

## SEMINAR ANNOUNCEMENT

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**The ETS family protein, *etv2*, is sufficient to activate the endothelial transcriptional program.**

Transcription factors of the ETS family play an extremely important role in regulation of endothelial and hematopoietic genes. We have identified and characterized the *Xenopus* orthologue of the ETS transcription factor, ETV2/ER71. Expression analysis shows that *etv2* transcripts are highly expressed in hematopoietic and endothelial precursor cells in the *Xenopus* embryo. In gain-of-function experiments, overexpression of *etv2* strongly activates expression of vascular markers in ectopic regions of the *Xenopus* embryo using multiple assays including microarray analysis, quantitative RT-PCR and whole mount *in situ* hybridization. Upregulated genes include a number of endothelial and hematopoietic transcription factors. Inhibition of *etv2* function using antisense morpholino oligonucleotides results in dramatic reduction in expression of endothelial marker genes, but expression of hematopoietic markers are not affected. These studies place *etv2* at the beginning of the transcriptional program essential for development of the endothelial lineage. However, these studies do not explain how *etv2* specifically activates endothelial genes, nor do they identify the regulatory regions bound by *etv2*. To approach these questions we have constructed an epitope-tagged *etv2* for use in chromatin immunoprecipitation experiments with the ultimate goal of identifying *etv2*-specific regulatory elements in endothelial target genes.

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26 July 2010, Monday  
4.30pm to 6pm

Breakthrough Theatre, Level 4 Matrix, Biopolis

Hosted by Dr Alan Colman, Singapore Stem Cell Consortium and  
Dr Karuna Sampath, Singapore Developmental Biology Club

All are welcome. Network Social hosted by SDBC.