

FURTHER THAN APOPTOSIS

CELLULAR DEATH AND ITS RELATION WITH CARCINOGENIC PROCESSES

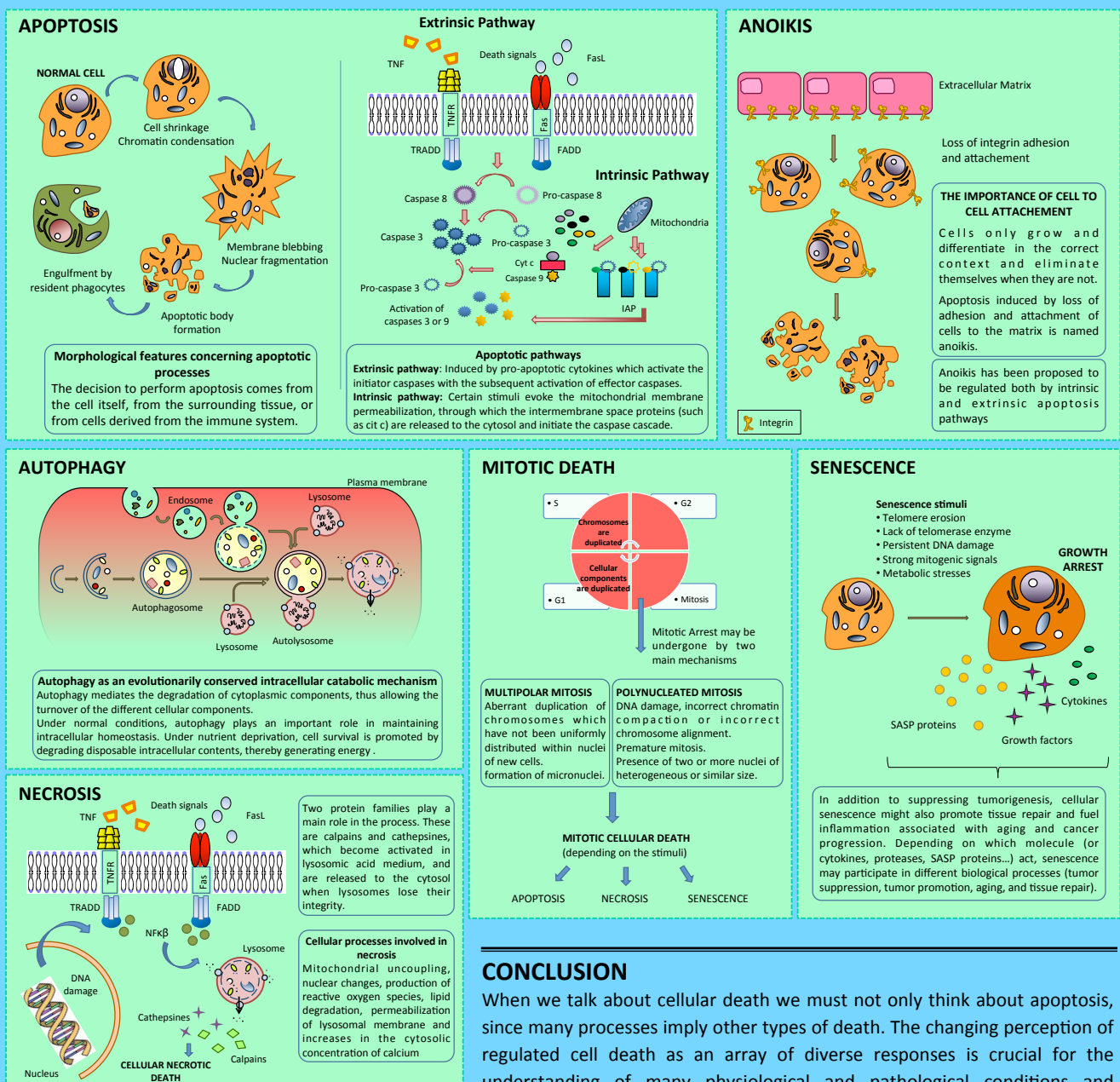
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INTRODUCTION

Cellular death is essential for embryonic development, tissue homeostasis, cellular stress and immunitary system regulation of multicellular organisms. Defects on these cellular death pathways lead to different pathologies, amongst which we shall highlight immortalization and tumorigenesis. In recent years, cellular death research has been basically focused on apoptosis, in which one cell takes the decision to die in response to certain signals and using the intrinsic cellular machinery. However, the elucidation of additional non-apoptotic, programmed cell death pathways is gradually opening new ways to explain many physiologic processes which were unknown.

In this project six different programmed cellular deaths have been studied in a molecular and morphologic basis. The understanding of death programs, may open new ways in treating carcinogenic processes.



Most relevant references

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CONCLUSION

When we talk about cellular death we must not only think about apoptosis, since many processes imply other types of death. The changing perception of regulated cell death as an array of diverse responses is crucial for the understanding of many physiological and pathological conditions and provides novel opportunities for cytoprotective therapies. Thus, studying the molecular networks underlying tumorigenesis and cellular escape from programmed cell death (spontaneous or induced) is prerequisite to develop new approaches to effective cancer treatment.