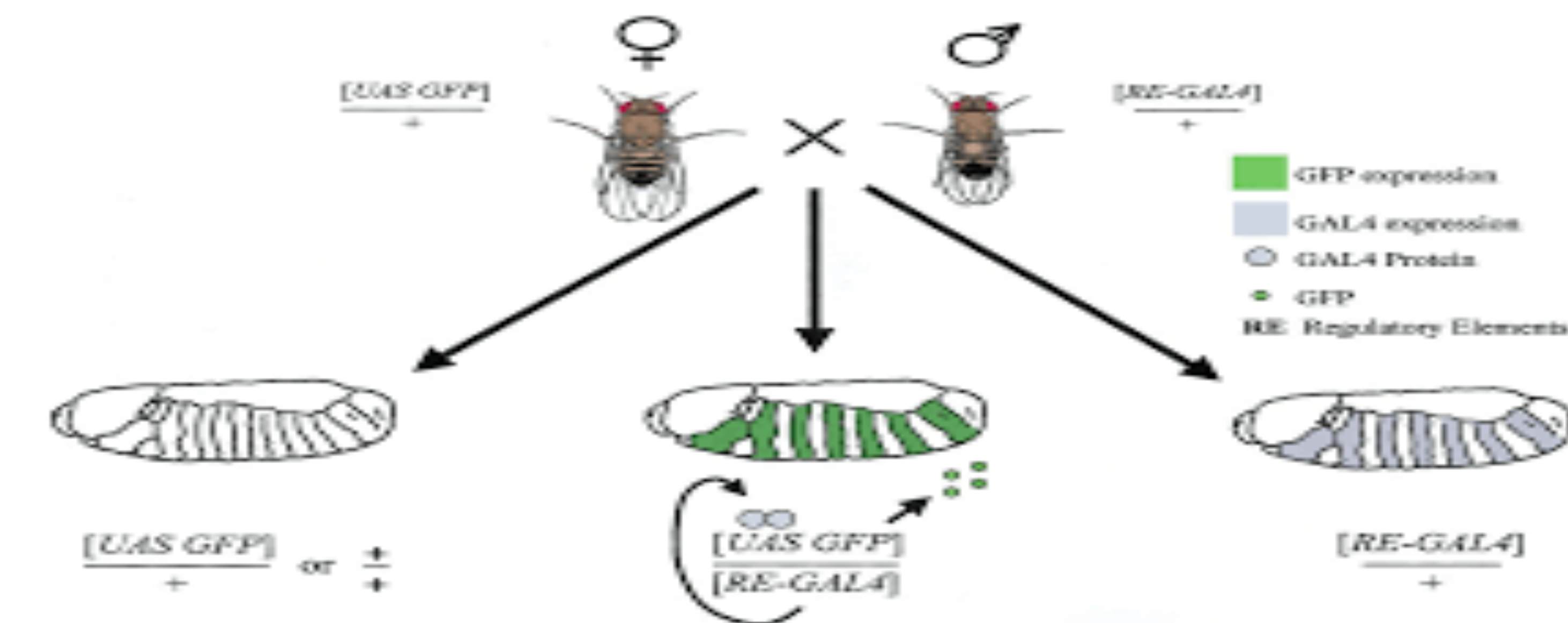


Analyzing the Effects of DNT1 on the Overproduction of Tau Within Drosophila Melanogaster.

