

## FULL LIST OF PUBLICATIONS

*Sérgio F. Sousa (BIA Lab / BioSIM)***2026**

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168. Selvam R., Yap M.K.K., Giacomazzi R., [Sousa S.F.](#), Tan H.S. **Aptamer-mediated outer membrane destabilization overcomes low permeability resistance in *Pseudomonas aeruginosa***. *The FEBS Journal* (2026). doi: 10.1111/febs.70560. 0 citations
167. Martins F.G., Santos H.A., [Sousa S.F.](#) **A Review of Current Computational Tools for Peptide–Protein Docking**. *Journal of Computational Chemistry* (2026). doi: 10.1002/jcc.70328. 1 citations
166. Salgado Pires V., Pires Gravina-Oliveira M., Silva-Junior N., Saraiva Veloso B., Maia de [Sousa S.F.](#), Dias Mesquita R. **Structural comparison between human and *Leishmania infantum* Sirtuin 2 NAD-dependent histone deacetylases**. *Acta Tropica* (2026). doi: 10.1016/j.actatropica.2026.107969. 0 citations
165. Salman M.K., Giordano I., Tommonaro G., Cutignano A., [Sousa S.F.](#), Borges A., Mauriello G., Abbamondi G.R. **Characterization of AHL-mediated quorum sensing in *Pseudomonas gessardii* from raw milk and insights into control of proteolytic activity**. *International Journal of Food Microbiology* (2026). doi: 10.1016/j.ijfoodmicro.2025.111502. 1 citations
164. Lopez-Parra J.S., Hameedat F., [Sousa S.F.](#), Walenkamp A.M.E., Sousa F., A Santos H. **Identification of Subtype-Specific Vulnerabilities in Resistant Glioblastoma: A Computational Pipeline for Biomarkers and Drug Discovery**. *Molecular Pharmaceutics* (2026). doi: 10.1021/acs.molpharmaceut.5c01538. 0 citations

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163. Singh M., Karthikeyan C., Waiker D.K., Tiwari A., Shrivastava S.K., [Sousa S.F.](#), Kiriwan D., Martins F.G., Moorthy N.S.H.N. **Design, synthesis, and pharmacological evaluation of heteroaryl thiol-linked kojic acid derivatives as a novel class of acetylcholinesterase inhibitors for Alzheimer’s disease therapy**. *3 Biotech* (2025). doi: 10.1007/s13205-025-04295-5. 4 citations
162. Roggero A., Toyama M.H., [Sousa S.F.](#) **Lands’ Cycle at the Crossroads: Phospholipid Remodelling, Oxidative Stress, Cellular Toxicity, and Therapeutic Targeting**. *ACS Pharmacology and Translational Science* (2025). doi: 10.1021/acspsci.5c00482. 2 citations
161. Leitão M.M., Gonçalves A.S.C., [Sousa S.F.](#), Borges F., Simões M., Borges A. **Two cinnamic acid derivatives as inhibitors of *Pseudomonas aeruginosa* las and pqs quorum-sensing systems: Impact on biofilm formation and virulence factors**. *Biomedicine and Pharmacotherapy* (2025). doi: 10.1016/j.biopha.2025.118090. 10 citations
160. Roggero A., Loyola P.M., Ramos da Cruz C., Santos W.H.B.C., Borges P.P., dos Santos Junior A.B., Martins F., Oliveira M.A., [Sousa S.F.](#), Toyama M.H. **NSAIDs beyond COX: In Silico and In Vitro Insights into Acetylcholinesterase Modulation**. *ACS Omega* (2025). doi: 10.1021/acsomega.5c08750. 0 citations

