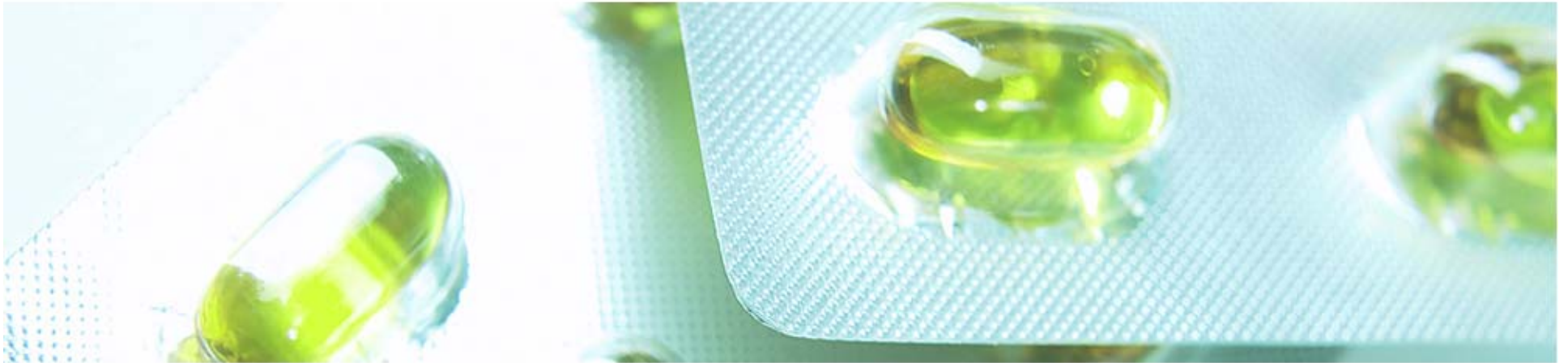




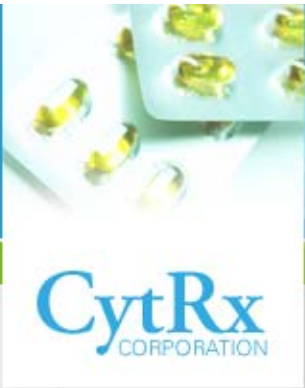
CREATING TOMORROW, TODAY.



Corporate Overview

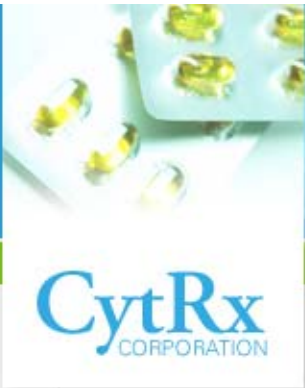
January 2012

NASDAQ: CYTR



CytRx Safe Harbor Statement

THIS PRESENTATION CONTAINS FORWARD-LOOKING STATEMENTS THAT INVOLVE CERTAIN RISKS AND UNCERTAINTIES ASSOCIATED WITH A DEVELOPMENT-STAGE COMPANY. ACTUAL RESULTS COULD DIFFER MATERIALLY FROM THOSE PROJECTED IN THE FORWARD-LOOKING STATEMENTS AS A RESULT OF THE RISK FACTORS DISCUSSED IN CYTRX REPORTS ON FILE WITH THE U.S. SECURITIES AND EXCHANGE COMMISSION INCLUDING, BUT NOT LIMITED TO, THE REPORT ON FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2010 AND ON FORM 10-Q FOR THE QUARTER ENDED SEPTEMBER 30, 2011.



Investment Highlights

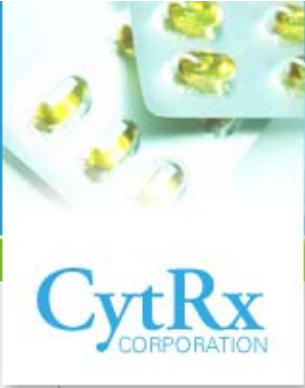
- Pure-play oncology company with 3 clinical stage compounds addressing significant market opportunities
- Tumor targeting platform technology improves efficacy & safety of cancer drugs
- Favorable results shown by INNO-206 in clinical trials including multiple partial responses
- Tamibarotene is in a global Phase 2b trial for advanced lung cancer and is on the market in Japan for APL
- Capital to support near-term milestones
 - \$41.4 million of cash (9/30/11)
 - No debt



CytRx Pipeline

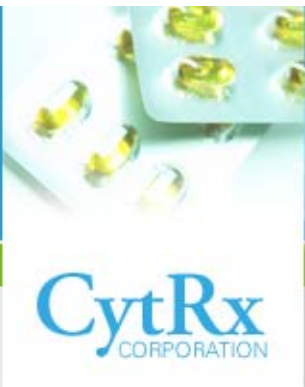


	Preclinical	Phase 1	Phase 2	Phase 3
INNO-206				
Solid Tumors	Ph. 1b/2 on-going			
Soft Tissue Sarcoma	Ph. 2b (Started Dec. 2011)			
Tamibarotene				
Non-Small Cell Lung Cancer	Ph. 2b on-going			
Acute Promyelocytic Leukemia	Ph. 2 on-going			
Bafetinib				
B-cell CLL (Leukemia)	Ph. 2 completed			