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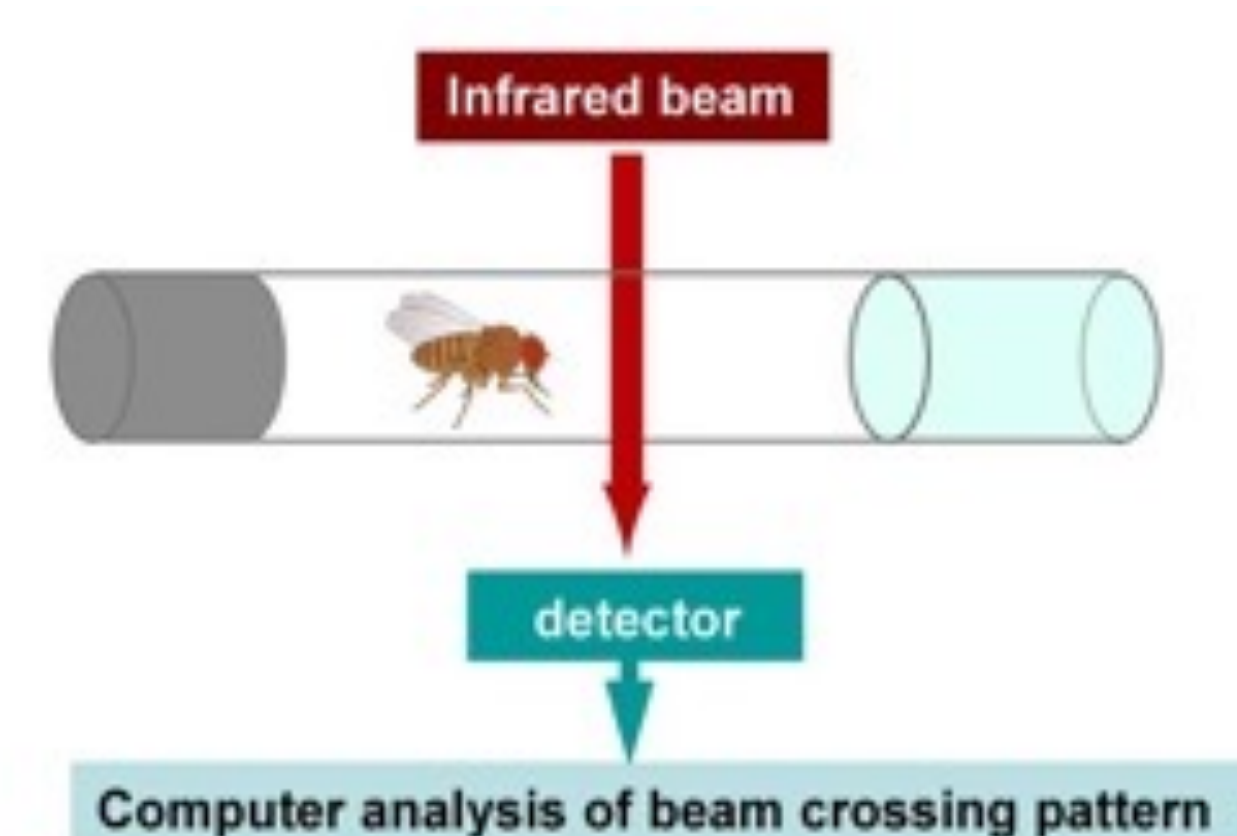
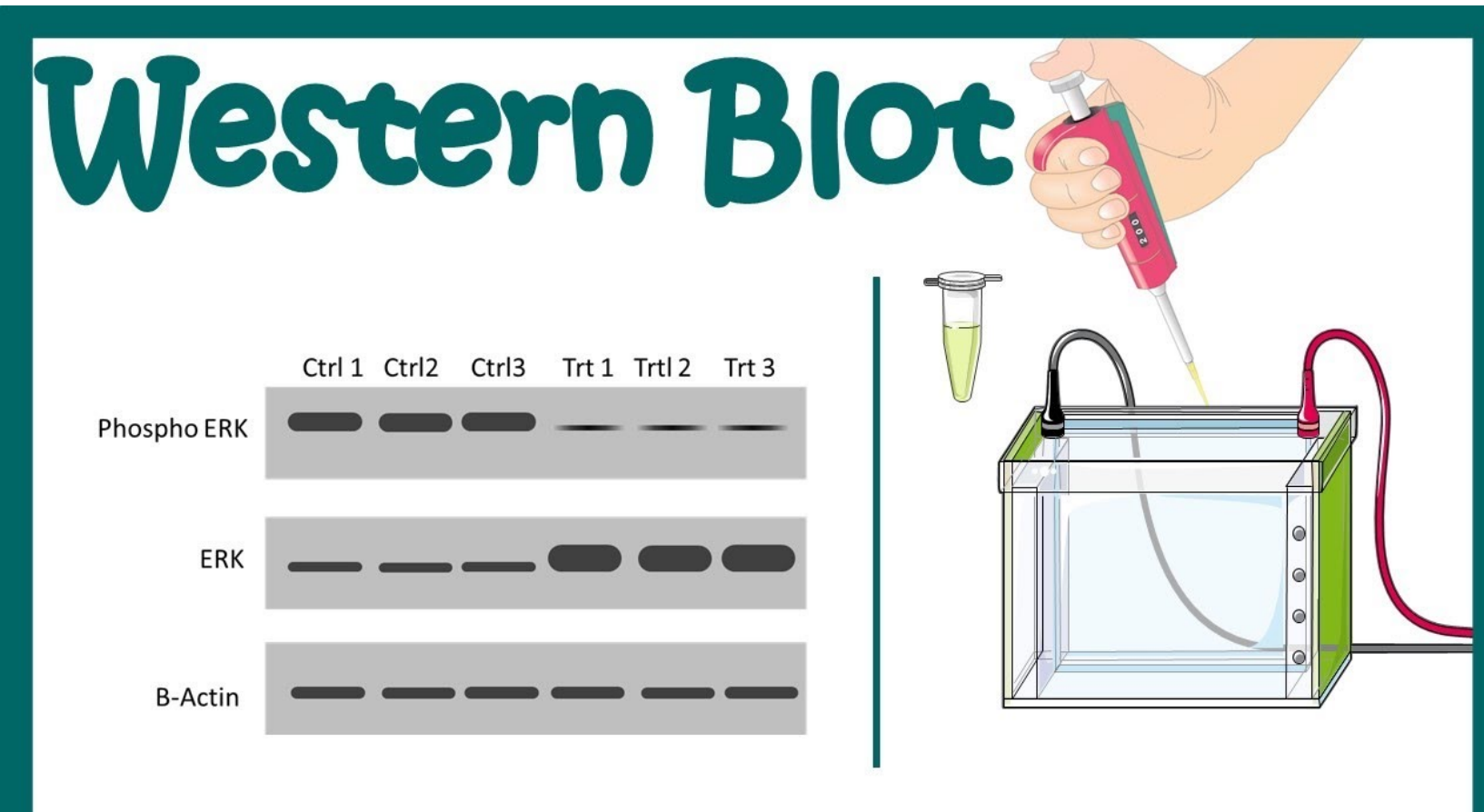
Fruit Fly mutations in genes encoding RNA binding proteins are associated with neurological disease's