159. Filho J.L.P., Pereira R.B., Vieira T.F., [Sousa S.F.](#), Coelho J.R.A., Pinto N.F.S., Coelho C.M.M., Fernandes M.J.G., Castanheira E.M.S., Gonçalves M.S.T., Pereira D.M. **Development of eugenol derivatives with 5-LOX inhibitory activity.** *Journal of Enzyme Inhibition and Medicinal Chemistry* (2025). doi: 10.1080/14756366.2025.2535586. 0 citations
158. Kiriwan D., Vieira T.F., Kumsiri N., [Sousa S.F.](#), Choowongkamon K. **Identification of Tripeptide Inhibitors Targeting MAPK3 in Leishmania martiniquensis and Leishmania orientalis Using Molecular Modeling, Virtual Screening, Molecular Dynamics, and In Vitro Approach.** *ACS Omega* (2025). doi: 10.1021/acsomega.5c03481. 0 citations
157. Peixoto V.P., Prudêncio C., Vieira M., [Sousa S.F.](#) **Evaluation of the impact of two C5 genetic variants on C5-eculizumab complex stability at the molecular level.** *Journal of Biomolecular Structure and Dynamics* (2025). doi: 10.1080/07391102.2024.2331091. 0 citations
156. Oliveira T., Ferraz R., Azevedo L., Quelhas D., Carneiro J., Jaeken J., [Sousa S.F.](#) **A comprehensive update of genotype–phenotype correlations in PMM2-CDG: insights from molecular and structural analyses.** *Orphanet Journal of Rare Diseases* (2025). doi: 10.1186/s13023-025-03669-5. 4 citations
155. Singh S., Paul S., Martins F.G., [Sousa S.F.](#), Kundu C.N., Karthikeyan C., Moorthy N.S.H.N. **Design, synthesis and biological evaluation of 2-phenylquinoxaline carbonyl piperazine derivatives as novel FASN inhibitors with anticancer activity.** *Bioorganic Chemistry* (2025). doi: 10.1016/j.bioorg.2025.108697. 1 citations

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154. Thakur C.K., Martins F.G., Karthikeyan C., Bhal S., Kundu C.N., Moorthy N.S.H.N., [Sousa S.F.](#) **In silico-guided discovery and in vitro validation of novel sugar-tethered lysinated carbon nanotubes for targeted drug delivery of doxorubicin.** *Journal of Molecular Modeling* (2024). doi: 10.1007/s00894-024-06061-5. 3 citations
153. Leitão M.M., Vieira T.F., [Sousa S.F.](#), Borges F., Simões M., Borges A. **Dual action of benzaldehydes: Inhibiting quorum sensing and enhancing antibiotic efficacy for controlling Pseudomonas aeruginosa biofilms.** *Microbial Pathogenesis* (2024). doi: 10.1016/j.micpath.2024.106663. 16 citations
152. Vieira T.F., Leitão M.M., Cerqueira N.M.F.S.A., [Sousa S.F.](#), Borges A., Simões M. **Montelukast and cefoperazone act as anti-quorum sensing and antibiofilm agents against Pseudomonas aeruginosa.** *Journal of Applied Microbiology* (2024). doi: 10.1093/jambio/lxae088. 6 citations
151. Fernandes S., Sousa M., Martins F.G., Simões M., [Sousa S.F.](#) **Protocol for in silico characterization of natural-based molecules as quorum-sensing inhibitors.** *STAR Protocols* (2024). doi: 10.1016/j.xpro.2024.103367. 2 citations
150. Zeghib W., Boudjouan F., Carneiro J., Oliveira A.L.S., [Sousa S.F.](#), Pintado M.E., Ourabah A., Vasconcelos V., Lopes G. **LC-ESI-UHR-QqTOF-MS/MS profiling and anti-inflammatory potential of the cultivated Opuntia ficus-indica (L.) Mill. and the wild Opuntia stricta (Haw.) Haw. fruits from the Algerian region.** *Food Chemistry* (2024). doi: 10.1016/j.foodchem.2024.140414. 13 citations

