

TECHNOLOGY OFFERS

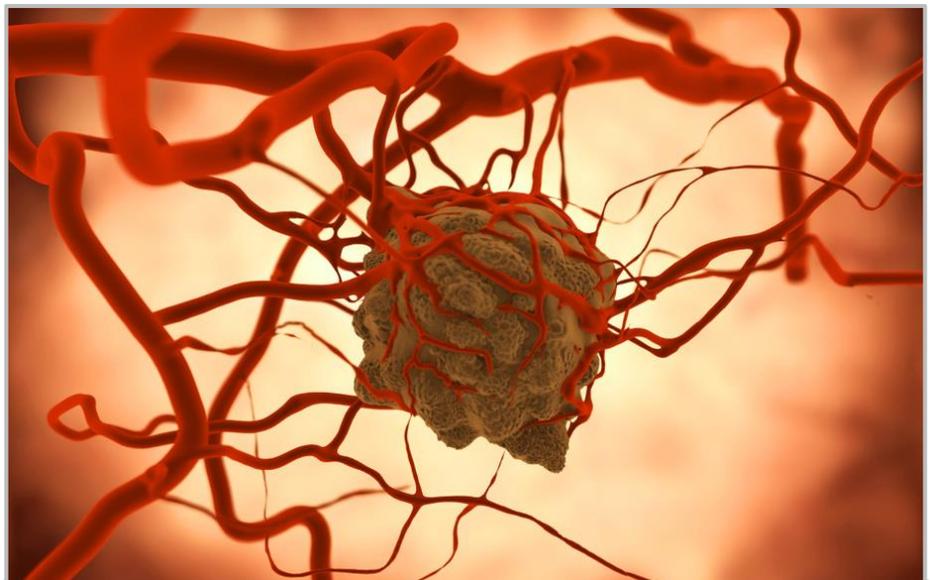
Iron Chelators in Tumor Therapy (P-1361)

Iron chelator based chemotherapy for inducing senescence in hypoxic cancer cells

EXECUTIVE SUMMARY

The Technology represent a pharmaceutically compatible iron chelator or a prodrug thereof for use in treating and/or preventing cancer in a patient suspected or known to comprise hypoxic cancer cells, and use in treatment and/or prevention of a human papillomavirus (HPV) related lesion. The technology further allows the use of an iron chelator or prodrug thereof for inducing senescence in a cancer cell, preferably a hypoxic cancer cell; and to a method for inducing an irreversible proliferation arrest in cancer cells comprising:

- a) contacting said cancer cells with an iron chelator or prodrug thereof and, thereby,
- b) inducing an irreversible proliferation arrest in said cancer cells.



Juan Gärtner, stock.adobe.com

Category

Therapeutics

Indication

Hypoxic cancer,
HPV

Development stage

Pre clinical

Seeking

Licensing, Development partner

BENEFITS

- Iron chelator in tumor therapy for tumors having hypoxic sections in which chemotherapy and radiotherapy are ineffective.
- Use in treatment and/or prevention of a human papillomavirus (HPV) related lesion.

TECHNOLOGY BACKGROUND

Ciclopirox (CPX) is clinically used as a topical antifungal agent to treat mycoses of the skin and nails. Although its exact mechanism of action is unclear, it is known to chelate intracellular iron and anti-tumor properties have been reported. There is, thus, a need in the art for improved methods for treating tumors, in particular tumors having hypoxic sections in which chemotherapy and radiotherapy are ineffective. Our technology provides means and methods to comply with the aforementioned needs

DEVELOPMENT STAGE

preclinical

APPLICATIONS

- Pharmaceutical composition
- Therapy
- Oncology
- HPV lesions

INTELLECTUAL PROPERTY

Patent application submitted:

- WO2019101897A1: "Iron Chelators in Tumor Therapy", Application Date November 23, 2017

PUBLICATIONS & REFERENCES

- "Effects of the antifungal agent ciclopirox in HPV-positive cancer cells: Repression of viral E6/E7 oncogene expression and induction of senescence and apoptosis." by Braun JA, et al. in Int J Cancer. 2019 Oct 11. doi: 10.1002/ijc.32709.

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ABOUT THE DKFZ INNOVATION MANAGEMENT

Working at the interface of research and industry, the Innovation Management of the German Cancer Research Center (DKFZ) helps to get new cancer medications, diagnostic tests, and research instruments onto the market as quickly as possible.

The DKFZ with its more than 3,000 employees is the largest biomedical research institution in Germany. At the Center more than 1,300 scientists investigate how cancer develops, identify cancer risk factors and endeavor to find new strategies to prevent people from getting cancer. They develop novel approaches to make tumor diagnosis more precise and treatment of cancer patients more successful. DKFZ is a member of the Helmholtz Association of National Research Centers, with ninety percent of its funding coming from the German Federal Ministry of Education and Research and the remaining ten percent from the State of Baden-Württemberg