

POST-TRANSCRIPTIONAL CONTROL OF GENE EXPRESSION: MECHANISMS OF RNA DECAY

JULY 10 - 15, 2016
LISBON, PORTUGAL

CO-ORGANIZERS:

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Post-transcriptional control of gene expression: Mechanisms of RNA decay
 July 10 - 15, 2016
 Lisbon, Portugal

Organizers:

Jeff Coller

Case Western Reserve University
 Cleveland, Ohio

Ciarán Condon

CNRS, Institut de Biologie Physico-Chimique
 Paris, France

Sunday, July 10, 2016

<u>Time</u>	<u>Title/Topic Event</u>	<u>Speaker, affiliation</u>
4:00 p.m. – 9:00 p.m.	Conference Registration	
6:00 p.m. – 7:00 p.m.	Welcome Reception	
7:00 p.m. – 8:00 p.m.	DINNER	
8:00 p.m. – 9:45 p.m.	<i>Welcome/Keynote Speakers</i>	
8:00 p.m - 8:15 p.m	FASEB Welcome/Announcements	Kristen Hagy/Jeff Coller
8:15 p.m. - 9:00 p.m.	T1. Keynote 1: The EMBO Keynote Lecture: Global mapping of endogenous RNase E cleavage sites by TIER-seq reveals processing-dependent small RNA biogenesis	Jörg Vogel (University of Würzburg)
9:00 p.m. - 9:45 p.m.	T2. Keynote 2: The Ins and Outs of the RNA exosome	Chris Lima (Sloan Kettering)

Monday, July 11, 2016

<u>Time</u>	<u>Title/Topic Event</u>	
7:30 a.m. – 9:00 a.m.	BREAKFAST	
7:30 a.m. – 12:00 p.m.	Conference Registration	
9:00 a.m. – 12:00 p.m.	<i>Session 1: 5' events in mRNA decay</i> <i>Chair Joel Belasco</i>	
9:00 a.m - 9:30 a.m	T3. All 5' caps are not equal: Unique caps with corresponding decapping enzymes	Mike Kiledjian (Rutgers Univeristy)
9:30 a.m - 10:00 a.m	T4. 5'-terminal control of bacterial mRNA degradation	Joel Belasco (NYU)
10:00 a.m. – 10:15 a.m.	<i>Morning Coffee Break and group photo</i>	
10:30 a.m. - 11:00 a.m.	T5. RNA degradomes reveal substrates and importance during stress responses of <i>Arabidopsis</i> XRN4	Pamela Green (University of Delaware)

11:00 a.m. - 11:15 am	T6. Cap recognition and catalytic activation of the Dcp1/Dcp2 mRNA decapping complex	Jeffrey Mugridge (UC San Francisco)
11:15 a.m. - 11:30 a.m.	T7. Structural insights into the mechanism of mRNA decapping activation	Eugene Valkov (Max Plank Institute for Developmental Biology)
11:30 p.m. – 11:45 a.m.	T8. The microprotein NoBody interacts with enhancer of decapping protein 4 in the human mRNA decapping complex	Sarah Slavoff (Yale University)
11:45 a.m. - 12:00 p.m.	T9. 5' mRNA cap surveillance in <i>Arabidopsis thaliana</i>	Aleksandra Kwasnik (University of Warsaw)
12:00 p.m. – 1:00 p.m.	LUNCH and Meet the Speakers	
1:00 p.m. – 2:30 p.m.	Reserved	
2:30 p.m. - 3:00 p.m.	Why you must visit my poster	
3:00 p.m. – 4:30 p.m.	Poster Session (odd numbers)	
4:30 p.m – 6:00 p.m.	Poster Session (even numbers)	
6:00 p.m. – 7:00 p.m.	Conference Registration	
6:00 p.m. – 7:00 p.m.	DINNER	
7:00 p.m. – 9:30 p.m.	Session 2: 3' events in mRNA decay Chair Ambro Van Hoof	
7:00 p.m. – 7:30 p.m.	T10. Molecular mechanisms of the cytoplasmic exosome	Elena Conti (Max Plank Institute for Developmental Biology)
7:30 p.m. – 7:45 p.m.	T11. Uridylation and PABP cooperate to repair mRNA deadenylated ends in Arabidopsis	Dominique Gagliardi (Université de Strasbourg)
7:45 p.m. – 8:00 p.m.	T12. AU-Rich Element structure and its impact on RNA binding of ZFP36L2	Sylvia Ramos (University of N. Carolina)
8:00 p.m. – 8:30 p.m.	T13. Ribonucleases "reloaded": a new look at old data	Cecilia Arraiano (University of Lisbon)
8:30 p.m. – 9:00 p.m.	T14. Regulatory roles of deadenylation factors in controlling mRNA turnover across the transcriptome	Ann-Bin Shyu (University of Texas)
9:00 p.m. – 9:30 p.m.	T15. Roles of specific TUTases in histone mRNA degradation	Bill Marzluff (University of N. Carolina)

