Decoding chitosans' mucosal, gene delivery and antimicrobial activities

Francisco M. Goycoolea*

Department of Cell Biology and Histology
Faculty of Biology
University of Murcia, Spain

*Correspondence: fmartin.goycoolea@um.es

Chitosans' value as functional biopolymers in biomedical and food applications rely on interactions that are directly dependent on its structure. These need to be elucidated to determine their specificity for given purposes.
With soluble mucins, chitosans interact by reducing their viscosity, where the degree of acetylation is the key parameter.
The antimicrobial activity has been subject of intensive studies, and the mechanisms are still poorly understood.
For gene delivery, chitosans effectiveness and specificity needs to be elucidated for the many variants of nucleic acids of therapeutic and biotechnological relevance.
These aspects will be discussed in the context of our own and others research.