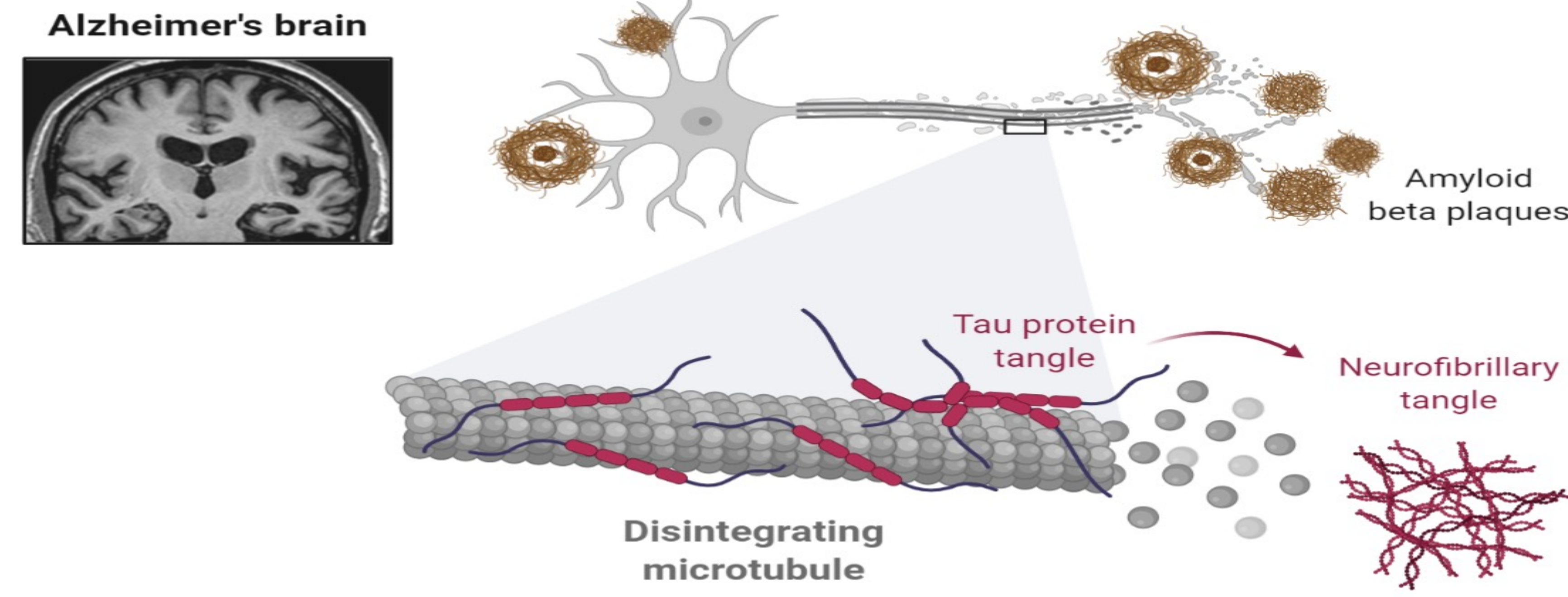
UAS-DNT1 can be described as the fruit fly version of Human BDNF

