

# Biomedical Research Seminar Series

## *Speaker Announcement*

**Friday, October 12, 2018 @ 3:30 pm**

**Domenici Hall, Room 109**

(Refreshments served at 3:00)



## ***Sanford M. Simon, PhD***

*Professor  
Laboratory of Cellular Biophysics  
The Rockefeller University*

### *Molecular analysis of the pediatric cancer fibrolamellar hepatocellular carcinoma*

Fibrolamellar Hepatocellular Carcinoma (FLC) is a usually lethal pediatric liver cancer that affects adolescents and young adults. The patients have no other identifiable underlying liver disease. Surgery is potentially curative for localized disease. However, the disease is often detected late and the majority of patients present with advanced disease. There is currently no approved systemic therapy for FLC and the overall 5-year survival is 30-45%.

Working together with the patients we have found that there is only one alteration in the DNA of the patients: A deletion that results in the fusion of two genes. One gene is a heat shock protein and the other is the catalytic subunit of protein kinase A. This single genetic change leads to a significant change in over 3500 transcripts and proteins. We have shown that recreating this fusion gene is sufficient to produce the cancer. We are using an analysis of chemistry of the molecular dynamics of the fusion protein, its behavior in cells and its behavior in organisms, to design both diagnostics and therapeutics.

**NM  
STATE**

Be Bold. Shape the Future.  
New Mexico State  
University  
nmsu.edu

The BMRS series is supported by the Office of the Provost, the College of Arts and Sciences, the Departments of Chemistry & Biochemistry, and the NM-INBRE program.

For more information or to meet with the speaker please contact Ryan Ashley at [ryashley@nmsu.edu](mailto:ryashley@nmsu.edu)