

Studies on new pharmacological treatments for alcohol dependence

– and the importance of objective markers of alcohol consumption

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This thesis is based on the following papers:

- I. The Effects of Mirtazapine Versus Placebo on Alcohol Consumption in Male High Consumers of Alcohol; A Randomized, Controlled Trial.**
Andrea de Bejczy, MD and Bo Söderpalm, MD, PhD.
Journal of Clinical Psychopharmacology, Vol. 35, No.1, pp 43-50, February 2015
- II. Efficacy and Safety of the Glycine Transporter-1 Inhibitor Org 25935 for the Prevention of Relapse in Alcohol-Dependent Patients: A Randomized, Double-Blind, Placebo-Controlled Trial.**
Andrea de Bejczy, Kari R. Nations, Armin Szegedi, Joep Schoemaker, Frank Ruwe and Bo Söderpalm.
Alcoholism: Clinical and Experimental Research, Vol.38, No.9, pp. 2427-2435, September 2014
- III. Varenicline for treatment of alcohol dependence: a randomized, placebo-controlled trial.**
Andrea de Bejczy*, MD, Elin Löf*, PhD, Lisa Walther, MD, Joar Guterstam, MD, Anders Hammarberg, PhD, Gulber Asanovska, MD, Johan Franck, prof., Anders Isaksson, associate prof., and Bo Söderpalm, prof. *shared first author
Alcoholism: Clinical and Experimental Research, Vol.39, No.11, pp. 2189-2199, November 2015
- IV. Phosphatidylethanol is Superior to Carbohydrate-Deficient Transferrin and γ -Glutamyltransferase as an Alcohol Marker and is a Reliable Estimate of Alcohol Consumption Level.**
Lisa Walther, Andrea de Bejczy, Elin Löf, Therese Hansson, Anders Andersson, Joar Guterstam, Anders Hammarberg, Gulber Asanovska, Johan Franck, Bo Söderpalm and Anders Isaksson.
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ABSTRACT

This thesis will guide you through three randomized controlled trials (RCT) on three pharmacotherapies for alcohol dependence; the antidepressant drug mirtazapine, the smoking cessation drug varenicline and the glycine-uptake inhibitor Org 25935. The mirtazapine study was an investigator initiated single-center harm-reduction study with alcohol consumption measured by self-report in a diary as main outcome. The results indicated that mirtazapine reduced alcohol consumption in males with heredity for alcohol use disorder (AUD). The Org 25935 study was an international multi-center study with abstinence as treatment goal, main time to relapse and alcohol consumption was measured by self-report collected by the Time Line Follow Back method (TLFB). All subjects reduced their drinking compared to baseline, but Org 25935 failed to show superiority over placebo. The varenicline study was an investigator initiated multi-center harm-reduction study. In this study alcohol consumption was measured both by self-report in a diary and by alcohol biomarkers. In the analysis of self-reported data, varenicline failed to show efficacy, however, in the biomarker analysis varenicline reduced alcohol consumption compared to placebo. The direct alcohol marker phosphatidylethanol (PEth) was superior to the indirect biomarkers CDT and GGT in measuring alcohol consumption.

Keywords: Alcohol dependence, RCT, mirtazapine, glycine-transporter inhibitor, varenicline, alcohol marker, phosphatidylethanol, PEth

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