Processa Pharmaceuticals

# Next Generation Chemotherapy

**David Young, PharmD, PhD**
**President and CEO**

**Biotech Showcase**
**January 11, 2023**

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# Investment Opportunity with De-Risked Next Generation Chemotherapy

| | |
|---|---|
| *Successful, Experienced Team* | • Leaders of the Development Team were involved with 2 FDA contracts where Regulatory Science was conceived<br>• Development Team was involved with > 30 FDA approvals for indications across FDA<br>• Management Team was involved with Billion-Dollar exits (Questcor - $5.7 B & Gentium - $1.0 B) |
| *Processa Regulatory Science Approach Capitalizing on Project Optimus Oncology Initiative* | • Regulatory Science became the foundation of the Processa Development Team to obtain > 30 FDA approvals for multiple types of indications over the last 32<br>• Processa capitalizes on using its Regulatory Science Approach to implement the Project Optimus Oncology Initiative in order to define the "optimal" regimen to improve the safety/efficacy profile |
| *Next Generation Chemotherapy* | • Next Generation Chemotherapy drugs were designed from the three most widely used chemotherapy drugs<br>• Next Generation drugs use Project Optimus to demonstrate improved safety/efficacy over existing drugs |
| *Substantial Market Opportunities* | • The safety/efficacy profile of each drug differentiates it from existing on-label and off-label therapy<br>• The market for each Next Generation Chemotherapy asset is greater than $1B |
| *Capital Efficient strategy* | • Processa will be advancing multiple assets to Phase 3-readiness within 24 months after funding with a low SG&A<br>• Known safety/efficacy profile with existing therapy leads to efficient clinical development |
| *Significant inflection points over the next 24 months after funding* | • Next Generation Capecitabine Phase 2B trial to define safer/more efficacious regimens will be initiated 2H2023<br>• Pancreatic cancer PCS3117 Phase 2 trial will be initiated in 2H2023 & Lung Cancer PCS11T Phase 1B trial in 2H2024<br>• Partner or out-license non-oncology assets |

# Processa Senior Management

## Management Team Involved With Billion-Dollar Exits (Questcor - $5.7 B & Gentium - $1.0 B) & Two FDA Contracts Where Regulatory Science Was Conceived

### David Young, Pharm.D, Ph.D.

President & CEO

**Joined Processa 2018**

*Former Roles*

- ✓ CSO & Independent Director, **Questcor**
- ✓ U.S. President, **AGI Therapeutics**
- ✓ CEO, **GloboMax**
- ✓ Associate Professor, **University of Maryland**
- ✓ Pharm.D., PhD, **University of S. California**

### Sian Bigora, Pharm.D.

Chief Development Officer

**Joined Processa 2018**

*Former Roles*

- ✓ VP Regulatory, **Questcor**
- ✓ VP Clinical Research, **AGI Therapeutics**
- ✓ VP Regulatory, **ICON Plc, GloboMax**
- ✓ Clinical Research Assoc., **Univ. of Maryland**
- ✓ Pharm.D., **University of Maryland**

### Michael Floyd

Chief Operating Officer

**Joined Processa 2020**

*Former Roles*

- ✓ President & CEO, **Elion Oncology**
- ✓ U.S. Project Lead, **Gentium**
- ✓ President, **Arpida**
- ✓ BSBA, **Georgetown University**

### Patrick Lin

Chief Business & Strategy Officer

**Joined Processa 2018**

*Former Roles*

- ✓ Founder and Managing Partner, **Primarius Capital**
- ✓ Robertson Stephens & Co.
- ✓ Co-Founding Partner, **E*Offering**
- ✓ MBA**, Kellogg Graduate School;** BS**, University of S. California**

### James Stanker, CPA

Chief Financial Officer

**Joined Processa 2019**

*Former Roles*

- ✓ Audit Partner, **Grant Thornton**
- ✓ CFO, **NASDAQ listed company and a privately-held life science company**
- ✓ Director/Audit Committee Chairman**, Hersperos**
- ✓ MBA, **California State University;** BS, **San Jose University**

### Wendy Guy

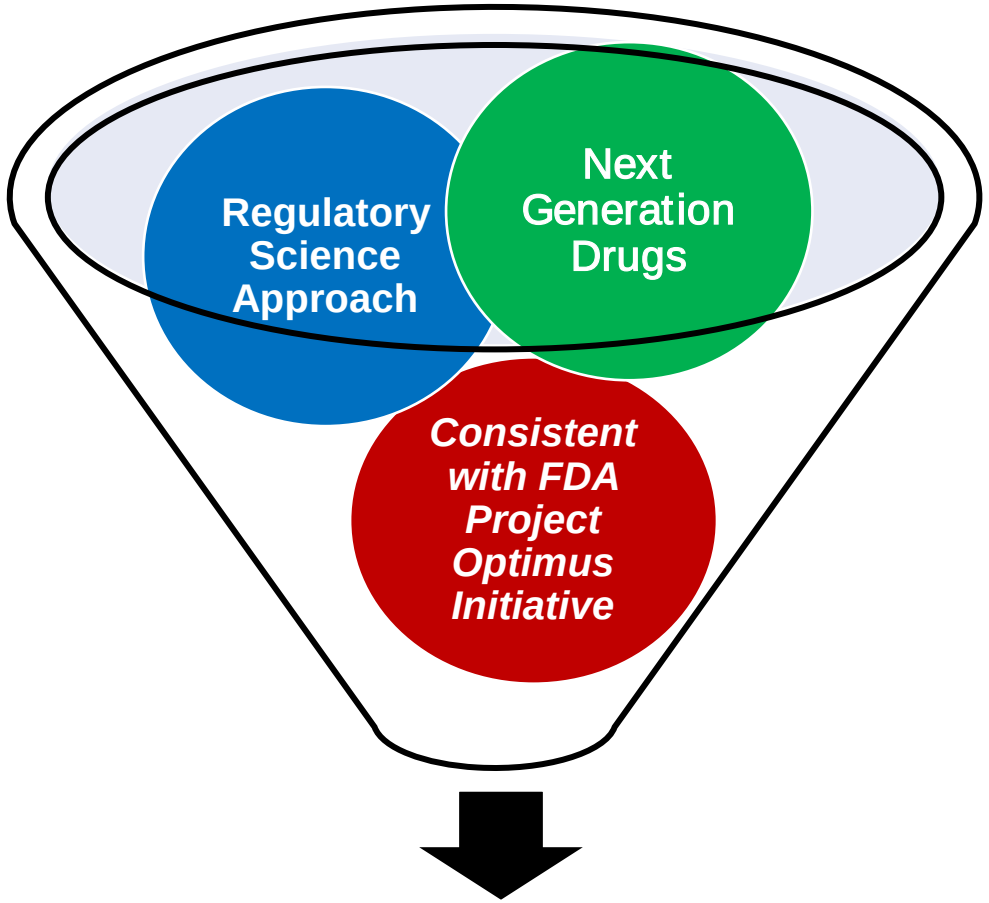
Chief Administrative Officer

**Joined Processa 2018**

*Former Roles*

- ✓ Senior Manager, Business Operations, **Questcor**
- ✓ Senior Manager, **AGI Therapeutics**
- ✓ Senior Manager, Administration, **ICON Plc, GloboMax**
- ✓ AA**, MWCC**

