Jan Willem Kok, J Glycobiol 2015, 3:3
http://dx.doi.org/10.4172/2168-958X.S1.002



# Glycobiology World Congress



## Glycosphingolipids enhance transfection efficiency in GM95 cells

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We investigated whether glycosphingolipids in the plasma membrane of cells affect transfection efficiency mediated by cationic lipoplexes. The ideal model cell line GM95 was used which lacks glycosphingolipids due to mutated glucosylceramide synthase. GM95-GCS cells were generated which stably express active glucosylceramide synthase. These cells display enhanced transfection efficiency of the reporter gene GFP and enhanced binding/uptake of lipoplexes compared to mock-transfected GM95 cells. The latter effect was mimicked by loading mock-transfected GM95 cells with GM3 but not in case of GM1. We conclude that glycosphingolipids enhance transfection efficiency of cationic lipoplexes and this likely is the result of increased binding/uptake of lipoplexes mediated selectively by GM3.

### Biography

Jan Willem Kok has completed his PhD at the age of 31 from Groningen University. He is an Associate Professor at the Cell Biology Department of the University Medical Center Groningen, University of Groningen in Netherlands. He has published more than 70 peer-reviewed papers in reputed journals. His research interest includes sphingolipid biology, lipid rafts and ABC transporters.

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