149. Araškov J.B., Garcia-Sosa A.T., Višnjevac A., [Sousa S.F.](#), Holló B.B., Uğuz Ö., Koca A., Monge M., Rodríguez-Castillo M., López-de-Luzuriaga J.M., Todorović T.R., Filipović N.R. **Structural insights and photophysical properties of mononuclear and pentanuclear Zn(II) acetate complexes with pyridyl-based thiazolyl-hydrazones.** *Polyhedron* (2024). doi: 10.1016/j.poly.2024.117162. 3 citations
148. Mendes F., Santos-Pereira C., Vieira T.F., Martins Pinto M., Castro B.B., [Sousa S.F.](#), Sousa M.J., Devin A., Chaves S.R. **The fungicide cymoxanil impairs respiration in *Saccharomyces cerevisiae* via cytochrome c oxidase inhibition.** *FEBS Letters* (2024). doi: 10.1002/1873-3468.14907. 2 citations
147. Duarte-Silva S., Da Silva J.D., Monteiro-Fernandes D., Costa M.D., Neves-Carvalho A., Raposo M., Soares-Cunha C., Correia J.S., Nogueira-Goncalves G., Fernandes H.S., Oliveira S., Ferreira-Fernandes A.R., Rodrigues F., Pereira-Sousa J., Vilasboas-Campos D., Guerreiro S., Campos J., Meireles-Costa L., Rodrigues C.M.P., Cabantous S., [Sousa S.F.](#), Lima M., Teixeira-Castro A., Maciel P. **Glucocorticoid receptor-dependent therapeutic efficacy of tauroursodeoxycholic acid in preclinical models of spinocerebellar ataxia type 3.** *Journal of Clinical Investigation* (2024). doi: 10.1172/JCI162246. 12 citations
146. Soares R., Azevedo L., Vasconcelos V., Pratas D., [Sousa S.F.](#), Carneiro J. **Machine Learning-Driven Discovery and Database of Cyanobacteria Bioactive Compounds: A Resource for Therapeutics and Bioremediation.** *Journal of Chemical Information and Modeling* (2024). doi: 10.1021/acs.jcim.4c00995. 4 citations
145. Paquete-Ferreira J., Freire F., Fernandes H.S., Muthukumaran J., Ramos J., Bryton J., Panjkovich A., Svergun D., Santos M.F.A., Correia M.A.S., Fernandes A.R., Romão M.J., [Sousa S.F.](#), Santos-Silva T. **Structural insights of an LCP protein–LytR–from *Streptococcus dysgalactiae* subs. *dysgalactiae* through biophysical and in silico methods.** *Frontiers in Chemistry* (2024). doi: 10.3389/fchem.2024.1379914. 5 citations
144. Sousa J., Santos-Pereira C., Gomes J.S., Costa Â.M.A., Santos A.O., Franco-Duarte R., Linhares J.M.M., [Sousa S.F.](#), Silvério S.C., Rodrigues L.R. **Heterologous expression and structure prediction of a xylanase identified from a compost metagenomic library.** *Applied Microbiology and Biotechnology* (2024). doi: 10.1007/s00253-024-13169-4. 7 citations
143. Batista-Silva J.P., Gomes D., [Sousa S.F.](#), Sousa Â., Passarinha L.A. **Advances in structure-based drug design targeting membrane protein markers in prostate cancer.** *Drug Discovery Today* (2024). doi: 10.1016/j.drudis.2024.104130. 5 citations
142. Vasconcelos D., Pina A., Habib N., Sousa S. **In silico analysis of aptamer-RNA conjugate interactions with human transferrin receptor.** *Biophysical Chemistry* (2024). doi: 10.1016/j.bpc.2024.107308. 5 citations
141. Ferreira D., Khalil R., [Sousa S.F.](#), Arenas M. **Substitution Models of Protein Evolution with Selection on Enzymatic Activity.** *Molecular Biology and Evolution* (2024). doi: 10.1093/molbev/msae026. 3 citations

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140. Carneiro J., Magalhães R.P., de la Oliva Roque V.M., Simões M., Pratas D., [Sousa S.F.](#) **TargIDe: a machine-learning workflow for target identification of molecules with antibiofilm activity against *Pseudomonas aeruginosa*.** *Journal of Computer-Aided Molecular Design* (2023). doi: 10.1007/s10822-023-00505-5. 9 citations

