

# 13<sup>th</sup> Course on Epigenetics - March 8-15, 2017

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

Wednesday, March 8 <sup>th</sup>		Chairs: Geneviève Almouzni & Nathalie Dostatni	
09:00	<b>Training Unit</b> Institut Curie	Welcome: practical aspects and posters set-up	
09:30	<b>Geneviève Almouzni &amp; Nathalie Dostatni</b> UMR 3664, Institut Curie: Director of the Research Center /CNRS, FR	Presentation of the module by the organizers & scientific committee	
09:45	<b>Brunch Committee</b>	Presentation of the brunch	
09:45 10:30	<b>Students presentation &amp; personal work</b>	Short presentation of background and research interest (1 mn each) orchestrated by David Sitbon	
10:30 11:00	<b>BREAK (BDD Hall)</b>		
11:00 11:45	<b>Epitalk : Andrew Moore</b> Bioessays, Weinheim - DE	<b>Want people to read your paper? Here's how to optimize your chances</b>	
12:00 12:45	<b>Geneviève Almouzni</b> UMR 3664, Institut Curie: Director of the Research Center /CNRS, FR	<b>Chromatin assembly in the nucleus: the bricks and the architects</b>	
13:00	<b>LUNCH and POSTER SET-UP</b>		<b>Green Cafe</b>
14:00	<b>ALUMNI SESSION</b>		
14:00 14:15	<b>Violaine Saint-André</b> Institut Curie, Paris - FR	<b>Use of epigenomic data to map transcriptional regulation of cell identity</b>	
14:20 14:35	<b>Iva Simeonova</b> Institut Curie, Paris - FR	<b>Transcription factor mutations: impact on tumorigenesis and development</b>	
14:40 17:00	<b>Paul Harrison</b> University of Dundee - UK	<b>Epigenetic Imagin(ing) workshop</b>	
17:00	<b>Departure to the Collège de France</b>		
17:30 19:00	<b>Rob Martienssen - KEYNOTE LECTURE</b> CSHL, Cold Spring Harbor - USA	<b>Germline reprogramming and epigenetic inheritance: how to avoid bad Karma</b>	
19:30	<b>WELCOME RECEPTION</b>		<b>Green Cafe</b>

Amphithéâtre BDD  
11-13 rue Pierre & Marie Curie,  
75005 Paris

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Chez Marie

Collège de France

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Thursday, March 9 <sup>th</sup>		Chairs: Antoine Coulon & Iva Simeonova	
09:30 10:15	<b>Valérie Borde</b> Institut Curie, Paris - FR	<b>Influence of histone H3K4 methylation on meiotic recombination</b>	Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
10:30 10:50	Article presentation by Mélissa Thomas & Lorrie Ramos	Davies et al. (2016) <u>Re-engineering the zinc fingers of PRDM9 reverses hybrid sterility in mice</u> , Nature 530, 171-176	
11:00	<b>BREAK and GROUP PHOTO</b>		
11:30 12:15	<b>Gaëlle Legube</b> CBI, Toulouse - FR	<b>Chromatin and chromosome dynamics at DNA double strand breaks</b>	
12:30 12:50	Article presentation by Gabriel le Berre	Cho et al. (2014) <u>Interchromosomal homology searches drive directional ALT telomere movement and synapsis</u> , Cell 159, 108-121	
13:00	<b>LUNCH</b>		Green Cafe
14:00 14:45	<b>Marcus Buschbeck</b> IMPPC, Barcelona - ES	<b>The histone variant macroH2A1.1 links chromatin structure and metabolism</b>	Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
15:00 15:20	Article presentation by Edith Borcoman & Miles Huseyin	Dardenne et al. (2012) <u>Splicing switch of an epigenetic regulator by RNA helicases promotes tumor-cell invasiveness</u> , Nature Structural & Molecular Biology 11, 1139-1146	
15:30 16:30	<b>Guided visit of the Curie museum</b>		Musée Curie
16:40 17:25	<b>Film projection: "La Saga des Nobel"</b>		Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
17:30 17:50	Article presentation by Chean Sern Jacobs & Prodromos Chatzikyriakou	Lewis et al. (2013) <u>Inhibition of PRC2 activity by a gain-of-function H3 mutation found in pediatric glioblastoma</u> , Science 340, 857-861	
18:00 20:00	<b>POSTER SESSION 1</b>		Annexes BDD

