**ARID1A: THE GOOD, THE BAD AND THE UGLY**  
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**BACKGROUND AND OBJECTIVES**

ARID1A mutations are frequent in colorectal cancer (CRC), ovarian cancer, gastric cancer, liver cancer and endometrial cancer. ARID1A mutations are also found in many other solid tumors and leukaemias. ARID1A is involved in the initiation and progression of cancer through its role in genome plasticity, chromatin remodelling and transcription regulation.

**LUNG ADENOCARCINOMA**

ARID1A is a tumour suppressor gene. ARID1A mutation is frequent in human malignancies.

**PRELIMINARY RESULTS**

**A549**

Resarzurin in A549 after silencing of ARID1A  
Figure 2: Colony formation assay in A549 cell line with ARID1A knockdown after 15 days of transfection.

**NCI-H2009**

Resarzurin in H2009 after silencing of ARID1A  
Figure 3: Cell viability assay in A549 after a single transient transfection.

**NCI-H1373**

Resarzurin in H1373 after silencing of ARID1A  
Figure 4: Western Blot of A549 after 2 and 6 days of ARID1A knockdown.

**GENETIC-DEPENDENCY: KRAS mutant context**

A549, H2009 and H1373 are ARID1A wt and KRAS mutant cell lines. Do KRAS mutants have an ARID1A-dependency?

**TIME-DEPENDENCY: Normal and tumor lung cell lines (Dual model)**

Resarzurin after 6 days of transfection with siRNAs against ARID1A

**CONCLUSIONS AND CURRENT WORKING MODEL**

ARID1A has a context-dependent role in lung adenocarcinoma.

**REFERENCES**