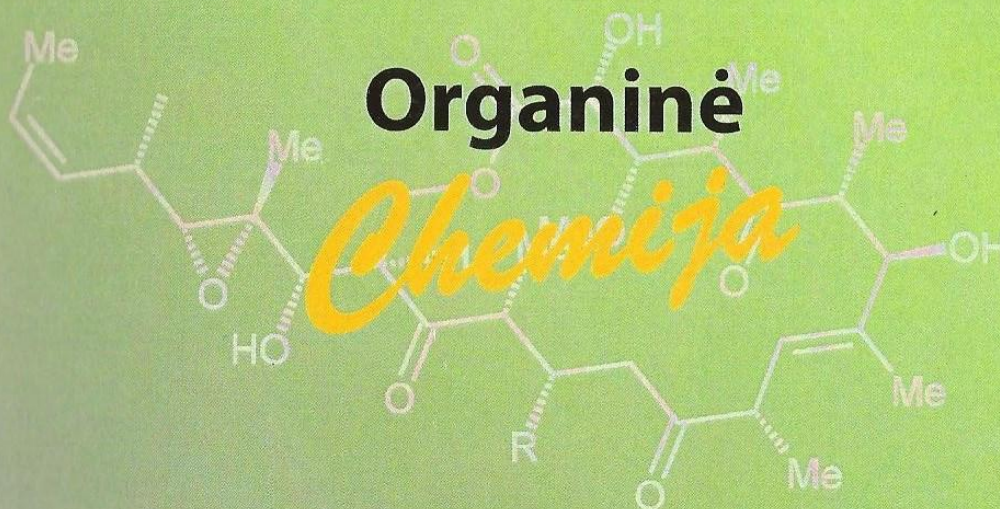


Kauno technologijos universitetas,
2013 m. balandžio 24 d.



Mokslinės konferencijos
pranešimų medžiaga

ISSN 2029–6401

KAUNO TECHNOLOGIJOS UNIVERSITETAS
KAUNAS UNIVERSITY OF TECHNOLOGY

Mokslinės konferencijos

ORGANINĖ CHEMIJA

pranešimų medžiaga

ORGANIC CHEMISTRY

Proceedings of Scientific Conference



TURINYS

I. Novosjolova, Ē. Bizdēna, M. Turks	
2,6-Bis-(1,2,3-triazolyl)-purine nucleosides and their reactivity towards different nucleophiles	7
E. Rolava, V. Rodins, S. Belyakov, M. Turks	
Synthetic pathway for carbohydrate-based spiro-oxazolidinone derivatives	12
I. Novosjolova, Ē. Bizdēna, M. Turks	
Synthesis and photophysical studies of N^6 -substituted-2-triazolyl adenine derivatives	17
V. Rjabovs, D. Zeļencova, E. Liepinsh, M. Turks	
Insight into possible secondary structures of glucose-derived carbopeptoids by NMR and CD spectroscopies.....	18
J. Lugiņina, M. Turks	
Construction of novel sugar derivatives via Michael/1,3-dipolar addition sequence	19
D. Posevins, V. Rjabovs, M. Turks	
Synthesis of linear homooligomers from novel furanoid sugar amino acids.....	20
K. Ozols, Ē. Bizdēna	
Synthesis and reactions of 2,6-diazidopurine deoxynucleoside.....	21
V. Pozņaks, M. Turks	
Stereoselective synthesis of GABA derivatives from diacetone-D-glucose.....	22
K. Vēze, D. Vasiljevs, J. Lugiņina, M. Turks	
Synthesis and applications of 3-C-nitromethyl derivatives of hexafuranoses	23
E. Rolava, U. Peipiņš, M. Turks	
Synthesis and applications of (-)-(S)-3-aminoquinuclidine derivatives.....	24
V. Zvarych, R. Musyanovych, O. Stanko, M. Stasevych, V. Novikov, V. Mickevičius, K. Anusevičius	
Synthesis of new 3,3'-[(4-R-phenyl)azanediy]- bis(N-(9,10-dioxo-9,10-dihydroanthracen-1-yl)propanamide).....	25
R. Jančienė, G. Mikulskienė, A. Vektarienė	
1-(2-Nitrobenzoyl)-1,5-benzodiazepin-2-ono ir 6,7-dihidrochinazolino- [3,2-a][1,5]benzodiazepino darinių struktūros ypatybių tyrimas.....	27
T. Javorskis, D. Podėnienė, S. Palaikienė, R. Asakavičiūtė, Z. Maknickienė	
1,5-Pakeistų 1,3,4,5-tetrahidro-2H-1,5-benzodiazepin-2-ono darinių poveikis siauralapių lubinų (<i>Lupinus angustifolius</i> L.) augimui	30