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Friday, March 10 <sup>th</sup>		Chairs: Ines Drinnenberg & Edith Heard	
09:30 10:15	<b>Edith Heard</b> Institut Curie, Paris - FR	<b>The nuclear and chromatin dynamics of the inactive X chromosome during development and disease</b>	
10:30 10:50	Article presentation by Madeleine Moscatelli & Nezhir Karasu	Chen et al. (2016) <u>Xist recruits the X chromosome to the nuclear lamina to enable chromosome-wide silencing</u> . Science 364, 468-472	
11:00 11:30	<b>BREAK</b>		
11:30 12:15	<b>Ana Pombo</b> MDC, Berlin - DE	<b>Genome architecture mapping, a novel approach to map chromatin contacts</b>	
12:30 12:50	Article presentation by Eliza Mari Maliepaard & Diego Rodriguez Terrones	Hay et al. (2016) <u>Genetic dissection of the <math>\alpha</math>-globin super-enhancer in vivo</u> . Nature Genetics 48, 895-903 / Shin et al. (2016) <u>Hierarchy within the mammary STAT5-driven Wap super-enhancer</u> . Nature Genetics 48, 904-911	
13:00	<b>LUNCH</b>		
14:00 15:00	<b>Harmit Malik - KEYNOTE LECTURE</b> Fred Hutchinson Research Center, Seattle - USA	<b>Epigenetics evolution related to chromatin</b>	
15:15	<b>BREAK</b>		
15:30 15:50	Article presentation by Antoine Huguin & Michael Gutbrod	Jacobs et al. (2014) <u>An evolutionary arms race between KRAB zinc finger genes 91/93 and SVAL1 retrotransposons</u> . Nature 516, 242-245	
16:00 16:45	<b>Daniele Fachinetti</b> Institut Curie, Paris - FR	<b>The centromere paradox: genetic vs epigenetic, a battle for centromere specification?</b>	
17:00 18:30	<b>Round table on the emergence of alternative methods to peer reviews for scientific integrity</b>		

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75005 Paris

Green Cafe

Amphithéâtre Burg  
12 rue Lhomond,  
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Saturday, March 11 <sup>th</sup>		
	<b>CAREER DEVELOPMENT WORKSHOP</b>	
	Organizer: Camille Clément	
11:00	<p><b>Invited speakers</b></p> <p><u>Biotech:</u> Jean-Baptiste Marie, Abbelight Thomas Ybert, DNA Script</p> <p><u>Education:</u> Boris Bardot, Université Pierre et Marie Curie</p> <p><u>Tech transfer:</u> Cécile Campagne, Institut Curie</p> <p><u>Science communication and management:</u> Marta Agostinho, EU life Cristina Bartocci, Institut Curie Gemma Balmer, CRUK Harmit Malik, Fred Hutchinson Research Center</p>	<p>Cafeteria Institut Curie 25 rue d'Ulm, 1st floor, 75005 Paris</p>
14:00	FREE AFTERNOON	

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Monday, March 13 <sup>th</sup>		Chairs: Daniel Fachinetti & Danny Reinberg	
09:30 09:50	Article presentation by Nuria Cortes Silva & Ayla Batu	Yu et al. (2015) <u>Dynamic phosphorylation of CENP-A at Ser68 orchestrates its cell-cycle-dependent deposition at centromeres</u> . Developmental Cell 32, 68-81 / Niikura et al. (2015) <u>CENP-A K124 ubiquitylation is required for CENP-A deposition at the centromere</u> . Developmental Cell 32, 1-15	Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
10:00 10:45	<b>Inès Drinnenberg</b> Institut Curie, Paris - FR	<b>Evolution of centromeres: diverse architectures yet conserved functions</b>	
11:00 11:20	Article presentation by Nancy Gutierrez Hernandez & Alexandra Iouranova	Akiyoshi et al. (2014) <u>Discovery of unconventional kinetochores in kinetoplastids</u> . Cell 156, 1247-1258	
11:30	<b>BREAK</b>		
12:00 12:45	<b>Vincent Colot</b> ENS, Paris - FR	<b>Plant transgenerational epigenetics</b>	
13:00	<b>LUNCH</b>		Green Cafe
14:00 14:20	Article presentation by Lea Duempelmann & Caridad Miró Pina	Amabile et al. (2016) <u>Inheritable silencing of endogenous genes by hit-and-run targeted epigenetic editing</u> . Cell 167, 219-232	Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
14:30 15:15	<b>Giacomo Cavalli</b> IGH, Montpellier - FR	<b>Polycomb proteins, 3D genome regulation and epigenetic inheritance</b>	
15:30 15:50	Article presentation by Léo Machado & Elena Stoyanova	Javierre et al. (2016) <u>Lineage-specific genome architecture links enhancers and non-coding disease variants to target gene promoters</u> . Cell 167, 1369-1384	
16:00	<b>BREAK</b>		
16:30 17:15	<b>Michaël Weber</b> ESBS, Strasbourg - FR	<b>Developmental functions of DNA methylation in mammals</b>	
17:30 17:50	Article presentation by Sebastian Kaluscha & Tessa Bertozzi	Barau et al. (2016) <u>The DNA methyltransferase DNMT3C protects male germ cells from transposon activity</u> . Science 354, 909-912	
18:00 20:00	<b>POSTER SESSION 2</b>		Annexes BDD

