Probing treatment response of glutaminolytic prostate cancer cells to natural drugs with hyperpolarized [5-13C]glutamine

Jensen, Pernille Rose; Canape, Carolina; Catanzaro, Giuseppina; Karlsson, Magnus; Lerche, Mathilde Hauge

Publication date:
2016

Document Version
Publisher's PDF, also known as Version of record

Link back to DTU Orbit

Citation (APA):
Resveratrol and sulforaphane have been shown to act by means of the PI3K signaling pathway. Treatment response to resveratrol is shown in Fig. E and F using hyperpolarization and RP-HPLC measurements respectively.

Glutamine metabolism is decreased after drug treatment as determined by both assays. Hyperpolarized [5-13C]glutamine metabolism thus is a promising biomarker for the non-invasive detection of tumor response to treatment, as it directly monitors one of the hallmarks in cancer metabolism - glutaminolysis - in living cells.

References:
3) This work is published: Canape et al. MRM 2015; 73:2296–2305.