Male Genotype	Female Genotype	F1 Genotype	Purpose
UAS-TAU / TM3	C155- GAL4	C155- GAL4 + UAS-Tau	Overproduction of Tau
UAS- HTAU	C155- GAL4	UAS-DNT1 FL	Overproduction of Tau & DNT1 FL
UAS- Cysknot	C155- GAL4	UAS-Cysknot	Overproduction of Tau & DNT1 Cysknot
C155-GAL4	C155- GAL4	C155-GAL4	Wild Type / Control

The GAL4/UAS transcriptional system facilitates targeted gene expression through binding of GAL4 activator to UAS sites, allowing for precise control of genetic manipulation. Following the establishment of four different crosses, circadian rhythms will be analyzed via Drosophila monitoring systems, and protein production will be assessed through western blot analysis in a molecular investigation.



What goes wrong within the brain that starts the development of Alzheimer's Disease ?



BRAIN FERTILIZER MAY BE THE TURNING POINT IN ALZHEIMER'S DISEASE ?

" UNLOCKING THE POWER OF BDNF: BOOSTING BRAIN HEALTH AND FUNCTION."

BDNF supports the growth and development of neurons. Dysfunction or deficiency of BDNF has been implicated in several neurological and psychiatric disorders.

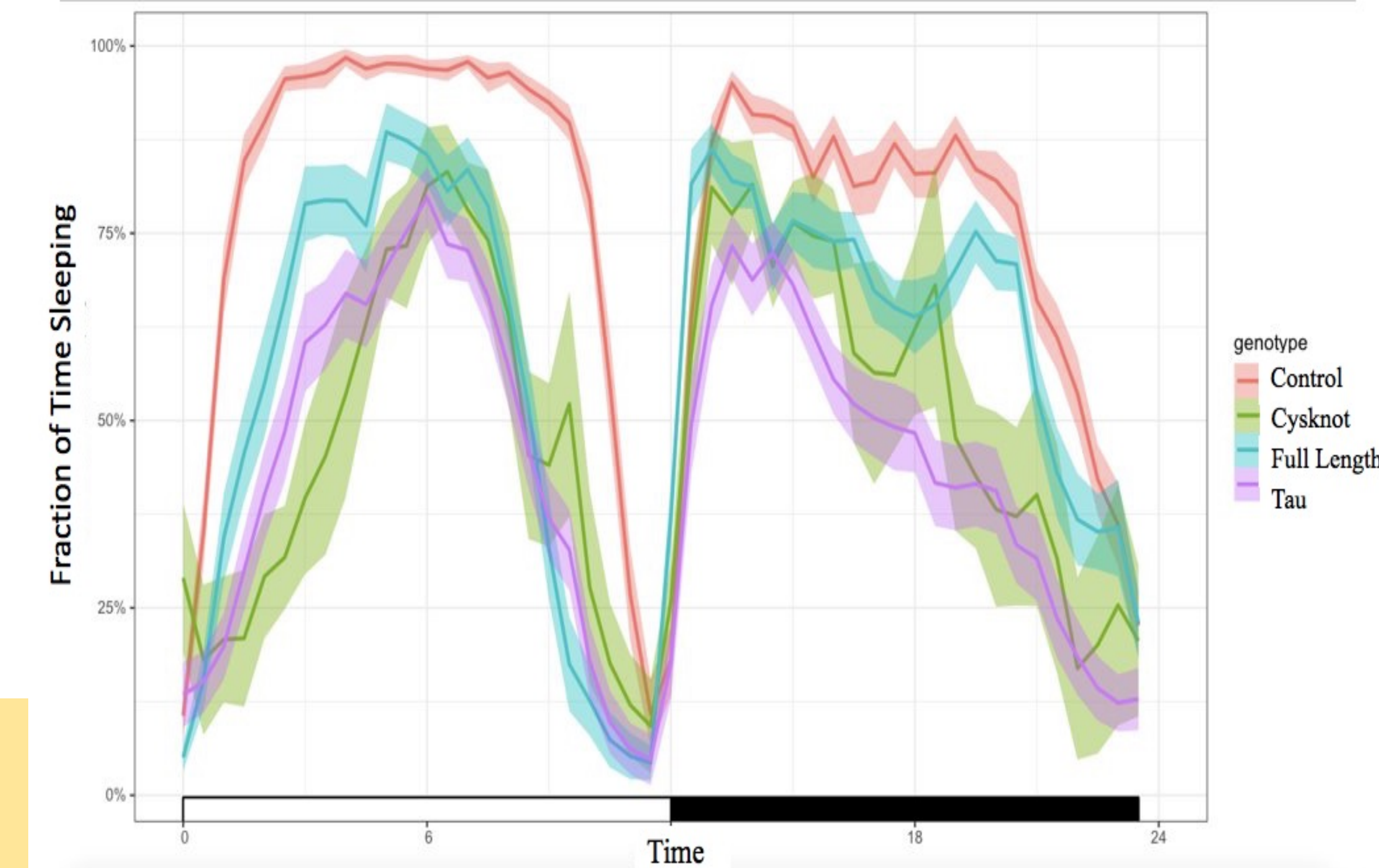
NEUROPLASTICITY
 WHY YOU SHOULD CARE ABOUT YOUR **BDNF**

- EXERCISE**: INCREASE BDNF AT ANY AGE
- SLEEP**: MISSED SLEEP = LESS BDNF
- NUTRITION**: FAT + SUGAR = LESS BDNF
- STRESS**: CORTISOL ACTS AGAINST BDNF

BDNF HELPS YOUR BRAIN ADAPT & LEARN
 IMPROVES ALL FORMS OF PLASTICITY

YOU CONTROL YOUR BDNF LEVELS

Full- Length Genotype during The Night period showed significant improvement.



Full-Length version of DNT1 is highly effective in combating the behavior effects of the overproduction of Tau, while the cleaved version of DNT1 (BDNF) may be promoting cell apoptosis due to the fruit flies undergoing high stress within the Drosophila Monitoring System.

