Peptide Amphiphiles and their use in Supramolecular Chemistry

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List of abbreviations

A	alanine
Ac	acetyl
Ada	adamantane
β-CD	β-cyclodextrin
CD	circular dichroism
CDV	cyclodextrin vesicle
CH	cholesterol
CHO	Chinese hamster ovary
CPE	cholesterol-PEG_{12}-E
CPEPC	cholesterol-PEG_{12}-E-PEG_{12}-cholesterol
CPK	cholesterol-PEG_{12}-K
cryo	cryogenic
DCM	dichloromethane
Dh	hydrodynamic diameter
DIC	N,N'-Diisopropylcarbodiimide
DIPEA	N,N-diisopropylethylamine
DLS	dynamic light scattering
DMF	dimethylformamide
DNA	deoxyribonucleic acid
DOPC	1,2,-dioleoyl-sn-glycero-3-phosphatidylcholine
DOPE	1,2,-dioleoyl-sn-glycero-3-phosphatidylethanolamine
DOPE-LR	1,2,-dioleoyl-sn-glycero-3-phosphatidylethanolamine-lissamine-rhodamine B
DOPE-NBD	1,2,-dioleoyl-sn-glycero-3-phosphatidylethanolamine-N-(7-nitro-2-1,3-benzoxydiazol-4yl)
E	glutamic acid
EM	electron microscopy
EPC	E-PEG_{12}-cholesterol
Fmoc	fluorenylmethoxycarbonyl
FRET	fluorescence resonance energy transfer
G	glycine
HCTU	1H-benzotriazolium 1-[bis(dimethylamino)methylene]-5-chloro-hexafluorophosphate(1-),3-oxide
HOBT	hydroxybenzotriazole
HPLC	high performance liquid chromatography
I	isoleucine
K	lysine
K_a	association constant
KPC	K-PEG_{12}-cholesterol
L	leucine
LC-MS	liquid chromatography-mass spectrometry
NMP	N-methyl-2-pyrrolidone
PBS	phosphate buffer system
PEG	poly(ethylene glycol)
SNARE	soluble NSF attachment protein receptor
SPPS	solid phase peptide synthesis
TEA	triethanolamine
TEM	transmission electron microscopy

TFA	trifluoroacetic acid
TFE	trifluorethanol
TIS	triisopropylsilane

Curriculum Vitae

Frank Versluis was born in Rotterdam on the 17th of August 1983. He received his elementary education at the "Prins Willem Alexander school" in Vlaardingen. He followed secondary education at the "Christelijke Scholengemeenschap Aqua Marijn," also in Vlaardingen, receiving a "VWO" diploma in 2001. He continued his education at the Leiden University where he studied chemistry. After finishing a master's internship on pH triggered β-sheet formation at the surface of cyclodextrin vesicles at the Soft Matter Chemistry group of Alexander Kros, he received a M. Sc. in chemistry in 2009. He continued his research efforts in supramolecular chemistry, mainly focused on membrane fusion, as a PhD student under the supervision of Alexander Kros. During his PhD track, Frank attended multiple conferences, giving oral lectures at the COST action meeting in Lisbon (2012) and the NWO meetings design and synthesis (2012) and molecules: synthesis and properties (2013) in Lunteren.

Currently, Frank works as a postdoctoral researcher at the organic chemistry department at the Wageningen University and Research Centre under the supervision of prof. dr. Han Zuilhof and dr. Maarten Smulders.

List of Publications

Published manuscripts

- H. Zope,[*] **F. Versluis**,[*] A. Ordas, J. Voskuhl, H. P. Spaink and A. Kros. *In vitro* and *In vivo* bio-membrane engineering using a Coiled-Coil motif. *Angew. Chem. Int. Ed.* (Manuscript accepted for publication).
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- J. Voskuhl, C. Wendeln, **F. Versluis**, E.-C. Fritz, O. Roling, H. Zope, C. Schultz, S. Rinnen, H. F. Arlinghaus, B. J. Ravoo and A. Kros, *Angew. Chem. Int. Ed.*, 2012, **51**, 12616.
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Manuscript in preparation

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