

Cancer Center Support Grant – CCSG 2017

“Targeting Cancer Stem Cell Signaling as a Strategy against Platinum-resistant Ovarian Cancer”

Principal Investigators:

David Schlaepfer, PhD

Michael McHale, MD

UC San Diego

MOORES CANCER CENTER

SCIENTIFIC ABSTRACT

Small microscopic clusters of chemotherapy-resistant tumor cells – also termed cancer stem cells (CSCs) facilitate ovarian cancer recurrence. Cisplatin chemotherapy can problematically enhance CSC survival within ovarian tumors associated with markers such as aldehyde dehydrogenase (ALDH) in chemotherapy-resistant tumors. FAK is a cytoplasmic tyrosine kinase that is amplified in >70% of late-stage ovarian cancers. The Schlaepfer lab finds that FAK can become activated by cisplatin treatment, that FAK facilitates ALDH expression, and that FAK activity is needed for ovarian CSC survival. These results were generated by Gynecological Oncology Research Fellows in support of the planned UCSD ROCKIF Phase I-II clinical trial.