

Call for Master's Thesis - In-shelf life of parenteral drugs on hospital wards

Supervisors: Verena Lamprecht, Silvana Gloor, Prof. Silvio Brugger,

Location: USZ Campus

Research Group: sdb-lab.org

Duration: min. 6 months

Start Date: upon agreement

Project Background:

In clinical practice, in-shelf life of parenteral drugs after preparation is limited to 1 hour due to lack of reliable data on microbiological stability. The preparation and administration of parenteral drugs place particularly high demands on hygiene, as contamination can have serious consequences for the patient.

Manufacturers can only provide information on chemical and physical stability, as the bioburden after preparation depends heavily on practical conditions. The risk of contamination is significantly influenced by hygiene measures as well as the environment in which the preparation takes place.

National and international guidelines often require immediate administration following preparation. In practice, these requirements are not feasible, creating a discrepancy between hygienic ideal and everyday clinical practice.

Project Aim

The aim is to establish the groundwork and further to contribute to the development of evidence-based, safe, and practical guidelines for the determination of the in-shelf life of parenteral drugs after preparations on clinical wards. This is achieved by the analysis of in-use samples, as well as a microbiological susceptibility studies of certain i.v. drugs to microbial contamination.

Methodological

- Systematic literature review
 - Experimental microbiological studies
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Professional and personal skills:

- BSc in microbiology, medicine, pharmacy, life sciences, or a related field
 - Experience with aseptic working techniques and basic academic research skills
 - Ability to work independently, excellent organizational skills and a high level of initiative
 - Interest in medical microbiology and applied research questions
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What we offer:

- A collaborative, innovative workspace with opportunities to engage microbiologists, infectiologists and pharmacists
- A relevant Master Thesis with direct impact on patient safety

Are you interested? To apply, please send your updated CV and motivation letter to Verena Lamprecht (Thesis mentor, email: verena.lamprecht@usz.ch)