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## Structural characterization and immunomodulatory activity of mucilage polysaccharide from mushroom *A. vaginata*

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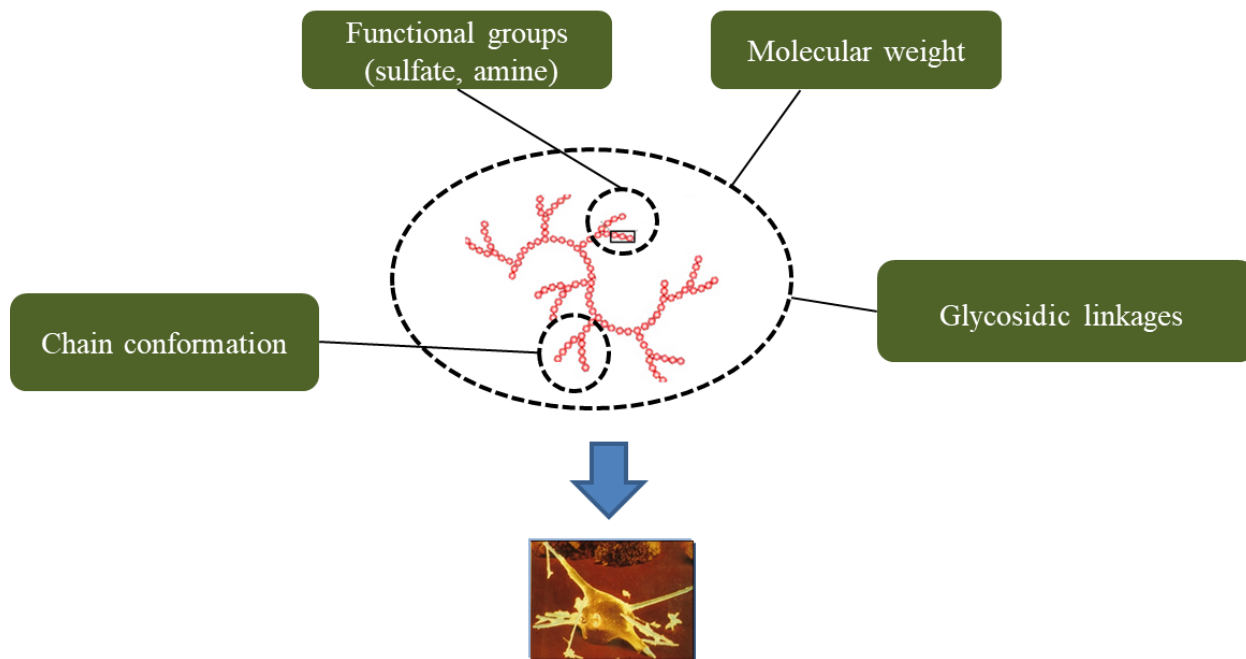
### Abstract:

The mucilage polysaccharides (MP) obtained from *A. vaginata* were fractionated using an anion exchange chromatography, yielding two fractions, MPF1 and MPF2. The crude and fractions mainly consisted of carbohydrates (83.1–95.2%) minor amount of proteins (3.46–7.4%) and sulfates (1.33–9.30%). Glucose was the major monosaccharide unit of the polysaccharides with different levels of sugar constituents including galactose, mannose, rhamnose and arabinose. The molecular weight (Mw) of crude and fractions ranged from 247.0–3697 × 10<sup>3</sup> g/mol. The crude and fractions could stimulate RAW264.7 cells to release nitric oxide and various of cytokines via up-regulation of their mRNA expression by the activation of NF-κB and MAPKs pathways. The related pattern recognition receptors (PRRs) on the surface of the cells appeared to be TLR4. The GC–MS analysis revealed that the main backbone of the highest immune-enhancing MPF2 was α-(1→6)-Glucopyranoside.



## MMS5 e-Conference

### Graphical abstract



Immunomodulation effects

The research scope of the MRG 6280218 project