Course Description

Course title: Cell Processing and Purification

Course organizer: Dr. Matthias Schiemann

Email address: matthias.schiemann@tum.de

Institute/Clinic: Institut für medizinische Mikrobiologie, Immunologie und Hygiene

Maximum number of participants: 25

Level (Basic or Advanced): basic and advanced

Prerequisites for attending (list all skills, techniques, theoretical knowledge needed to participate in this course, especially if this is an advanced course):

None

Describe the contents and context of this course (e.g.: Are you teaching certain techniques in the context of a specific disease or system? If so, how does that affect the way the course is taught? Or are you teaching certain techniques as widely used tools focusing on their theoretical background? How and why? Is the course about how to perform a technique, which techniques to use for a certain question or about developing the experimental design? Etc.):

Flow cytometry related course with focus to clinical cell-therapy. Flow cytometry basics - also advanced aspects and practical work included.

This workshop will cover a variety of topics related to cell processing and purification, including advances in instrumentation and techniques, software for FCS analysis, intracellular cytokine detection, advances in methods to measure T cell proliferation and advances in the usage of reversible reagents. We have invited experts to discuss their work in an informal lecture setting, discussion and workshop groups.

List the techniques that will be taught in this course:

- Flow cytometry and cell sorting - experimental setup
- Multi color panel design
- Software for FCS analysis
- Data analysis/statistic
- Micro particles and artefacts
- practice on T cell subsets and reversible reagents, clinical cell processing

Type and Duration of Exam:

written Exam – multiple Choice – 90 minutes
Provide a schedule of the course including the following information:

<table>
<thead>
<tr>
<th>Day/Date</th>
<th>Location</th>
<th>Start Time</th>
<th>End Time</th>
<th>Topic</th>
<th>Instructor</th>
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| 24.09.2018  | MIH      | 10.00      | 18.00    | Basics flow cytometry and cell sorting  
Cell sorting and purification  
HD analysis                               | Matthias Schiemann (Munich)  
Immanuel Andrä (Munich)  
Tomas Kalina (Prague)  
Antonio Cosma (Paris) |
| 25.09.2018  | MIH      | 9.00       | 17.00    | Multicolor Panel Design  
Data analysis/statistic                                             | Tomas Kalina (Prague)  
Jonas Mir (Munich) |
| 26.09.2018  | MIH      | 9.00       | 17.00    | FCS analysis  
Analysis of lymphocytes B and T differentiation in the diagnosis of primary immune deficiencies | Claudio Vallan (Zurich)  
Andreja Natasa Kopitar (Ljubljana) |
| 27.09.2018  | MIH      | 9.00       | 17.00    | Micro particles and artefacts                                                    | Andreas Spittler (Vienna)  
Immanuel Andrä (Munich) |
| 28.09.2018  | MIH      | 9.00       | 16.00    | Behind the scenes  
QC and viability  
FACS, GMP and clinical cell processing  
Examination and discussion                             | tbd  
Martin Hildebrand (Munich)  
Ulrich Sack (Leipzig)  
Matthias Schiemann (Munich) |