

## Antioxidant activity of new glycoconjugates containing Selenium

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### Abstract

Nowadays Selenium (Se) is recognized as a trace element essential for human health, low Se levels are actually associated with several diseases [1]. Many natural occurring Se compounds show redox and biological capacities, thus stimulated synthesis of new molecules with the aim to spread antioxidant effects in biological systems. Most of these bioactive Se-containing molecules showed a strong therapeutic and biological relevance [2].

Here we propose a new strategy to synthesize glycoconjugates consisting of a seleno-deoxysugar (**1**) bound to a polyphenolic moiety. The methodology was applied for the synthesis of the short library of the new molecules displayed in Chart 1.

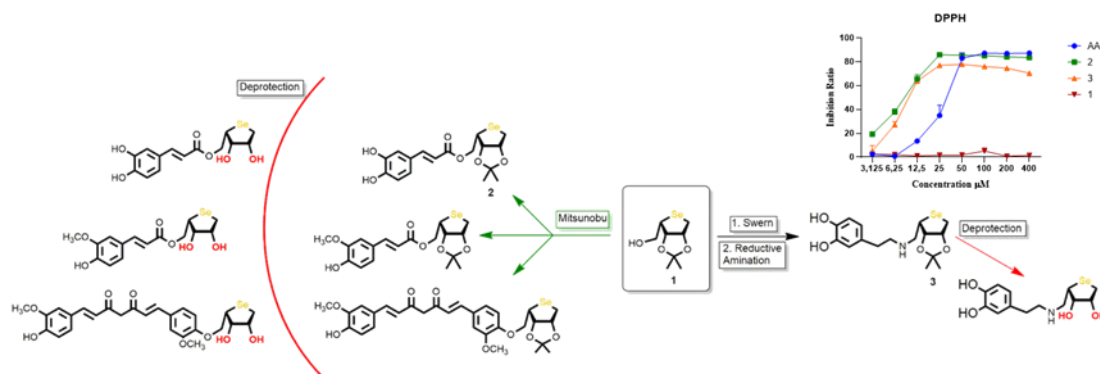


Chart 1. Scheme of seleno-glycoconjugates.

Antioxidant activity of the new glycoconjugates has been investigated by specific tests. Namely, FRAP and DPPH assays were performed to verify the reducing and scavenging abilities, respectively.

**Key Words:** Selenium, Antioxidants, Oxidative stress, Deoxysugars, Polyphenols

### References

[1] Rayman MP (2020) *Hormones* 19:9–14

[2] Lenardão EJ, Santi C, Sancineto L (2018) *New Frontiers in Organoselenium Compounds*. Springer, Cham 2:99-143

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