“NEXT GEN” THERAPEUTICS FOR OVARIAN CANCER

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UNMET NEED

- Ovarian cancer (OvCa) is the 5th leading cause of cancer deaths in US women with a 5 year survival rate = ~45%.
- ~21,000 US women are diagnosed with OvCa (~240,000 worldwide) per year.
- The OvCa therapeutic standard of care lacks innovation.
KEY INNOVATION & IP POSITION

- Kinase inhibitors have had little impact in OvCa
- Phosphatases have emerged as tractable drug targets
- PTP4A3 is a known cancer causing protein frequently found in tumor metastasis
- JMS-053 is a potent small molecule inhibitor of PTP4A3

![JMS-053](image)

- US patent app No. 15/737,062 (12/15/17)
- EP patent app No. 16734519.8 (6/16/16)
- US provisional Application No. 62/536,125 (7/24/17)
KEY EARLY STAGE FINDINGS

PTP4A3 is the most expressed mRNA in OvCa tumor samples.

JMS-053 is the most potent inhibitor of PTP4A3 with a $K_i=18$ nM

Thermal shift analysis confirms target engagement

JMS-053 reduces OvCa tumor weight
NEAR TERM RESEARCH PLAN

Total = $0.725M

MILESTONE

1. **Medicinal Chemistry** $175k
2. **PK/PD, ADME, Safety, Formulation & Tox** $250k
3. **Animal Models** $150k
4. **Patent Prosecution, Filings and Consultants** $150k

IND Enabling Studies (Q2 ‘19 – Q2 ‘20)
- Pharmacology & safety pharmacology
- DMPK
- Toxicology
- Genotoxicity
- API
- CTM
- Regulatory
TOTAL OvCA MARKET

Competition
- No PTP4A3-targeted therapeutics on the market
- PTP4A3-targeted humanized antibody in Phase I clinical trial

LEADERSHIP

Elizabeth R. Sharlow, PhD
University of Virginia
- >20 years experience in drug discovery and development in industry and academia, with 10+ years focusing on high throughput assay design and implementation
- Associate Professor Pharmacology
- >50 scientific papers
- Led science at startup pharmaceutical company

John S. Lazo, PhD
University of Virginia
- >25 years of experience studying tumor cells and mechanism of small molecule drug action, 16 years focusing on phosphatase in cancer
- Harrison Distinguished Professor of Pharmacology
- >250 scientific papers and 10 patents
- Founded 3 startups including one that is now part of Seattle Genetics

Peter Wipf, PhD
University of Pittsburgh
- >25 years of experience in the field of Chemistry
- Distinguished Professor of Chemistry
- >650 scientific papers and patents

Charles N. Landen
University of Virginia
- >20 years of experience in OvCa medicine and research
- Associate Professor of Obstetrics & Gynecology
- Publisher of >50 scientific articles
FUNDING SECURED


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