Ovarian Cancer Cell Lines for Testing PARP Inhibitors in Mice

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Introduction

Ovarian cancer is the leading cause of death from gynecological malignancies, with an overall mortality of 60%. Molecular targeted agents, such as Poly (ADP-ribose) polymerase (PARP) inhibitors, represent an exciting new avenue of clinical investigation. Preclinical studies on a reliable disease model play a key role in this drug discovery process.

Description

- The Mouse Ovarian Cancer Cell Lines developed by Dr. Sandra Orsulic are the only BRCA1-proficient and BRCA1-deficient isogenic pair of ovarian cancer cell lines that grow tumors upon intraperitoneal injection into immunocompetent mice.
- The tumors recapitulate human ovarian cancer biology (serous histology; intraperitoneal carcinomatosis + ascites) and genetic alterations (BRCA1-/- or wt; p53-/-; myc, Kras, Akt).
- This pair of cell lines is useful for testing PARP inhibitors and other DNA damage-targeted therapies in immunocompetent mice. Luciferase transduced versions of cell lines are available for Ivis small animal imaging.

Publications

References using earlier versions of the mouse ovarian cancer cell lines for testing BRCA-targeted therapies:


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