# Three Next Generation Chemotherapy Drugs with Routes to Approval



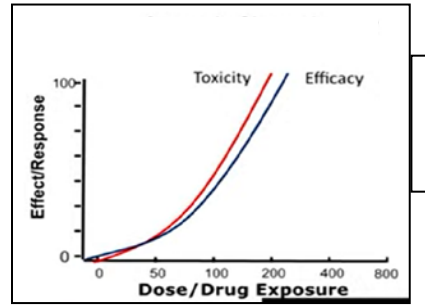

High Probability of Approval &
Capital Efficient Development

# FDA Project Optimus: Evaluate Safety & Efficacy as a Function of Drug Exposure

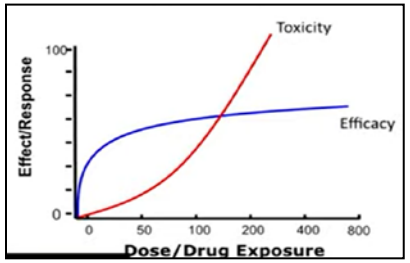
- Maximum Tolerated Dose (MTD): Historically, Used to determine efficacious dose while assuming toxicity & efficacy follow a parallel path.

- FDA Project Optimus Oncology Initiative: Evaluation of safety & efficacy in Relationship to Drug Exposure & Dosage Regimen may show toxicity and efficacy do not show a parallel path.

- Example Irinotecan vs PCS11T, Next Generation Irinotecan, in a colorectal xenograft animal model

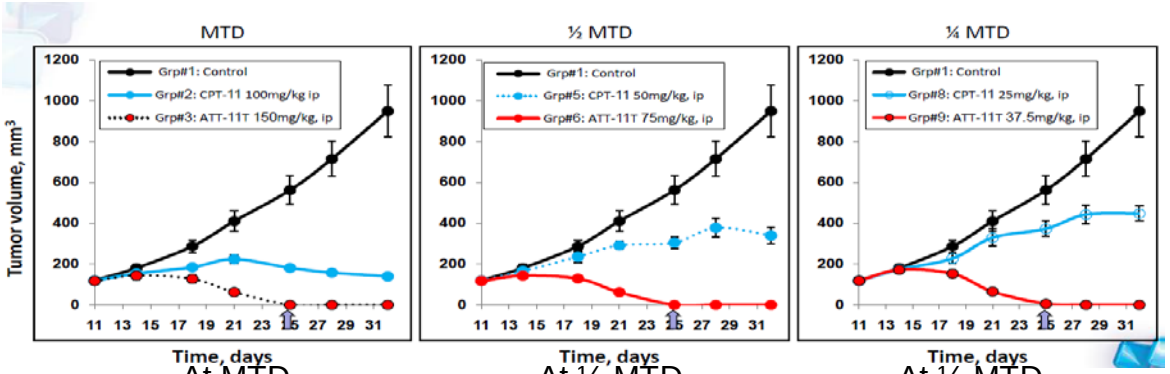



Assumption with MTD Approach




Possibility with Project Optimus

Evaluate Safety and Efficacy as a Function of Drug Exposure/Drug Regimens



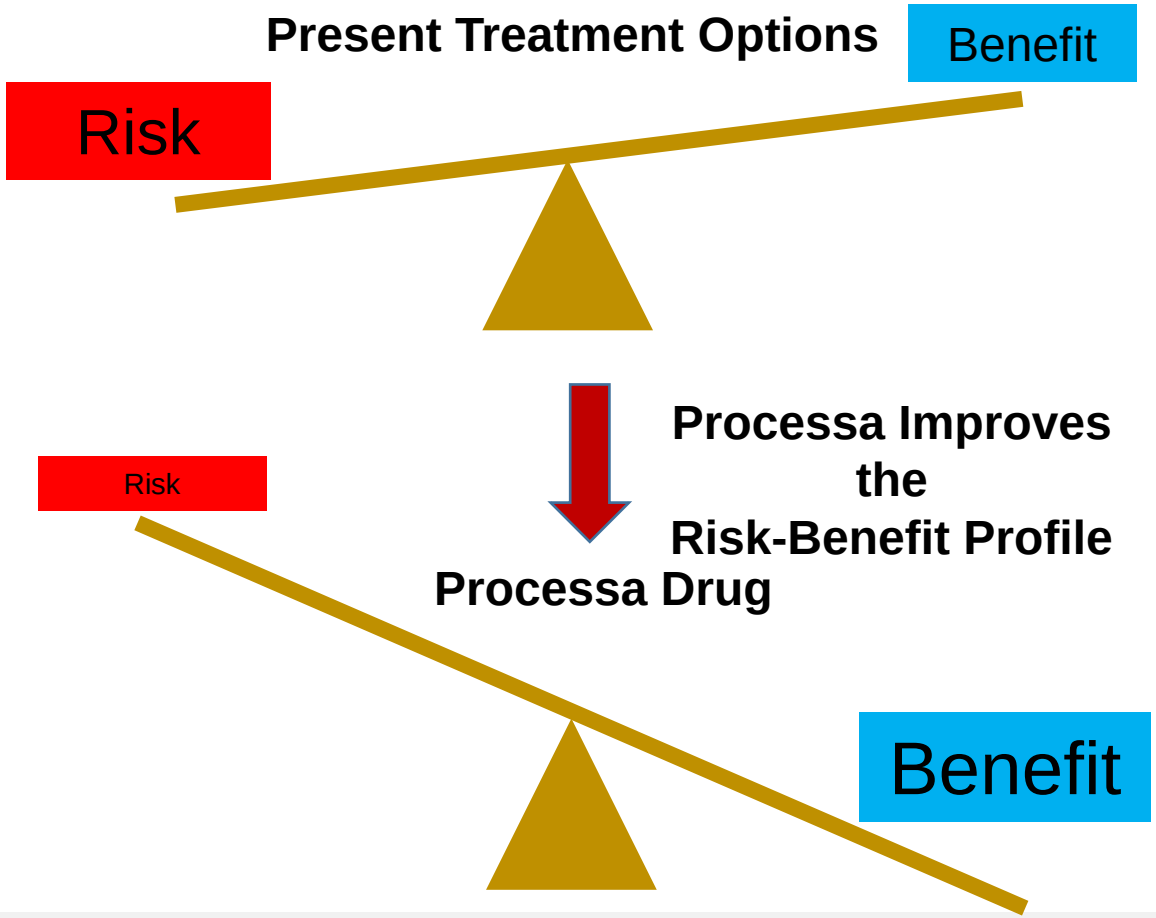

| At MTD | At ½ MTD | At ¼ MTD |
|---|---|---|
| Tumor Growth Inhibition | Tumor Growth Inhibition | Tumor Growth Inhibition |
| 100% CPT-11 | 64% CPT-11 | 53% CPT-11 |
| 100% PCS11T | 100% PCS11T | 100% PCS11T |

