

Biomedical master (UNIL), specialization in 'Immunology and Cancer'

Module 3 ECTS credits: 15 (total of 2nd semester)

Responsible: S.Luther (sluther@unil.ch); secretary: F.Dubois (Fanny.Dubois@unil.ch)

2022 program

2nd semester					2022 program														
COURSE	RESPONSIBLE	TEACHER	SUBJECTS	C	S	COURSE	RESPONSIBLE	TEACHER	SUBJECTS	C	S								
C Immunology II	S.Luther	S.Luther (SL)	Course introduction, Lymphoid organs	6h		C Molecular and cellular techniques	M.Quadroni (MQ)	MQ, M.Bassari(MB), V.Zoele (VZ), GV, P.Baumgartner (PBa)	Proteomics, antigen discovery, 3D modeling, peptide-based assays	14h									
		M.Thome (MT)	Signaling in lymphocytes	5h	1h														
		W.Heid (WH)	NK-cells, Innate lymphoid cells	3h	1h														
		F.Tacchini (FTC)	Macr.,neutrophils, T cell differentiation	5h															
		P.-C.Ho (PCH)	Metabolism of T cells and macrophage	3h	1h														
		S.Monticelli (SM)	Gene expression in immune cells	2h	1h														
		C Immunology III	S.Luther	M.Perreau (MPe)	Acute and chronic viral infections			4h	1h	C Bioinformatics	D.Geller (DGF)	DGF	Bioinformatics	2h					
				P.Broz (PBr)	Cell death and immunity			4h				C Biostatistics	F.Schütz (FS)	FS	Biostatistics	2h			
				T.Roger (TR)	Bacterial infections and sepsis			2h	1h					Common courses	G.Wuerzner		Clinical Medicine	20h	
				D.Velin (DV)	Gut immunity			3h	1h							LTK1 Module or Clinical Research Module	M.-C.Brillot (MCB)	C.Berthonneche (CB)	
N.Ubags (NU)	Microbiome, lung immunity			3h															
C.Pot (CP)	Autoimmunity and neuroinflammation	3h																	
G.Verdeil (GV)	Mouse models, immune monitoring	2h																	
				Total	45h	7h													
					52h														
C Cancer II	T.Petrova	D.Hanahan (DH)	Cancer: a summary	2h		PW Molecular and cellular techniques	M.Quadroni (MQ)	MQ, MB, VZ, GV, PBa, L.Derré(LD)	Antigen discovery by mass spectrometry, 3D modeling, peptide-based assays	6 days									
		E.Misaglia (EM)	Cancer genetics and heterogeneity	4h															
		G.Ciriello (GC)	Epigenetics of cancer	2h	1h														
C Cancer III	T.Petrova	T.Petrova (TP)	Tumor vessels and microenvironment	5h	1h	PW: Ex vivo and in situ techniques	S.Luther (SL)	SL, A.Bénéchet (AB), A.Noble (AN), CA, J.-F.Mayol (JM)	Histology (Immunology), Histology (Cancer), Flow cytometry	4.5 days									
		J.Joyce (JJ)	Tumor invasion and metastasis, glioms	5h	1h														
		D.Gfeller (DGF)	Genetics of antitumoral immunity, omic	2h															
								Total	20h	3h									
					23h														
C Treatments	T.Petrova	P.Romero (PR)	Antitumor immunity	4h		PW Bioinformatics	D.Gfeller (DGF)	DGF	Basics of bioinformatics and biostatistics	4h									
		M.-C.Vozenin (MV)	Radio- and Chemotherapy	2h	1h			PW Biostatistics	F.Schütz (FS)	FS		13h							
		L.Kandalaf (LK)	Cancer immunotherapy	3h						E e-learning exercises	S.Luther (SL)		Introduction	1h					
		C.Arber (CA)	Leukemias and therapies	2h								ABL immunology	S.Luther (SL)	SL + MP + AB	Experimental design	2h			
		L.Perez (LP)	Vaccines	2h										CBL cancer	S.Luther (SL)	O.Naveiras (ON) + CA	Clinical case	2h	
		D.Golshayan (DGo)	Immunology of organ transplantations	2h								S/E Grant writing and defense				T.Petrova	2h		
		D.Comte (DC)	Allergies and treatments	2h								Master thesis			S.Luther (SL)	Group leaders	1.5 Semesters		
												Total	17h	1h					
													18h						

