

Table 3 Docosahexaenoic acid (DHA) binding affinities with ACE2 and IL-6 in addition to its other therapeutic properties

Docosahexaenoic acid (DHA) binding affinities with ACE2 and IL-6 could make it a potent protective factor against COVID-19 in children and Infants	
Binding Affinity with ACE2 receptor	-6.3
Binding Affinity with IL-6	-5.3
Hydrogen bonds with ACE2	Two strong hydrogen bonds
Hydrogen bonds with IL-6	One strong hydrogen bond
Type	Omega-3 fatty acid
Anti-inflammatory properties	Inhibition of Interleukin-6(IL-6) (Rehman K et al.,2016) Inhibition of tumor necrosis factor-alpha (TNF-α) and nuclear factor-κB (NF-κB) (Yang YC et al.,2013)
Smell, taste and GPCRs	Protective for the olfactory system (Gao MG et al.,2021) DHA levels affect ad modulates G protein-coupled receptors (GPCRs) function (Guixà-González R et al., 2016)
Sources	Breast Milk, Fish oils, Single cell oils (SCO) (Algal source like Crypthecodinium and Schizochytrium)(Z.Cohen et al., 2010)
Anti-clotting properties	Inhibition of platelet aggregation (DiNicolantonio JJ et al.,2019)
DHA for children	DHA has many health benefits for both mother and baby (Juber et al.,2016) 1-Enhances brain function and vision. (Horrocks LA.,1999) 2-Treats allergies, asthma, and attention deficit-hyperactivity disorder (ADHD). (Miyata J et al., 2015)
DHA , COVID-19 and Children	According to our findings DHA found in breast milk (Juber et al.,2016), could act as a protective factor against COVID-19 via inhibiting both ACE2 receptors and IL-6