# Regulatory Science Approach

## Conceived from 2 FDA Contracts with the Approach Resulting In > 30 FDA Approvals For Indications Across FDA
## Risk And Benefit Are More Than Adverse Event And Efficacy Response

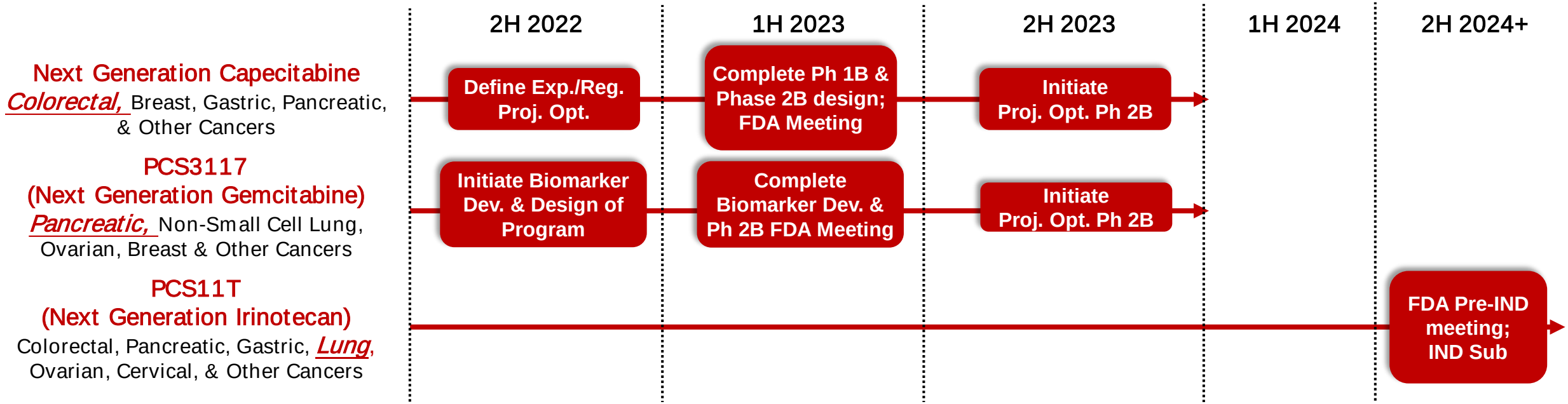
**What Influences the Risk/Benefit Balance?**

- Existing Therapy (On-Label & Off-Label)
- Clinical Study Design for Best Risk-Benefit Outcome
- Regulators' View of Clinical Design & Results
- Regulators' View of Acceptable Risk/Benefit Balance

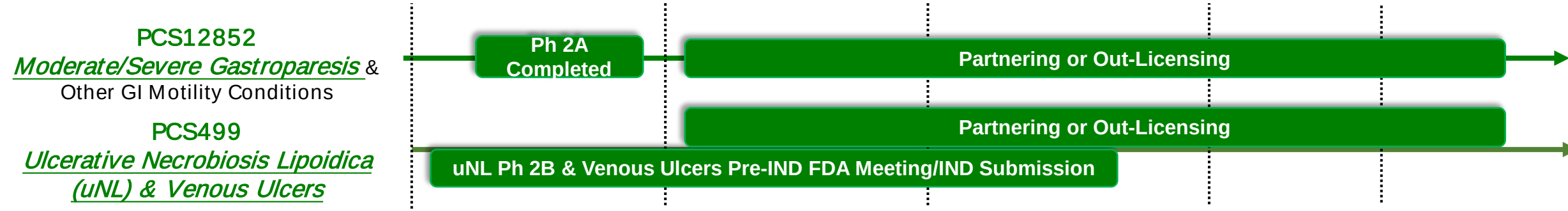


# Processa Pipeline of Drugs, Each with > $1B Market

## Next Generation Chemotherapy Improving Safety and Efficacy




## Candidates for Monetization by Partnering or Out-Licensing



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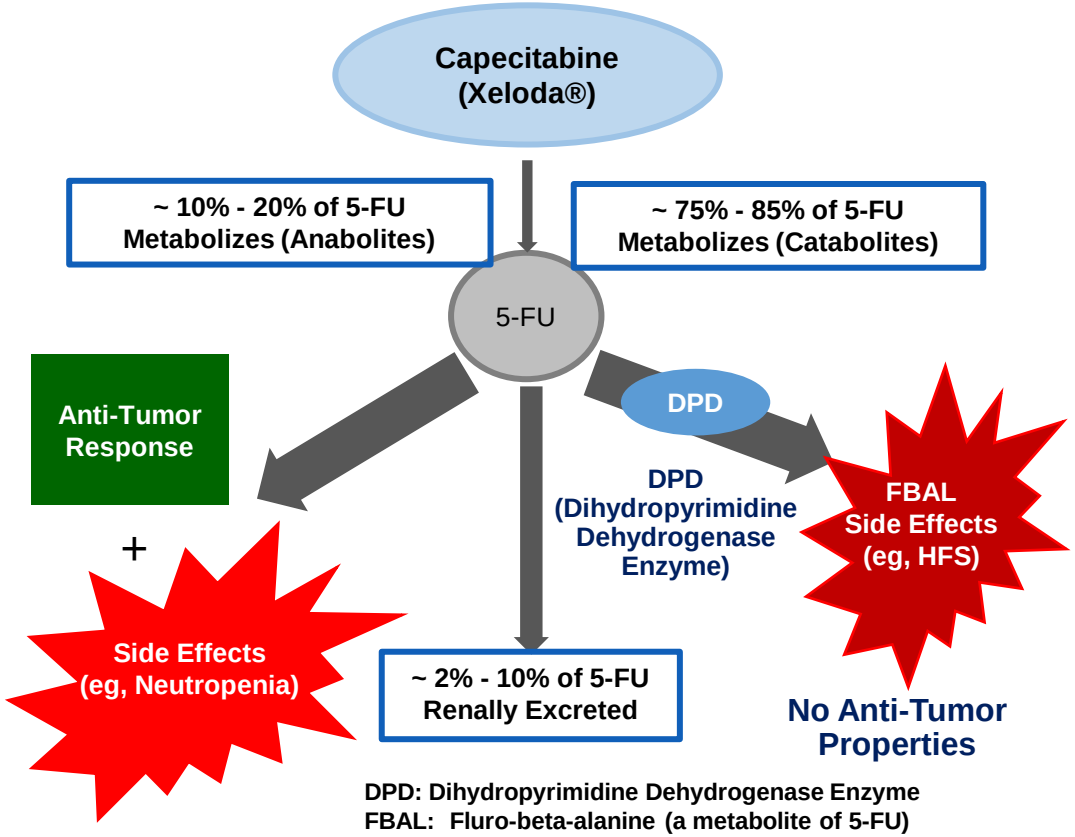
# Next Generation Capecitabine (NGC) (Combination Regimens of PCS6422 and Capecitabine)

