

## GEPHE SUMMARY

	Gephebase Gene	GephelD
Not much yang (Nmy) ( <a href="https://www.gephebase.org/search-criteria?/and+Gene">https://www.gephebase.org/search-criteria?/and+Gene</a> Gephebase="Not much yang (Nmy)"#gephebase-summary-title)	GP00001970	
	Entry Status	Main curator
Published	Courtier	

## PHENOTYPIC CHANGE

	Trait Category	
Physiology ( <a href="https://www.gephebase.org/search-criteria?/and+Trait">https://www.gephebase.org/search-criteria?/and+Trait</a> Category="Physiology">#gephebase-summary-title)	Trait	
Sex determination (sex ratio distortion) ( <a href="https://www.gephebase.org/search-criteria?/and+Trait=^Sex determination (sex ratio distortion)^#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Trait=^Sex determination (sex ratio distortion)^#gephebase-summary-title</a> )	Trait State in Taxon A	
Drosophila simulans	Trait State in Taxon B	
Drosophila simulans	Ancestral State	
Taxon A	Taxonomic Status	
Intraspecific ( <a href="https://www.gephebase.org/search-criteria?/and+Taxonomic">https://www.gephebase.org/search-criteria?/and+Taxonomic</a> Status="Intraspecific">#gephebase-summary-title)		
Taxon A	Latin Name	Taxon B
Drosophila simulans ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila">https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila</a> simulans">#gephebase-summary-title)	Drosophila simulans ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila">https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila</a> simulans">#gephebase-summary-title)	Drosophila simulans ( <a href="https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila">https://www.gephebase.org/search-criteria?/and+Taxon and Synonyms=^Drosophila</a> simulans">#gephebase-summary-title)
-	Common Name	Common Name
-	Synonyms	Synonyms
-	Rank	Rank
species	Lineage	Lineage
cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Holometabola; Diptera; Brachycera; Muscomorpha; Eremoneura; Cyclorrhapha; Schizophora; Acalyptratae; Ephydriodea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup	cellular organisms; Eukaryota; Opisthokonta; Metazoa; Eumetazoa; Bilateria; Protostomia; Ecdysozoa; Panarthropoda; Arthropoda; Mandibulata; Pancrustacea; Hexapoda; Insecta; Dicondylia; Pterygota; Neoptera; Holometabola; Diptera; Brachycera; Muscomorpha; Eremoneura; Cyclorrhapha; Schizophora; Acalyptratae; Ephydriodea; Drosophilidae; Drosophilinae; Drosophilini; Drosophila; Sophophora; melanogaster group; melanogaster subgroup	
melanogaster subgroup () - (Rank: species subgroup) ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 32351">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 32351</a> )	Parent	Parent
7240 ( <a href="https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 7240">https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id= 7240</a> )	NCBI Taxonomy ID	NCBI Taxonomy ID
is Taxon A an Infraspecies?		is Taxon B an Infraspecies?
No		

## GENOTYPIC CHANGE

	Generic Gene Name	UniProtKB
-	0	
	Synonyms	GenebankID or UniProtKB
-	GU477253 ( <a href="https://www.ncbi.nlm.nih.gov/nucore/GU477253">https://www.ncbi.nlm.nih.gov/nucore/GU477253</a> )	
	String	
-	Sequence Similarities	
	GO - Molecular Function	
-	GO - Biological Process	
-	GO - Cellular Component	
-		Presumptive Null
Unknown ( <a href="https://www.gephebase.org/search-criteria?/and+Presumptive Null=^Unknown">#gephebase-summary-title)</a>		

Coding ( <a href="https://www.gephebase.org/search-criteria?/and+Molecular%20Type=%5BCoding%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Molecular Type=%5BCoding%5D#gephebase-summary-title</a> )	Molecular Type
Deletion ( <a href="https://www.gephebase.org/search-criteria?/and+Aberration%20Type=%5BDeletion%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Aberration Type=%5BDeletion%5D#gephebase-summary-title</a> )	Aberration Type
-	Deletion Size
Loss of one of the inverted repeats that is present in the wild-type Dsim\Nmy locus and loss of most of the sequence located between the inverted repeats (except for a 93bp element in reverse orientation).	Molecular Details of the Mutation
Candidate Gene ( <a href="https://www.gephebase.org/search-criteria?/and+Experimental%20Evidence=%5BCandidate%20Gene%5D#gephebase-summary-title">https://www.gephebase.org/search-criteria?/and+Experimental Evidence=%5BCandidate Gene%5D#gephebase-summary-title</a> )	Experimental Evidence
A sex-ratio meiotic drive system in <i>Drosophila simulans</i> . I: an autosomal suppressor. (2007) ( <a href="https://pubmed.ncbi.nlm.nih.gov/17988172">https://pubmed.ncbi.nlm.nih.gov/17988172</a> )	Main Reference
Tao Y; Masly JP; Araripe L; Ke Y; Hartl DL	Authors
Sex ratio distortion (sex-ratio for short) has been reported in numerous species such as <i>Drosophila</i> , where distortion can readily be detected in experimental crosses, but the molecular mechanisms remain elusive. Here we characterize an autosomal sex-ratio suppressor from <i>D. simulans</i> that we designate as not much yang (nmy, polytene chromosome position 87F3). Nmy suppresses an X-linked sex-ratio distorter, contains a pair of near-perfect inverted repeats of 345 bp, and evidently originated through retrotransposition from the distorter itself. The suppression is likely mediated by sequence homology between the suppressor and distorter. The strength of sex-ratio is greatly enhanced by lower temperature. This temperature sensitivity was used to assign the sex-ratio etiology to the maturation process of the Y-bearing sperm, a hypothesis corroborated by both light microscope observations and ultrastructural studies. It has long been suggested that an X-linked sex-ratio distorter can evolve by exploiting loopholes in the meiotic machinery for its own transmission advantage, which may be offset by other changes in the genome that control the selfish distorter. Data obtained in this study help to understand this evolutionary mechanism in molecular detail and provide insight regarding its evolutionary impact on genomic architecture and speciation.	Abstract
A sex-ratio meiotic drive system in <i>Drosophila simulans</i> . II: an X-linked distorter. (2007) ( <a href="https://pubmed.ncbi.nlm.nih.gov/17988173">https://pubmed.ncbi.nlm.nih.gov/17988173</a> )	Additional References

## RELATED GEPHE

2 (Distorter on the X (Dox), HP1D2) ( <a href="https://www.gephebase.org/search-criteria?/or+Taxon%20ID=%5B7240%5D/and+Trait=Sex%20determination/and+groupHaplotypes=true#gephebase-summary-title">https://www.gephebase.org/search-criteria?/or+Taxon ID=%5B7240%5D/and+Trait=Sex determination/and+groupHaplotypes=true#gephebase-summary-title</a> )	Related Genes
No matches found.	Related Haplotypes

## EXTERNAL LINKS

## COMMENTS

Nmy suppresses an X-linked sex-ratio distorter named Dox. Nmy contains a pair of near-perfect inverted repeats of 345 bp and originated through retrotransposition from the distorter Dox itself. @Epistasis - No UniProtKD\_ID - <http://flybase.org/reports/FBal0240568.html>