MY JOURNEY TO A PHD IN MEDICAL SCIENCE

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My background

• 1999-2002 Partial MSc in Computer Science and Engineering, LiU
• 2002-2005 The Nursing Programme, LiU B.Sc. in Nursing Science
• 2005 Registerd nurse, Department of Acute Internal Medicine, Linköping University Hospital
My PhD project

- To combine optical methods into a system with the ability to measure blood flow changes in different depths
- Reveal vascular mechanisms relevant to pressure ulcer etiology in clinically relevant conditions
- In relation to evaluation of pressure-redistribution support surfaces
Conditions for the project

• A fixed project with funding
• My competence complemented the group
Consequences

- Working independently in daily life
- Dependent in the formal discussions/decisions
  - Economy
  - Direction of the research
Solutions

Get your own network!

- Forum Scientium
  - Got into a context other PhD students, not a project worker
- AgoraLink
  - Collaboration with the industry
  - representing the project without your supervisors
  - Commercializing

Gives you own competence and confidence
Solutions

Get your own money!

- You as the main applicant
- Apply for even small funding
- Different types

Own funding gives you independence
Solutions

• Evaluate your life situation
  • Have children
  • Changed working site at the hospital

Find your own place in life
Get a mentor!

- Use a senior wise person’s network
- From the outside but have knowledge of the inside
- Mutual relationship “walking side by side”
- Personal guidance, the best for me!
The result

• Redefined my research area
  • Microcirculation
• Defined my skills and competence
  • Interdisciplinary
  • translational
• My intellectual property
• Collaborate: technology/clinical research
  • Tomas Strömberg; biomedical engineering
  • Ulrika Källgren; pressure ulcer
  • Folke Sjöberg; microcirculation
The result
Publications through collaboration!


The future

Tomas Strömberg
Dept Biomedical engineering

Folke Sjöberg
Dept Clinical Experimental Medicine
My Postdoc

Microcirculation
- Endothelial function
- Pressure induced vascular mechanisms

Technology
- LDF, qLDF
- DRS
- PPG
- Iontophoresis/micro dialysis

Clinical applications
- Pressure ulcer
- Diabetes
- Microvascular surgery
In pipeline

Publications through collaboration!


• Comparison between nursing home residents with and without cutaneous pressure-induced vasodilation in regard to sacral blood flow responses. Källman U, Bergstrand S, Ek A-C, Engström M, Lindgren M (submitted)

• Nursing staff induced repositionings and spontaneous movements among older immobile patients in nursing care. Källman U, Bergstrand S, Ek A-C, Lindgren M (submitted)

Completed data collection

• Jonasson et al (Dep of Biomedical engineering) Diabetic population

• Bergstrand et al (Dep of Clinical Experimental medicine) Vasomotion

• Bergstrand et al (Dep of Medical and Health Sciences) Frequency analysis of data from my dissertation