## ***Colorectal Cancer***, Gastric, Breast Cancer, Pancreatic Cancer, and Other Cancers

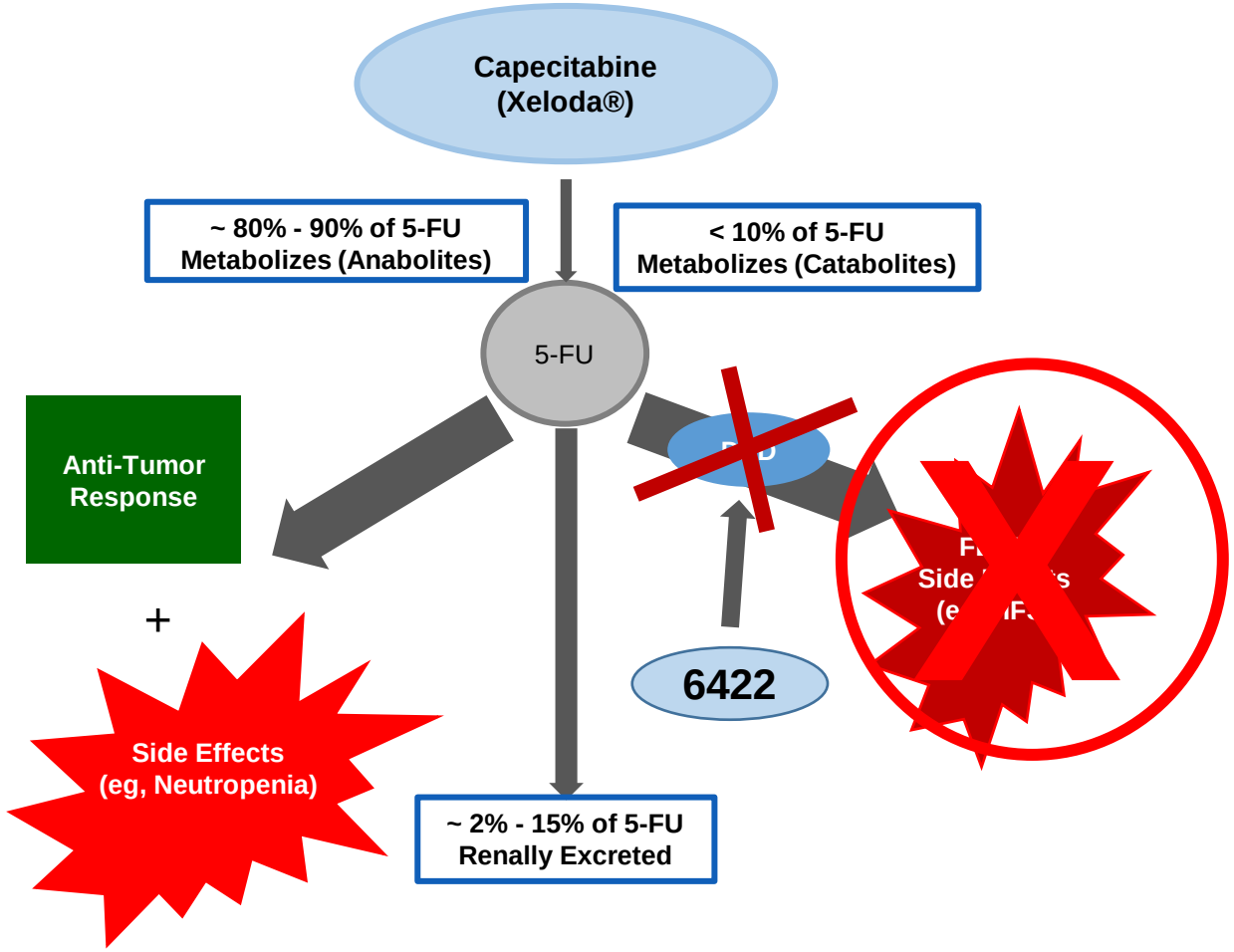
# 5-FU & Capecitabine - Most Widely Used Cancer Chemotherapy Agents

- 50% - 70% of Patients on Capecitabine Have Dose-Limiting Side Effects Requiring Change in Therapy;
- Approximately 60% Of Patients Do Not Respond Or Are Partial Responders




DPD: Dihydropyrimidine Dehydrogenase Enzyme
FBAL: Fluro-beta-alanine (a metabolite of 5-FU)
HFS: Hand-Foot-Syndrome

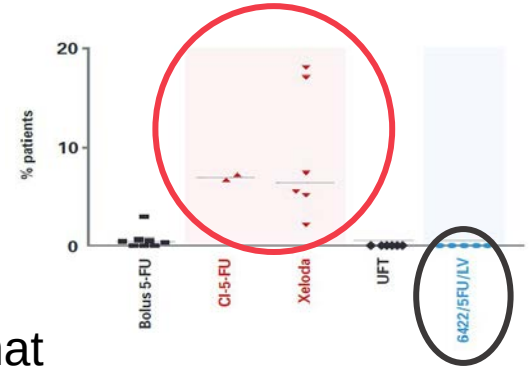
- Combining PCS6422 Regimen (Irreversibly Inhibiting DPD) With Capecitabine Regimen, The 5-FU Formed Is Only Metabolized To Anabolites



# Why Believe in NGC (PCS6422+Capecitabine): Evidence of Clinical Benefit

## ➢ PCS6422 + 5-FU Safety is Better than Existing Chemotherapy

- 50-70% of Capecitabine patients have adverse events from FBAL resulting in decreasing Capecitabine dose or stopping therapy.
- Clinical trial of the PCS6422 + 5-FU provided initial evidence that NGC will decrease FBAL adverse events.



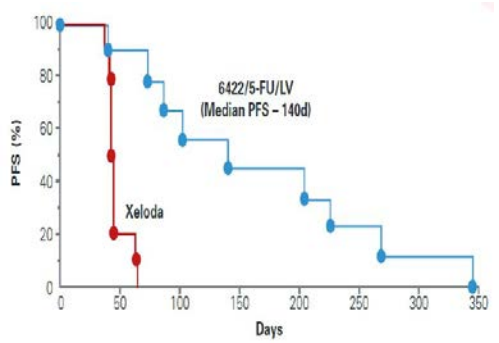

Decrease Incidence of HFS (Grade 3&4) FBAL Side Effects

*Revollo et al. 2008 Clin Cancer Res;* Masuda et al. 2017. NEJM

## ➢ PCS6422 + 5-FU Efficacy Occurred in Patients Not Responding to Capecitabine

- ~60% of patients do not respond or are partial responders to Capecitabine.
- Clinical trial evidence in 9 patients that NGC (when 6422 is administered before 5-FU) extends progression free survival (PFS) in patients who do not respond to Capecitabine and increases PFS in those patients who do respond.

