

# In My Opinion

## Cutting edge: biomedical research in hospital pharmacy – the Malmö experience



Associate Professor Pål Stenberg, PharmD, PhD

The year was 1971. After a much-debated report written by the distinguished pharmacist Dr Rune Lönngren, Swedish pharmacies were reformed as a government-owned company (Apoteket AB). Before this, most Swedish hospitals received their drugs from community pharmacies. Now, hospital pharmacies incorporating retail dispensing facilities were progressively located at central positions in major hospitals. The visionary director of hospital pharmacy, Sven Ström, recruited PhD level pharmacists to leading organisational positions and university hospitals. A new era in Swedish hospital pharmacy began.

Encouraged by the Chief Pharmacist of that time, Elsa Widell, I was given the privilege in 1974 of establishing research at the Hospital Pharmacy of Malmö University Hospital (UMAS). Our three aims were 1) improved pharmacotherapy, 2) increased collaboration between pharmacy and medicine, and 3) strengthened profile of professional pharmacy.

The research subjects were chosen to reflect the pharmacist's basic function and the profile of the hospital. At UMAS, the Clinical Coagulation Research Unit is internationally recognised. Hospital pharmacists were able to contribute to development thanks to their specialist knowledge of coagulation factors. In 1982, another PhD level pharmacist, Sven Björkman, joined the staff and research was expanded. Excited by what was happening, young pharmacists

applied for positions and the two track Malmö model was established:

- A full time basic pharmacist's function
- Encouragement to do research (access to laboratory, support by senior colleagues, etc)
- Freedom with responsibility but always with their basic function as first priority
- All projects performed in close collaboration with suitable clinicians

The model became a success. We attracted bright, responsible and dedicated pharmacists with the right profile. They combined their basic duties with science. In a symbiotic way, research made their basic functions more effective while their central functions gave new propulsion to scientific investigations. Over the years, clinicians from all main departments became engaged in the teams. In my opinion, the interface between pharmacy and medicine at major hospitals is an outstanding platform for creative research, promoting collaboration between disciplines and stimulating development in the field of pharmacotherapy. Thanks to grants from private foundations, research soon became self financed. It has so far resulted in more than a hundred reports in scientific journals. Up to now, seven hospital pharmacists have achieved their PhDs with the Malmö Hospital pharmacy as their base (see Table 1). More clinicians have written their PhD theses with strong support by pharmacists.

Similar winning programmes were set up at other major Swedish hospital pharmacies. Thanks to the strengthened professional profile and increased public trust, Swedish hospital pharmacies became the backbone of a united pharmacy corporation focusing on development, public service and cost effectiveness. Sven Ström's visions were fulfilled and in some cases even surpassed.

Regretfully, the Swedish pharmacy system is now undergoing ideologically-based privatisation. Hospital pharmacy seems to be the big loser. Professional, public service-oriented hospital pharmacists have been replaced by shopkeepers, whose main vision is profit. In my opinion, this short-sighted action will harm society and medical care as well as public health. Ironically, it will also damage both trust in, and business opportunities for, hospital pharmacies. What a pity!

**Table 1: PhD theses from Malmö University Hospital Pharmacy**

Author	Year	Title
Birgitta Seiving	1990	Biological characterisation of leukocyte transglutaminases
Maj Carlsson	1997	Pharmacokinetic dosing of factor VIII and factor IX in prophylactic treatment of haemophilia
Tommy Eriksson	1997	Pharmacokinetics of thalidomide enantiomers
Karin Henricson	2003	Pharmacoepidemiology of antibiotics, weak opioids and statins with special reference to socioeconomic aspects – an ecological approach
Bodil Roth	2008	Transglutaminases and peptidylarginine deiminase in the pathogenesis of autoimmune diseases
Lars Söderberg	2009	<i>In vitro</i> – <i>in vivo</i> correlations of injectable lipid formulations
Marie Magnusson	2009	Pharmacokinetics and pharmacodynamics of pentoxifylline and metabolites in humans

### Author

Associate Professor Pål Stenberg, PharmD, PhD  
Former Regional Information Pharmacist and Chief Pharmacist  
Malmö University Hospital  
Clinical Coagulation Research Unit - UMAS  
SE-20502 Malmö, Sweden  
pal.stenberg@telia.com