

Post-Transcriptional Gene Regulation, The Biology
of

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Salve Regina University

Newport, RI

Chair:

Lynne E. Maquat

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The 2010 Gordon Research Conference (GRC) on The Biology of Post-Transcriptional Gene Regulation will be the fourth in a series that is held every other year. This GRC provides an outstanding forum to present and discuss new findings about the mechanisms and regulation of RNA biogenesis in normal and disease states. The emphasis will be on the post-transcriptional transactions during the processing of mRNA. However, this focus will extend to bioinformatic approaches to study gene expression and RNAomics; transcriptional coupling; and factors involved in the regulation of mRNA transport, translation and decay, including rRNA, tRNA and microRNAs. Elucidating the basic mechanisms of post-transcriptional gene regulation is essential to gain a full understanding of the organization, function, and evolution of the human genome, and other genomes, as well as of the extensive involvement of RNA-processing dysfunction in numerous genetic and acquired disorders.

The meeting will convene approximately 45 speakers representing key areas of post-transcriptional gene regulation, with a total of 150 participants. The program will consist of nine morning or evening sessions that will broadly address cutting-edge issues in the following areas: Nuclear RNA Metabolism: The Transcription Connection; Bioinformatics: Gene Expression and RNAomics, including the evolution of RNA-processing signals and factors; RNA Splicing Catalysis, Regulation and Fidelity; Non-coding RNAs; RNA Transport and Localization; RNA Turnover, including nonsense-mediated mRNA decay and other types of quality control; Translational Control; RNA and RNP Structure; and RNA-processing Dysfunctions in Disease. Short talks will be chosen from abstract submissions. In addition, small poster sessions on four late afternoons will enable all participants to contribute to, and learn about, the above-mentioned topics. Free early-afternoon and late-evening periods, and meal times, will also stimulate discussion. While the quality of science will be high, the atmosphere is aimed to be relaxed and interactive. Four poster prizes will be awarded: two to graduate students, and two to post-docs.