METABOLISM & CANCER

UCLouvain IREC fnrs télévie

Therapy-induced DNA methylation inactivates MCT1 and renders tumor cells vulnerable for MCT4 inhibition

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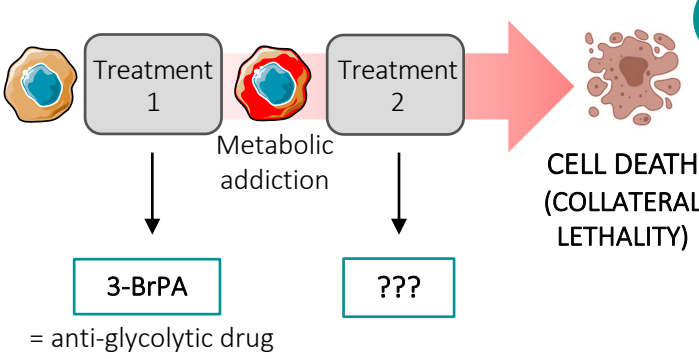
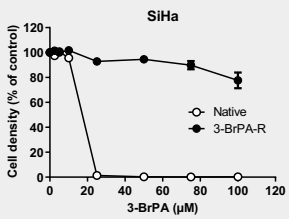
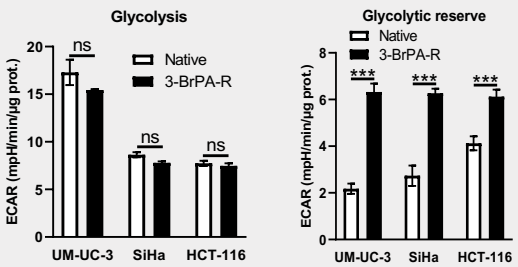


1 ESTABLISHMENT OF 3-BrPA-RESISTANT CANCER CELLS

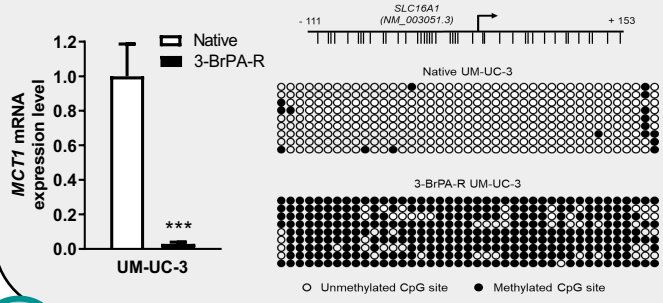


Cell lines		IC50 (µM) ± SD
UM-UC-3 (bladder)	Native	24.18 ± 2.057
	3-BrPA-R	> 100
SiHa (cervix)	Native	14.67 ± 0.353
	3-BrPA-R	> 100
HCT-116 (colorectal)	Native	28.60 ± 1.575
	3-BrPA-R	> 100

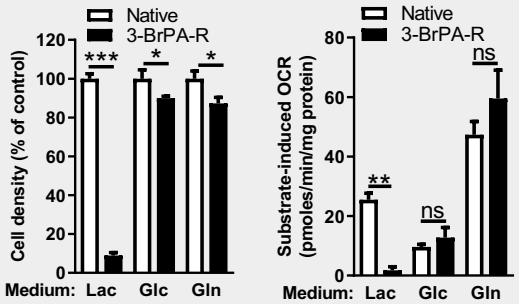
2 GLYCOLYSIS IS MAINTAINED IN 3-BrPA-RESISTANT CANCER CELLS



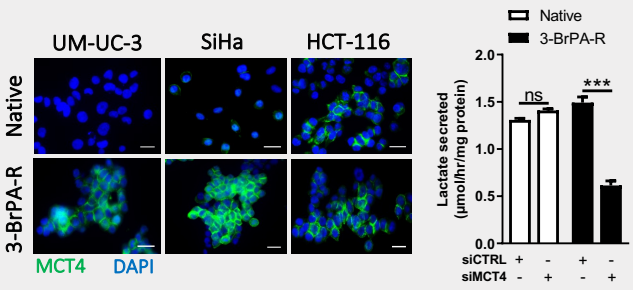
3 MCT1 DNA HYPERMETHYLATION AS A SOURCE OF RESISTANCE TO 3-BrPA



4 LACTATE UPTAKE AND UTILIZATION ARE IMPAIRED IN 3-BrPA-R TUMOR CELLS



5 MCT4 SUPPORTS GLYCOLYTIC FLUX IN 3-BrPA-R TUMOR CELLS



CONCLUSIONS: 3-BrPA TREATMENT SENSITIZES CANCER CELLS TO THE INHIBITION OF MCT4 BY DICLOFENAC