



САМАРСКИЙ УНИВЕРСИТЕТ
SAMARA UNIVERSITY

How the light influences productivity of melatonin

presenter: Pechko A.E
research advisor: Malova M.M

Presentation outline:

- I. Introduction:**
 - History of research
- II. The meaning of melatonin:**
 - What does it mean?
 - Chemistry description
- III. Purposes of my research**
- IV. The main part:**
 - Circadian system
 - Light exposure
 - Melatonin's levels
- V. Methods**
- VI. Results**
- VII. Conclusion**

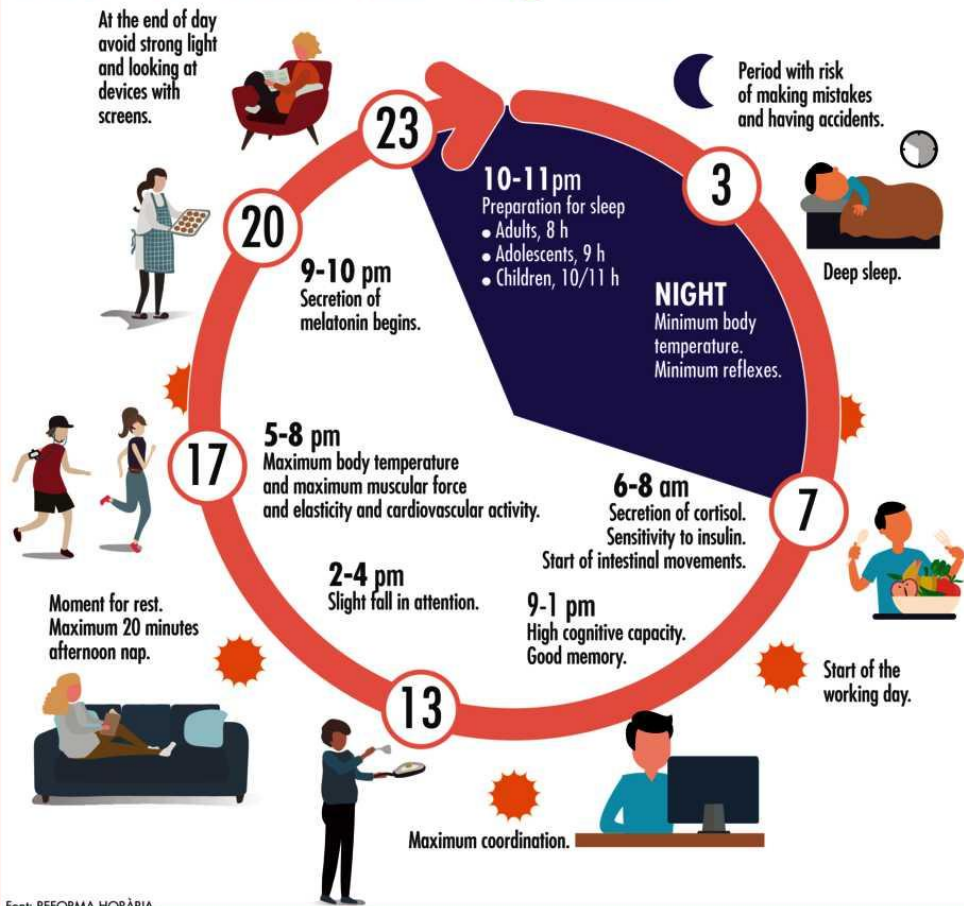


The purposes of this research:

- To learn more about producing of melatonin
- To reveal how the biological cycles work
- To get new information about this topic
- To discover new methods



