

Focus area Inflammation II	
Module code	mIsInflammationII-01a
Abbreviated title	Inflammation II
Module components	Lab seminar, lab practical, joint seminar of all focus areas
When	Semester 3
Module coordinator/ Organiser	R. Häslar Dermatology
Lecturers	Principal investigators of research groups working on research topics of focus areas (joint seminars)
Contact hours	Practical 9 CH Lab seminar 1 CH Joint seminar 1 CH
Workload	<u>Lab practical: 240 h</u> Attendance time 100 h, preparation 60 h, revision 80 h <u>Lab seminar: 60 h</u> Attendance time 14 h, preparation 26 h, revision 20 h <u>Joint seminar "Current affairs":</u> Attendance time 14 h, preparation 10 h, revision 6 h
Total: 330 h	Attendance time 14 h, preparation 10 h, revision 6 h
Credit points	11 (practical 8 CP, seminar 2 CP, joint seminar 1 CP)
Requirements	<i>Inflammation I</i> passed
Expected outcome	<p><u>Knowledge:</u> Students</p> <ul style="list-style-type: none"> - have an in-depth understanding of physiological and molecular/cell biological processes which influence inflammatory diseases - can comprehend literature describing lab techniques in inflammation research and explain essential methods such as immunoelectrophoresis, lymphocyte transformation - have in-depth knowledge of the experiments conducted during the practical. <p><u>Skills:</u> Students</p> <ul style="list-style-type: none"> - can conduct the different steps of their lab experiments self-reliantly, document them correctly in lab books and explain them - are able to perform quality control measures for the results obtained - can analyse the results and put them into relation to the research area. <p><u>Competences:</u> Students</p> <ul style="list-style-type: none"> - can plan experiments self-reliantly, can analyse the data obtained and interpret results using the knowledge they have acquired - can assess their own work critically and integrate new results adequately - can familiarize themselves with new topics and develop relevant research lab research approaches - recognize the connections between topics of different focus areas and can explain and link them correctly - are aware of the connections between the topics of the different focus areas and can elucidate them.
Content	<u>Seminar:</u> Developing a lab project by researching literature and discussions with fellow students and lecturers for topics such as T-cell, B-cell mediated immune reactions, auto-antigens, autoantibody formation, pro-inflammatory cytokines,

	<p>signal transduction pathways for activating cell migration and pathogen destruction.</p> <p><u>Practical</u>: Preparation and execution of experimental lab project making use of methods such as ELISA, RIA, ELISPOT, allergen tests, infection/stimulation experiments with primary macrophages, transformation/transfection of model organisms, FACS analysis of Toll-like receptor expression.</p> <p><u>Joint seminar</u>: Joint discussion of papers relevant for all focus areas.</p>
Module evaluation/ exam	<p>Graded Scientific essay with oral presentation</p>
Media used	<p>PPT presentations, lab/lecture notes, lab manuals and instructions, lab experiments.</p>
Literature	<p>Cavaillon J-M, Singer M, Inflammation: From Molecular and Cellular Mechanisms to the Clinic (Wiley 2017)</p> <p>Bondy, S C; Campbell A, Inflammation, Aging, and Oxidative Stress (Humana Press 2016)</p> <p>Miyasaka M, Takatsu K, Chronic Inflammation – Mechanisms and Regulation (Springer 2016)</p> <p>Current original publications and reviews</p>