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Publications

Journals

- Sohrabi, T., Mirzaei-Behbahani, B., Zadali, R., Pirhaghi, M., Morozova-Roche, L. A., & Meratan, A. A. , "Common Mechanisms Underlying α-Synuclein-Induced Mitochondrial Dysfunction in Parkinson’s Disease.", Journal of Molecular Biology, 2023

- Zohoorian-Abootorabi, T., Meratan, A. A., Jafarkhani, S., Muronetz, V., Haertlé, T., & Saboury, A. A. , "Modulation of cytotoxic amyloid fibrillation and mitochondrial damage of α-synuclein by catechols mediated conformational changes", Scientific Reports, 2023

- Mamashli, F., Meratan, A. A., Ghasemi, A., Obeidi, N., Salmani, B., Atarod, D., ... & Saboury, A. A., "Neuroprotective Effect of Propolis Polyphenol-Based Nanosheets in Cellular and Animal Models of Rotenone-Induced Parkinson’s Disease", ACS Chemical Neuroscience, 2023

- Pirhaghi, M., Najarzadeh, Z., Moosavi-Movahedi, F., Shafizadeh, M., Mamashli, F., Atarod, D., ... & Saboury, A. A., "The anti-platelet drug ticlopidine inhibits FapC fibrillation and biofilm production: Highlighting its antibiotic activity", Biochimica et Biophysica Acta (BBA)-Proteins and Proteomics, 2023

- Rafiei, Y., Salmani, B., Mirzaei-Behbahani, B., Taleb, M., Meratan, A. A., Ramezani, M., ... & Rezaei-Ghaleh, N. ,

"Polyphenols-Based Nanosheets of Propolis Modulate Cytotoxic Amyloid Fibril Assembly of α-Synuclein", ACS Chemical Neuroscience, 2022

- Zadali, R., Hassani, V., Rafiei, Y., Meratan, A. A., Mamashli, F., & Nemat-Gorgani, M., "A study on the interaction of the amyloid fibrils of α-synuclein and hen egg white lysozyme with biological membranes", Biochimica et Biophysica Acta (BBA)-Biomembranes, 2022

- Meratan, A. A., Hassani, V., Mahdavi, A., & Nikfarjam, N., "Pomegranate seed polyphenol-based nanosheets as an efficient inhibitor of amyloid fibril assembly and cytotoxicity of HEWL", RSC Advances, 2022

- Ramezani, M., Hesami, M. D., Rafiei, Y., Ghareghozloo, E. R., Meratan, A. A., & Nikfarjam, N., "Efficient amyloid fibrillation inhibition and remodeling of preformed fibrils of bovine insulin by propolis polyphenols-based nanosheets.", ACS Applied Bio Materials, 2021

- Shahbazi, E., Jamei, S., Meratan, A. A., & Pour Mohammadi, P., "Effect of salt stress on some physio-biochemical traits and antioxidative enzymes of two Brassica species under callus culture", Plant Cell, Tissue and Organ Culture, 2021

- Dehghani, Z., Meratan, A. A., Saboury, A. A., & Nemat-Gorgani, M. , "α-Synuclein fibrillation products trigger the release of hexokinase I from mitochondria: Protection by curcumin, and possible role in pathogenesis of Parkinson's disease", Biochimica et Biophysica Acta (BBA)-Biomembranes, 2020

- Rostampour Ghareghozloo, E., Mahdavimehr, M., Meratan, A. A., Nikfarjam, N., Ghasemi, A., Katebi, B., & Nemat-Gorgani, M, "Role of surface oxygen-containing functional groups of graphene oxide quantum dots on amyloid fibrillation of two model proteins", PLOS ONE, 2020

- Zadali, R., Ghareghozloo, E. R., Ramezani, M., Hassani, V.,

Rafiei, Y., Chiyaneh, S. M., & Meratan, A. A., "Interactions with and membrane permeabilization of brain mitochondria by amyloid fibrils", Journal of Visualized Experiments, 2019