Lower Dose of 6422 Administered Hours Before 5-FU/LV in Capecitabine-Resistant Patients




Kaplan-Meier Plot Shows PCS6422 + 5-FU Efficacy Occurred in Patients not Responding to Capecitabine

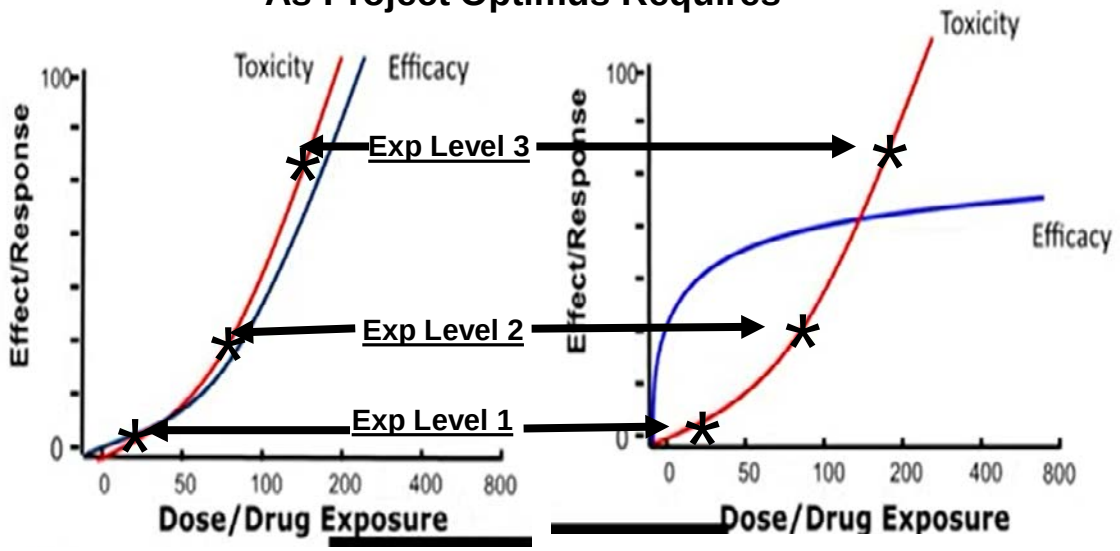
5-FU = 5-Fluoruracil; LV = Leucovorin; PFS = Progression Free Survival, SD = Stable Disease; PR = Partial Response; PD = Progressive Disease

# NGC Project Optimus: Evaluate Safety as a Function of Drug Exposure and 6422 Regimens in Phase 1B Trial

| Phase 1B Trial | DLTs from Anabolites (e.g., Neutropenia) | AEs, DLTs from FBAL (e.g., HFS)** |
|---|---|---|
| 5-FU Exposure Level 1 (NGC Regimen A) | 0/1 | 0/1 |
| 5-FU Exposure Level 2 (NGC Regimen B) | 0/5 | 0/5 |
| 5-FU Exposure Level 3 (NGC Regimen C) | 2/5 (Exposure Limiting) | 0/5 |

**50%-70% of patients on approved Capecitabine have adverse events from FBAL

**Evaluate Safety vs Exposure As Project Optimus Requires**




- Evaluated timeline of maintaining the potency of NGC to ~ 50-times greater than approved Capecitabine.
- Evaluated relationship between dose-limiting toxicities (DLTs)/adverse events and 5-FU exposure; <10% of approved Capecitabine dose administered with PCS6422 causes DLTs.
- **Safe 5-FU exposure levels (and NGC regimens) identified for evaluation in the Phase 2B safety/efficacy study; exposure levels and NGC regimens that cause DLTs have also been identified.**

# NGC Project Optimus Objectives in 2023

## Need To Evaluate Safety And Efficacy As A Function Of Drug Exposure & NGC Regimens In Phase 2B Trial

- 5-FU exposure and NGC regimens have been identified for a Phase 2B trial which will provide the exposure range required for FDA's Project Optimus Oncology Initiative
- Discuss with FDA the development program and Phase 2B trial design in relation to Project Optimus in 1H2023
- Evaluate additional regulatory approaches to expedite the development program
- Evaluate current studies to determine the potential for new intellectual property and life extension

Initiate Phase 2B trial in 2H2023

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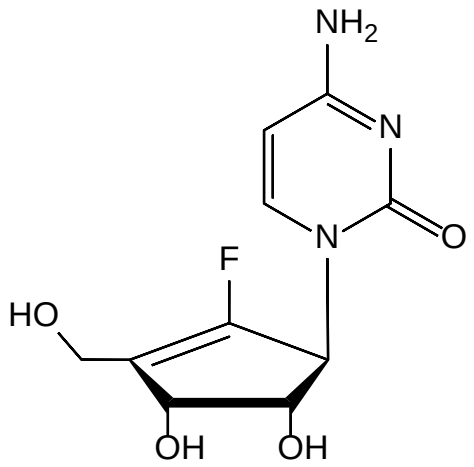
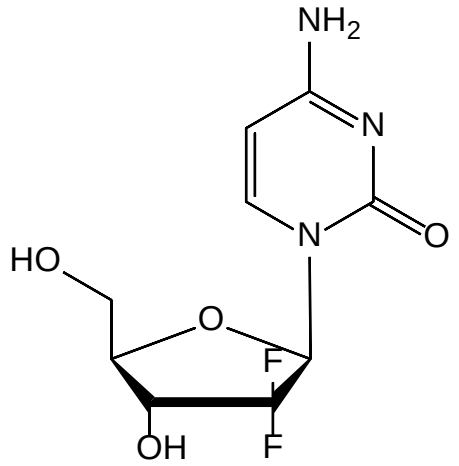
# PCS3117

## *Pancreatic Cancer*, Adjuvant Therapy for Pancreatic Cancer, Biliary Cancer, Non-Small Cell Lung, and Other Cancers

# PCS3117: Next Generation Gemcitabine




PCS3117
Oral Administration
(Cytosine + Ribose Analog)

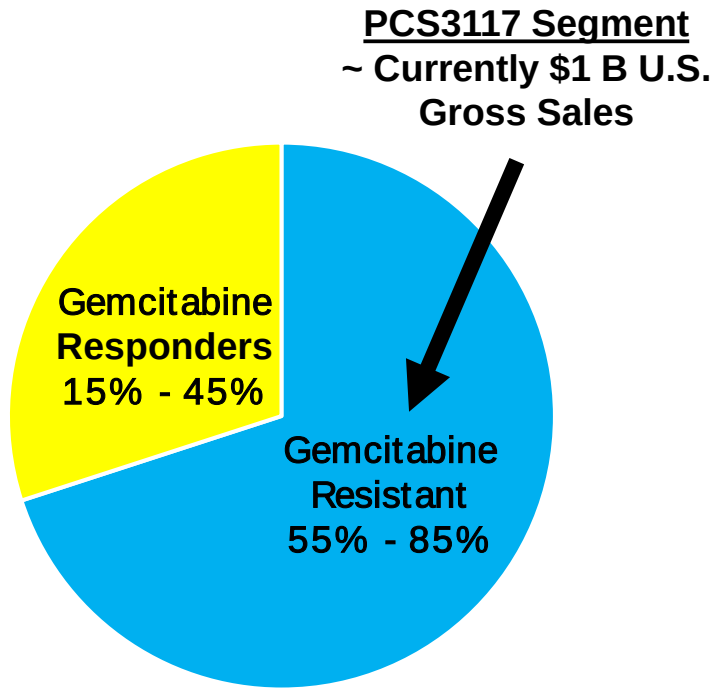



Gemcitabine (dFdC)
IV Administration
(Cytosine + F,F-Deoxyribose)

- **<u>PCS3117 is the "Next Generation" of FDA-approved Gemcitabine.</u>**
  - PCS3117 is more efficacious than Gemcitabine with a similar safety profile.
  - PCS3117 has a similar structure to Gemcitabine but is activated through a different pathway and causes cancer cell apoptosis in more ways than Gemcitabine.
- PCS3117 already has FDA Orphan Designation for the treatment of pancreatic cancer and the drug development “roadmaps” have been defined.