The circadian rhythm

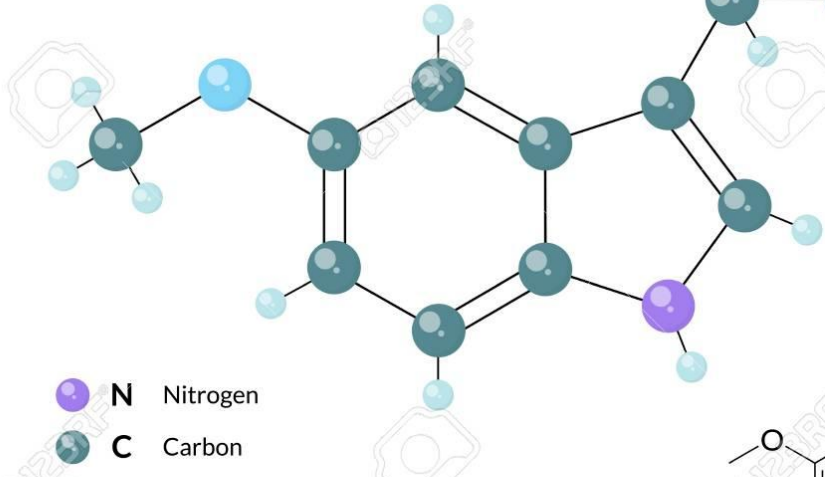
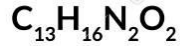






Melatonin

Pineal Gland Hormone

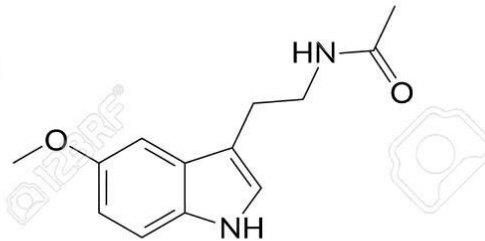
VECTOR OBJECTS
EPS 10

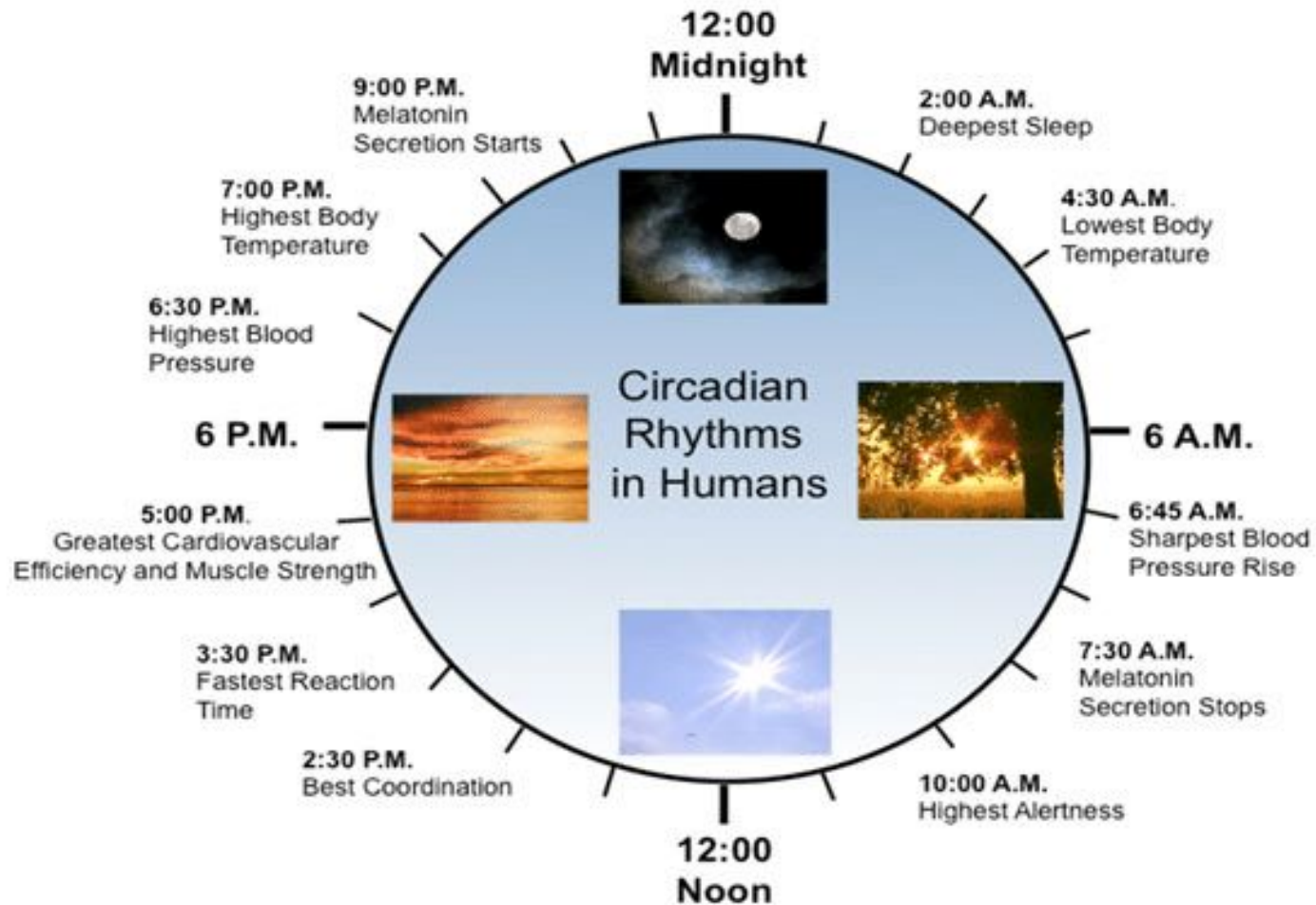
Molecular Formula
of Melatonin:



-  **N** Nitrogen
-  **C** Carbon
-  **O** Oxygen
-  **H** Hydrogen

Structural Formula
of Melatonin:

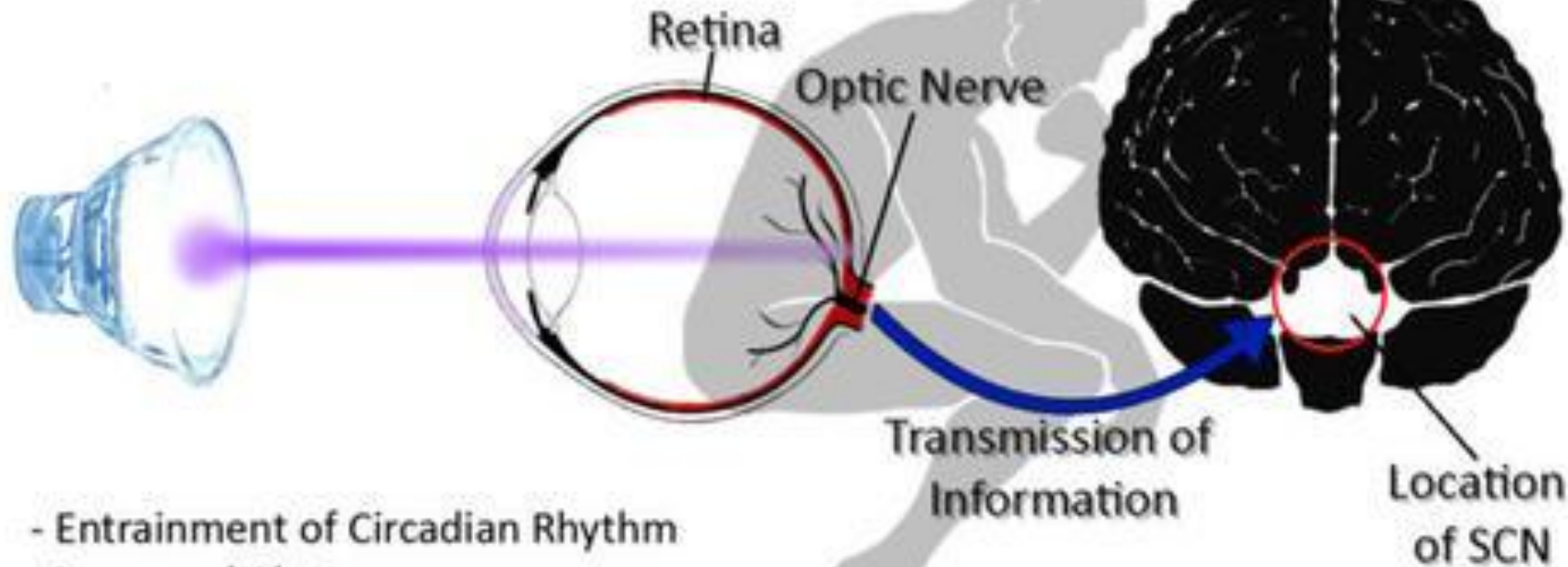




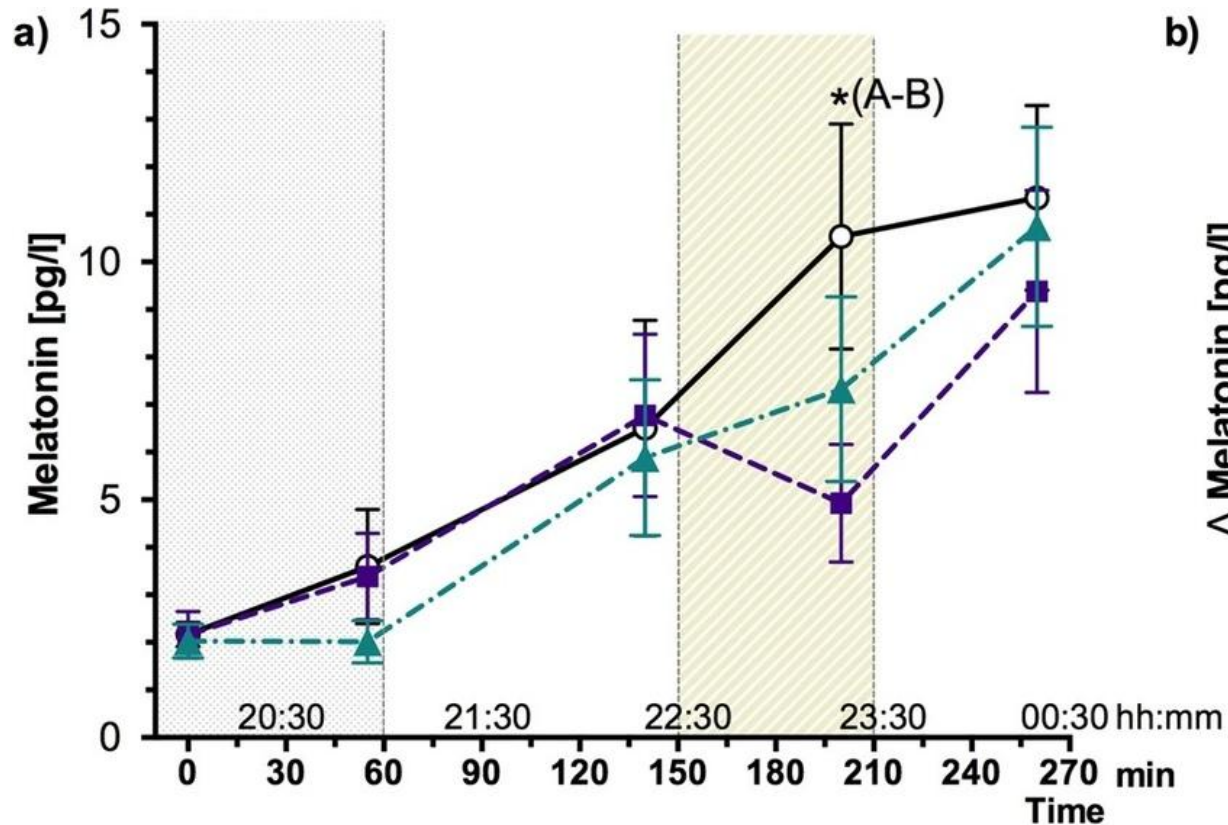
Blue Light Source

Eye

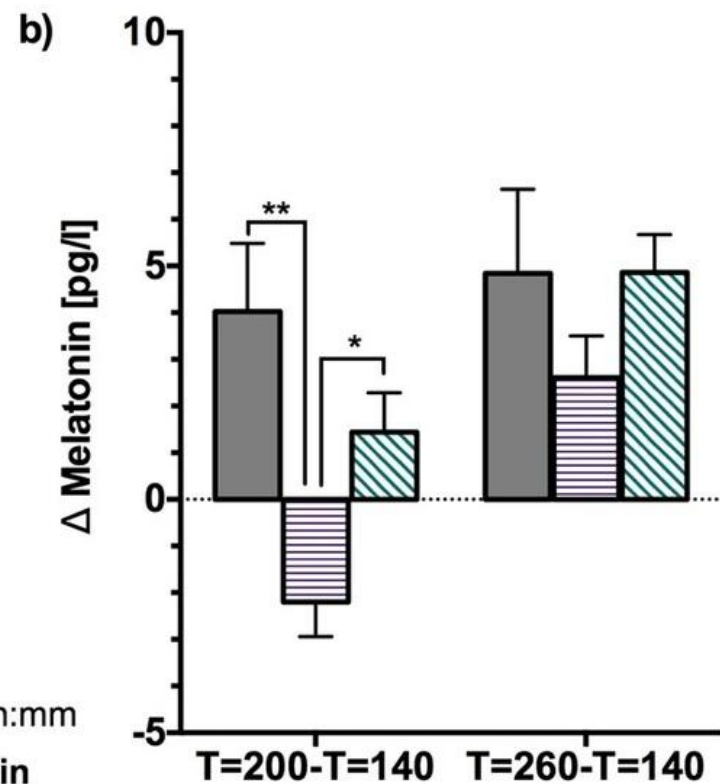
Brain



- Entrainment of Circadian Rhythm
- Increased Alertness
- Enhanced Cognitive Functions
- Improved Working Memory