INNO-206: A Better Doxorubicin

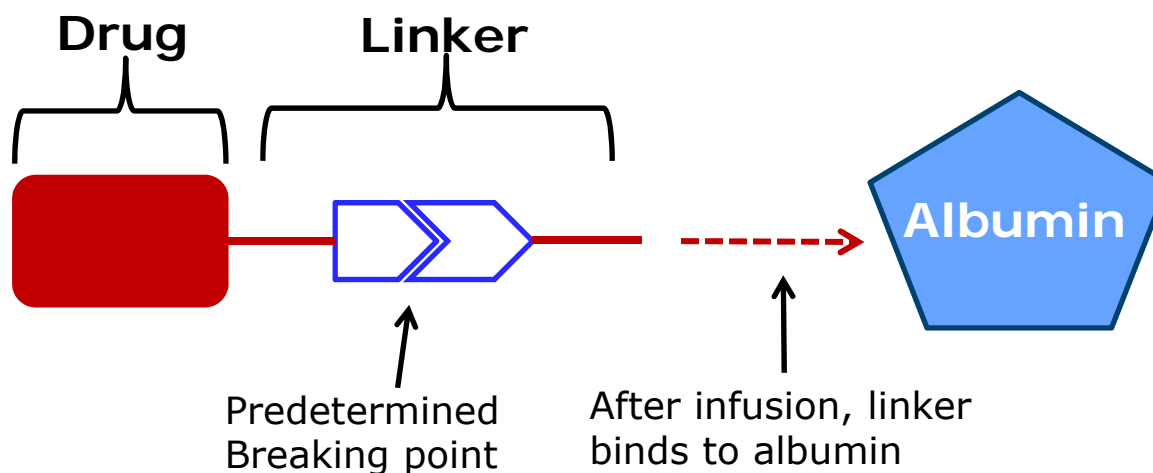
- Doxorubicin is a widely used chemotherapy for breast, lung, ovarian cancers, non-Hodgkin's lymphoma and sarcomas
- Doxorubicin is associated with significant side effects, including chronic cardiotoxicity
- INNO-206 uses CytRx's tumor targeting platform technology
 - Designed to deliver more drug to tumors for improved efficacy and safety
- CytRx has worldwide rights to INNO-206 and the tumor targeting linker technology



Tumor Targeting Linker Technology

Linker Is Multi-Functional

1. Keeps drug inactive until released → fewer side effects
2. Once infused, linker binds to albumin which takes it to the tumor
3. Linker breaks apart due to low pH in the tumor and releases drug

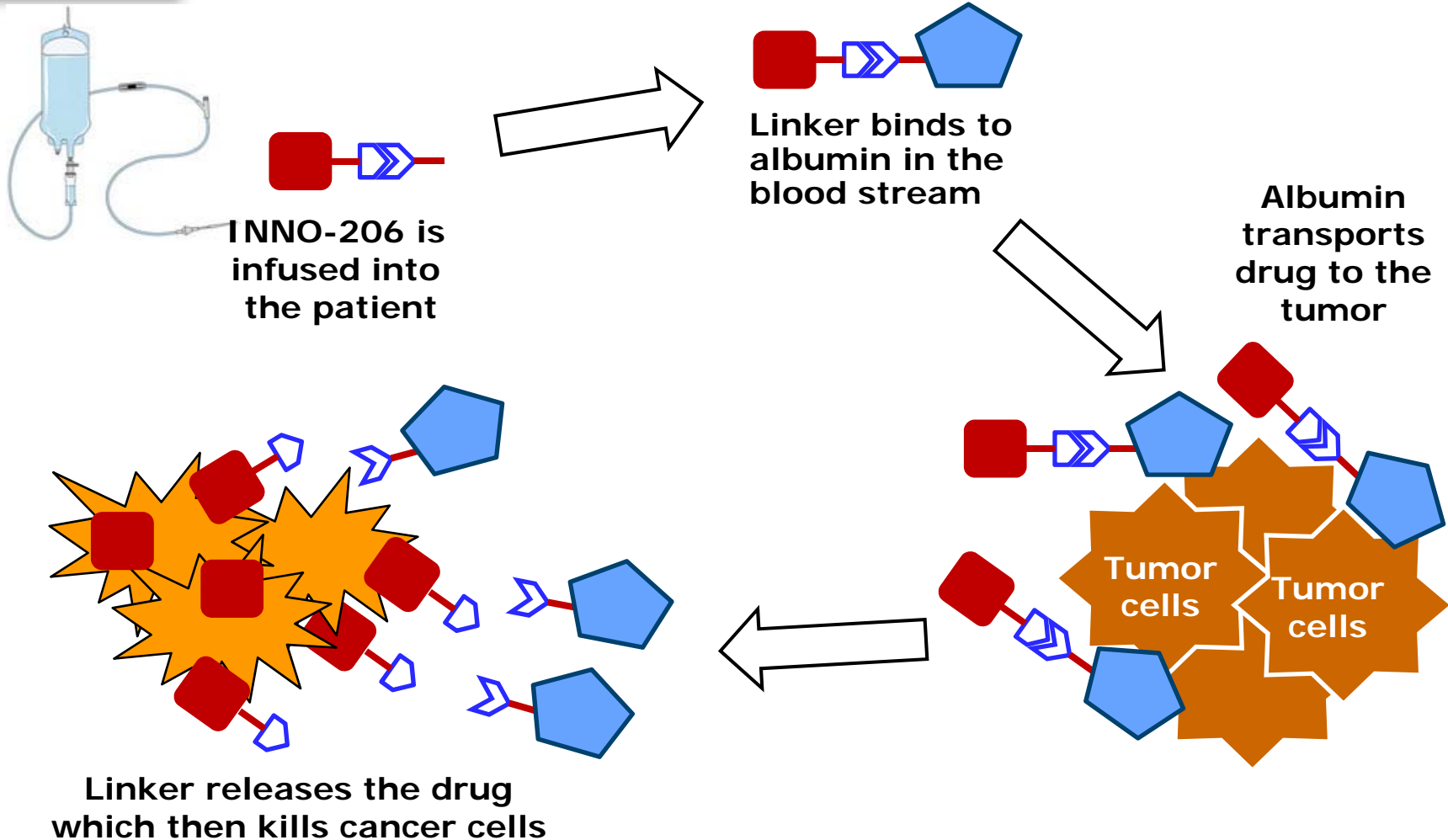


Key Potential Benefits

- **Improved Efficacy:** Ability to deliver several times more drug
- **Less Toxic:** drug is inactive until released at the tumor
- **Broad Utility:** Can be used with many types of cancer drugs: anthracyclines, taxanes, camptothecins, platinums, etc.

