大学院特別講義

（医歯学先端研究特論）（生命理工学先端研究特論）
（医歯理工学先端研究特論）

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記

1．講　師　Centre for Cancer Biology
University of South Australia and SA Pathology
Prof. Claudine S. Bonder

2．演　題　How a single adhesion molecule controls anti-tumour immunity in pancreatic cancer

3．日　時　2025年10月16日（木）17：00～19：00

4．要　旨

Pancreatic ductal adenocarcinoma (PDAC) remains a lethal malignancy of global significance with a 5-year survival rate of <13% and increasing in incidence, particularly in young adults. Herein, we show that protein expression of desmoglein-2 (DSG2), a cell surface adhesion molecule, is elevated in the tumors of patients with PDAC and doubles their risk of succumbing to the disease. In vitro studies of DSG2 in human PDAC cells indicate that it promotes cancer cell migration, invasion, and that it influences several pro-tumorigenic intracellular signaling pathways. In vivo xenograft studies with DSG2 knockdown human PDAC cells, as well as genetic ablation of Dsg2 in the KPC mouse model, reveal that targeting DSG2 significantly decreased tumor burden via changes to the tumor microenvironment. More specifically, loss of Dsg2 reduced cancer associated fibroblasts, collagen content, opened the lumen of tumor vasculature and increased tumor infiltrating lymphocytes. Outcomes from in vivo administration of an anti-DSG2 monoclonal antibody provide further evidence that targeting DSG2 in PDAC improves cancer outcomes by directly addressing the dense fibrotic composition of PDAC tumors and thereby enabling an enhanced anti-tumor immune response.

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