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MP08-14 Metabolomic approach to elucidate mechanisms of acquired resistance to sunitinib in renal cell carcinoma

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Introduction

- Identification of increasing metabolites accompanying cancer progression would be a novel therapeutic targets.
- In RCC, the relation between sunitinib resistance and cellular metabolism has not been fully elucidated.
- The present study aimed to determine possible mechanisms of **resistance to sunitinib** focus on **cancer metabolites** in RCC.

Methods

- Intracellular **metabolites** were identified by **LC-MS** from cell lines extracted from **mouse model acquired with sunitinib resistance**.



Results

- Energy metabolism with **glutamine uptake** and **glycolysis upregulation**, as well as **antioxidant activity**, contributed to the mechanism of sunitinib-resistance.
- The expression of **SLC1A5** (a transporter that carries glutamine into cells) was significantly increased in sunitinib-resistance cell compared to control cell.