INNO-206: A Novel Tumor Targeted Doxorubicin Conjugate

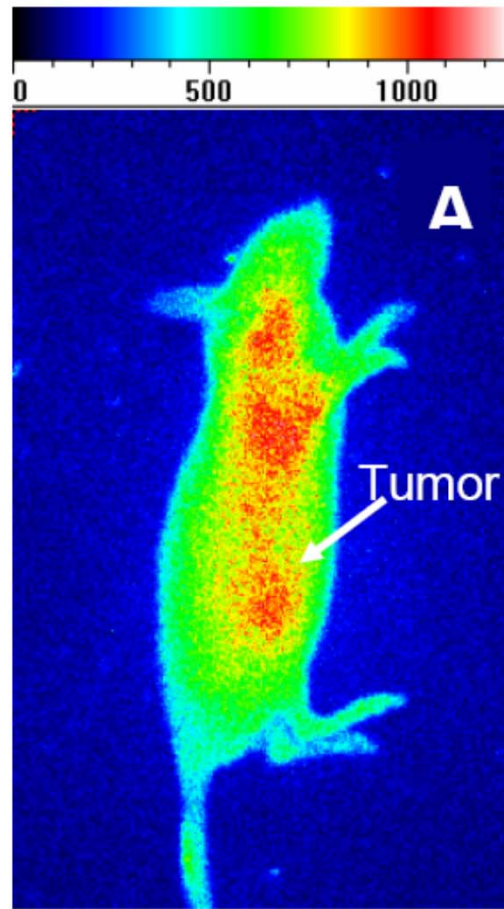
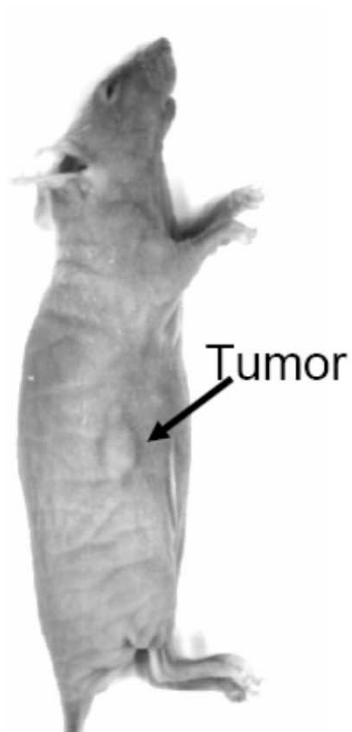
CytRx
CORPORATION



