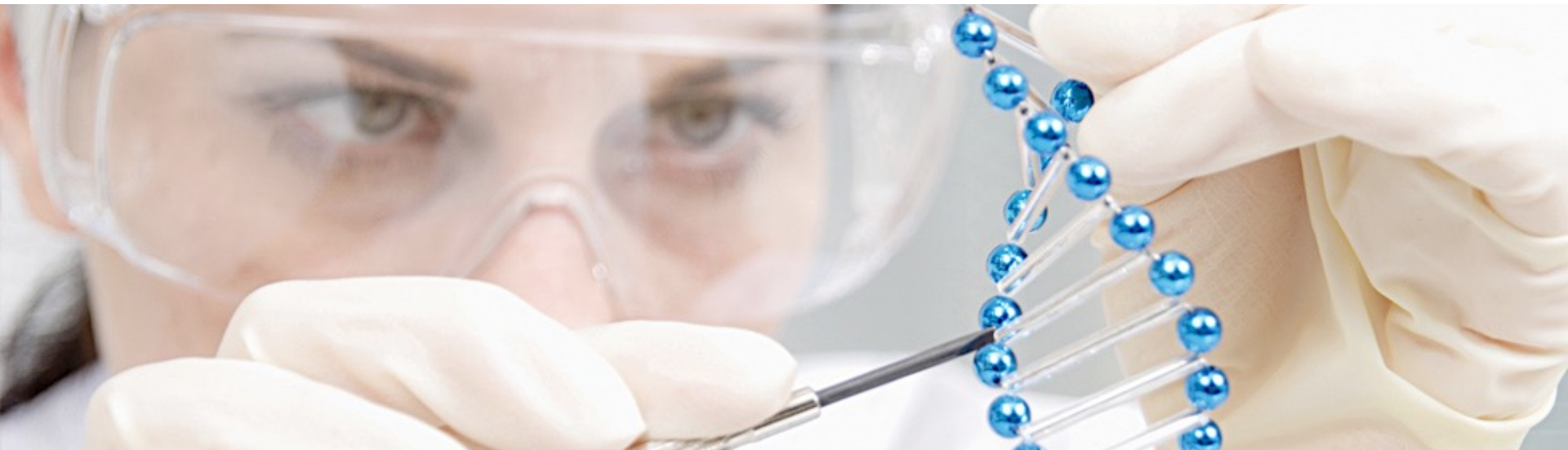


Phoenix Molecular Designs



DESIGNING PRECISE THERAPEUTICS TO REVOLUTIONIZE
CANCER TREATMENT

Our Team



Dr. Sandra Dunn, Ph.D.

CEO, CSO

UBC Professor 2001-2015
Board: Canadian Breast
Cancer Foundation
85 publications
Cited >4500 times



Dr. Anna Stratford, Ph.D.

RESEARCH ASSOCIATE

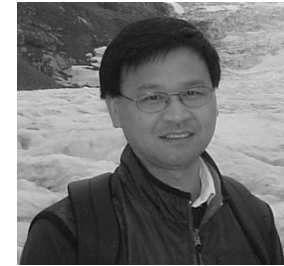
Dunn Lab UBC - 10 years
15 publications on RSK
In breast cancer
RSK Program Inventor



Dr. Aarthi Jayanthan, Ph.D.

SENIOR SCIENTIST

Preclinical Lead
Kinase drug development lead
18 publications on
Kinases
U of Calgary



Dr. Zaihui Zhang

MEDICINAL CHEMIST

50 issued patents
SignalChem
Xenon
Angiotech
Kinetek Pharma



Dr. Jaipal Nagireddy

MEDICINAL CHEMIST

Vibrant Pharma



Nick Sharp

BUSINESS DEVELOPMENT

Duke University
Entrepreneur



Sonia Vasudevan

**MARKETING AND
INVESTOR RELATIONS**

MBA, Sauder School of
Business

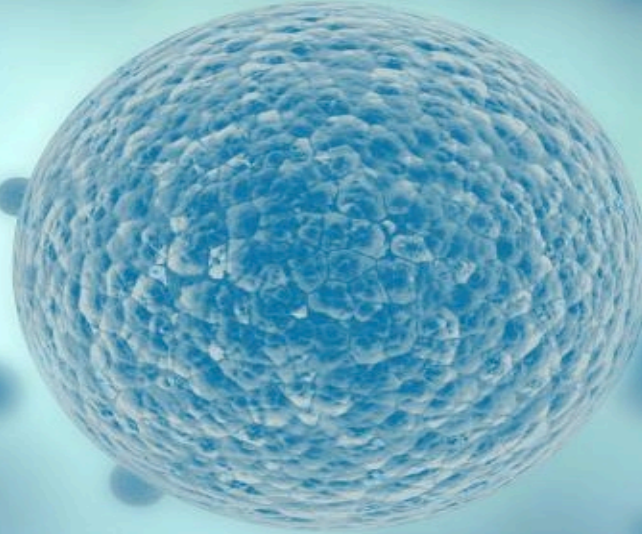


Dave Matthews

CFO

GenomeDX
Aspreva
StressGen

The Problem



There are 1.7 Million new cases of breast cancer each year worldwide.
400,000 women are diagnosed with **Triple Negative Breast Cancer (TNBC)** every year.

This is the worst, most fatal kind of breast cancer, which, until now *has no targeted treatment* making it one of the greatest unmet medical needs in the pharmaceutical industry.

The Opportunity

HER2+ BREAST CANCER

TARGETED TREATMENT

✓ HERCEPTIN – A KINASE INHIBITOR

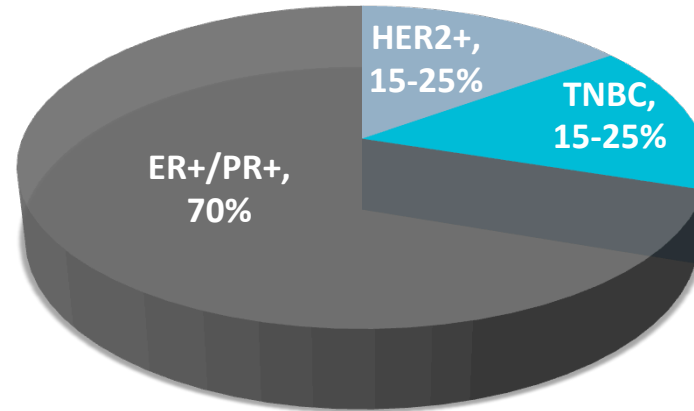
ANNUAL SALES OF HERCEPTIN: \$1.9B

IMPROVED PATIENT SURVIVAL BY ~40%

ER+/PR+ BREAST CANCER

TARGETED TREATMENTS

✓ HORMONE BLOCKERS



TRIPLE-NEGATIVE BREAST CANCER

NAMED BECAUSE THE TUMORS LACK THE DRUG TARGETS ER, PR and Her-2

TARGETED TREATMENT – NONE

SIMILAR MARKET TO HERCEPTIN

The Big Question: Is there a kinase target for TNBC?

Kinase inhibitors are high value

✕ Kinase inhibitors

- Generate > \$21B in annual revenue
- Generate > \$25B in licensing deals
- Have fewer side-effects than conventional chemotherapy

✕ The top three cancer drugs are all kinase inhibitors

- Rituximab: \$3.2B annual revenue
- Avastin: \$2.4B annual revenue
- Herceptin: \$1.9B annual revenue

Our Solution



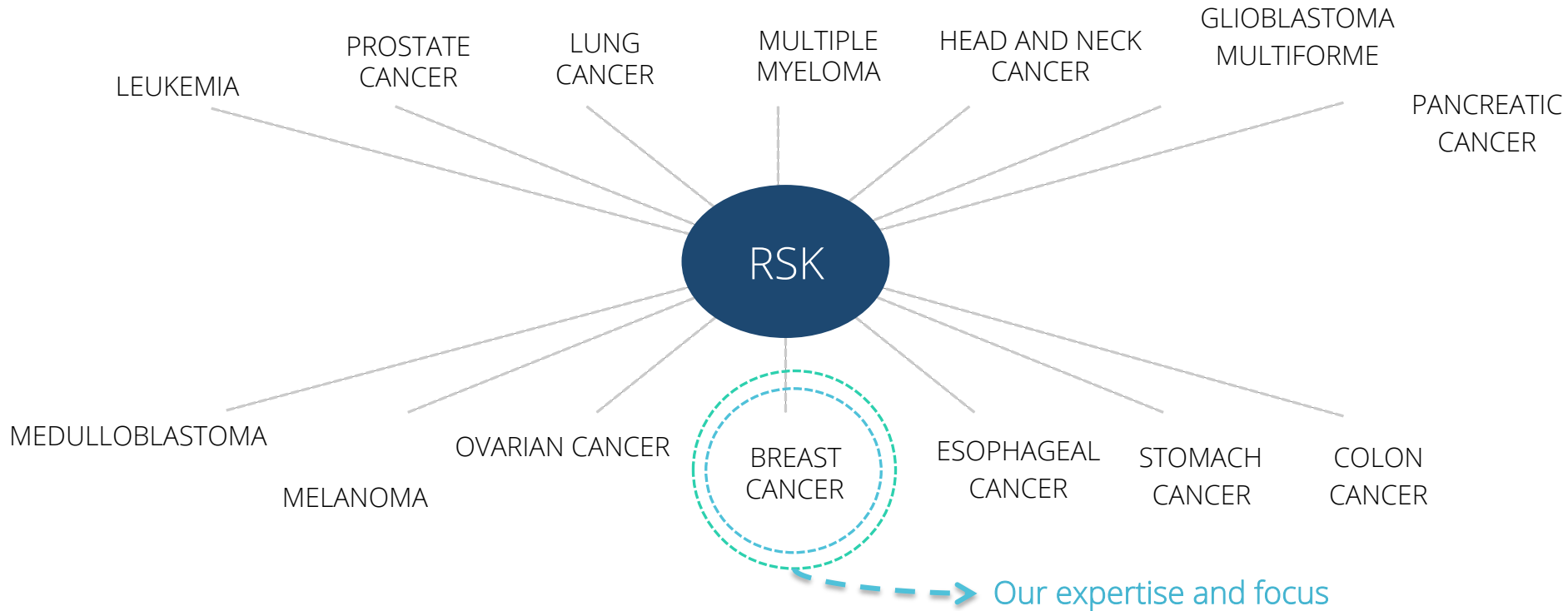
We have identified a cancer drug target called **RSK** (p90 ribosomal S6 kinase) by individually inhibiting each of 518 human kinases to find the best one

RSK inhibition **selectively kills TNBC** but not normal cells

RSK inhibition uniquely eliminates cancer stem cells which contribute to cancer recurrence

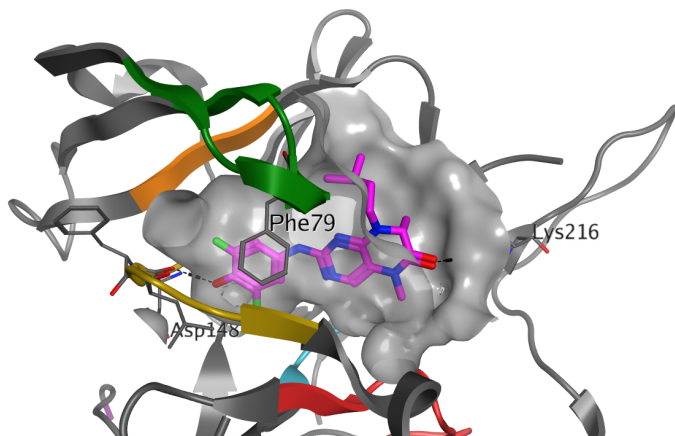
PHOENIX MOLECULAR
DESIGNS

RSK is essential for the growth of many cancers



Our research identified RSK as being the best drug lead for TNBC the most aggressive form of breast cancer (Phoenix^{MD} patent pending) .

Precise RSK inhibitor design



RSK inhibitors are being designed using medicinal chemistry and computational informatics



We developed a series of potent small molecules (ex. PMD-016) that selectively inhibit RSK



Our inhibitors are easily taken up by TNBC cells



Once they are delivered to the TNBC cells they die.



They have the added benefit of also

- 1) Inhibiting the growth of the other types of breast cancer (ER+/PR+ and Her-2+).
- 2) Cells that have developed resistance to conventional therapies such as Herceptin and taxanes

Timeline and Goals



Why we will succeed

MARKET OPPORTUNITY

Oncology therapy market worth
> \$100B

RSK targeted therapy for TNBC
Estimated market **~\$1.9B**

RSK inhibitors can be applied to
treat other types of cancer

EXPERIENCED TEAM

Our team has 24 years of
experience
In developing cancer
Therapeutics

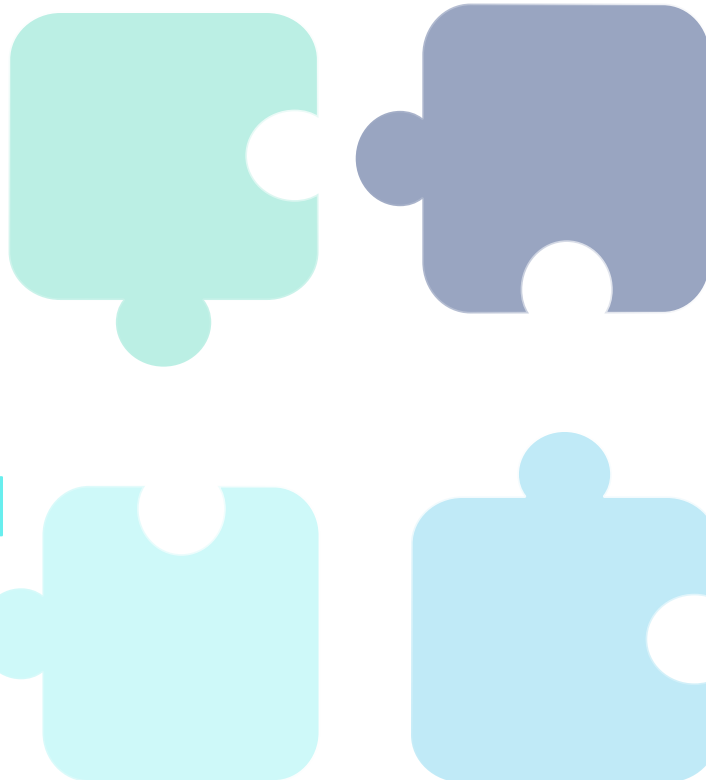
TECHNOLOGY PLATFORM

Extensive know-how around
development of novel inhibitors of
RSK

FAVORABLE REGULATIONS

FDA Breakthrough Designation

Orphan drug status
<200,000 cases/year in the US



Vision

First to market effective, *personalized medicine for the most aggressive type of Breast Cancer*



For more information: www.phoenixmd.ca