Synthesis and *in vitro* NMR and phantom MRI studies of TEMPO-Glc and TEEPO-Glc, potential contrast agents for MRI

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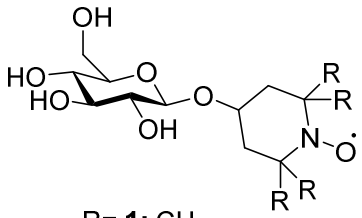
Magnetic resonance imaging (MRI) is one of the most important medical imaging methods due to its non-invasiveness and superior image quality. Contrast agents are used in MRI to improve the contrast between different tissues. They are paramagnetic substances mainly based on gadolinium chelates.

We present two fully organic free radicals, TEMPO-Glc (1) and TEEPO-Glc (2), as potential contrast agents for MRI.[1] Due to their unpaired electrons, these compounds possess relaxation enhancing properties. Also, heterocyclic nitroxide radicals can be made very stable by synthetically modifying the structure to shelter the unpaired electron. These structures can be further developed to incorporate for example tumor targeting properties. In the poster, synthesis, stability assessment and relaxivity studies by *in vitro* MRI of these compounds will be discussed.



R= **1:** CH_3
2: CH_2CH_3

1. Soikkeli, M.; Sievänen, K.; Peltonen, J.; Kaasalainen, T.; Timonen, M.; Heinonen, P.; Rönkkö, S.; Lehto, V.-P.; Kavakka, J.; Heikkinen, S. *RSC Adv.* **2015**, *5*, 15507