

The Janus Corner



This occasional section within the journal surveys visions and achievements, often not on the main track of the developing biomedical sciences, but all relating to discoveries and developments of medicinals – both ancient and modern. What they have in common, in one way or another, is providing further background and glances around the edges of the core discipline of pharmacognosy, as it has been and continues to evolve within our times.

Extracts Prepared from *Punica granatum* L. Peel Inhibit SARS-CoV-2 Virus Infection

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The SARS-CoV-2 virus that causes the current COVID-19 pandemic is an enveloped RNA virus that has been the focus of much research in the last year. Whilst the majority of efforts to combat this pandemic have focussed on the development of an effective vaccine, other researchers have turned to pharmacognosy in an effort to discover effective treatments. A recent study from the Department of Pharmacognosy at University of Banja Luka in Bosnia and Herzegovina has highlighted the potential of *Punica granatum* L. (commonly known as pomegranate) peel extracts in preventing SARS-CoV-2 infections.¹ *Punica granatum* peel contains substantial levels of hydrolysable tannins including gallic acid, ellagic acid, punicalagin and punicalatin, as well as notable flavonoids and anthocyanins, with reported therapeutic properties. Notably, *P. granatum* extracts have previously been reported to inhibit infections in humans of

influenza virus, herpes virus, poxviruses and human immunodeficiency virus (HIV). The researchers of this study screened *P. granatum* extracts and pure tannins against four protein targets that facilitate SARS-CoV-2 entry into host cells (SARS-CoV-s spike glycoprotein, angiotensin-converting enzyme-2, furin and transmembrane serine protease 2). Of the tested compounds, punicalagin and punicalatin displayed noteworthy interactions with the selected proteins. Whether this translates to decreased infection rates *in vivo* is yet to be determined.

REFERENCE

1. Suručić R, Tubić B, Stojiljković MP, et al. Computational study of pomegranate peel extract polyphenols as potential inhibitors of SARS-CoV-2 virus internalization. Mol Cell Biochem. 2020. <https://doi.org/10.1007/s11010-020-03981-7> <https://link.springer.com/article/10.1007%2Fs11010-020-03981-7>