Anna Böttiger (née Börjel) was born in Hjulsjö, Hallefors 1977. She received a Master of Science in Chemistry at Karlstad University 2002. Her doctoral studies started in 2003 at the Department of Clinical Chemistry, Örebro University Hospital. In May 2005 she received a licentiate degree in biomedicine. Since 2007 she is working as a Clinical Biochemist at the Department of Clinical Chemistry, Örebro University Hospital and is also attending postgraduate MSc course in Clinical Biochemistry at the University of Surrey, Guildford, England.

Total homocysteine in plasma (tHcy) is known to be a risk factor for cardiovascular disease and neurocognitive disease. The B-vitamins folate and B12 are the main factors that influence tHcy concentrations. The individual tHcy concentration can also be affected by mutations in genes coding for receptors, transporters and enzymes important in Hcy metabolism. This thesis focuses on mutations in the genes for folate receptor-α and methylenetetrahydrofolate reductase and how they affect tHcy concentrations.