

**Fending for a Braveheart.**

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**Authors:** Deepak Srivastava, Kimberly R Cordes Metzler

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**Public Summary:**

Recent articles by Klattenhoff et al (2013) and Grote et al (2013) identify long non-coding RNAs (lncRNA) that are important for determining which cells ultimately become heart cells. Depletion of a lncRNA, aptly named Braveheart, resulted in loss of beating heart muscle cells during embryonic stem cell differentiation and failure to activate a key network of cardiac transcription factors. Analysis of the protein complex associated with Braveheart revealed that it physically interacts with machinery that regulates interpretation of the genome as it relates to the heart. Similarly, a second lncRNA, Fendrr, also interacts with regulators to promote proper cardiac gene expression and function in vivo in mice. These studies highlight the importance of lncRNAs during lineage commitment and provide a new layer of regulation involved in determining cardiac cell fate.

**Scientific Abstract:**

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