THE ROLE OF CALORIC RESTRICTION IN AGING

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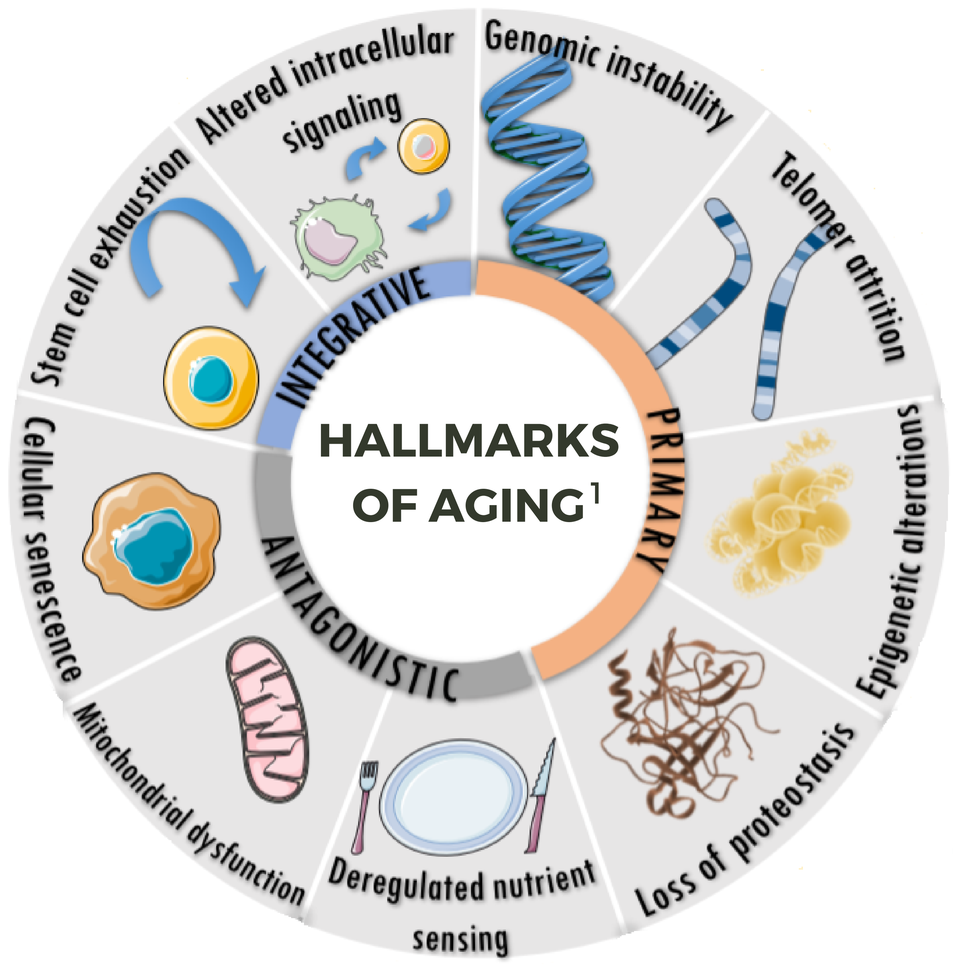
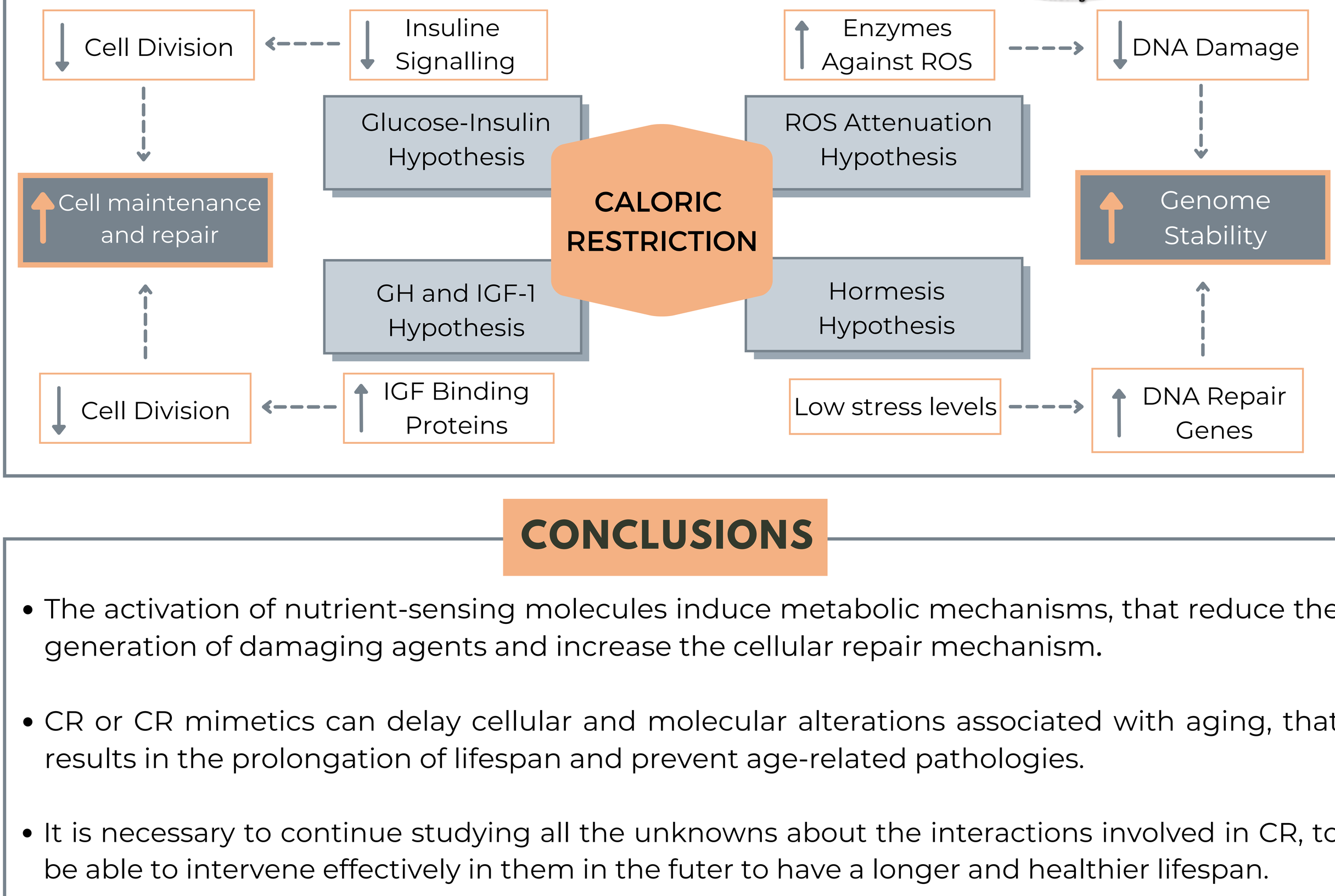
OBJECTIVES

