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## Miniaturized bioactivity screening of complex samples

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2015

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### **citation for published version (APA)**

Heus, F. A. H. (2015). *Miniaturized bioactivity screening of complex samples*.

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# List of Publications

## In this thesis

Giera M, Heus F, Janssen L, Kool J, Lingeman H, Irth H., *Microfractionation revisited: a 1536 well high resolution screening assay*. Anal Chem, 2009. 81:5460

Heus F, Giera M, de Kloe GE, van Iperen D, Buijs J, Nahar TT, Smit AB, Lingeman H, de Esch IJ, Niessen WM, Irth H, Kool J., *Development of a microfluidic confocal fluorescence detection system for the hyphenation of nano-LC to on-line biochemical assays*. Anal Bioanal Chem, 2010. 398:3023

Kool J, Heus F, de Kloe G, Lingeman H, Smit AB, Leurs R, Edink E, De Esch IJ, Irth H, Niessen WM., *High-resolution bioactivity profiling of mixtures toward the acetylcholine binding protein using a nanofractionation spotter technology*. J Biomol Screen, 2011. 16:917

Heus F, Vonk F, Otvos RA, Bruyneel B, Smit AB, Lingeman H, Richardson M, Niessen WM, Kool J., *An efficient analytical platform for on-line microfluidic profiling of neuroactive snake venoms towards nicotinic receptor affinity*. Toxicon, 2013. 61:112

Pieke E, Heus F, Kamstra JH, Mladic M, van Velzen M, Kamminga D, Lamoree MH, Hamers T, Leonards P, Niessen WM, Kool J., *High-resolution fractionation after gas chromatography for effect-directed analysis*. Anal Chem, 2013. 85:8204

Otvos RA, Heus F, Vonk FJ, Halff J, Bruyneel B, Paliukhovich I, Smit AB, Niessen WM, Kool J., *Analytical workflow for rapid screening and purification of bioactives from venom proteomes*. Toxicon, 2013. 76:270

Heus F, Otvos RA, Aspers RL, van Elk R, Halff JI, Ehlers AW, Dutertre S, Lewis RJ, Wijmenga S, Smit AB, Niessen WM, Kool J., *Miniaturized bioaffinity assessment coupled to mass spectrometry for guided purification of bioactives from toad and cone snail*. Biology, 2014. 3:139

## Not in this thesis

Schebb NH\*, Heus F\*, Saenger T, Karst U, Irth H, Kool J., *Development of a countergradient parking system for gradient liquid chromatography with online biochemical detection of serine protease inhibitors*. Anal Chem, 2008. 80:6764

Schebb NH, Faber H, Maul R, Heus F, Kool J, Irth H, Karst U., *Analysis of glutathione adducts of patulin by means of liquid chromatography (HPLC) with biochemical detection (BCD) and electrospray ionization tandem mass spectrometry (ESI-MS/MS)*. Anal Bioanal Chem. 2009, 394:1361

Reinen J, Kalma LL, Begheijn S, Heus F, Commandeur JN, Vermeulen NP., *Application of cytochrome P450 BM3 mutants as biocatalysts for the profiling of estrogen receptor binding metabolites of the mycotoxin zearalenone*. Xenobiotica, 2011. 41:59

Pochet L, Heus F, Jonker N, Lingeman H, Smit AB, Niessen WM, Kool J., *Online magnetic bead based dynamic protein affinity selection coupled to LC-MS for the screening of acetylcholine binding protein ligands*. J Chromatogr B, 2011. 879:1781

Falck D, Schebb NH, Prihatiningtyas S, Zhang J, Heus F, Morisseau C, Kool J, Hammock BD, Niessen WM., *Development of On-line Liquid Chromatography-Biochemical Detection for Soluble Epoxide Hydrolase Inhibitors in Mixtures*. Chromatographia, 2013. 76:13

\* shared first authorship

## Patent

Heus F, Kool J., *Process to separate compounds starting from a mixture of compounds*.  
Patent number: WO2013187761 A1, 19 dec 2013