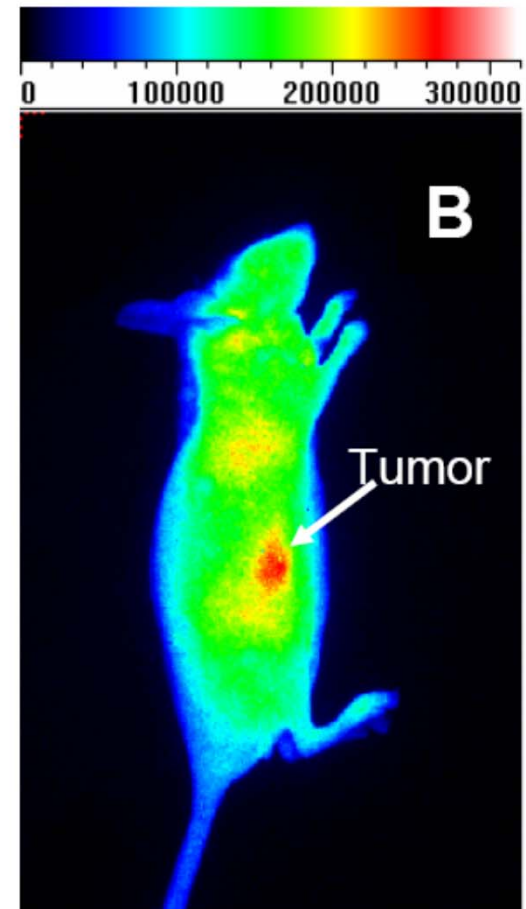


CytRx
CORPORATION

Linker attached to albumin preferentially collects in the tumor



No linker



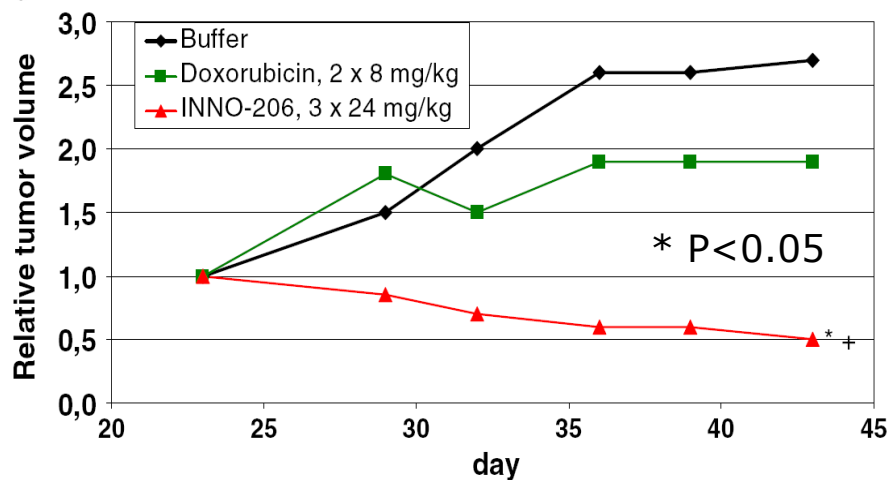
With linker

INNO-206 Preclinical Efficacy: Breast & Ovarian Cancer



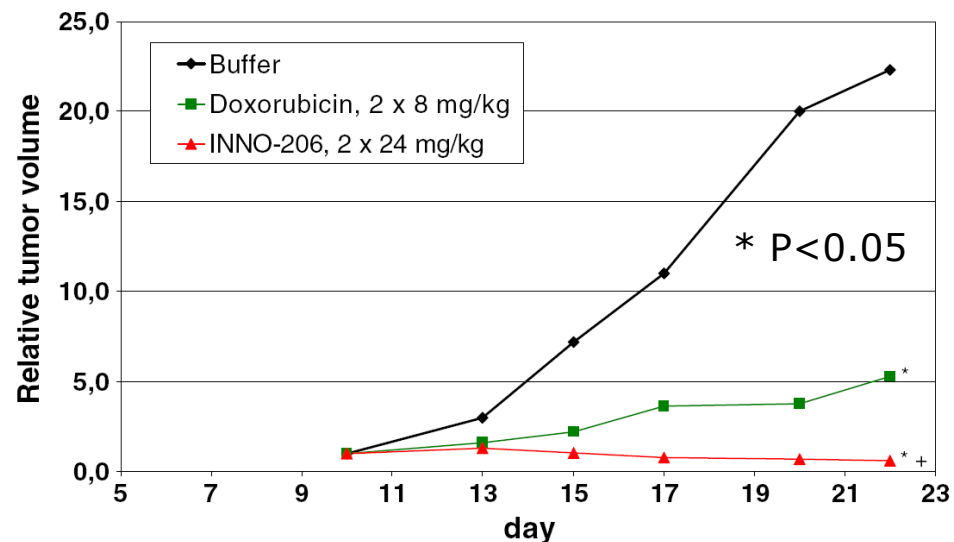
INNO-206 shrinks tumors

Breast Cancer
Mammary carcinoma xenograft 3366

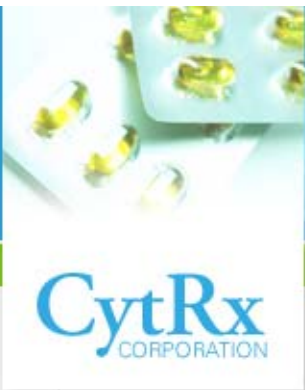


7-8 animals per group

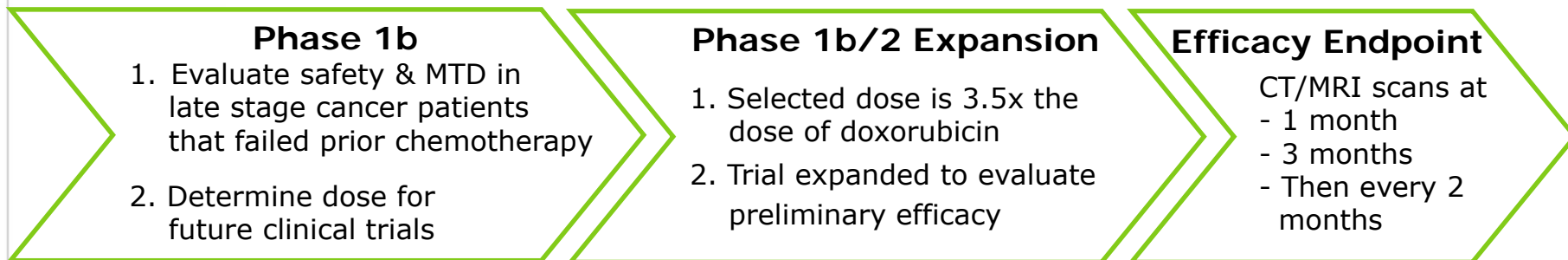
Ovarian Cancer
Ovarian carcinoma xenograft A2780



6 animals per group



INNO-206 Phase 1b/2 Trial Design



Phase 1b

1. Evaluate safety & MTD in late stage cancer patients that failed prior chemotherapy
2. Determine dose for future clinical trials

Phase 1b/2 Expansion

1. Selected dose is 3.5x the dose of doxorubicin
2. Trial expanded to evaluate preliminary efficacy

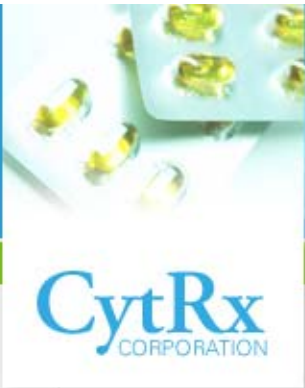
Efficacy Endpoint

- CT/MRI scans at
- 1 month
 - 3 months
 - Then every 2 months

The majority of patients enrolled to date have soft tissue sarcomas.

