2nd Course on Computational Systems Biology of Cancer - September 23-28, 2019

A Training Unit International Course - Open conferences (in blue or orange)

Monday, September 23th	**Session 1: Pathway databases for single cell research**	
BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	Chairs: TBA	
08:50 09:00	**Training Unit and Emmanuel Barillot** Institut Curie-INSERM, Paris, France	Welcome and opening remarks
09:00 10:00	**Augustin Luna** Harvard Medical School, Boston, USA	**Pathway Commons resource for single cell data analysis and network-based interpretation**
10:00 10:30	COFFEE/TEA BREAK (BDD Hall)	
10:30 11:30	**Inna Kuperstein** Institut Curie-INSERM, Paris, France	**ACSN: cancer-specific knowledge resource to study cell type-specific features**
11:30 12:00	**Presentation(s) selected from post-docs abstracts**	**10 minutes/presentation**
12:00 13:30	LUNCH (BDD Hall) AND POSTERS PLACEMENT (BDD, Annexes 1-3)	
	Session 2: Visualization and interpretation of single cell cancer data	
13:30 14:30	**Reinhard Schneider** Luxembourg University, Luxembourg	**Data integration and knowledge management in Biomedicine**
14:30 15:30	**TBA** Didactic introductory lecture	**Data analysis approaches in single cell data era**
15:30 16:00	COFFEE/TEA BREAK (BDD Hall)	
16:00 17:30	**Flash presentations of projects by PhD students**	**5 minutes/presentation**
17:30 19:30	**WELCOME RECEPTION (Chez Marie)**	

Tuesday, September 24th BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	Session 3: Single cell omics data analysis in tumor heterogeneity studies (1) Chairs: TBA
09:00 10:00 **Julio Saez-Rodriguez** EMBL-EBI, Hinxton, UK	**Pathway-based analysis of single-cell data**
10:00 10:30 COFFEE/TEA BREAK (BDD Hall)	
10:30 11:30 **Luca Pinello** Harvard Medical School, Boston, USA	**Single Cell Trajectory Reconstruction Exploration and Mapping of omics data**
11:30 12:30 **Flash presentations of projects by PhD students**	**5 minutes/presentation**
12:30 13:30 LUNCH (BDD Hall)	
Session 4: Single cell omics data analysis in tumor heterogeneity studies (2)	
13:30 14:30 **Thomas Höfer** Deutsches Krebsforschungszentrum, Heidelberg, Germany	**Inferring clonal evolution and growth of tumors from cell barcoding and somatic mutations**
14:30 15:30 **Andrew Teschendorff** UCL, London, UK	**Towards the quantification of Waddington's epigenetic landscape at the single-cell level**
15:30 16:00 COFFEE/TEA BREAK (BDD Hall)	
16:00 17:00 **Ioannis Xenarios** UNIL, Lausanne, Switzerland	**Cellular decision process using single data to build up cellular automata of differentiations and responses**
17:00 18:30 POSTERS (BDD Annexes 1-3)	

Wednsday, September 25th BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	Session 5: Exploring tumor microenvironment using single cell data (1) Chairs: TBA
09:00 10:00	**Presentation(s) selected from post-docs abstracts**	**10 minutes/presentation**
10:00 10:30	COFFEE/TEA BREAK (BDD Hall)	
10:30 11:30	**Denis Thieffry** IBENS-ENS, Paris, France	**Qualitative dynamical modeling of T-helper cell differentiation and reprogramming**
11:30 12:00	**Veronique Thomas-Vaslin** Sorbonne University, Paris, France	**Systems biology for cell proliferation quantification and modeling of lymphocyte dynamics: T-cell heterogeneity dynamics across aging and genetic origins**
12:00 13:30	LUNCH (BDD Hall)	
	Session 6: Exploring tumor microenvironment using single cell data (2)	
13:30 14:30	**Vassili Soumelis** INSERM, Paris, France	**Immune cell diversity in cancer: of concepts, subsets, states and single cells**
14:30 15:30	**Leïla Perié** Institut Curie, Paris, France	**Family matters: the role of single cell families in hematopoiesis**
15:30 16:00	COFFEE/TEA BREAK (BDD Hall)	
16:00 17:00	**Jérome Galon** Cordeliers Research Center, Paris, France	**Integrative cancer immunology and immune contexture**
17:00 18:30	POSTERS AND BEER (BDD Annexes 1-3)	