139. Teixeira C.S.S., Biltés R., Villa C., [Sousa S.F.](#), Costa J., Ferreira I.M.P.L.V.O., Mafra I. **Exploiting *Locusta migratoria* as a source of bioactive peptides with anti-fibrosis properties using an in silico approach.** *Food and Function* (2023). doi: 10.1039/d3fo04246d. 5 citations
138. Teixeira C.S.S., Villa C., [Sousa S.F.](#), Costa J., Ferreira I.M.P.L.V.O., Mafra I. **An in silico approach to unveil peptides from *Acheta domesticus* with potential bioactivity against hypertension, diabetes, cardiac and pulmonary fibrosis.** *Food Research International* (2023). doi: 10.1016/j.foodres.2023.112847. 16 citations
137. Araškov J.B., Maciejewska N., Olszewski M., Višnjevac A., Blagojević V., Fernandes H.S., [Sousa S.F.](#), Puerta A., Padrón J.M., Holló B.B., Monge M., Rodríguez-Castillo M., López-de-Luzuriaga J.M., Uğuz Ö., Koca A., Todorović T.R., Filipović N.R. **Structural, physicochemical and anticancer study of Zn complexes with pyridyl-based thiazolyl-hydrazones.** *Journal of Molecular Structure* (2023). doi: 10.1016/j.molstruc.2023.135157. 9 citations
136. Araújo M.F., Castanheira E.M.S., [Sousa S.F.](#) **The Buzz on Insecticides: A Review of Uses, Molecular Structures, Targets, Adverse Effects, and Alternatives.** *Molecules* (2023). doi: 10.3390/molecules28083641. 143 citations
135. Vieira T.F., Cerqueira N.M.F.S.A., Simões M., [Sousa S.F.](#) **In silico identification of novel PqsD inhibitors: promising molecules for quorum sensing interference in *Pseudomonas aeruginosa*.** *Molecular Systems Design and Engineering* (2023). doi: 10.1039/d3me00107e. 5 citations
134. Belchor M.N., Costa C.R.D.C., Roggero A., Moraes L.L.F., Samelo R., Annunziato I., de Oliveira M.A., [Sousa S.F.](#), Toyama M.H. **In Silico Evaluation of Quercetin Methylated Derivatives on the Interaction with Secretory Phospholipases A2 from *Crotalus durissus terrificus* and *Bothrops jararacussu*.** *Pharmaceuticals* (2023). doi: 10.3390/ph16040597. 4 citations
133. Costa C.R.C., Belchor M.N., Roggero A., Moraes L.L., Samelo R., Annunziato I., Bonturi C.R., Oliva M.L.V., [Sousa S.F.](#), de Oliveira M.A., Toyama M.H. **The First Anti-Snakebite and Hepatoprotective Characterization of a Trypsin Kunitz-like Inhibitor (EcTI) from the Plant *Enterolobium contortisiliquum*; A Case of Two Soul Mates Meeting.** *Pharmaceuticals* (2023). doi: 10.3390/ph16040632. 1 citations
132. Leite J.P., Lourenço F., Oliveira R., [Sousa S.F.](#), Mendes M.V., Gales L. **Crystal structures of *Streptomyces tsukubaensis* sigma factor SigG1 and anti-sigma RsfG.** *Journal of Structural Biology* (2023). doi: 10.1016/j.jsb.2023.108038. 2 citations
131. Vieira T.F., [Sousa S.F.](#) **Receptor-Based Virtual Screening of Large Libraries in a Multi-Level In Silico Approach.** *Methods in Molecular Biology* (2023). doi: 10.1007/978-1-0716-3147-8\_15. 3 citations
130. Mauro E., Lapaillerie D., Tumiotto C., Charlier C., Martins F., [Sousa S.F.](#), Métifiot M., Weigel P., Yamatsugu K., Kanai M., Munier-Lehmann H., Richetta C., Maisch M., Dutrieux J., Batisse J., Ruff M., Delelis O., Lesbats P., Parissi V. **Modulation of the functional interfaces between retroviral intasomes and the human nucleosome.** *mBio* (2023). doi: 10.1128/mbio.01083-23. 4 citations
129. Fernandes S., Borges A., Gomes I.B., [Sousa S.F.](#), Simões M. **Curcumin and 10-undecenoic acid as natural quorum sensing inhibitors of LuxS/AI-2 of *Bacillus subtilis* and LasI/LasR of *Pseudomonas aeruginosa*.** *Food Research International* (2023). doi: 10.1016/j.foodres.2023.112519. 51 citations
128. Martins F.G., Thakur C.K., Karthikeyan C., Moorthy N.S.H.N., [Sousa S.F.](#) **Use of lysinated multiwalled carbon nanotubes with carbohydrate ligands as a doxorubicin nanocarrier: A molecular dynamics analysis.** *Carbon Trends* (2023). doi: 10.1016/j.cartre.2023.100280. 6 citations