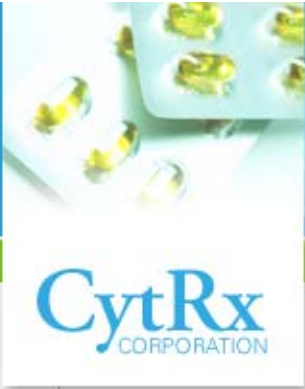
INNO-206 Phase 1b/2	Dose (doxorubicin equivalents)	Fold Increase over doxorubicin	Enrollment
Cohort 1	165mg/m ²	2.2x	Completed
Cohort 2*	260mg/m ²	3.5x	Completed
Cohort 3	325mg/m ²	4.3x	Completed
Doxorubicin	60-75mg/m ²		

**Expanded to total of 18 patients.*



INNO-206 Preliminary Efficacy: Phase 1b/2 Trial

- Based on initial six patients in Cohort 2 (260mg/m² doxorubicin equivalents) completing 4 cycles
- Patients had received multiple lines of prior chemotherapy
- **2 Partial Responses** (>30% tumor shrinkage per RECIST criteria)
- 4 with Stable Disease
- One of the partial responders had received at least 3 prior chemotherapies
- A patient with a large oral sarcoma causing pain and difficulty eating saw almost total disappearance of the tumor after the first cycle of INNO-206
- At 4 cycles, patients have received nearly double the current doxorubicin threshold of 550mg/m² due to cardiac toxicity; no cardiac toxicity seen in the Phase 1b/2 trial



INNO-206 Phase 2b Trial: First line treatment of advanced soft tissue sarcomas

Phase 2b Principal Investigator is Dr. Sant Chawla

Randomized Trial Design

Patient Population
105 patients with advanced soft tissue sarcomas that are ineligible for surgery.

Clinical sites will be in the US, Hungary, Romania, Russia, Ukraine, India and Australia

Arm 1

Treatment: INNO-206
Dose: 350 mg/m²*
Cycle: once every 3 weeks, up to 8 cycles
Number of patients: 70

Arm 2

Treatment: doxorubicin
Dose: 75 mg/m²
Cycle: once every 3 weeks, up to 6 cycles
Number of patients: 35

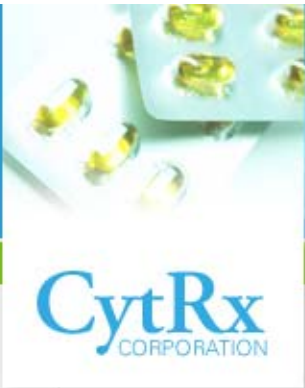
Primary Endpoint

1. Progression-free survival

Secondary Endpoints

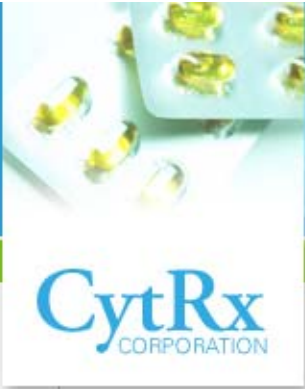
1. Tumor response
2. Overall survival
3. Safety

*350 mg/m² of INNO-206 contains 260mg/m² of doxorubicin equivalents. This is 3.5x the standard dose of doxorubicin.



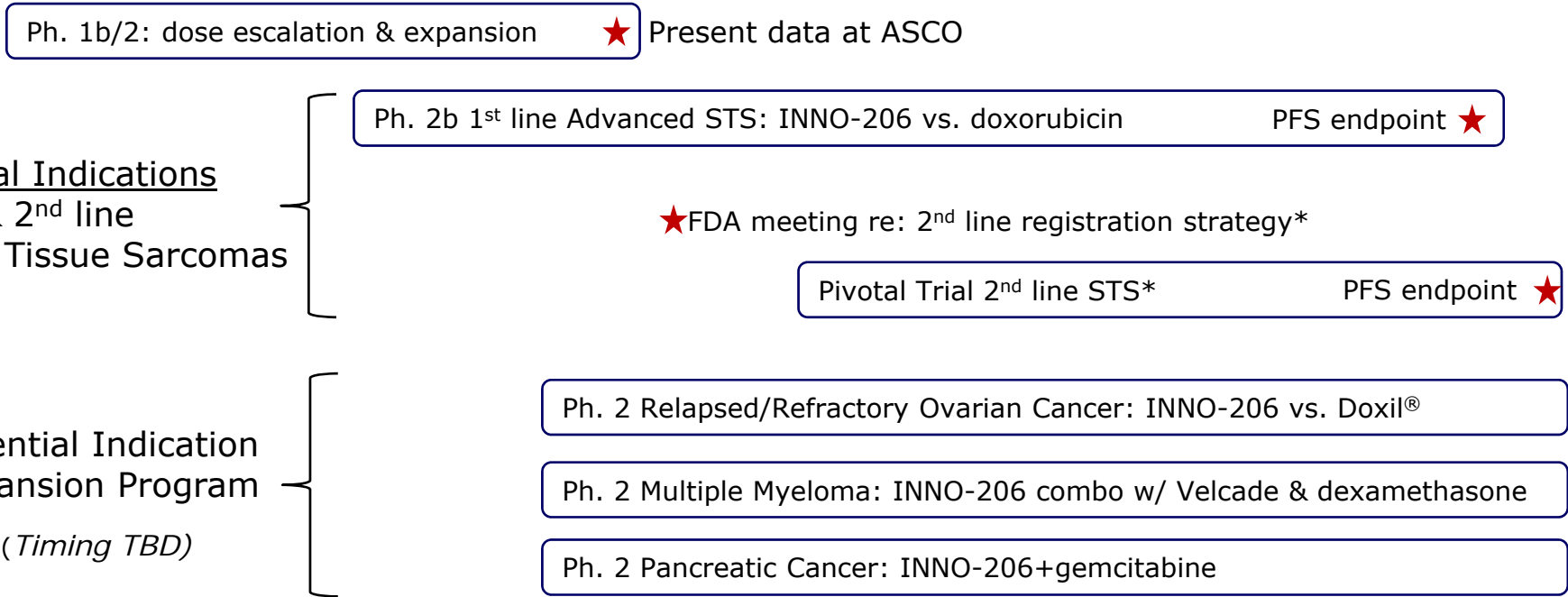
Potential Indications for INNO-206

- **Cancers where doxorubicin, Doxil®, or anthracyclines are used**
 - Soft Tissue Sarcoma
 - Ovarian Cancer
 - Doxil® is approved for 2nd line ovarian cancer
 - Multiple Myeloma
 - Doxil® approved as 2nd line treatment
 - Pancreatic Cancer
 - Small Cell Lung Cancer
 - Breast Cancer
 - Gastric Cancer
 - Triplet regimens containing an anthracycline are commonly used in advanced patients
 - Non Hodgkin's Lymphoma
 - CHOP+R is one of the most common treatment regimens