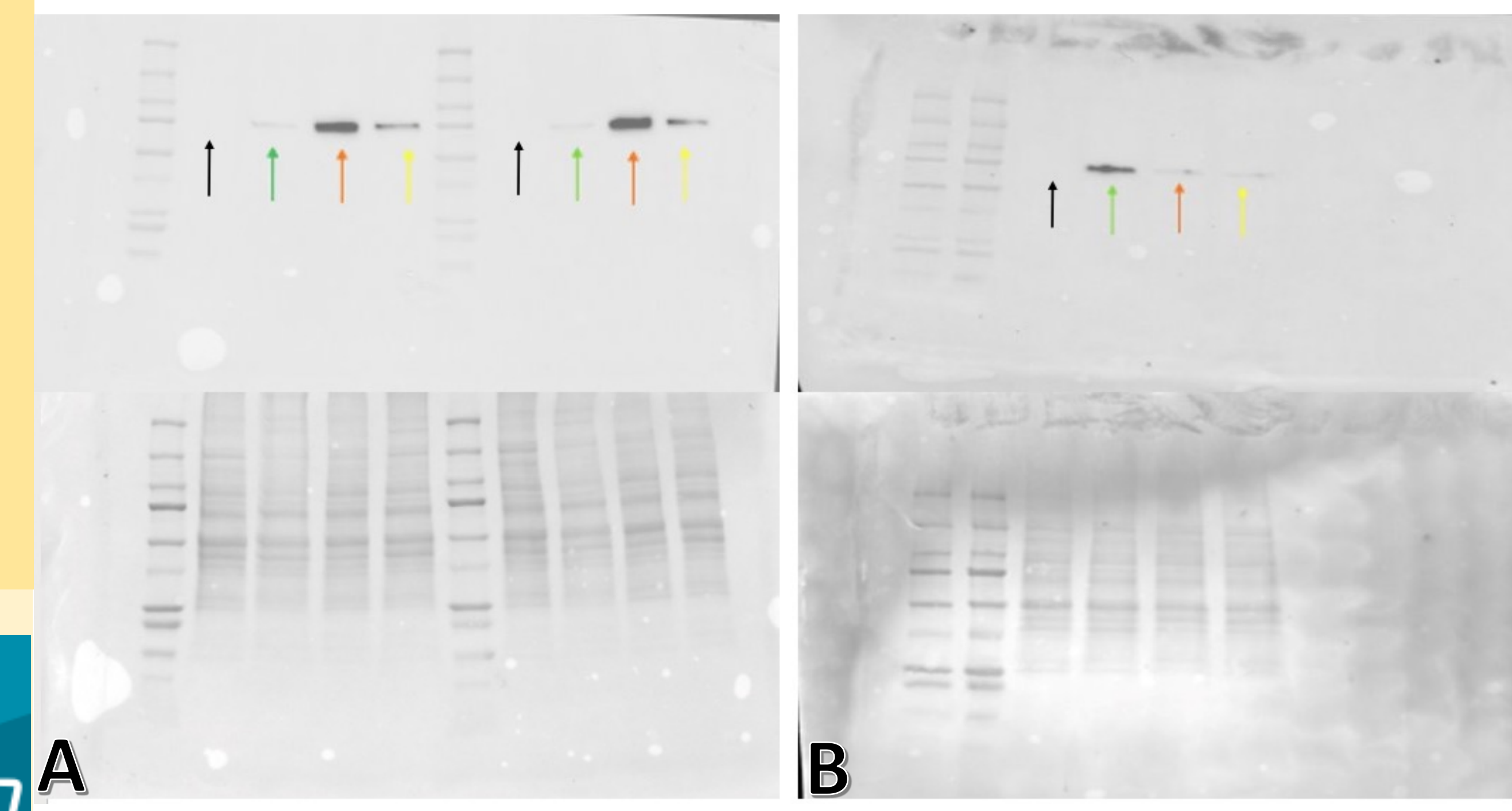


Figure A, depicts the overproduction of Full length DNT1 which caused decreased levels of Tau as seen in lane 3. Figure B, Contradicts the original analysis depicting DNT1 assisting the production of Tau or is just utterly ineffective at combating the production of Tau. This may be due to the altering of the UAS-targeted gene in which the protein tau is expressed within the Drosophila melanogaster

Funding:

