

PERSONAL INFORMATION **Torgny Rundlöf**

WORK EXPERIENCE

January 1999–August 2000

Scientist

Swedish Match (Sweden)

Project management analytical chemistry

August 2000–Present

Pharmaceutical evaluator

Swedish Medical Products Agency (Sweden)

Project management, analytical chemistry, NMR spectroscopy, Pharmaceuticals, quality control

EDUCATION AND TRAINING

August 1989–June 1993

Master of science in chemistry

Stockholm University (Sweden)

Focus on organic chemistry. Some analytical chemistry, biochemistry, inorganic chemistry, physical chemistry, physics, mathematics, geology, biology

July 1993–October 1998

Doctor of Philosophy in organic chemistry

Stockholm University (Sweden)

Carbohydrate chemistry, NMR spectroscopy, mass spectrometry, gas chromatography

ADDITIONAL INFORMATION

Expertise

NMR spectroscopy

Mass spectrometry

Pharmaceutical analysis

Publications

1. P-E Jansson, A Kjellberg, T Rundlöf and G Widmalm. "Synthesis, NMR spectroscopy and conformational studies of two vicinally disubstituted trisaccharides", *J. Chem. Soc., Perkin Trans. 2*, 1 (1996) 33-37.
2. T Rundlöf, A Weintraub and G Widmalm. "Structural studies of the enteroinvasive *Escherichia coli* (EIEC) O28 O-antigenic polysaccharide", *Carbohydr. Res.* 291 (1996) 127-139.
3. T Rundlöf and G Widmalm. "A method for determination of the absolute configuration of chiral glycerol residues in natural products using TEMPO oxidation and characterization of the glyceric acids formed", *Anal. Biochem.* 243 (1996) 228-233.
4. A Kjellberg, T Rundlöf, J Kowalewski and G Widmalm. "Motional properties of two vicinally disubstituted trisaccharides as studied by multiple-field carbon-13 NMR relaxation", *J. Phys. Chem. B* 102 (1998) 1013-1020.
5. T Rundlöf, C Landersjö, K Lycknert, A Maliniak and G Widmalm. "NMR investigation of oligosaccharide conformation using dipolar couplings in an aqueous dilute liquid crystalline medium", *Magn. Reson. Chem.* 36 (1998) 773-776.
6. T Rundlöf, A Kjellberg, C Damberg, T Nishida and G Widmalm. "Long-range proton-carbon coupling constants in conformational analysis of oligosaccharides", *Magn. Reson. Chem.* 36 (1998) 839-847.
7. T Rundlöf, A Weintraub and G Widmalm. "Structural studies of the O-antigenic polysaccharide from *Escherichia coli* O35", *Eur. J. Biochem.* 258 (1998) 139-143.
8. T Rundlöf, R Venable, R Pastor, J Kowalewski and G Widmalm. "Distinguishing anisotropy and flexibility of the pentasaccharide LNF-1 in solution by carbon-13 NMR relaxation and hydrodynamic

modeling", *J. Am. Chem. Soc.* 121 (1999) 11847-11854.

9. T Rundlöf, E Olsson, A Wiernik, S Back, M Aune, L Johansson and I Wahlberg. "Potential nitrite scavengers as inhibitors of the formation of N-nitrosamines in solution and tobacco matrix systems", *J. Agric. Food Chem.* 48 (2000) 4381-4388.

10. R Eserstam, C Slater, P-E Jansson, G Widmalm, T Rundlöf and S G Wilkinson.

"Structure of the acidic microcapsular glycan from the reference strain (C.D.C. 6320-58) for *Serratia marcescens* serotype O14:K12", *Carbohydr. Res.* 329 (2000) 227-232.

11. T Rundlöf, L Eriksson and G Widmalm. "A conformational study the trisaccharide α -D-Glcp-(1 \leftrightarrow 2)[α -D-Glcp-(1 \leftrightarrow 3)] β -D-Glcp-OMe by NMR NOESY and TROESY experiments, computer simulations and X-ray crystal structure analysis", *Chem. Eur. J.* 7 (2001) 1750-1758.

12. T Rundlöf and G Widmalm. "NMR analysis of the trisaccharide 2'-fucosyllactose by heteronuclear trans-glycosidic coupling constants and molecular simulations", *Magn. Reson. Chem.* 39 (2001) 381-385.

13. K Lycknert, T Rundlöf and G Widmalm. "Solution structure of a type 1 H antigen trisaccharide at a micellar surface: NMR relaxation and molecular dynamics simulation studies", *J. Phys. Chem. B* 106 (2002) 5275-5280.

