Miscellaneous

Roger Alexander
Gerstein Lab Journal Club
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Interesting Recent Papers

BRCA1 makes Ub-H2A to maintain pericentric heterochromatin and repress transcription of satellite DNA
Nature
http://www.nature.com/nature/journal/v477/n7363/full/477169a.html

All the cancer-related functions of BRCA1 may be mediated by this fundamental mechanism – suppression of BRCA1 function allows unregulated transcription of centromeric satellite DNA.
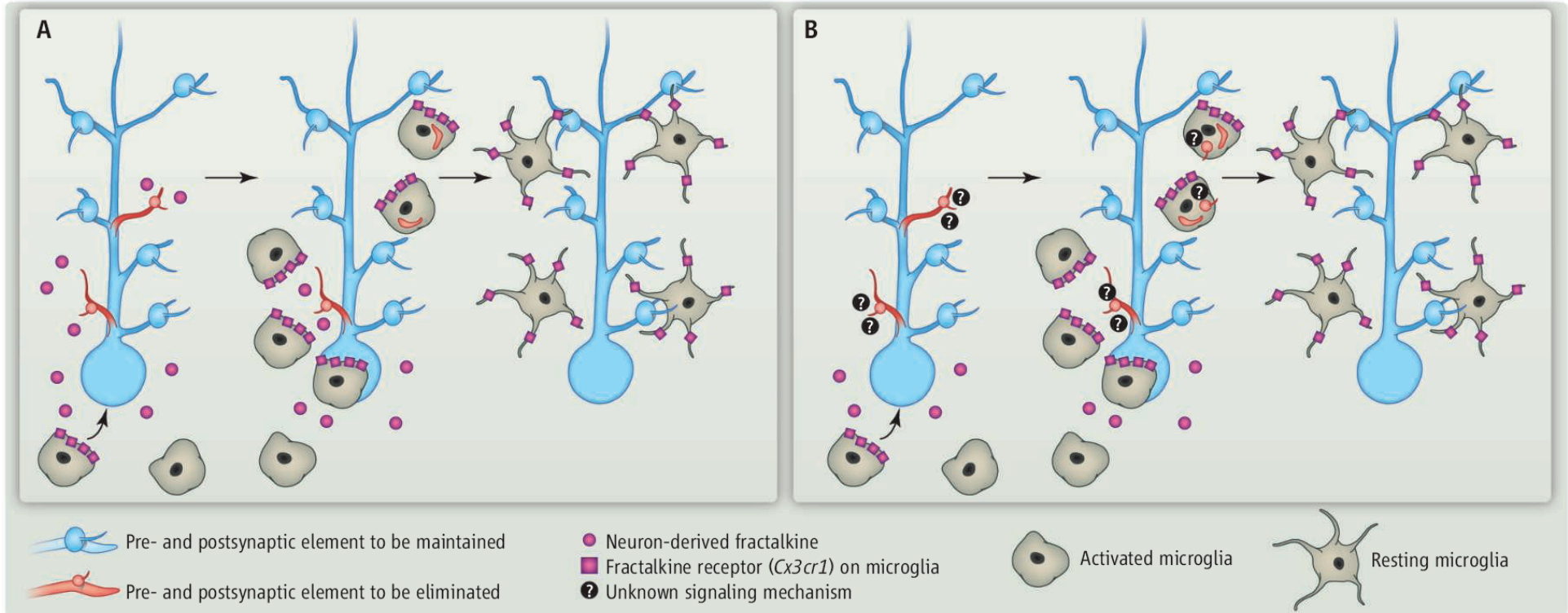
piRNA Production Requires Heterochromatin Formation in *Drosophila*
Current Biology
http://dx.doi.org/10.1016/j.cub.2011.06.057

Also related to transcription from heterochromatin, piRNA actually appears to require a heterochromatic state in germline cells for it to be properly transcribed.

Microglia in neural circuits

Synapse pruning by microglia. During normal brain development, neurons undergo remodeling in which some pre- and postsynaptic elements are maintained (blue), while others are eliminated (red). **(A)** In one model of pruning, synaptic elements to be eliminated release fractalkine, which activates microglia via the *Cx3cr1 fractalkine receptor (left)*. Microglia prune elements *(center)* and then return to a resting state near maintained elements (right). **(B)** In an alternative model, fractalkine signaling globally activates microglia, but a more local, undetermined signal regulates pruning.

of interest to Brainspan people

Science (2011) 333: 1456

Overlap of ENCODE TFs with Nick Luscombe's Census of Human TFs

A census of human transcription factors: function, expression and evolution
Nature Reviews Genetics (2009) 10:252

from Nick Luscombe at EMBL-EBI Wellcome Trust Genome Campus, Cambridge
former Gerstein lab postdoc

fairly definitive list of human TFs

27 ENCODE TFs not in Luscombe TF Census (see text file)

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