Thursday, September 26th BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	**Session 7: Tumor genetics and epigenetics** Chairs: TBA
09:00 10:00	**Estelle Duprez** CRCM, Marseille, France	**Epigenetic and gene expression profiling for patient stratification and biomarker discovery**
10:00 10:30	COFFEE/TEA BREAK (BDD Hall)	
10:30 11:30	**Nikolaus Rajewsky** Keynote MDC, Berlin, Germany	**Single cell analysis of tumorigenesis in solid tumors**
11:30 12:30	**Students journal club**	**4-5 milestone papers from the field presentation by students**
12:30 13:30	LUNCH (BDD Hall)	
	Session 8: Treatment response prediction and patient stratification	
13:30 14:30	**Lodewyk Wessels** National Cancer Institute, Amsterdam, The Netherlands	**Molecular networks as determinants of response and outcome**
14:30 15:30	**Kathleen Marchal** Ghent University, Ghent, Belgium	**Integrative network-based analysis for subtyping and cancer driver identification**
15:30 16:00	COFFEE/TEA BREAK (BDD Hall)	
16:00 16:30	**Antoine de Weck** Pharma talk Novartis, Basel, Switzerland	**Functional screening for Target Identification and Drug Discovery**
16:30 18:00	**Students journal club**	**4-5 milestone papers from the field presentation by students**

Friday, September 27th	Session 9: Multi-level single cell omics data analysis
BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	Chairs: TBA

09:00 10:00	**Andrei Zinovyev** Institut Curie, Paris, France	**Epigenetic tumor heterogeneity at single cell level**
10:00 10:30	COFFEE/TEA BREAK (BDD Hall)	
10:30 11:30	**Peter Kharchenko** Keynote Curie Seminar Harvard Medical School, Boston, USA	**Integrative analysis of large single-cell RNA-seq collections**
11:30 12:30	**Flash presentations of projects by PhD students**	**5 minutes/presentation**
12:30 13:30	LUNCH (BDD Hall)	
13:30 14:30	VISIT OF CURIE MUSEUM	

Session 10: Bioimage informatics for single cell data cancer research		
14:30 15:30	**Jean-Phillipe Vert** Google, Paris, France	**TBA**
15:30 16:30	**Thomas Walter** Centre for Computational Biology, MINES ParisTech, Paris, France	**Bioimage analysis for single cell analysis and spatial transcriptomics**
16:30 17:00	Coffee break and poster removal (BDD Hall)	
16:30 17:30	**Master student's journal club**	**4-5 milestone papers from the field presentation by students**
17:30 18:00	**Closing remarks, prizes for flash presentations and posters**	
18:30 21:00	**FAREWELL COCKTAIL (Chez Marie)**	

Saturday, September 28th BDD Amphithéâtre, 11-13 rue Pierre & Marie Curie, 75005 Paris	**CAREER DEVELOPMENT WORKSHOP**	
10:00 10:15	**Introduction to career development opportunities in computational systems biology of cancer**	
10:15 12:30	**Flash presentations: invited speakers, pharma and scientific editing representatives, platform managers speaking on their career**	
12:30 13:00	**Global discussion panel of audience with all speakers**	
13:00 14:00	**LUNCH (BDD Hall) AND DISCUSSIONS (BDD, Annexes 1-3)**	
14:00 16:00	**Round tables: students discuss career paths with invited speakers, pharma and scientific editing representatives, platform manage**	