Tuesday, July 12, 2016

Time	Title/Topic Event	
7:30 a.m. – 9:00 a.m.	BREAKFAST	
7:30 a.m. – 12:00 p.m.	Conference Registration	
9:00 a.m. – 12:00 p.m.	Session 3: Translation and Stability Chair Hani Zaher	
9:00 a.m - 9:30 a.m	T16. Insight into the interconnection between mRNA translation and decay	Jeff Collier (Case Western Reserve University)
9:30 a.m - 10:00 a.m	T17. Remarkable Functional Convergence: Type I and II Toxin-Antitoxins Induce Persistence by a “Magic Spot” Dependent Mechanism	Ken Gerdes (U. of Copenhagen)
10:00 a.m. – 10:15 a.m.	<i>Morning Coffee Break</i>	
10:15 a.m. - 10:45 a.m.	T18. mRNA stability is substantially dictated by the action of the ribosome	Rachel Green (Johns Hopkins University)
10:45 a.m. - 11:15 a.m.	T19. Role of a new ribonuclease in selective mRNA turnover in <i>B. subtilis</i>	Ciarán Condon (IBPC, Paris)
11:15 a.m. – 11:30 a.m.	T20. Cytoplasmic fate of sense-antisense mRNA pairs	Albertas Navickas (IBPC, Paris)
11:30 a.m. – 11:45 a.m.	T21. Regulation and genetic interactions of the RNA decay machinery in <i>Staphylococcus aureus</i>	Peter Redder (University of Geneva)

11:45 a.m. - 12:00 p.m.	T22. <i>Drosophila</i> Nanos acts as a molecular clamp that modulates the RNA-binding and repression activities of Pumilio	Aaron Goldstrohm (University of Michigan)
12:00 p.m. – 1:00 p.m.	LUNCH and Meet the Speakers	
1:00 p.m. – 6:00 p.m.	Free time – Bus trip to Sintra (49 places)	
6:00 p.m. – 7:00 p.m.	Conference Registration	
6:00 p.m. – 7:00 p.m.	DINNER	
7:00 p.m. – 9:30 p.m.	Session 4: Quality Control and NMD Chair Kristian Baker	
7:00 p.m. – 7:30 p.m.	T23. Mechanistic insight into the binding and targeting of aberrant RNA by the nonsense-mediated mRNA decay pathway	Kristian Baker (Case Western Reserve University)
7:30 p.m. – 8:00 p.m.	T24. High resolution definition of the subsets of mRNAs targeted by the UPF proteins and other decapping activators	Allan Jacobson (U. Massachusetts)
8:00 p.m. – 8:15 p.m.	T25. Ubiquitylation of ribosomal proteins play crucial roles in quality controls induced by aberrant translation	Tushifumi Inada (Tohoku University)
8:15 p.m. – 8:30 p.m.	T26. ATP hydrolysis by UPF1 promotes translation termination at premature stop codons	Lucas Serdar (Case Western Reserve University)
8:30 p.m. – 9:00 p.m.	T27. Role of the ribosome in initiating no-go decay	Hani Zaher (Washington U. St. Louis)
9:00 p.m. – 9:30 p.m.	T28. What makes an NMD target? Characterisation of NMD sensitive mRNAs in human cells	Oliver Mühlemann (Universität Bern)