The aim of this bibliographic revision is to understand the different mechanisms involved in aging and how the molecular mechanism triggered by caloric restriction or their mimetics may influence this processes.



IMPACT OF CR[2]



CONCLUSIONS

- The activation of nutrient-sensing molecules induce metabolic mechanisms, that reduce the generation of damaging agents and increase the cellular repair mechanism.
- CR or CR mimetics can delay cellular and molecular alterations associated with aging, that results in the prolongation of lifespan and prevent age-related pathologies.
- It is necessary to continue studying all the unknowns about the interactions involved in CR, to be able to intervene effectively in them in the futer to have a longer and healthier lifespan.

1.López-Otín C, Galluzzi L, Freije JMP, Madeo F, Kroemer G. 2016. Metabolic Control of Longevity. Cell. 166(4):802–821. doi:10.1016/j.cell.2016.07.031. https://pubmed.ncbi.nlm.nih.gov/23746838/.
Figure modified of Orduña A. CR and Aging. Degree project in Biochemistry 2019.
2.Gillespie ZE, Pickering J, Eskiw CH. 2016. Better Living through Chemistry: Caloric Restriction (CR) and CR Mimetics Alter Genome Function to Promote Increased Health and Lifespan. doi:10.3389/fgene.2016.00142. https://pubmed.ncbi.nlm.nih.gov/27588026/.