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Characterisation of the *M*-locus and functional analysis of the male-determining gene in the housefly

Yanli Wu

1. *Mdmd*, the male determining gene of *Musca domestica*, evolved from a duplication event of the spliceosomal factor gene *Md-ncm*. Through this process a proto-Y chromosome was generated.
(This thesis, chapter 3)
2. Independent amplification events of *Mdmd* occurred both before and after translocation of the *M*-locus to autosomes III and V.
(This thesis, chapter 2)
3. After amplification, the *M*-locus may have translocated multiple times as a cluster from the Y to an autosome and/or subsequently from autosome to autosome.
(This thesis, chapter 2)
4. *Mdmd* already acts at a very early embryonic stage and might be continuously needed to maintain male development.
(This thesis, chapter 4)
5. To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science.
(Albert Einstein)
6. False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for everyone takes a salutary pleasure in proving their falseness.
(Charles Darwin)
7. Performing scientific research does not only need patience, but also needs efficiency.
8. My research interest has been fostered during my PhD training. Diverse research experience has expanded my knowledge of genetics, bioinformatics, molecular and cellular biology and enriched my skillset in genetic and molecular techniques.
9. Smartness, hard work, and a bit of luck are the secrets to become a successful scientist.
10. A good scientist must not only conduct experiments well, but must also be good at communicating his results.