Wednesday, July 13, 2016

Time	Title/Topic Event	
7:30 a.m. – 9:00 a.m.	BREAKFAST	
7:30 a.m. – 12:00 p.m.	Conference Registration	
9:00 a.m. – 12:00 p.m.	Session 5: miRNA/sRNA/CRISPR 1 Chair Eric Massé	
9:00 a.m. – 9:30 a.m.	T29. NetRNA sponsored lecture: RNA-dependent regulatory circuits in <i>Staphylococcus aureus</i> link metabolism, stress responses and virulence determinant expression in a dynamic manner	Pascale Romby (Université de Strasbourg)
9:30 a.m. – 9:45 a.m.	T30. RoxS small RNA stabilizes <i>yflS</i> mRNA by blocking RNase J1 5'-3' activity in <i>Bacillus subtilis</i>	Sylvain Durand (IBPC, Paris)
9:45 a.m. – 10:00 a.m.	T31. RNA Arrays: A novel opportunity for RNA research	Louise Butt (University of Portsmouth)
10:00 a.m. – 10:15 a.m.	<i>Morning Coffee Break</i>	
10:15 a.m. - 10:45 a.m.	T32. Processing of mRNA 3' ends to give sRNAs	Gisela Storz (NIH)
10:45 a.m. - 11:15 a.m.	T33. Diverse biology of tRNA-derived small non-coding RNAs	Paul Anderson (Harvard University)
11:15 a.m. - 11:30 a.m.	T34. The importance of mRNA folding in controlling type I toxin antitoxin expression in <i>Helicobacter pylori</i>	Fabien Darfeuille (Université de Bordeaux)
11:30 a.m. – 11:45 a.m.	T35. mRNP reorganization during microRNA-mediated repression	Oliva Rissland (University of Toronto)
11:45 a.m. - 12:00 p.m.	T36. The Sm-like protein Hfq is important for ribosome biogenesis and affects translational fidelity	José Andrade (Universidade Nova de Lisboa)
12:00 p.m. – 1:00 p.m.	LUNCH and Meet the Speakers	
1:00 p.m. – 6:00 p.m.	Free time	
6:00 p.m. – 7:00 p.m.	Conference Registration	
6:00 p.m. – 7:00 p.m.	DINNER	
7:00 p.m. – 9:30 p.m.	Session 6: miRNA/sRNA/CRISPR 2 Chair Erik Sontheimer	

7:00 p.m. – 7:30 p.m.	T37. The RNA chaperone Hfq directly binds target mRNAs to promote sRNA-mediated cleavage	Eric Massé (University of Sherbrooke)
7:30 p.m. – 8:00 p.m.	T38. Transport of ribosomal RNA biogenesis lncRNA RMRP to mitochondria by RBPs	Myriam Gorospe (NIH)
8:00 p.m. – 8:15 p.m.	T39. Role of the RNA chaperone Hfq in the regulatory network governing the <i>Legionella pneumophila</i> differentiation	Giulia Oliva (Pasteur Institute, Paris)
8:15 p.m. – 8:30 p.m.	T40. RNA surveillance as a mechanism to regulate maturation of both coding and non-coding RNAs	Anita Corbett (Emory University School of Medicine)
8:30 p.m. – 9:00 p.m.	T41. The dynamic machinery of RNA degradation, processing and riboregulation in <i>E. coli</i>	Ben Luisi (University of Cambridge)
9:00 p.m. – 9:30 p.m.	T42. <i>Neisseria meningitidis</i> Cas9 is a naturally high-fidelity genome editing enzyme	Erik Sontheimer (U. Massachusetts)