- Improved Reaction Time and Psychomotor Function

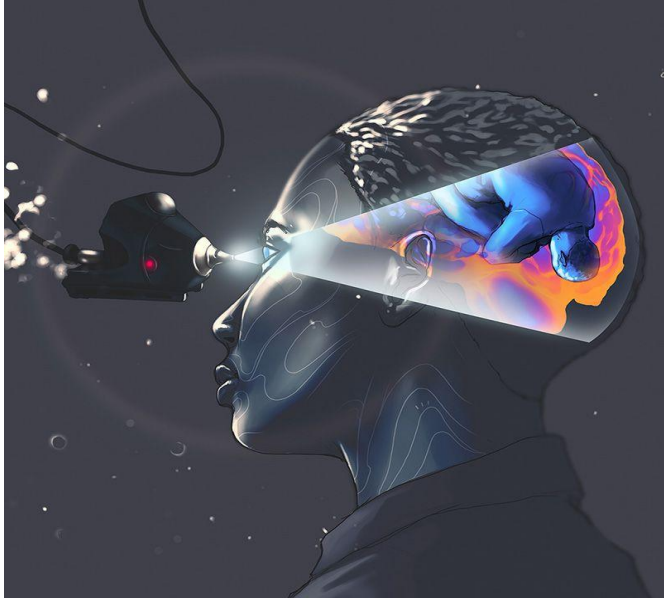


- A) Constant dim light condition (18.30-00.30)
- B) Cond A + evening light pulse (22.30-23.30)
- ▲ C) Cond B + prior light (18.30-21.00)



- A)
- ▨ B)
- ▩ C)

§ The sphere of light exposure:



- body temperatures
- melatonin
- subjective sleepiness



Methods:

- ***A randomized crossover study design*** was used to compare three sessions that differed in light exposure

Twelve healthy females participated in this study



- We have learnt more about producing of melatonin
- We have revealed how the biological cycles work
- We have got new information about this topic
- We have discovered new methods



References:

- <https://woordhunt.ru>
- <https://www.nature.com>



E-mail: pechko2000@mail.ru