# PCS3117 Opportunity

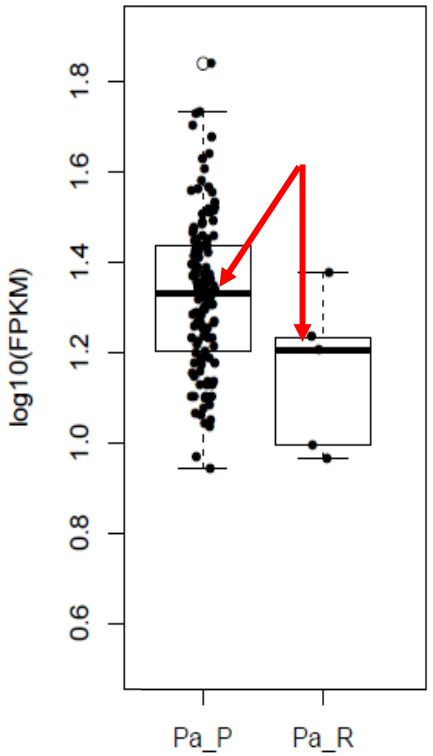
- Gemcitabine is the most widely used chemotherapeutic agent used to treat pancreatic, non-small cell lung, and biliary cancer.
- U.S. pancreatic cancer Gemcitabine sales: ~ $1 B; U.S. market for all cancer/indications is > $1.5 B .
- 55% - 85% of patients are inherently resistant to Gemcitabine or acquire resistance.
- **Initial target indications are:**
  - **First-line therapy for post-surgical recurrent pancreatic cancer after FOLFIRINOX adjuvant chemotherapy.**
  - **First-line treatment in pancreatic cancer patients where biomarkers identify resistance to Gemcitabine.**
  - **Second-line treatment of pancreatic cancer with or without biomarkers.**



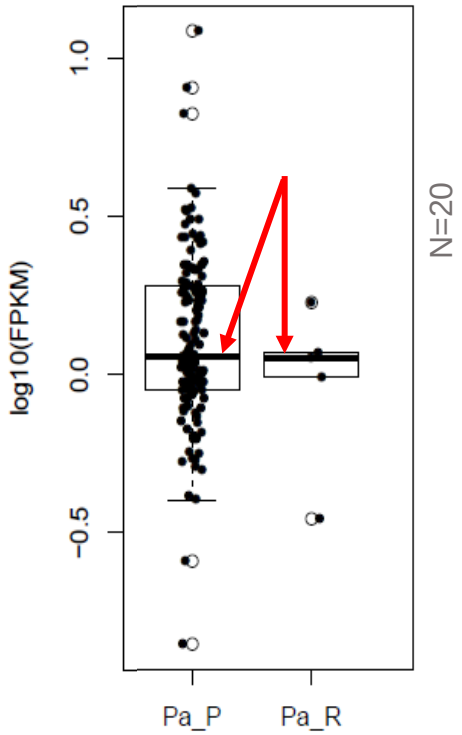
# PCS3117 - UCK2 Level as a Predictive Biomarker

## Higher UCK2 Expressions In Human Pancreatic Tumors Compared To Normal Tissue

**UCK2 Expression**
**(Enzyme Activating PCS3117)**

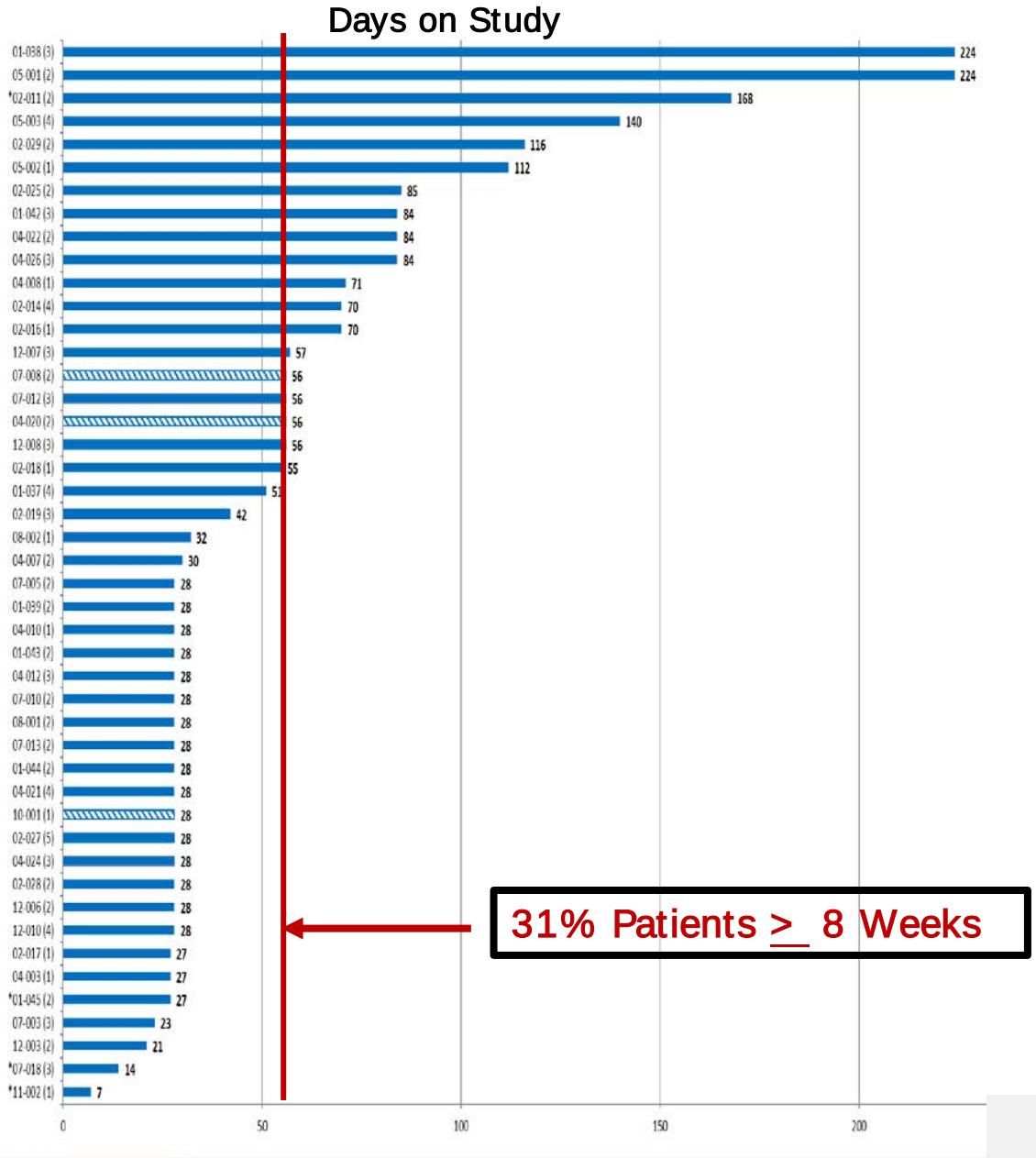



**dCK Expression**
**(Enzyme Activating Gemcitabine)**




Pa_P : Pancreatic Tumor, N=134
Pa_R : Normal pancreas, N=5
(Data from Univ. of Toronto)