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127. Magalhães R.P., Fernandes H.S., Sousa S.F. **The critical role of Asp206 stabilizing residues on the catalytic mechanism of the *Ideonella sakaiensis* PETase.** *Catalysis Science and Technology* (2022). doi: 10.1039/d1cy02271g. 13 citations
126. Fernandes M.J.G., Pereira R.B., Rodrigues A.R.O., Vieira T.F., Fortes A.G., Pereira D.M., Sousa S.F., Gonçalves M.S.T., Castanheira E.M.S. **Liposomal Formulations Loaded with a Eugenol Derivative for Application as Insecticides: Encapsulation Studies and In Silico Identification of Protein Targets.** *Nanomaterials* (2022). doi: 10.3390/nano12203583. 6 citations
125. Teixeira C.S.S., Sousa S.F. **Current status of the use of multifunctional enzymes as anti-cancer drug targets.** *Pharmaceutics* (2022). doi: 10.3390/pharmaceutics14010010. 12 citations
124. Sousa S.F. **Special Issue on “Enzymes as Biocatalysts: Current Research Trends and Applications”.** *International Journal of Molecular Sciences* (2022). doi: 10.3390/ijms232416209. 2 citations
123. Coelho C.M.M., Pereira R.B., Vieira T.F., Teixeira C.M., Fernandes M.J.G., Rodrigues A.R.O., Pereira D.M., Sousa S.F., Gil Fortes A., Castanheira E.M.S., T. Gonçalves M.S. **Synthesis, computational and nanoencapsulation studies on eugenol-derived insecticides.** *New Journal of Chemistry* (2022). doi: 10.1039/d2nj01893d. 4 citations
122. Marković S.B., Maciejewska N., Olszewski M., Višnjevac A., Puerta A., Padrón J.M., Novaković I., Kojić S., Fernandes H.S., Sousa S.F., Ramotowska S., Chylewska A., Makowski M., Todorović T.R., Filipović N.R. **Study of the anticancer potential of Cd complexes of selenazoyl-hydrazones and their sulfur isosters.** *European Journal of Medicinal Chemistry* (2022). doi: 10.1016/j.ejmech.2022.114449. 22 citations
121. Silva S., Marto J., Gonçalves L.M., Fernandes H.S., Sousa S.F., Almeida A.J., Vale N. **Development of Neuropeptide Y and Cell-Penetrating Peptide MAP Adsorbed onto Lipid Nanoparticle Surface.** *Molecules* (2022). doi: 10.3390/molecules27092734. 13 citations
120. Pina A.F., Sousa S.F., Cerqueira N.M.F.S.A. **The Catalytic Mechanism of Pdx2 Glutaminase Driven by a Cys-His-Glu Triad: A Computational Study.** *ChemBioChem* (2022). doi: 10.1002/cbic.202100555. 3 citations
119. Magalhães R.P., Vieira T.F., Melo A., Sousa S.F. **Identification of novel candidates for inhibition of LasR, a quorum-sensing receptor of multidrug resistant *Pseudomonas aeruginosa*, through a specialized multi-level in silico approach.** *Molecular Systems Design and Engineering* (2022). doi: 10.1039/d2me00009a. 21 citations
118. Lapaillerie D., Charlier C., Guyonnet-Dupérat V., Murigneux E., Fernandes H.S., Martins F.G., Magalhães R.P., Vieira T.F., Richetta C., Subra F., Lebourgeois S., Charpentier C., Descamps D., Visseaux B., Weigel P., Favereaux A., Beauvineau C., Buron F., Teulade-Fichou M.-P., Routier S., Gallois-Montbrun S., Meertens L., Delelis O., Sousa S.F., Parissi V. **Selection of Bis-Indolyl Pyridines and Triphenylamines as New Inhibitors of SARS-CoV-2 Cellular Entry by Modulating the Spike Protein/ACE2 Interfaces.** *Antimicrobial Agents and Chemotherapy* (2022). doi: 10.1128/aac.00083-22. 16 citations
117. Fernandes S., Gomes I.B., Sousa S.F., Simões M. **Antimicrobial Susceptibility of Persister Biofilm Cells of *Bacillus cereus* and *Pseudomonas fluorescens*.** *Microorganisms* (2022). doi: 10.3390/microorganisms10010160. 26 citations