INSIGHT INTO POSSIBLE SECONDARY STRUCTURES OF GLUCOSE-DERIVED CARBOPEPTOIDS BY NMR AND CD SPECTROSCOPIES

V. Rjabovs, D. Zelencova, E. Liepinsh, M. Turks

Faculty of Material Science and Applied Chemistry, Riga Technical University, Riga, LV-1007, Latvia, maris_turks@ktf.rtu.lv

Carbopeptoids comprising unnatural sugar amino acids exhibit secondary structures, and were studied as peptidomimetics.¹ At the same time, 1,2,3-triazoles were studied as amide bond isosteres as they exhibit similar spatial arrangement and geometry.²

We have synthesized oligomers that have either alternating amide/1,2,3-triazole linkers between carbohydrate moieties (type I, Fig. 1a) or triazole linkers (type II, Fig. 1a). To determine folding preferences of the compounds in solution we have subjected oligomers of each series with 4, 6, and 8 sugar residues to spectroscopic studies. Using ROESY experiments in chloroform distances between adjacent protons were calculated and used for MD calculations. CD spectra in MeCN and trifluoroethanol (Fig. 1b) were acquired to determine solvent, chain length and temperature effects on the conformational preferences of the compounds.

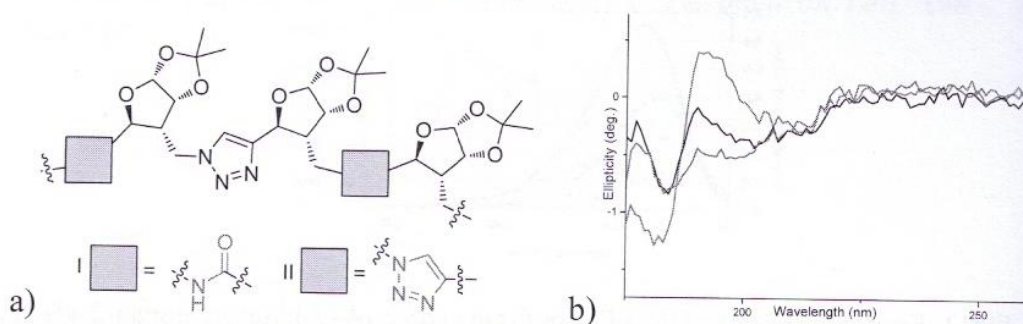


Fig. 1. a) Structural fragment of carbopeptoids. b) CD spectra of type I oligomers.

Acknowledgement. This work has been supported by the European Social Fund within the project «Support for the implementation of doctoral studies at Riga Technical University».

REFERENCES

- Claridge, T. D. W.; Long, D. D.; Baker, C. M.; Odell, B.; Grant, G. H.; Edwards, A. A.; Tranter, G. E.; Fleet, O. W. J.; Smith, M. D. *J. Org. Chem.* **2005**, *70*, 2082-2090.
- Angell, Y.; Chen, D.; Brahimi, F.; Saragovi, H. U.; Burgess, K. *J. Am. Chem. Soc.* **2008**, *130*, 556-565.