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Hepatic senescence, the good and the bad

Huda N *et al.* Hepatic senescence

Nazmul Huda, Gang Liu, Honghai Hong, Shengmin Yan, Bilon Khambu, Xiao-Ming Yin

Abstract

Gradual alterations of cell's physiology and functions due to age or exposure to various stresses lead to the conversion of normal cells to senescent cells. Once becoming senescent, the cell stops dividing permanently but remains metabolically active. Cellular senescence does not have a single marker but is characterized mainly by a combination of multiple markers, such as, morphological changes, expression of cell cycle inhibitors, senescence associated β -galactosidase activity, and changes in nuclear membrane. When cells in an organ become senescent, the entire organism can be affected. This may occur through the senescence-associated secretory phenotype (SASP). SASP may exert beneficial or harmful effects on the microenvironment of tissues. Research on senescence has become a very exciting field in cell biology since the link between age-related diseases, including cancer, and senescence has been established. The loss of regenerative and homeostatic capacity of the liver over the age is somehow connected to cellular senescence. The major contributors of senescence properties in the liver are hepatocytes and cholangiocytes. Senescent cells in the liver have been implicated in the etiology of chronic liver diseases including cirrhosis and hepatocellular carcinoma and in the interference of liver regeneration. This review summarizes recently reported findings in the understanding of the molecular mechanisms of senescence and its relationship with

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RP Rivera 저술 - 2017 - [관련 학술자료](#)

Cellular damage, if not repaired, leads to apoptosis or **senescence**. ... Cellular arrest is an essential condition for **senescence** to occur, as **senescent** cells are **positive** for Age is an independent risk factor for **poor** outcomes in primary biliary ...

Senescence and cell death in chronic liver injury: roles and ... - NCBI

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2018. 2. 2. - It was also found that **senescent hepatic** stellate cells (HSC) di Fagagna F. Cellular **senescence**: when **bad** things happen to **good** cells.

Ageing, telomeres, senescence, and liver injury - ScienceDirect

<https://www.sciencedirect.com/science/.../S0168827810006331> - 이 페이지 번역하기

M Hoare 저술 - 2010 - [106회 인용](#) - [관련 학술자료](#)

Increasing age has now been recognised as a significant correlate of a **poor** outcome in a number of chronic liver disorders (Table 1). Perhaps the **best** studied ...

Senescence in chronic liver disease: Is the ... - Journal of Hepatology

<https://www.journal-of-hepatology.eu/article/S0168...2/pdf> - 이 페이지 번역하기

AD Aravinthan 저술 - 2016 - [28회 인용](#) - [관련 학술자료](#)

the field of fibrosis and cancer, where cellular **senescence** of hepatocytes, [1] Campisi J, d'Adda di Fagagna F. Cellular **senescence**: when **bad** things ... [14] Campisi J. **Senescent** cells, tumor suppression, and organismal **aging**: **good**.

검색결과 약 185,000개 (0.47초)

Senescence and cell death in chronic liver injury: roles and ... - NCBI

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2017. 12. 22. - With the presence of DNA damage, SASP induces the EMT of pre-malignant cells and enhances their invasiveness. ... DCA can cause DNA damage and induce **senescence** of **hepatic** stellate cells, while **senescent hepatic** stellate cells can secrete SASP factors.

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관련 질문

What triggers senescence?



What does cellular senescence mean?



What are senescent cells and why are they important?



Are cancer cells senescent?



사용자 의견

Cellular senescence drives age-dependent hepatic steatosis

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5474745/> ▼ 이 페이지 번역하기

M Ogrodnik 저술 - 2017 - [132회 인용](#) - [관련 학술자료](#)

2017. 6. 13. - Cellular **senescence** has been implicated in the progression of **liver** disease. However, the mechanisms are not yet completely understood, and in some cases, **senescence** has been associated with



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Senescence: the good the bad and the dysfunctional.

<https://www.ncbi.nlm.nih.gov/pubmed/18262406>

Senescence: the good the bad and the dysfunctional. Pazolli E(1), Stewart SA. Author information: (1)Department of Cell Biology and Physiology, Washington University School of Medicine, Saint Louis, MO 63110, USA. Nearly 50 years have elapsed since Hayflick challenged the dogma that individual human cells were immortal by demonstrating that ...

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Author: Ermira Pazolli, Sheila A Stewart

Publish Year: 2008

Innate immunity and cellular senescence: The good and the ...

<https://jlb.onlinelibrary.wiley.com/doi/full/10.1002/JLB.3MR0118-003R>

Feb 01, 2018 · Innate immunity and cellular senescence: The good and the bad in the developmental and aged brain Antonietta Santoro Department of Medicine, Surgery and Dentistry "Scuola Medica Salernitana," University of Salerno, Via Salvatore Allende, Baronissi, Italy

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Aging is a condition in which a person gradually loses the ability to maintain homeostasis, due to structural alteration or dysfunction. Aging changes biological processes in many organs and tissues. The loss of regenerative capacity is the most dramatic age-associated alteration in the liver. Cellular damage, if not repaired, leads to apoptosis or senescence.

Author: Ruth Pacheco Rivera, Jaime Arellane...

Publish Year: 2017

DOI: 10.5772/intechopen.68587

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Cellular senescence drives age-dependent hepatic steatosis ...

<https://www.nature.com/articles/ncomms15691>

Jun 13, 2017 · DR protects against liver fat deposition. In order to investigate the relationship between fat deposition in hepatocytes and hepatocyte senescence, C57BL/6 male mice were randomly assigned to ...

Senescence

Senescence or biological aging is the gradual deterioration of functional characteristics. The word senescence can refer either to cellular senescence or to senescence of the whole organism. Organismal senescence involves an increase in death rates and/or a decrease in fecundity with increasing age, at least in the later part of an organism's life cycle.



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