116. Vieira T.F., Magalhães R.P., Cerqueira N.M.F.S.A., Simões M., [Sousa S.F.](#) **Targeting Pseudomonas aeruginosa MvfR in the battle against biofilm formation: a multi-level computational approach.** *Molecular Systems Design and Engineering* (2022). doi: 10.1039/d2me00088a. 6 citations
115. Araškov J.B., Višnjevac A., Popović J., Blagojević V., Fernandes H.S., [Sousa S.F.](#), Novaković I., Padrón J.M., Holló B.B., Monge M., Rodríguez-Castillo M., López-De-Luzuriaga J.M., Filipović N.R., Todorović T.R. **Zn(ii) complexes with thiazolyl-hydrazones: structure, intermolecular interactions, photophysical properties, computational study and anticancer activity.** *CrystEngComm* (2022). doi: 10.1039/d2ce00443g. 17 citations
114. Pina A.F., [Sousa S.F.](#), Azevedo L., Carneiro J. **Non-B DNA conformations analysis through molecular dynamics simulations.** *Biochimica et Biophysica Acta - General Subjects* (2022). doi: 10.1016/j.bbagen.2022.130252. 7 citations
113. Vieira T.F., Magalhães R.P., Simões M., [Sousa S.F.](#) **Drug Repurposing Targeting Pseudomonas aeruginosa MvfR Using Docking, Virtual Screening, Molecular Dynamics, and Free-Energy Calculations.** *Antibiotics* (2022). doi: 10.3390/antibiotics11020185. 36 citations
112. Pereira A.C., Pina A.F., Sousa D., Ferreira D., Santos-Pereira C., Rodrigues J.L., Melo L.D.R., Sales G., [Sousa S.F.](#), Rodrigues L.R. **Identification of novel aptamers targeting cathepsin B-overexpressing prostate cancer cells.** *Molecular Systems Design and Engineering* (2022). doi: 10.1039/d2me00022a. 9 citations
111. Fernandes H.S., [Sousa S.F.](#), Cerqueira N.M.F.S.A. **New insights into the catalytic mechanism of the SARS-CoV-2 main protease: an ONIOM QM/MM approach.** *Molecular Diversity* (2022). doi: 10.1007/s11030-021-10259-7. 30 citations
110. Burke A.J., Teixeira C.S.S., [Sousa S.F.](#) **Transformation of a Chiral Glycolic Acid to an Isoaurone: Stereochemical Assignment of a Benzilic Acid Rearrangement Product.** *Asian Journal of Organic Chemistry* (2022). doi: 10.1002/ajoc.202100692. 0 citations
109. Fernandes H.S., Cerqueira N.M.F.S.A., [Sousa S.F.](#), Melo A. **A Molecular Mechanics Energy Partitioning Software for Biomolecular Systems.** *Molecules* (2022). doi: 10.3390/molecules27175524. 2 citations
108. Rocha J.F., [Sousa S.F.](#), Cerqueira N.M.F.S.A. **Computational Studies Devoted to the Catalytic Mechanism of Threonine Aldolase, a Critical Enzyme in the Pharmaceutical Industry to Synthesize  $\beta$ -Hydroxy- $\alpha$ -amino Acids.** *ACS Catalysis* (2022). doi: 10.1021/acscatal.1c05567. 15 citations
107. Kiriwan D., Seetaha S., Jiwacharoenchai N., Tabtimmai L., [Sousa S.F.](#), Songtawee N., Choowongkamon K. **Identification of tripeptides against tyrosine kinase domain of EGFR for lung cancer cell inhibition by in silico and in vitro studies.** *Chemical Biology and Drug Design* (2022). doi: 10.1111/cbdd.14010. 9 citations

