10th International Conference on

Food Science & Technology

February 07, 2022 | Webinar

Nutrition in pandemic; short communication screening pilot study of fruit seed compositions by GC–MS and their potential scenario anti ACE2 and 2rh1 receptors as a recycling possibility in the Coronavirus pandemic

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Since 2019, several critical effects of the coronavirus pandemic have surfaced, including its psychological problems such as depression. The World Health Organization has approved a group of drugs and vaccines. However, the world still faces novel coronavirus mutations, requiring more ideas to investigate a drug, vaccine, and phytochemical potential chemoprevention proposal. Severe acute respiratory syndrome coronavirus (SARS-CoV)-2 co-operates directly with the angiotensin-converting enzyme 2 (ACE2) to penetrate the target cells. We aim to introduce the possibility of studying seed oil extract as an anti-depression, anti-stress, anti-epinephrine receptor (PDB: 2rh1), and as potentially binding antiangiotensin-converting enzyme 2 (ACE2) agent. From our previous work we have health benefit effect from studied fruit on rats. From this point of view, we analyze the constituents of the six studied seeds' oil with gas chromatographymass spectrometry (GC-MS) by performing an AutoDock analysis of the components' potential ligands to both the 2rh1 and ACE2. We observe convenient binding conformations between the investigated receptors and the 44 phyto constituents. The AutoDock outcomes of the seeds' phytochemical GC-MS separated components reveal highly binding energy, with ACE2 higher than 2rh1. The studied seed oil contains binding energy with currently studied receptors and molecular weight, which enables it to be studied in the future as a nanoparticle against viruses, vaccines, and psychiatric drugs.

Speaker Biography

Asmaa Fathi Hamouda contributed to creating and owning, conceptualizing, work idea designing, and performing the experiments, chromatography, and AutoDock analysis, interpreting and analyzing data, writing, revising, and editing the manuscript, and explaining the results.

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