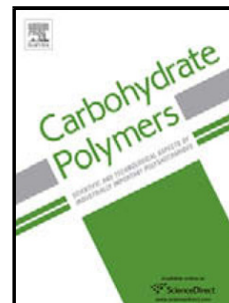


## Accepted Manuscript

Title: Stability and Bioactivity of Chitosan as a Transfection Agent in Primary Human Cell Cultures: A Case for Chitosan-only Controls

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PII: S0144-8617(17)31167-0  
DOI: <https://doi.org/10.1016/j.carbpol.2017.10.021>  
Reference: CARP 12870

To appear in:

Received date: 28-6-2017  
Revised date: 21-8-2017  
Accepted date: 4-10-2017

Please cite this article as: { <https://doi.org/>

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Stability and Bioactivity of Chitosan as a Transfection Agent in Primary Human Cell Cultures:

A Case for Chitosan-only Controls

Chitosan Modulates CD59 Expression

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### Highlights:

- Chitosan microparticle size is augmented by incubation under cell culture conditions
- Chitosan polymers modulate viability in cells exposed to acidotic conditions
- Transfection with chitosan particles enhances CD59 mRNA but not surface expression
- Chitosan polymers directly alter CD59 surface expression in primary human cells

### Abstract

Chitosan polymers (Cs), from which microparticles (CsM) may be precipitated to deliver various intracellular payloads, are generally considered biologically inert. We examined the impact of cell culture conditions on CsM size and the effect of chitosan on CD59 expression in primary human smooth muscle cells. We found that particle concentration and incubation time in

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