

Jacob Widaeus

RESIDENT PHYSICIAN · PHD CANDIDATE, KAROLINSKA
INSTITUTET

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EDUCATION

- 2024 – **Karolinska Institutet, PhD programme**
Bedside assessment of microvascular dysfunction — method evaluation in clinical studies.
Principal supervisor Sara Tehrani; co-supervisors Maria Cronhjort and Helge Brandberg.
- 2022 **Karolinska Institutet, MD**
Thesis: High risk serological profile for autoimmunity in Antiphospholipid syndrome — A retrospective single-centre cohort study, 2014–2020.
- 2016–2017 **Sophiahemmet University, Nursing programme**
Coursework in nursing science and basic physiology.

CLINICAL SERVICE

- March 2025 – **Resident (ST-läkare)**, Department of Internal Medicine, Danderyd Hospital
- 2023–2024 **Internship (AT-läkare)**, Danderyd Hospital. Licensed physician from December 2024.
- 2022–2023 **Junior doctor**, Cardiology Clinic, Danderyd Hospital
- 2021–2022 **Junior doctor**, Neurology Clinic, Danderyd Hospital
- 2016–2021 **Nursing assistant**, Danderyd Hospital — ICU, CCU, IMCU (ward 75), AMU (ward 77) and Pulmonary medicine (ward 74). Recurring summer and hourly positions. Also MandoMeter AB (inpatient eating disorders) and Aleris Omsorg AB.

RESEARCH

- 2024 – **PhD candidate**, Karolinska Institutet / Danderyd Hospital
The project is built around three clinical studies: **SCAPIS 2 Spectrum** (investigation of two class 2a medical devices in individuals at cardiovascular risk), **MIND** (investigation in patients with type 1 diabetes across degrees of microangiopathy), and **CapriS** (observational study of microvascular changes in sepsis).
Within the scope of these trials I have acquired knowledge in MDR/IVDR/AI Act where applicable, ISO 14155:2020, ICH-GCP R2, ethics submissions, protocol and CIP authoring, statistical analysis plans, control and matching design.
Selected project coursework: Statistical methods with R (KI, 7.5 ECTS); Programming in Python (KTH, 7.5 ECTS).

PUBLICATIONS

1. K. Hagman et al. Correlation of SARS-CoV-2 Nasopharyngeal CT Values With Viremia and Mortality in Adults Hospitalized With COVID-19. *Open Forum Infectious Diseases*, 2022. doi:10.1093/ofid/ofac463
2. K. Hagman et al. Effects of remdesivir on SARS-CoV-2 viral dynamics and mortality in viraemic patients hospitalized for COVID-19. *J Antimicrob Chemother*, 2023. doi:10.1093/jac/dkad295
3. R. Di Fenza et al. High-Dose Inhaled Nitric Oxide in Acute Hypoxemic Respiratory Failure Due to COVID-19: A Multicenter Phase II Trial. *Am J Respir Crit Care Med*, 2023. doi:10.1164/rccm.202304-06370C
4. J. Widaeus, I. Fredriksson, S. Tehrani. Noninvasive Bedside Approaches for Assessing Microvascular Dysfunction. *J Vasc Res*, 2025. doi:10.1159/000547636
5. N. Karandyszowska et al. Risk Factors for Recurrent Thrombosis in Patients with Antiphospholipid Syndrome — A Single-Centre Cohort Study. *TH Open*, 2025. doi:10.1055/a-2646-9016
6. S. Lörstad, J. Widaeus, P. Gille-Johnson, J. Persson. Sepsis-related myocardial injury: the role of bacterial pathogens and toxins — a scoping review protocol. *BMJ Open*, 2025. doi:10.1136/bmjopen-2025-102485

Abstracts: Karandyszowska et al. APS with concomitant autoimmunity. EULAR 2021. · Karandyszowska et al. Thrombocytopenia and renal function in recurrent thrombosis in APS. EULAR 2023.

TEACHING

2025 –	REDCap training, Clinical Research Centre, Danderyd Hospital. Introductory sessions in ISO 14155:2020.
Nov–Dec 2025	Teaching assistant, clinical examination, semester 4, KI/Danderyd Hospital
May, Dec 2024	Teaching assistant, emergency simulation, semester 10, KI. Nominated for the KI/Danderyd teaching prize, 19 January 2024.
Jan 2023	Disaster-medicine simulation, KI. Nominated for the KI/Danderyd teaching prize, 13 January 2023.
2019–2021	Board member and teaching assistant, Student Society for Surgery and Anaesthesia, KI. Teaching assistant in Thrombosis and Haemostasis (semester 6, Oct 2020–Jan 2021).

PROJECTS AND CODE

medapp — Internal hospital telephone directory; searchable on-call list, clinic and direct numbers. Pilot project in internal distribution (React Native · Expo · Supabase). **medscan** — Fetches and summarises external clinical guidelines and memos — Vårdhandboken, Janusmed, national care programmes — and publishes them at internmed.se. An AI layer generates clinical summaries for quick pre-round reading (Python · Playwright · FastAPI · Anthropic API). **Research automation** — Study logistics for SCAPIS 2 Spectrum, running locally within KI research environments. Automated letter dispatch to participants based on study variable data from REDCap (PyCap), data import from Viewpoint (GE), and questionnaire distribution via the KI REDCap server backend. Letter generation with docxtpl. **Regulatory monitoring** — RSS pipeline for MDR/AI Act updates (Python · Anthropic API).

ICH-GCP R2 — NIDA Clinical Trial Networks, June 2020; KI 5-day training course, February 2025. ISO 14155:2020 — continuous comprehension and self-certification, February 2025.