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Evolution of sex chromosomes in plants

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A paper on plant sex chromosomes by a LBBE team has just came out in {Nature Plants}. This paper shows that in Silene latifolia (white campion), a plant with XY chromosomes, a dosage compensation mechanism on the X has evolved in response to Y degeneration. Up-regulation of the X chromosome from the mother in the sons, probably through epigenetic modifications, reestablishes the proper dosage of the sex-linked genes. The molecular details of this mechanism remains to be deciphered.

See Muyle A, Zemp N, Fruchard C, ..., Picard F, Widmer A, Marais GAB. Genomic imprinting mediates dosage compensation in a young plant XY system. Nat Plants. 2018 Sep;4(9):677-680. https://www.ncbi.nlm.nih.gov/pubmed/30104649

and a News&Views about this paper in the same issue: https://www.ncbi.nlm.nih.gov/pubmed/30104648

contact: gabriel.marais@univ-lyon1.fr