# PCS3117 Prior Evidence of Clinical Safety and Efficacy in Pancreatic Cancer Patients




- PCS3117 monotherapy Phase 2A trial as second or third-line therapy in patients with progressive metastatic pancreatic cancer after 1-5 previous therapies of chemotherapy (93% (40/43) refractory to Gemcitabine).
  - **31 % (14 patients) had progression-free survival (PFS) for 8 weeks or more.**
  - 12% (5 patients) had stable disease for more than 4 months.
  - One patient had a tumor reduction of 40% after 28 days of treatment.
  - Mild to moderate adverse events were reported with a better overall safety profile than Gemcitabine.

# PCS3117 Milestones in 2023

- Complete the evaluation of potential biomarkers in pancreatic cancer patients to identify potential responders to PCS3117 as 1st line therapy prior to treatment using a Precision Medicine approach in 1H2023.
- Complete the evaluation of potential biomarkers in pancreatic cancer patients to identify potential non-responders to Gemcitabine.
- Meet with FDA to discuss pancreatic cancer development program in 1H2023.
- Submit Phase 2B protocol to existing IND mid-2023.

Initiate Phase 2B trial in 2H2023

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# PCS11T

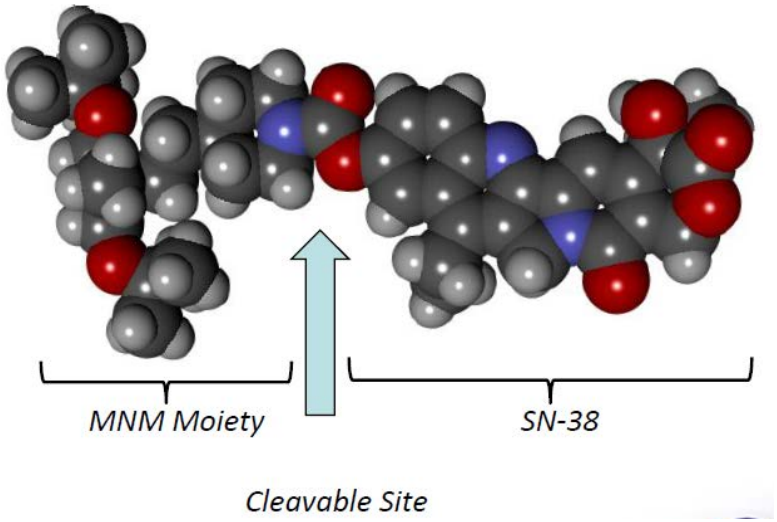
## Colorectal, *Lung*, Pancreatic, Cervical and Other Cancers

# PCS11T (Next Generation Irinotecan): Lipophilic Prodrug of SN-38 (Irinotecan Active Metabolite)

- Pro-drug of SN-38 linking SN-38 to a molecular nano-motor (MNM), a proprietary compound, which interacts with cell membranes **preferentially accumulating in the membrane of tumor cells and the tumor core more than normal cells.**

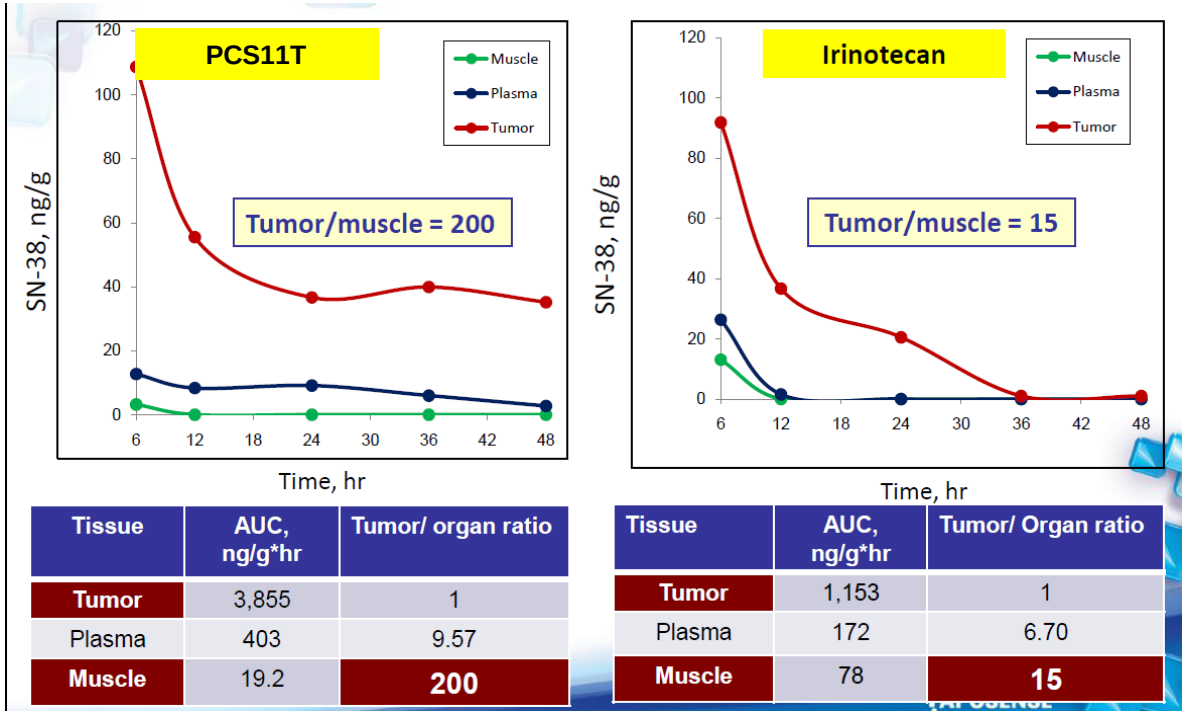
- Given the PCS11T specificity for cancer cells, upon approval it is **unlikely that PCS11T will have the BlackBox diarrhea warning that Irinotecan has.**