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106. Lapaillerie D., Charlier C., Fernandes H.S., [Sousa S.F.](#), Lesbats P., Weigel P., Favereaux A., Guyonnet-Duperat V., Parissi V. **In silico, in vitro and in cellulo models for monitoring sars-cov-2 spike/human ace2 complex, viral entry and cell fusion.** *Viruses* (2021). doi: 10.3390/v13030365. 14 citations
105. Fernandes H.S., Cerqueira N.M.F.S.A., [Sousa S.F.](#) **Developing and Using BioSIMAR, an Augmented Reality Program to Visualize and Learn about Chemical Structures in a Virtual Environment on Any Internet-Connected Device.** *Journal of Chemical Education* (2021). doi: 10.1021/acs.jchemed.0c01317. 18 citations

104. Pereira R.B., Pinto N.F.S., Fernandes M.J.G., Vieira T.F., Rodrigues A.R.O., Pereira D.M., Sousa S.F., Castanheira E.M.S., Gil Fortes A., Gonçalves M.S.T. **Amino alcohols from eugenol as potential semisynthetic insecticides: Chemical, biological, and computational insights.** *Molecules* (2021). doi: 10.3390/molecules26216616. 12 citations
103. Quelhas D., Carneiro J., Lopes-Marques M., Jaeken J., Martins E., Rocha J.F., Teixeira Carla S.S., Ferreira C.R., Sousa S.F., Azevedo L. **Assessing the effects of PMM2 variants on protein stability.** *Molecular Genetics and Metabolism* (2021). doi: 10.1016/j.ymgme.2021.11.002. 6 citations
102. Sousa S.F. **Special issue on “the application of quantum mechanics in reactivity of molecules”.** *Applied Sciences (Switzerland)* (2021). doi: 10.3390/app11031132. 0 citations
101. Santos-Pereira C., Rocha J.F., Fernandes H.S., Rodrigues L.R., Côrte-Real M., Sousa S.F. **The milk-derived lactoferrin inhibits V-ATPase activity by targeting its V1 domain.** *International Journal of Biological Macromolecules* (2021). doi: 10.1016/j.ijbiomac.2021.06.200. 12 citations
100. Silva Teixeira C.S., Sousa S.F., Cerqueira N.M.F.S.A. **An Unusual Cys-Glu-Lys Catalytic Triad is Responsible for the Catalytic Mechanism of the Nitrilase Superfamily: A QM/MM Study on Nit2.** *ChemPhysChem* (2021). doi: 10.1002/cphc.202000751. 17 citations
99. Leite J.P., Lete M.G., Fowler S.B., Gimeno A., Rocha J.F., Sousa S.F., Webster C.I., Jiménez-Bar'bero J.J., Gales L. **A $\beta$ 31-35 Decreases Neprilysin-Mediated Alzheimer's Amyloid- $\beta$  Peptide Degradation.** *ACS Chemical Neuroscience* (2021). doi: 10.1021/acchemneuro.1c00432. 11 citations
98. Mihaljević-Jurič P., Sousa S.F. **A QM/MM evaluation of the missing step in the reduction mechanism of HMG-CoA by human HMG-CoA reductase.** *Processes* (2021). doi: 10.3390/pr9071085. 2 citations
97. Martins F.G., Melo A., Sousa S.F. **Databases for the study of biofilms: current status and potential applications.** *Biofouling* (2021). doi: 10.1080/08927014.2021.1876849. 6 citations
96. Martins F.G., Melo A., Sousa S.F. **Identification of new potential inhibitors of quorum sensing through a specialized multi-level computational approach.** *Molecules* (2021). doi: 10.3390/molecules26092600. 30 citations
95. Magalhães R.P., Cunha J.M., Sousa S.F. **Perspectives on the role of enzymatic biocatalysis for the degradation of plastic pet.** *International Journal of Molecular Sciences* (2021). doi: 10.3390/ijms222011257. 81 citations
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