

Summerlee Science Complex SSC 2315

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The hidden secrets of small genes

One major focus of our research has been the identification and characterization of small, regulatory RNAs, which have been found to be integral to most regulatory networks in *E. coli*. Similar to eukaryotic miRNAs,

many of these bacterial RNAs act by base pairing with mRNA targets. Interestingly, while it was initially assumed these small RNAs are encoded as independent genes between protein-coding genes, recent studies have shown that some small RNAs are derived from the 5' end, internal region and 3' end of mRNAs. Thus, the distinction between coding and noncoding is becoming increasingly blurred. This blurring is further reflected in the finding that several small RNAs encode small proteins of less than 50 amino acids, another overlooked class of molecules. Recent studies have shown that these proteins also can be regulators; modulating the activities and levels transporters and other large proteins in the membrane as an example.

All welcome to attend Light refreshments will be served More information on MCB's website: www.uoguelph.ca/MCB

