Desethylamiodarone for use in cancer treatment

TECHNOLOGY OFFER OF THE UNIVERSITY OF PÉCS

Keywords Cancer treatment, oncology, pharmacology, drug target

BACKGROUND

Desethylamiodarone (DEA), the major metabolite of the widely used antiarrhythmic drug amiodarone (AM), also has antiarrhythmic activity, significantly increasing the action potential duration and decreasing the maximum rate of depolarization at clinically relevant concentrations. Amiodarone and its main metabolite DEA are both strongly bound to plasma proteins. DEA rapidly accumulates in extra cardiac tissues (especially in the lungs) after amiodarone treatment, sometimes in higher concentrations than amiodarone itself. Amiodarone was found to activate mainly necrotic cell death pathways, whereas DEA also activated apoptotic pathways. DEA may act synergistically with amiodarone. DEA has greater cytotoxic potency in vitro compared to AM, however this toxic effect is further enhanced in the presence of amiodarone. Modern surgical techniques and new chemotherapeutic approaches have significantly improved the effectiveness of treatment in primary tumors, but metastasis remains the leading cause of death in patients with cancer. The present inventors surprisingly found that DEA has significant anti-tumor effect. Although DEA is a well-known metabolite, which accumulates in lungs, and is capable of inducing apoptotic cell death, no such anti-tumor effect has been suggested.

BRIEF DESCRIPTION

The present invention provides a pharmaceutical composition comprising a compound selected from the group consisting of desethylamiodarone (DEA) and pharmaceutically acceptable salts, hydrates and solvates thereof, together with a pharmaceutically acceptable excipient, vehicle and/or carrier, for use in the treatment of a proliferative disorder. The present invention further provides a method for the treatment of a proliferative disorder, comprising the step of administering a pharmaceutical composition comprising a compound selected from the group consisting of desethylamiodarone (DEA) and pharmaceutically acceptable salts, hydrates and solvates thereof, together with a pharmaceutically acceptable excipient, vehicle and/or carrier.

We are seeking for: Commercial partners, cooperation, license partners

IP status: Patend granted in the USA in 2018 by the USPTO, ann in Europe in 2019 by the EPO.

Contact

PTE Inno-Capital Kutatáshasznosító és Fejlesztő Kft.
Pécsi Tudományegyetem
Kutatáshasznosítás és Technológia Transzfer Központ
7633 Pécs, Szántó K. J. u. 1/B.
Email: innocapital@pte.hu
Telefon: +36 30/ 288 70 39
+36 30/ 334 54 01

REFERENCIASZÁM: 509

PÉCSI TUDOMÁNYEGYETEM