14. A Amini, T Rundlöf, M-B Grön Rydberg and T Arvidsson. "Characterization of sulfated -cyclodextrins and determination of enantiomeric purity of (1R,2S)-ephedrine by capillary zone electrophoresis", *J. Sep. Sci.* 27 (2004) 1002-1008.

15. A Amini, V Barclay, T Rundlöf, S Jönsson, A Karlsson and T Arvidsson. "Determination of ephedrine, pseudoephedrine and caffeine in a dietary product by capillary electrophoresis", *Chromatographia* 63 (2006) 143-148.

16. H Brandin, O Myrberg, T Rundlöf, A-K Arvidsson and G Brenning. "Adverse effects by artificial grapefruit seed extract products in patients on warfarin therapy", *Eur. J. Clin. Pharmacol.* 63 (2007) 565-570.

17. S Bekiroglu, O Myrberg, K Östman, M Ek, T Arvidsson, T Rundlöf, B Hakkarainen. "Validation of a quantitative NMR method for suspected counterfeit products exemplified on determination of benzethonium chloride in grapefruit seed extracts", *J. Pharm. Biomed. Anal.* 47 (2008) 958-961.

18. I McEwen, T Rundlöf, M Ek, B Hakkarainen, G Carlin, T Arvidsson. "Effect of Ca²⁺ on the 1H NMR chemical shift of the methyl signal of oversulphated chondroitin sulphate, a contaminant in heparin", *J. Pharm. Biomed. Anal.* 49 (2009) 816-819.

19. T Rundlöf, M Mathiasson, S Bekiroglu, B Hakkarainen, T Bowden, T Arvidsson. "Survey and qualification of internal standards for quantification by 1H NMR spectroscopy", *J. Pharm. Biomed. Anal.* 52 (2010) 645-651.

20. T Rundlöf, I McEwen, M Johansson, T Arvidsson, "Use and qualification of primary and secondary standards employed in quantitative 1H NMR spectroscopy of pharmaceuticals", *J. Pharm. Biomed. Anal.* 93 (2014) 111-117.

21. M Johansson, D Fransson, T Rundlöf, N-H Huynh, T Arvidsson, "A general analytical platform and strategy in search for illegal drugs", *J. Pharm. Biomed. Anal.* 100 (2014) 215-229.

22. A Amini, T Rundlöf, K Rönnquist, M Tydén, T Turunen, P Korhola, A Perolari, "A protocol for the quality assessment of illegally distributed human growth hormones with respect to identity, purity, endotoxin level and microorganism content", *Anal. Methods* 7 (2015) 8857.

23. A Durgaryan, T Rundlöf, M Lavén, A Amini, "Identification of human chorionic gonadotropin hormone in illegally distributed products by MALDI-TOF mass spectrometry and doubleinjection capillary zone electrophoresis", *Anal. Methods* 8 (2016) 4188.

24. Li C, Bhavaraju S, Thibeault MP, Melanson J, Blomgren A, Rundlöf T, Kilpatrick E, Swann CJ, Rudd T, Aubin Y, Grant K, Butt M, Shum W, Kerim T, Sherwin W, Nakagawa Y, Pavón S, Arrastia S, Weel T, Pola A, Chalasani D, Walfish S, Atouf F, "Survey of peptide quantification methods and comparison of their reproducibility: A case study using oxytocin.", *J. Pharm. Biomed. Anal.* 166 (2019) 105-112.

25. Brinson RG, Marino JP, Delaglio F, Arbogast LW, Evans RM, Kearsley A, Gingras G, Ghasriani H, Aubin Y, Pierens GK, Jia X, Mobli M, Grant HG, Keizer DW, Schweimer K, Stähle J, Widmalm G, Zartler ER, Lawrence CW, Reardon PN, Cort JR, Xu P, Ni F, Yanaka S, Kato K, Parnham SR, Tsao D, Blomgren A, Rundlöf T, Trieloff N, Schmieder P, Ross A, Skidmore K, Chen K, Keire D, Freedberg DI, Suter-Stahel T, Wider G, Ilc G, Plavec J, Bradley SA, Baldisseri DM, Sforça ML, Zeri ACM, Wei JY, Szabo CM, Amezcua CA, Jordan JB, Wikström M, "Enabling adoption of 2D-NMR for the higher order structure assessment of monoclonal antibody therapeutics.", *mAbs* 11 (2019) 94-105.

Projects

Memberships

Ad Hoc Specialist, Council of Europe, European Pharmacopoeia Group 6 Biologicals
Expert, Council of Europe, European Pharmacopoeia NMR working party
Representative, Official Medicinal Control Laboratories (OMCL) Network, API working group
Vice secretary of the Swedish Pharmacopoeia Committee

Other Relevant Information