

3rd Symposium of Young Researchers on Pharmacognosy



Szeged, 3–4 February 2022

BOOK OF ABSTRACTS



3rd Symposium of Young Researchers on Pharmacognosy

BOOK OF ABSTRACTS

(ed. Tivadar Kiss, Judit Hohmann)

**Department of Pharmacognosy, University of Szeged, Szeged,
Hungary**

3–4 February 2022

doi: [10.14232/syrpharmacognosy.2022.af](https://doi.org/10.14232/syrpharmacognosy.2022.af)

A7

doi: 10.14232/syrpharmacognosy.2022.a7

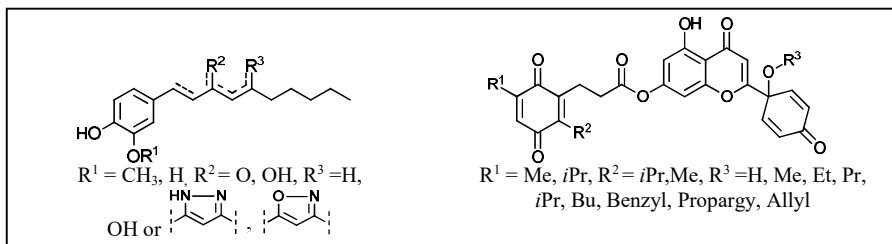
6-gingerol derivatives and thymoquinone-protolavones hybrids: natural antioxidants as building blocks of new bioactive compounds

Sara Hassan Hassan Ahmed

Email: sara.ahmed@pharmacognosy.hu

Ginger (*Zingiber officinale* Roscoe) has been well known as a spice and in traditional medicine [1]. Ginger extract has been investigated for many diseases and the activity was mainly attributed to gingerols and shogaols, the most abundant antioxidants in ginger root [2,3]. Black seed (*Nigella sativa* L.) has been widely used as a seasoning spice and in folk medicine [4]. A wide array of bioactivities was reported for the extract and for thymoquinone, a predominant active constituent in the plant [5].

Fourteen 6-gingerol derivatives were semi-synthesized, 8 of which are new. They were investigated for their *in vitro* antiplatelet activity and *in silico* ADME behavior. The most promising compound showed an IC₅₀ of 2.1 μM. Eight thymoquinone-protolavone hybrids were also synthesized and will soon be studied for their *in vitro* antitumor activity.

**Supervisors:** Attila Hunyadi, Tímea Halasi-Gonda**Acknowledgements:**

This work was supported by the NKFIH, Hungary (K-134704).

References

1. Han, Y.a., et al., *Phytotherapy Research*, 2013. 27(8):1200–1205.
2. Mao, Q.Q., et al., *Foods*, 2019. 8(6):185.
3. Nile, S.H. and P. Se Won, *Industrial Crops and Products*, 2015. 70:238–244.
4. Ramadan, M.F., Chapter 30 - V.R. Preedy, Editor. 2016, Academic Press: San Diego. p. 269–275.
5. Ahmad, A. et al., *Asian Pac J Trop Biomed*, 2013. 3(5):337–352.