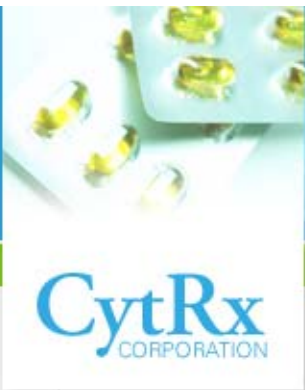


INNO-206 Development Plan

★ Key data points

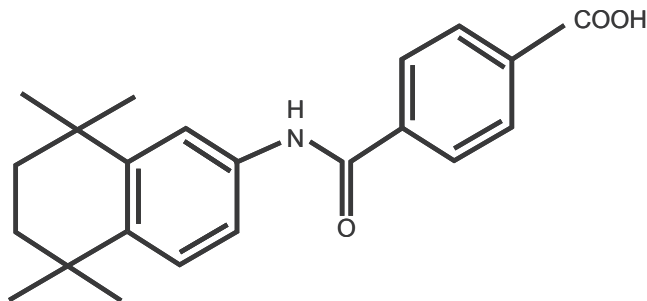


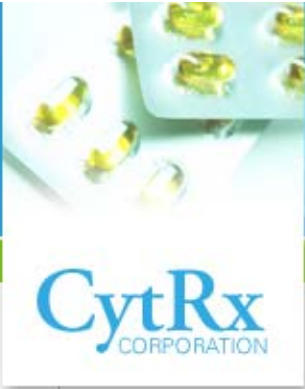
*Subject to efficacy in Ph. 1b/2 trial and agreement with the FDA on 2nd line STS registration strategy



Tamibarotene: Overview

- Tamibarotene is a novel retinoid
 - Approved and marketed in Japan since 2005 for a rare form of leukemia
 - Designed to be superior to ATRA, an approved retinoid
 - Ten-fold higher potency than ATRA; milder side effects
- CytRx has rights to North America and Europe
- CytRx is developing Tamibarotene for non-small cell lung cancer and APL





Tamibarotene for 1st-line Treatment of Non-Small Cell Lung Cancer

Lung cancer causes more deaths worldwide each year than breast, prostate and colon cancers combined.

Market Potential

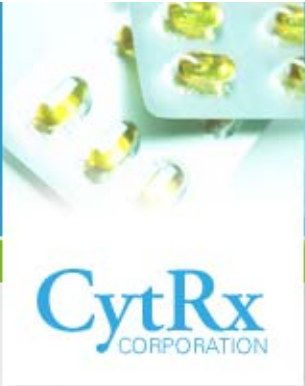
NSCLC

- \$13.3 billion market by 2015^(a)
- 60% of patients have Stage IIIb or IV at diagnosis
- In 2012, 135,696 estimated new cases in the US^(b)

Rationale for Tamibarotene in NSCLC

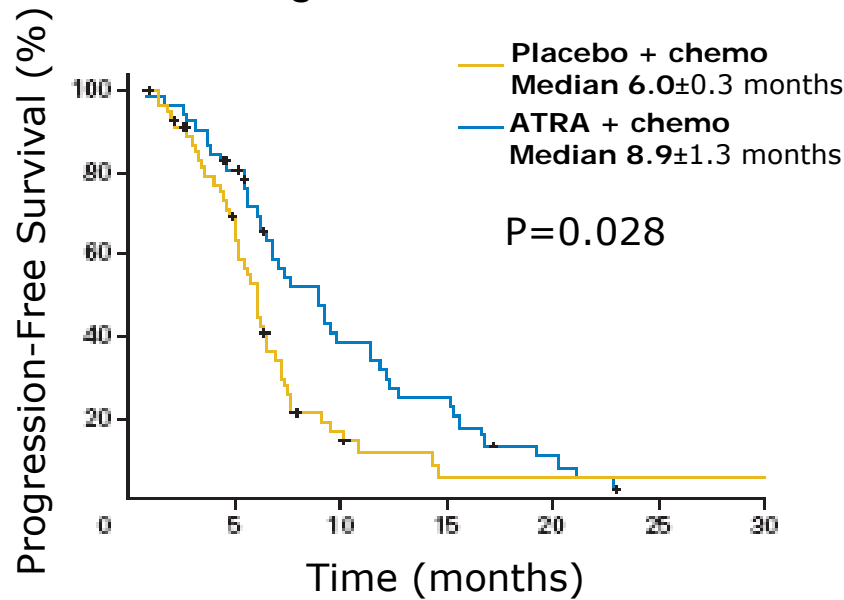
- Adding ATRA to chemo in 1st line, stage IIIb/IV NSCLC patients had statistically significant improvements
 - Tumor shrinkage doubled
 - Progression free survival increased by three months
 - Overall survival increased by 14 months
- Results published in the Journal of Clinical Oncology in July 2010

^a "Lung Cancer Therapeutics: A Global Strategic Business Report" by Global Industry Analysts, June 2009; ^b American Cancer Society

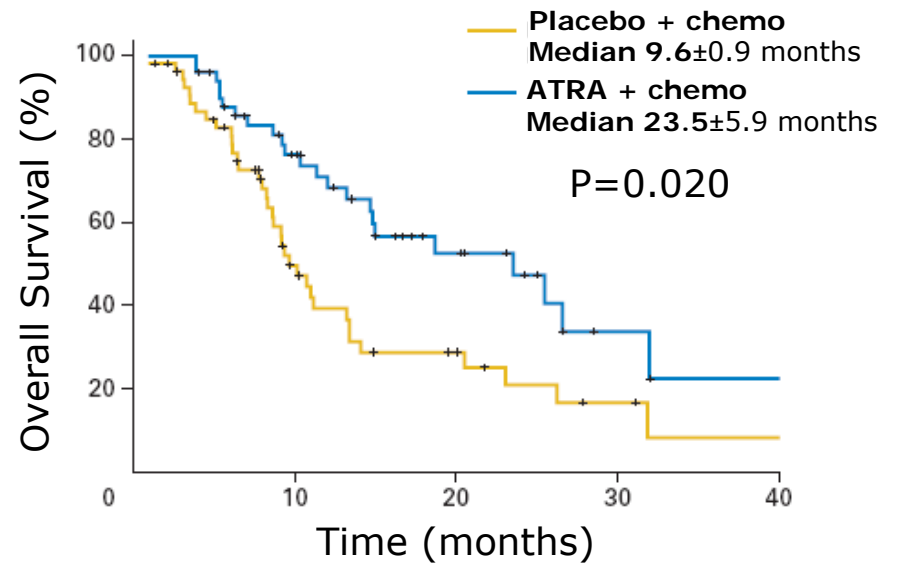


ATRA + chemo Improves Response Rate, PFS and OS in Stages IIIB and IV NSCLC

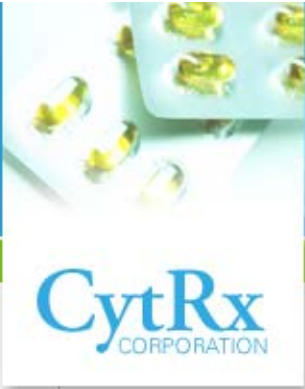
Progression-Free Survival



Overall Survival

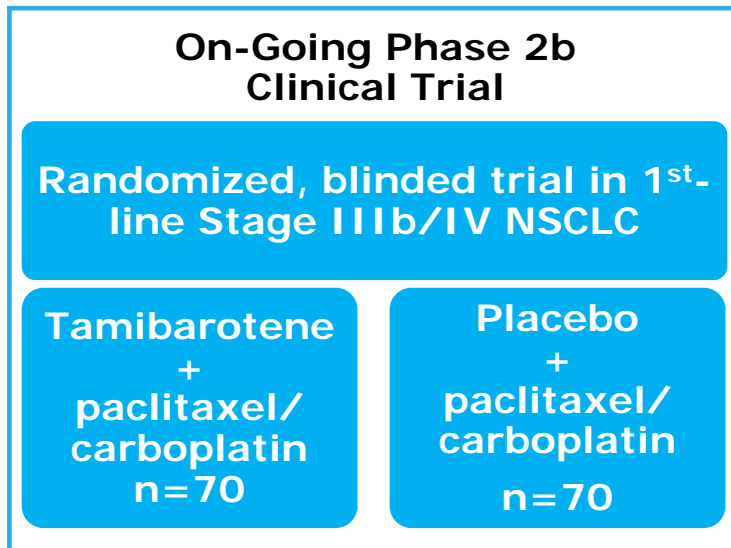


Treatment	No. of Responses	Overall Response Rate (%CR + PR)	Univariate			Multivariate		
			HR	95% CI	P	HR	95% CI	P
Placebo + Chemo	14/55	25.4	2.20	1.3 to 3.7	0.001	3.50	1.5 to 8.0	0.003
ATRA + Chemo	29/52	55.8						



Tamibarotene Added to Paclitaxel and Platinum Chemotherapy for NSCLC

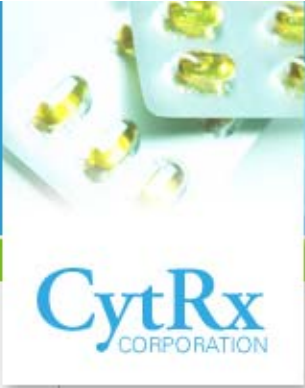
Phase 2b Principal Investigator is Dr. Oscar Arrieta, Head of Thoracic Oncology at the National Cancer Institute in Mexico



Primary endpoint:
Progression Free Survival

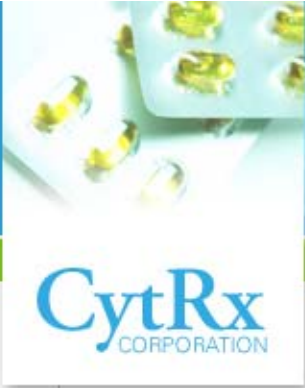
Secondary endpoints:
Response rate
Overall survival
RAR beta expression (potential biomarker for responders)

Patients include both squamous and adenocarcinoma NSCLC



Bafetinib Overview

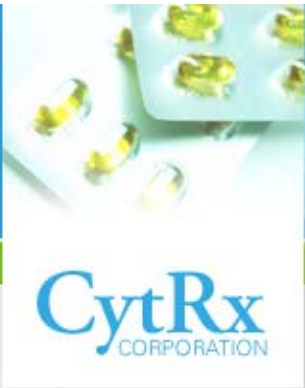
- **Bafetinib is a targeted kinase inhibitor**
 - Key differentiator is potent inhibition Lyn and Fyn kinases
 - Lyn and Fyn kinases are over-expressed in both solid and hematological cancers
- **Phase 2 trial on-going in refractory/relapsed B-CLL**
 - Prior Phase 1 trial in leukemia completed
- **CytRx has worldwide rights, excluding Japan**
 - Discovered by Nippon Shinyaku
- **CytRx plans to partner bafetinib following the Phase 2 trial**



