



BREAKTHROUGH FORMULATIONS FOR COVID-19 DRUG DELIVERY SUSTAINED RELEASE IN RESPIRATORY AND GASTROINTESTINAL TRACTS

Novochizol™ technology enables the formulation of any active pharmaceutical ingredient – small molecule, nucleic acid, peptide or protein – with monomolecular chitosan nanoparticles for targeted delivery and sustained release in any tissue or organ. Chitosan, a derivative of chitin, is the second most abundant polysaccharide on earth. It finds applications in a variety of domains and has an extraordinary potential in healthcare, but its inherent characteristics limit its use in pharma.

Novochizol™ technology quantitatively transforms single linear chitosan molecules into nanoparticles of customizable diameters, overcoming the limitations of chitosan, enhancing its existing beneficial properties and displaying new features for first-in-class solutions.

Video presentations: [Novochizol™ COVID-19 aerosol formulations](#)

NOVOCHIZOL™ vs CHITOSAN

Chitosan

- Solubility only at acid pH
- High viscosity
- Rapid biodegradation
- Low physical stability
- Low chemical stability
- Limited physical states
- Limited carrier possibilities

NOVOCHIZOL™

- Solubility/dispersibility under all conditions
- High or low viscosity (for sprays, aerosols, nebulizers)
- Slow biodegradation
- High physical stability (resistance to freeze-thaw cycles)
- High chemical stability
- Aqueous suspensions, aerosols, hydrogels, solid states
- Sustained release of small molecules, peptides, proteins, and supramolecular entities. Emulsifies any hydrophobic substance

NOVOCHIZOL™ FORMULATIONS FOR RESPIRATORY TRACT DELIVERY

- Formulation of challenging APIs as low viscosity aqueous suspensions ideal for nebulization
- Generation of aerosols with optimal size particles (180 nm) for complete intra-pulmonary delivery
- Localized, high concentration delivery and mucoadherence
- Long-term sustained release
- Customizable release properties, enabling or preventing systemic distribution
- Proofs of concepts with 8 different anti-viral drug candidates

NOVOCHIZOL™ ANTI-COVID-19 FORMULATIONS FOR GASTROINTESTINAL TRACT DELIVERY

- Formulation of challenging APIs
- Intestinal mucoadherence
- Localized delivery and mucoadherence
- Intestinal wall penetration
- Long-term sustained release

NOVOCHIZOL™ CAN BE USED TO FORMULATE SMALL MOLECULES, PEPTIDES, DNA/RNA AND PROTEINS

Further Information:

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