Thursday, July 14, 2016

Time a.m.	Title/Topic Event	
7:30 a.m. – 9:00 a.m.	BREAKFAST	
7:30 a.m. – 12:00 p.m.	Conference Registration	
9:00 a.m. – 12:00 p.m.	Session 7: RNA binding proteins Chair Myriam Gorospe	
9:00 a.m. - 9:30 a.m.	T43. mRNA-protein regulatory networks: RNA tagging, subnetworks and evolution	Marv Wickens (University of Madison)
9:00 a.m. - 9:45 a.m.	T44. CshA is necessary for efficient degradation of a subset of mRNAs in the opportunistic pathogen <i>Staphylococcus aureus</i>	Patrick Linder (University of Geneva)
9:45 a.m. - 10:00 a.m.	T45. Regulation of mRNA levels by the exosome specificity factor Mmi1	Cornelia Kilchert (University of Oxford)
10:00 a.m. – 10:15 a.m.	<i>Morning Coffee Break</i>	
10:15 a.m. - 10:45 a.m.	T46. A CAF40-binding motif mediates recruitment of the CCR4-NOT complex by <i>Drosophila</i> Roquin	Elisa Izaurralde (Max Plank Institute for Developmental Biology)
10:45 a.m. - 11:15 a.m.	T47. The antagonistic gene paralogs Upf3a and Upf3b govern nonsense-mediated RNA decay	Miles Wilkinson (UC San Diego)
11:15 a.m. - 11:30 a.m.	T48. Alternative operon isoforms drive differential protein production in bacteria	Gene-Wei Li (Massachusetts Institute of Technology)
11:30 a.m. – 12:00 p.m.	T49. A role for the unconventional deadenylase Toe1/Caf1z in RNA processing and neurodegeneration	Jens Lykke-Andersen (UC San Diego)
12:00 p.m. – 1:00 p.m.	LUNCH and Meet the Speakers	
1:00 p.m. – 4:00 p.m.	Free time	
4:00 p.m. - 6:00 p.m.	Session 8 RNA decay and disease Chair Jeff Kieft	
4:00 p.m. – 4:30 p.m.	T50. Targeting of the cellular exoribonuclease XRN1 - a shared RNA virus strategy with pathogenic implications	Jeff Wilusz (Colorado State University)
4:30 p.m. – 4:45 p.m.	T51. A novel endonuclease escape element restricts viral but not mammalian ribonucleases	Britt Glaunsinger (UC Berkeley)
4:45 p.m. – 5:00 p.m.	T52. The RNA exosome regulates differentiation of human embryonic stem cells	Cedric Belair (Yale University)
5:00 p.m. – 5:30 p.m.	T53. Modulation of tristetraprolin (TTP) action in vivo through modifications of the endogenous genetic locus in mice	Perry Blackshear (NIH)
5:30 p.m. – 6:00 p.m.	T54. Zika, Dengue & West Nile: RNA structure and the art of molecular warfare	Jeff Kieft (University of Colorado)

6:00 p.m. – 7:00 p.m.	DINNER	
7:00 p.m. – 9:30 p.m.	Session 9: Ribonucleases Chair Lori Passmore	
7:00 p.m. – 7:30 p.m.	T55. Does 5' UTR capture independent of cleavage and 5' monophosphorylated-end sensing represent a major mechanism by which RNase E initiates the turnover of RNA in <i>Escherichia coli</i> ?	Kenny MacDowall (University of Leeds)
7:30 p.m. – 8:00 p.m.	T56. mRNA decay initiating ribonucleases in bacteria: convergent evolution of enzymes and pathways	Harald Putzer (IBPC, Paris)
8:00 p.m. – 8:30 p.m.	T57. Functions of the RNA exosome	Ambro Van Hoof (University of Texas)
8:30 p.m. – 9:00 p.m.	T58. Anchoring the RNA degradosome to the inner cytoplasmic membrane is necessary for normal biogenesis of the 50S ribosomal subunit	AJ Carpousis (University of Toulouse)
9:00 p.m. – 9:30 p.m.	T59. EMBO Young Investigator Lecture: Regulation of polyA tail length by cellular machines	Lori Passmore (University of Cambridge)

Friday, July 15, 2016

Time	Title/Topic Event	
7:30 a.m. – 9:00 a.m.	BREAKFAST	
9:00 a.m.	Boxed Snacks to Go And DEPARTURES	

END OF CONFERENCE

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