

Biomedical Sciences (BW)	16 weeks (BSc), 20 or 28 weeks (MSc)*
Medicine (GNK)	16, 21 or 26 weeks*
Research thema's	<input type="checkbox"/> Academic Pharma <input type="checkbox"/> Neuroscience <input type="checkbox"/> Cancer <input type="checkbox"/> (Auto-)Immunity <input type="checkbox"/> Cell Tissue & Organ (Tx) <input checked="" type="checkbox"/> Cardio-Vascular <input type="checkbox"/> Genetics <input type="checkbox"/> Infection <input type="checkbox"/> Lifecourse <input type="checkbox"/> Prevention & Lifestyle <input type="checkbox"/> Other projects
Department	Intensive Care
Project supervisor	Carlos Elzo Kraemer (Internist-Intensivist, PhD-candidate) / Jacinta Maas (Neurologist-Intensivist)
Address	Albinusdreef 2, 2333ZA Leiden
Telephone number	071-5268692
Fax number	
E-mail address	c.v.elzo_kraemer@lumc.nl
Title of research project	Influence of Management and Patient Outcomes in Adults undergoing Extracorporeal Cardiopulmonary Resuscitation: Before and After INCEPTION (IMPACT-ECPR).
Background of research project	<p>This multicenter observational cohort study aims to evaluate the impact of implementing the INCEPTION study findings (Suverein MM, et al. NEJM, Jan 26, 2023). The INCEPTION study, a large-scale randomized trial conducted in the Netherlands, assessed the effectiveness (i.e., survival with favorable neurological outcomes) and safety of extracorporeal cardiopulmonary resuscitation (ECPR) in out-of-hospital cardiac arrest (OHCA). Although the study provided valuable insights, several limitations were identified that warrant further investigation.</p> <p>Notably, the median low-flow time was 74 minutes—longer than in other studies—and extended low-flow times are associated with worse neurological outcomes. A key critique was the delay in procedural times, with an average of 16 minutes from hospital arrival to cannulation, potentially impacting the effectiveness of ECPR.</p> <p>The IMPACT study seeks to compare data from patients undergoing ECPR (both in-hospital cardiac arrest [IHCA] and OHCA) before and after implementing the INCEPTION study's findings. It will analyze demographic data, clinical characteristics, procedural factors, and patient outcomes, focusing on survival with favorable neurological status measured at discharge and six months post-treatment. The study will also evaluate the frequency of ECPR usage and the application criteria, ultimately aiming to provide evidence-based recommendations for optimizing ECPR in critical care scenarios.</p> <p>The study will take place at the ICU of LUMC, which offers excellent research facilities for scientific internships. LUMC is</p>

	<p>a Platinum ECMO center and one of the leading ECMO centers in the Netherlands.</p> <p>As our research student, your tasks will include:</p> <ul style="list-style-type: none"> - Patient screening and enrollment - Maintained the Castor database and patient records - Visits to participating centers to assist with data entry - Deliver a report that analyzes how changes in procedural times and management protocols—both before and after the INCEPTION study—affect OHCA patient outcomes in particular. - With sufficient contribution, co-authorship on the final manuscript is possible. <p>What we offer:</p> <ul style="list-style-type: none"> - A unique opportunity to gain experience in innovative medical research - Collaboration with various disciplines, including Intensive Care Medicine, (Interventional) Cardiology, Clinical Perfusion, and Emergency Medicine - Participate in the ECMO rounds and daily educational activities - Visits to other participating centers (e.g., Erasmus MC, Haga Ziekenhuis, UMCU, AUMC) <p>You will work directly under the supervision of CEK and JJM. If you are interested or have any questions, please send an email with your motivation letter and CV to: c.v.elzo_kraemer@lumc.nl</p>
Research questions	<ol style="list-style-type: none"> 1. How does implementing the INCEPTION study's findings (e.g., changes in procedural times, cannulation protocols, and medication administration) impact survival rates with favourable neurological outcomes in patients undergoing ECPR for OHCA and IHCA? 2. What effect does the variation in clinical experience with ECPR across participating centres have on the consistency of ECPR implementation and its associated patient outcomes?
Clinical/Non-clinical (only BW)	
Methods	Retrospective cohort study
Project at least available until	January 2026
Similar projects available thereafter	Yes
Date of submission of this project	25-02-2025

* Please strike through when not applicable

** Please indicate which profile fits best (multiple options possible)