WHAT IS CRY2 MOLECULAR INFRASTRUCTURE AND HOW DOES IT INTERACT IN THE CIRCADIAN RHYTHM?

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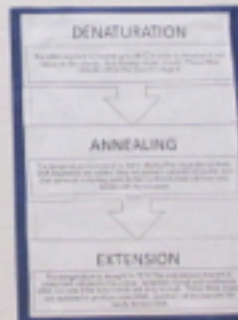
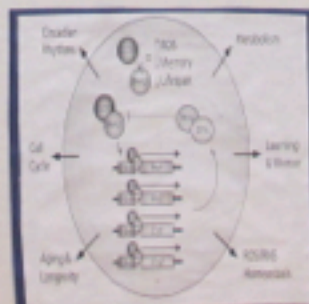
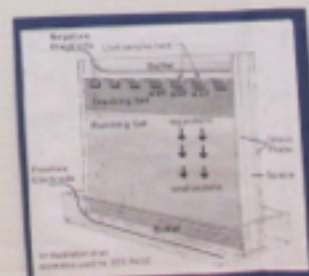
Introduction







BACKGROUND AND SIGNIFICANCE

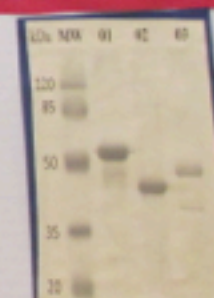
- The circadian CRY2 plays a vital role as light-independent inhibitors of CLOCK-BMAL1 components of the circadian clock
- Cryptochrome is found in plants and animals
- In plants, blue light photoreception can be used to cue developmental signals
- The circadian clock plays a role in sleep disorders, obesity, and diabetes.
- The knowledge of CRY2 will help us have more knowledge regarding the circadian rhythm
- The future understanding of CRY2 will benefit science and future drug works.

Cryptochrome (CRY2)

- CRY2 is there to act as a light-independent inhibitor of CLOCK-BMAL, the activator driving transcription.
- CRY2 along with other components such as CRY1 PER1,PER2, and TIM which acts as a light-independent components of the circadian clock and more than likely regulate transcriptional cycling by contacting both the activator and its feedback inhibitor.
- The mammalian protein CRY2 is a member of the family of plant blue light receptors for the circadian clock.

DISCUSSION AND FUTURE WORK

- Currently the molecular structure of cry2 is unknown.
- Once cry2 being cloned and crystallized becomes available for further research.
- Cry2 will be expressed alongside with clock to fully understand the complex.



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