C: Course (lecture) S: Seminar / journal club (JC) PW: Practical Work

CBL: Case-Based Learning ABL: Article-Based Learning

▲ Important: all courses and lecture pdf's are to be given in English!

WEEK 1: 21.02 to 25.02

	mo 21	tu 22	we 23	th 24	fr 25
8H	Introduction to Clinical Medicine / Clinical Research Module (Theory) GW				
9H					
10H					
11H					
12H					
13H	LTK1 Module (Theory, e-learning) MCB, CB Clinical Research Module (e-learning TRREE) GW				
14H					
15H					
16H					
17H					
Site					Exam LTK1 C.Roux/CHUV

WEEK 2: 28.02 to 04.03

	mo 28	tu 01	we 02	th 03	fr 04
8H	Clinical Research Module (e-learning TRREE) GW LTK1 Module (Practicals - Group I - BUZ7, DSB) MCB, CB				
9H					
10H					
11H					
12H					
13H	Clinical Research Module (e-learning TRREE) GW LTK1 Module (Practicals - Group II - BUZ7, DSB) MCB, CB				
14H					
15H					
16H					
17H					
Site					

WEEK 3: 07.03 to 11.03

	mo 07	tu 08	we 09	th 10	fr 11
8H	C-Immunology II overview (SL)	C-Immunology II SL	C-Immunology II SL	C-Immunol.II MT	C-Treatments PR
9H	C-Cancer II DH	C-Cancer II EM	C-Immunology II MT	C-Treatments PR	C-Immunology II FTC
10H					
11H					
12H					
13H	C-Cancer II EM	C-Immunology II MT	C-Immunology II FTC	C-Cancer II GC	prepare JC
14H					
15H	prepare JC	prepare JC	prepare JC	prepare JC	prepare JC
16H					
17H					
Site	F308	F308	F308	F308	F308

WEEK 4: 14.03 to 18.03

	mo 14	tu 15	we 16	th 17	fr 18
8H	C-Immunology III GV	C-Proteomics (MQ)	C-Antigen discovery (MB)	PW Ag discovery	C-Immunology II WH
9H					
10H	C-Cancer III DGF	PW Proteomics	C-Antigen discovery (MB)	PW Ag discovery	S-Immunol.II MT
11H					
12H					
13H	S-Cancer II GC	C-Proteomics (MQ)	PW Ag discovery	PW Ag discovery	C-Cancer III TP
14H					
15H	prepare JC			PW Ag discovery	
16H					
17H					
Site	F308	F308/library	F308/library	F304/F308/library	F308

WEEK 5: 21.03 to 25.03

	mo 21	tu 22	we 23	th 24	fr 25
8H	C-Immunol.II WH	PW-Bioinformatics DGF	PW Ag discovery	PW report writing	C-Protein analysis (VZ)
9H	S-Immunol.II WH	PW-Bioinformatics DGF		PW Q/A session	C-Protein analysis (VZ)
10H	C-Cancer III TP				
11H					
12H					
13H	C-Bioinformatics DGF	C-Cancer III TP	PW Ag discovery	PW report writing	PW-3D modelling (VZ)
14H		S-Cancer III TP			PW 3D modelling
15H					
16H					
17H					
Site	F308	F308	F302/ library	F302/ library	F308/ library

WEEK 6: 28.03 to 01.04

	mo 28	tu 29	we 30	th 31	fr 01
8H	C-Treatments MV	PW Peptide-based assays	PW Peptide-based assays	PW report writing	
9H					PW report writing
10H	C-Immunology III TR	C-Protein analysis (VZ/PBa)	PW report writing	PW Peptide-based assays	
11H					
12H					
13H	C-Treatments LP	PW Peptide-based assays	PW Peptide-based assays	PW Peptide-based assays	PW report writing
14H	PW Intro (PBa)				
15H					
16H					
17H					
Site	F302	F304/F302/library	F304/F302/library	F302/ library	F308/F302/ library

WEEK 7: 04.04 to 08.04

	mo 04	tu 05	we 06	th 07	fr 08
8H	C-Immunology II PCH	C-Immunol.II PCH	C Histology: introduction	PW. histology preparation	PW Histology
9H			Intro e-learning SL		
10H	C-Cancer III JJ	C-Cancer III JJ			PW Histology
11H					
12H					
13H	C-Immunology II SM	S- treatments MV	C-Cancer III JJ	PW. histology preparation	PW Histology
14H	S-Immunol.III SM	S-Immunol.III TR	S-Cancer III JJ		
15H					
16H					
17H					
Site	F302	F302	F302	F302	library

WEEK 8: 11.04 to 15.04

	mo 11	tu 12	we 13	th 14	fr 15
8H			S histology: presentations	PW report writing	Easter holidays 15 - 22.4.22
9H	PW report writing	PW histology presentation			
10H					
11H					
12H					
13H	PW Histology Q/A session	PW histology presentation	PW report writing		
14H					
15H	PW report writing				
16H					
17H					
Site	F302/ library	F302/ library	F302/ library	F302/ library	

EASTER HOLIDAYS 2022 : FROM APRIL 15 TO APRIL 22, 2022

WEEK 9: 25.04 to 29.04

	mo 25	tu 26	we 27	th 28	fr 29
8H	C-Immunology III DV	PW FACS: acquisition	PW FACS: acquisition (2nd group)	PW FACS: analysis	PW report writing
9H					
10H	C-Treatments DGo	PW FACS: acquisition		PW FACS: analysis	
11H					
12H					
13H	C FACS: introduction JM	PW FACS: acquisition	PW FACS: acquisition (2nd group)	PW FACS: analysis	PW FACS: Q/A session
14H					
15H	PW preparation	PW FACS: acquisition		PW FACS: analysis	PW report writing
16H					
17H					
Site	F302	F304/F302/library	F304/F302/library	library (F302)	F302/ library

WEEK 10: 02.05 to 06.05

	mo 02	tu 03	we 04	th 05	fr 06
8H		C-Immunol.III DV	C-Immunology III MPE		
9H	PW report writing	S-Immunol.III DV		C-Immunology III MPE	ABL/CBL preparation
10H		C-Treatments CA	C-Treatments DC		
11H				S-Immunol.III MPE	
12H					
13H		C-Immunology III CP	C-Immunology III PBr	C-Immunology III PBr	ABL/CBL preparation
14H				S-Immunol.III PCR	
15H	PW report writing				
16H					
17H					
Site	library	Arziller 090	Arziller 090	Arziller 090	library

WEEK 11: 09.05 to 13.05

	mo 09	tu 10	we 11	th 12	fr 13
8H			C-Immunol.III NU		
9H	ABL/CBL preparation	C-Immunol.III CP	C-Treatments LK		
10H		E- ABL or CBL			
11H			C-Treatments LK		
12H				Preparation for evaluation	preparation for evaluation
13H	ABL/CBL preparation	C-Immunology III NU	C-Histo&more SL		
14H	F: CBL Q/A session	C-FACS&more JM	C Feedback session / Apéro		
15H					
16H					
17H					
Site	library	Arziller 090	Arziller 090		

WEEK 12: 16.05 to 20.05

	mo 16	tu 17	we 18	th 19	fr 20
8H					
9H					
10H					
11H					
12H	preparation for evaluation	preparation for evaluation	preparation for evaluation	preparation for evaluation	preparation for evaluation
13H					
14H					
15H					
16H					
17H					

WEEK 13: 23.05 to 27.05

	mo 23	tu 24	we 25	th 26	fr 27
8H	oral evaluation	oral evaluation		Ascension	
9H	oral evaluation	oral evaluation			
10H	oral evaluation	oral evaluation			
11H	oral evaluation	oral evaluation			
12H			preparation for evaluation		
13H	oral evaluation				
14H	oral evaluation				
15H	oral evaluation				
16H					
17H					
Site	Arziller 090	B301			

WEEK 14: 30.05 to 03.06

	mo 30	tu 31	we 01	th 02	fr 03
8H		written evaluation			Dies academicus
9H		written evaluation			
10H		written evaluation			
11H					
12H	preparation for evaluation		day off	grant proposal	
13H					
14H					
15H					
16H					
17H					
Site		BU09 (Bugnon 9)			

WEEK : 06.06 to 10.06

	mo 06	tu 07	we 08	th 09	fr 10
8H	Pentecôte				
9H					
10H					
11H					
12H		grant proposal	grant proposal	grant proposal	grant proposal
13H					
14H					
15H					
16H					
17H					

WEEK : 13.06 to 18.06

	mo 13	tu 14	we 15	th 16	fr 17
8H					
9H					
10H					
11H					
12H	grant proposal	grant proposal	preparation of grant defense	preparation of grant defense	Defense of grant proposal
13H					
14H					
15H					
16H		submit grant proposal			
17H					
Site					B301 + B305

3rd semester

Master work all day, all semester

Hours: all lectures start 15 minutes after the hour (8h on schedule = 8.15h)
 Lecture rooms: F308 / F302 (DB, Epalinges)
 Library with computers: B304 (DB, Epalinges)
 Lab for practicals: F304 (DB, Epalinges)
 Exams: F308 (DB, Epalinges)

Dates important for lecturers: Sport school holidays: 19-27.02.2022
 Spring school holidays: 15.04-01.05.2022
 LS2 (USGEB; Geneva): 17-18.02.2022
 WIRM Davos: 06-09.07.2022
 Wollberg Immunology: 15-17.08.2022

Lecturers in Immunology:

Sanjiv Luther <sanjiv.luther@unil.ch>
 Werner Heid <werner.heid@unil.ch>
 Fabienne Tacchini <Fabienne.Tacchini@cotier.unil.ch>
 Margot Thome <Margot.Thome@unil.ch>
 Petr Broz <Petr.Broz@unil.ch>
 Grégory Verdeil <gregory.verdeil@unil.ch>
 Dominique Velin <Dominique.Velin@chuv.ch>
 Matthieu Perreau <Matthieu.Perreau@chuv.ch>
 Thierry Roger <Thierry.Roger@chuv.ch>
 Ping Chih Ho <Ping.Chih.Ho@unil.ch>
 Caroline Pot <Caroline.Pot@chuv.ch>
 Delvis Golshteyn <Delvis.Golshteyn@chuv.ch>
 Denis Comte <Denis.Comte@chuv.ch>
 Laurent Perez <Laurent.Perez@chuv.ch>
 Niki Ubags <Niki.Ubags@chuv.ch>
 Silvia Monticelli <Silvia.Monticelli@ib.usi.ch>

Lecturers in Cancer Biology:

Tanya Petrova <Tatiana.Petrova@unil.ch>
 Douglas Hanahan <douglas.hanahan@epfl.ch>
 Johanna Joyce <Johanna.Joyce@unil.ch>
 David Gfeller <David.Gfeller@unil.ch>
 Giovanni Ciriello <giovanni.ciriello@unil.ch>
 Edoardo Missiaglia <Edoardo.Missiaglia@chuv.ch>
 Marie-Catherine Vozenin <Marie-Catherine.Vozenin@chuv.ch>
 Caroline Arber <caroline.arber@unil.ch>
 Lana Kandalaf <Lana.kandalaf@unil.ch>
 Céline Schollerer <celine.schollerer@chuv.ch>
 Mikael Pittet <mikael.pittet@unige.ch>
 Pedro Romero <pedro.romero@hospvd.ch>

