

Propositions

1. Dissociation of homologously joint DNA molecules, such as D-loops, which are key intermediates in DNA recombination, is mediated by RecA-driven reinvasion of the displaced strand (this thesis).
2. Eukaryotic endonucleases impart rotational freedom to the DNA strands of crossover intermediates (this thesis).
3. Eukaryotic DNA mismatch repair machinery impedes crossover formation by inducing rotational constraint to the DNA strands of homeologous recombination intermediates (this thesis).
4. Homologous antirecombination is different from homeologous antirecombination (this thesis).
5. Deregulation of homeologous recombination predisposes one to cancer (this thesis).
6. SUMO functions as a protein glue (Ivan et al. 2012 Cell 151, 807-820).
7. Thinking is bad for DNA (Suberbielle et al. 2013. Nat. Neurosci. 16, 613-621).
8. Air pollution is bad for DNA (Yauk et al. 2008. PNAS 105, 605-610).
9. "Junk" DNA is by no means junky (Visel et al. 2010. Nature 464, 409-412).
10. "Everything should be made as simple as possible, but not simpler." Albert Einstein
11. "The world is like a waiting room in a railway station." Osho