- Katebi, B., Mahdavimehr, M., Meratan, A. A., Ghasemi, A., & Nemat-Gorgani, M., "Protective effects of silibinin on insulin amyloid fibrillation, cytotoxicity and mitochondrial membrane damage", Archives of biochemistry and biophysics, 2018

- Mahdavimehr, M., Katebi, B., & Meratan, A. A. , "Effect of fibrillation conditions on the anti-amyloidogenic properties of polyphenols and their involved mechanisms.", International journal of biological macromolecules, 2018

- Nedaei, H., Saboury, A. A., Meratan, A. A., Karami, L., Sawyer, L., Kaboudin, B., ... & Ghasemi, A., "Polyphenolic self-association accounts for redirecting a high-yielding amyloid aggregation", Journal of Molecular Liquids, 2018

- Azami-Movahed, M., Meratan, A. A., Ghasemi, A., Ebrahim-Habibi, A., & Nemat-Gorgani, M., "Acetylation of lysine residues in apomyoglobin: Structural changes, amyloid fibrillation, and role of surface charge.", International journal of biological macromolecules, 2018

- Mahdavimehr, M., Meratan, A. A., Ghobeh, M., Ghasemi, A., Saboury, A. A., & Nemat-Gorgani, M. , "Inhibition of HEWL fibril formation by taxifolin: mechanism of action", PLOS ONE, 2017

- Roqanian, S., Meratan, A. A., Ahmadian, S., Shafizadeh, M., Ghasemi, A., & Karami, L. , "Polyphenols protect mitochondrial membrane against permeabilization induced by HEWL oligomers: Possible mechanism of action", International journal of biological macromolecules, 2017

- Ghobeh, M., Ahmadian, S., Ebrahim-Habibi, M. B., Meratan, A. A., & Ebrahim-Habibi, A. , "Effects of Dimethyl Sulfoxide and Mutations on the Folding of Abeta (25-35) Peptide: Molecular Dynamics Simulations", Biomacromolecular Journal, 2016

- Shariatizi, S., Meratan, A. A., Ghasemi, A., & Nemat-Gorgani, M., "Inhibition of amyloid fibrillation and cytotoxicity of lysozyme fibrillation products by polyphenols", International journal of biological macromolecules, 2015

- Ghobeh, M., Ahmadian, S., Meratan, A. A., Ebrahim-Habibi, A., Ghasemi, A., Shafizadeh, M., & Nemat-Gorgani, M., "Interaction of Aβ (25–35) fibrillation products with mitochondria: Effect of small-molecule natural products.", Peptide Science, 2014

- Abbasabadi, A. O., Javanian, A., Nikkhah, M., Meratan, A. A., Ghiasi, P., & Nemat-Gorgani, M., "Disruption of mitochondrial membrane integrity induced by amyloid aggregates arising from variants of SOD1", International journal of biological macromolecules, 2013

- Meratan, A. A., & Nemat-Gorgani, M., "Mitochondrial membrane permeabilization upon interaction with lysozyme fibrillation products: role of mitochondrial heterogeneity.", Biochimica et Biophysica Acta (BBA)-Biomembranes, 2012

- Meratan, A. A., Ghasemi, A., & Nemat-Gorgani, M. , "Membrane integrity and amyloid cytotoxicity: a model study involving mitochondria and lysozyme fibrillation products", Journal of molecular biology, 2011

- Niknam, V., Meratan, A. A., & Ghaffari, S. M., "The effect of salt stress on lipid peroxidation and antioxidative enzymes in callus of two Acanthophyllum species.", In Vitro Cellular & Developmental Biology-Plant, 2011

- Meratan, A. A., Ghaffari, S. M., & Niknam, V., "In vitro organogenesis and antioxidant enzymes activity in Acanthophyllum sordidum.", Biologia plantarum, 2009

- Bigdeli, M. R., Rasoulian, B., & Meratan, A. A., " In vivo normobaric hyperoxia preconditioning induces different degrees of antioxidant enzymes activities in rat brain tissue.",

European journal of pharmacology, 2009