sci Rep. 2020 Sep 4;10(1):14657.
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31. Maresi E, Janson G, Fruncillo S, Paiardini A, Vallone R, Dominici P, **Astegno A***. Functional Characterization and Structure-Guided Mutational Analysis of the Transsulfuration Enzyme Cystathionine γ-Lyase from Toxoplasma gondii. Int J Mol Sci. 2018 Jul 20;19(7):2111.
32. Vandelle E, Vannozzi A, Wong D, Danzi D, Digby AM, Dal Santo S, **Astegno A**. Identification, characterization, and expression analysis of calmodulin and calmodulin-like genes in grapevine (Vitis vinifera) reveal likely roles in stress responses. Plant Physiol Biochem. 2018 Aug;129:221-237.
33. La Verde V, Dominici P, **Astegno A***. Towards Understanding Plant Calcium Signaling through Calmodulin-Like Proteins: A Biochemical and Structural Perspective. Int J Mol Sci. 2018 Apr 30;19(5):1331.
34. Rossignoli G, Phillips RS, **Astegno A**, Menegazzi M, Voltattorni CB, Bertoldi M. Phosphorylation of pyridoxal 5'-phosphate enzymes: an intriguing and neglected topic. Amino Acids. 2018 Feb;50(2):205-215.
35. La Verde V, Trande M, D'Onofrio M, Dominici P, **Astegno A***. Binding of calcium and target peptide to calmodulin-like protein CML19, the centrin 2 of Arabidopsis thaliana. Int J Biol Macromol. 2018 Mar;108:1289-1299.
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39. Allegrini A, **Astegno A**, La Verde V, Dominici P. Characterization of C-S lyase from Lactobacillus delbrueckii subsp. bulgaricus ATCC BAA-365 and its potential role in food flavour applications. J Biochem. 2017 Apr 1;161(4):349-360.
40. Kumar N, **Astegno A**, Chen J, Giorgetti A, Dominici P. Residues in the Distal Heme Pocket of Arabidopsis Non-Symbiotic Hemoglobins: Implication for Nitrite Reductase Activity. Int J Mol Sci. 2016 Apr 28;17(5):640.
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44. **Astegno A**, Maresi E, Marino V, Dominici P, Pedroni M, Piccinelli F, Dell'Orco D. Structural plasticity of calmodulin on the surface of CaF2 nanoparticles preserves its biological function. Nanoscale. 2014 Dec 21;6(24):15037-47.
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48. **Astegno A**, Giorgetti A, Allegrini A, Cellini B, Dominici P. Characterization of C-S Lyase from C. diphtheriae: a possible target for new antimicrobial drugs. Biomed Res Int. 2013;2013:701536.
49. Abbruzzetti S, Faggiano S, Spyrakis F, Bruno S, Mozzarelli A, **Astegno A**, Dominici P, Viappiani C. Oxygen and nitric oxide rebinding kinetics in nonsymbiotic hemoglobin AHb1 from Arabidopsis thaliana. IUBMB Life. 2011 Dec;63(12):1094-100.
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dynamics modulates ligand exchange between distal pocket and solvent in AHb1 from Arabidopsis thaliana. J Phys Chem B. 2011 Apr 14;115(14):4138-46.
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