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Tuesday, March 14 <sup>th</sup>		Chairs: Judith Mine-Hattab & Guillermo Orsi	
09:30 10:15	<b>Angela Taddei</b> Institut Curie, Paris - FR	<b>The heterochromatin factor Sir3 whips the yeast genome into shape</b>	
10:30 10:50	Article presentation by Simon Willaume & Ilya Flyamer	Hsieh et al. (2016) <u>Mapping nucleosome resolution chromosome folding in yeast by Micro-C</u> . Cell 162, 108-119	
11:00	<b>BREAK</b>		<b>Amphithéâtre BDD</b> 11-13 rue Pierre & Marie Curie, 75005 Paris
11:30 12:15	<b>Cécile Fradin</b> McMaster University, Hamilton - CA	<b>On the importance of diffusion for transcription factors</b>	
12:30 12:50	Article presentation by Thomas Dahlet & Changwei Yu	Hammar et al. (2012) <u>The lac repressor displays facilitated diffusion in living cells</u> . Science 336,1595-1598 / Wang et al. (2012) <u>The promoter-search mechanism of Escherichia coli RNA polymerase is dominated by three-dimensional diffusion</u> . Nature Structural & Molecular Biology 20, 174-182	
13:00	<b>LUNCH</b>		<b>Green Cafe</b>
14:00 14:45	<b>Antoine Coulon</b> Institut Curie, Paris - FR	<b>Understanding transcriptional regulation in space and time with single-molecule imaging</b>	
15:00 15:20	Article presentation by Mathieu Carrara & Ruben Schep	Chen et al. (2017) <u>Direct visualization of transcriptional activation by physical enhancer-promoter proximity</u> . Preprint, BioRxiv	
15:30	<b>BREAK</b>		<b>Amphithéâtre BDD</b> 11-13 rue Pierre & Marie Curie, 75005 Paris
16:00 16:45	<b>Nathalie Dostatni</b> Institut Curie, Paris - FR	<b>Transcription dynamics in living embryos</b>	
17:00 17:20	Article presentation by Jaime Osuna Luque & Charbel Souaid	Zhao et al. (2011) <u>Gene bookmarking accelerates the kinetics of post-mitotic transcriptional re-activation</u> . Nature Cell Biology 13, 1295-1306	
17:30 18:15	<b>Patricia Le Baccon &amp; Tristan Piolot</b> UMR 3664/UMR 3215/U934, Institut Curie/CNRS/INSERM	<b>Advanced microscopy to image the nucleus</b>	
18:30	<b>NIKON IMAGING CENTER VISIT / OMX</b> with Patricia Le Baccon, Tristan Piolot & Olivier Renaud		<b>NIKON Imaging Center</b>
19:30	<b>FAREWELL COCKTAIL &amp; POSTER PRIZE CELEBRATION - BUFFET DINNER</b>		<b>Chez Marie</b>

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Wednesday, March 15 <sup>th</sup>		Chairs: Valérie Borde & Angela Taddei	
09:30	Debriefing of the course		Amphithéâtre BDD 11-13 rue Pierre & Marie Curie, 75005 Paris
10:00 10:45	Céline Vallot Institut Curie, Paris - FR	How data mining and integration help us understand stem cell plasticity	
11:00	BREAK		
11:30 12:15	Marc Sanson ICM, Paris - FR	Revisiting the classification of gliomas	
12:30	LUNCH		Green Cafe
	FAREWELL & DEPARTURE		