ENABLE Phase 2 Trial: *Effectiveness in B-Cell Lymphocytic Leukemia*

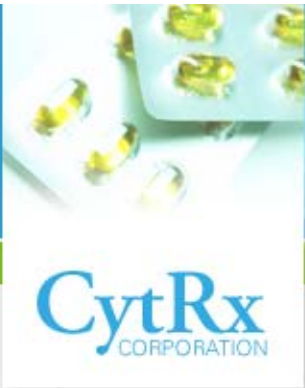
Phase 2 PI is Dr. Tapan Kadia from the MD Anderson Cancer Center

- Phase 2 proof-of-concept trial in B-cell CLL
 - Treating patients that have failed 1st line therapy
 - Study will evaluate safety and activity of bafetinib
- Clinical sites: MD Anderson, City of Hope Cancer Center (Los Angeles) and US Oncology, San Antonio
- Phase 2 data was presented by Dr. Kadia at ASH Meeting in December 2011



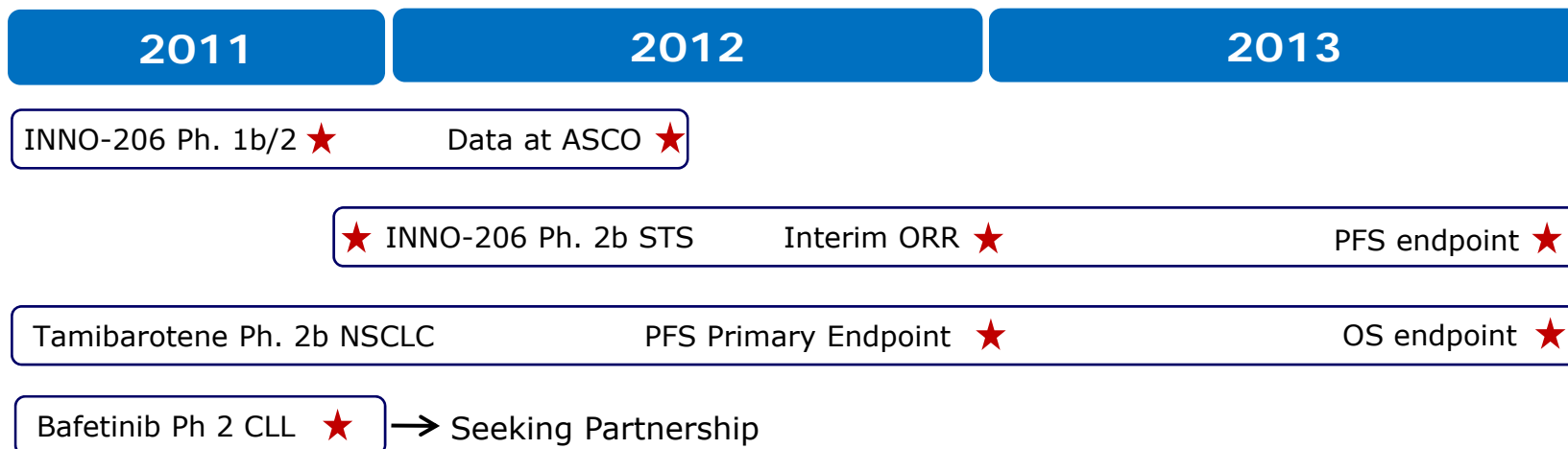
ENABLE Phase 2 Trial Results

- Enrolled 18 advanced stage patients with poor prognosis
 - Median number of prior therapies: 3 (range:1-6)
 - 14 of 18 (78%) had unfavorable cytogenetics
- **Preliminary Activity** (12 evaluable patients)
 - 6 of 12 (50%) had nodal response ($\geq 30\%$ shrinkage of lymph nodes and/or spleen)
 - 4 of 12 (33%) had stable disease
 - 2 of 12 (17%) had progressive disease
- **Preliminary Safety**
 - No Grade 4 Adverse Events; One Grade 3 AE – elevated liver enzymes which resolved after stopping therapy
 - Other drug-related AEs include grade 1 or 2 elevated liver enzymes, fatigue and nausea

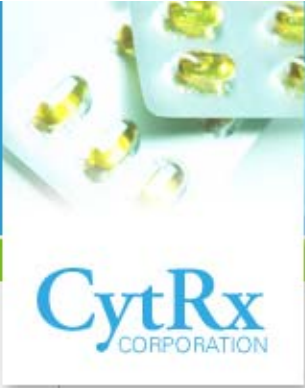


Development Milestones

★ Key inflection points



- Complete INNO-206 Phase 1b/2 clinical trial in solid tumors, primarily STS
- Commenced INNO-206 Phase 2b clinical trial in soft tissue sarcoma
- Present INNO-206 Phase 1b/2 data at ASCO Meeting in June 2012
- Completed Bafetinib Phase 2 trial in B-CLL
- Bafetinib Phase 2 results in B-CLL presented at ASH Meeting in December 2011



Investment Highlights

- Pure-play oncology company with 3 compounds in mid-stage clinical development
- Platform technology can be used with many chemotherapies to dramatically improve their performance
- INNO-206 has shown efficacy in clinical trials and is in an international Phase 2b trial in soft tissue sarcomas
- Tamibarotene could be a breakthrough for the treatment of late stage lung cancer
- Capital to support near-term milestones
 - \$41.4 million of cash (9/30/11)
 - No debt