Lecturers in Protein analysis:

Manfredo Quadroni <Manfredo.Quadroni@unil.ch>
 Michal Bassani <michal.bassani@chuv.ch>
 Vincent Zoete <vincent.zoete@isb-sib.ch>

Dates for students: Easter Friday (Good Friday) 15.04.2022
 Easter Monday 18.04.2022
 UNIL Easter holidays: 15-22.04.2022
 Ascension day (Thursday) 26.05.2022
 Whit Monday (Pentecost Monday) 06.06.2022
 First day of spring semester: Monday 21.02.2022
 Last day of spring semester: Friday 03.06.2022
 Last day of autumn semester: 23.12.2022
 Exam session: 13.06.-09.07.2022
 Repeat exam session: 22.08.-10.09.2022
 Submission of master work report: 13.01.2023?
 Defense of master work (last possible date): 03.02.2023?

Practicals and other exercises

Manfredo Quadroni <Manfredo.Quadroni@unil.ch>
 Michal Bassani <michal.bassani@chuv.ch>
 Vincent Zoete <vincent.zoete@isb-sib.ch>
 Jean-Francois Mayol <jean-francois.mayol@unil.ch>
 Petra Baumgartner <Petra.Baumgartner@hospvd.ch>
 Laurent Dere <Laurent.Dere@chuv.ch>
 Grégory Verdeil <gregory.verdeil@unil.ch>
 David Gfeller <David.Gfeller@unil.ch>
 Olaia Naveiras <olaia.naveiras@unil.ch>
 Antoine Noble <antoine.noble@promed-lab.ch>
 Alexandre Benechet <Alexandre.Benechet@chuv.ch>
 Caroline Arber <caroline.arber@unil.ch>
 Frédéric Schutz <Frederic.Schutz@unil.ch>

Administrator:

Fanny Dubois <Fanny.Dubois@unil.ch>

Master students:

EMAIL

Sarah.Bollat@unil.ch
 Thea.Chevalley@unil.ch
 Kelly.DeKorod@unil.ch
 Lucas.DosSantos.1@unil.ch
 Lucas.FellmannZurietay@sea@unil.ch
 Emilie.Fistola@unil.ch
 clementine.gallard@unil.ch
 Erwan.Glemarec@unil.ch
 Lola.Hannil@unil.ch
 pablo.hernandezlopez@unil.ch

EMAIL

Jakub.Korzenlowski@unil.ch
 Clotilde.Lacroix@unil.ch
 eleni.lamprou@unil.ch
 Lucas.Munzenmaier@unil.ch
 Giulia.Paone@unil.ch
 sandramaris.pimentelmendes@unil.ch
 Kadir.SeidMohammed@unil.ch
 Aya.Sghaier@unil.ch
 Apha.Shannuganathan@unil.ch
 tobias.shiple@unil.ch
 Alexandros.Sifs@unil.ch

EXAMS

Semester	Grade	1/5	Journal club (oral presentation)	theoretical	2/3	written evaluation 4h (4 topics in immunology and 4 topics in cancer biology; topics announced at end of courses)
2nd	practical	1/5	PW report 'peptide-based assays'	1/3	oral evaluation	30' (15' preparation and 15' exam), mix of immunology and cancer questions
		1/5	PW report 'antigen discovery by mass spectrometry'			
		1/5	PW report 'flow cytometric analysis of lymphoid organs'			
		1/5	1/10 PW report 'histology' and 1/10 PW oral presentation 'histology'			

Both the practical and theoretical grade need to be ≥ 4

3rd	practical	1/3	master work:	written report (1/4 written grant proposal, 3/4 thesis report)
		1/3	oral defense (1/4 oral grant defense, 3/4 oral thesis defense)	
		1/3	practical work	

All three grades need to be ≥ 4