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Research Article

Composites of Malonic Acid Diamides and Phospholipids – Impact of Lipoplex Stability on Transfection Efficiency.

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Running Title: Impact of Lipoplex Stability on Transfection Efficiency.

Keywords: cationic lipids, lipofection, lipoplexes, phospholipids, charge density, gene therapy

Abbreviations: **a.u.**, arbitrary units, **CC**, point of charge compensation, **Chol**, cholesterol, **CLSM**, confocal laser scanning microscopy, **CV**, cell viability, **DLS**, dynamic light scattering, **DOPC**, 1,2-di-[(9Z)-octadec-9-enoyl]-sn-glycero-3-phosphocholine, **DOPE**, 1,2-dioleoyl-*sn*-glycero-3-phosphoethanolamine, **DOPS**, 1,2-dioleoyl-*sn*-glycero-3-phosphoserin, **DPPC**, 1,2-dihexadecanoyl-*sn*-glycero-3-phosphocholine, **eGFP**, enhanced green fluorescent protein, **EtBr**, ethidium bromide, **FBS**, fetal bovine serum, **GAGs**, glycosaminoglycans, **I**, intensity, **IEP**, isoelectric point, **IRRAS**, infrared reflection-absorption spectroscopy, **MES**, 2-(*N*-morpholino)ethanesulfonic acid, **N/P ratio**, ratio of the numbers of primary amino groups in cationic lipids to the number of phosphate groups in the DNA, **OH4**, *N*-{6-amino-1-[*N*-(9Z)-octadec-9-enylamino]-1-oxohexan-(2*S*)-2-yl]-*N*'-2-[*N,N*-bis(2-aminoethyl)amino]ethyl}-2-hexadecylpropanediamide, **PBS**, phosphate buffered saline,

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