- **Irinotecan sales prior to generics was > $1B.**



# Importance of Regulatory Science and Project Optimus for PCS11T, Next Generation Irinotecan

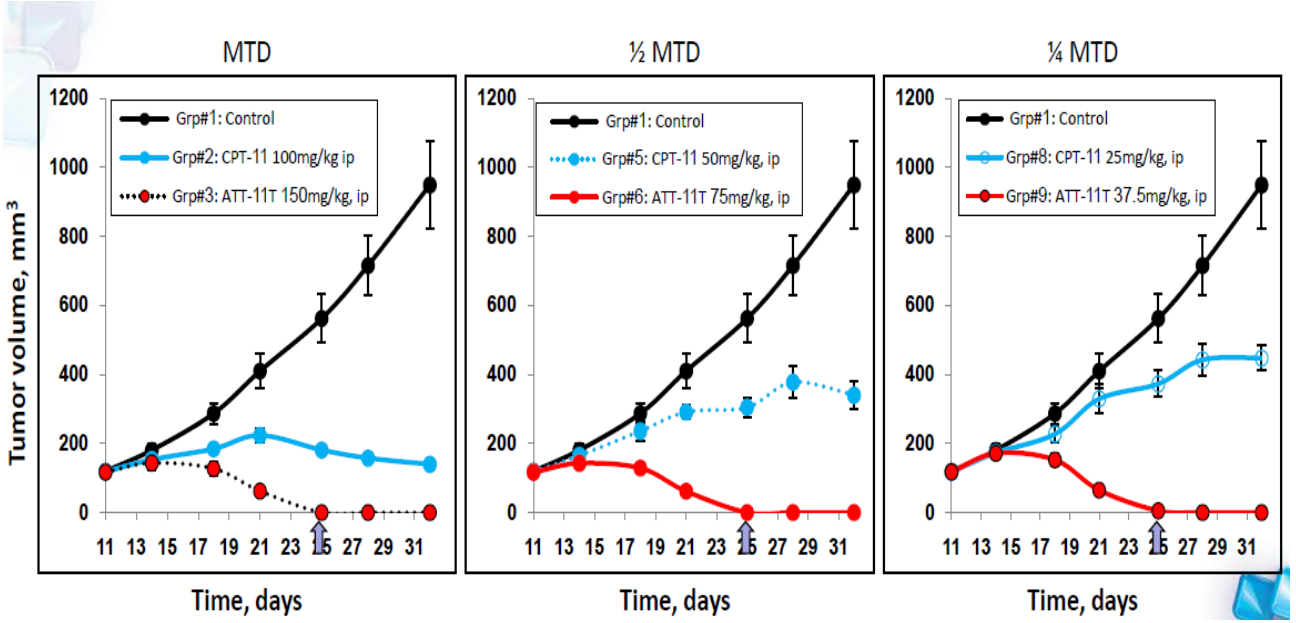
## Tumor-Bearing Mice Had 200x Higher Drug In Tumor vs Muscle Compared To 15x With Irinotecan




| Tissue | AUC, ng/g*hr | Tumor/ organ ratio |
|---|---|---|
| **Tumor** | 3,855 | 1 |
| Plasma | 403 | 9.57 |
| **Muscle** | 19.2 | **200** |

| Tissue | AUC, ng/g*hr | Tumor/ Organ ratio |
|---|---|---|
| **Tumor** | 1,153 | 1 |
| Plasma | 172 | 6.70 |
| **Muscle** | 78 | **15** |

## Efficacy Maintained at Lower Doses of PCS11T When Compared to Irinotecan in SW620 Colorectal Cancer Xenograft Model




At MTD
Tumor Growth Inhibition
100% CPT-11
100% PCS11T

At ½ MTD
Tumor Growth Inhibition
64% CPT-11
100% PCS11T

At ¼ MTD
Tumor Growth Inhibition
53% CPT-11
100% PCS11T

# PCS11T Milestones in 2023

- Drug Substance manufacturing site has been selected and Drug Product manufacturing sites are being evaluated.
- Drug development “roadmaps” are being developed for lung, pancreatic, colorectal, and other potential cancers.
- Complete manufacturing of Drug Substance and Drug Product.

Initiate IND Enabling Toxicology Studies in 2H2023

# 2022 Key Accomplishments and 2023 Anticipated Key Events

| Next Generation Treatment | 2022 Key Accomplishments | 2023 Anticipated Key Events |
|---|---|---|
| Next Generation Capecitabine (NGC) | ✓ Identified DPD inhibition and de novo formation timeline.<br>✓ Identified safe and dose limiting 5-FU exposure levels and NGC dosage regimens. | • Meet with FDA on NGC Project Optimus plan.<br>• Initiate Phase 2B trial with multiple NGC regimens to evaluate relationship of 5-FU exposure to efficacy. |
| PCS3117 | ✓ Identified clinical development program. | • Complete biomarker analysis.<br>• Meet with FDA on programs.<br>• Initiate Phase 2B trial. |
| PCS11T | ✓ Identified sites for pre-IND CMC, tox studies. | • Initiate IND enabling studies. |
| | | |
| PCS12852 | ✓ Completed Phase 2A study.<br>✓ Determined safe dose in gastroparesis that improves symptoms associated with gastroparesis. | • Submit Phase 2B protocol to IND.<br>• Partner or out-license. |
| PCS499 | ✓ Enrolled additional patients for uNL<br>✓ Initiated development strategy in Venous Ulcers. | • Complete interim analysis.<br>• Meet with FDA on Phase 2B venous ulcers IND<br>• Partner or out-license. |

# Intellectual Property and Market Exclusivity

| Program | Description of IP | Overview of Patent Expiration Dates and Market Exclusivity |
|---|---|---|
| PCS6422 | Existing Patents, Provisional Patents<br>To Be Submitted Patents<br>Potential FDA Market Exclusivity | 2042<br>2043<br>7 Years after approval |
| PCS3117 | Existing Patents, Provisional Patents<br>To Be Submitted Patents<br>Potential FDA Market Exclusivity | 2034<br>2043<br>7 Years after approval |
| PCS11T | Existing Patents, Provisional Patents<br>To Be Submitted Patents<br>Potential FDA Market Exclusivity | 2031<br>2043<br>7 Years after approval |
| | | |
| PCS12852 | Existing Patents, Provisional Patents<br>To Be Submitted Patents<br>Potential FDA Market Exclusivity | 2037<br>N/A<br>5 Years |
| PCS499 | Existing Patents, Provisional Patents<br>To Be Submitted Patents<br>Potential FDA Market Exclusivity | 2034<br>N/A<br>5-7 Years after approval |

# Investment Opportunity with De-Risked Next Generation Chemotherapy

| | |
|---|---|
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# Backup Slides

# PCS12852 & PCS499

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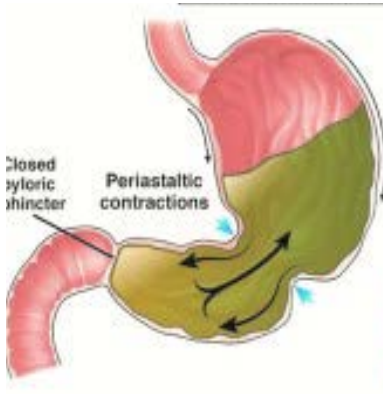
# PCS12852

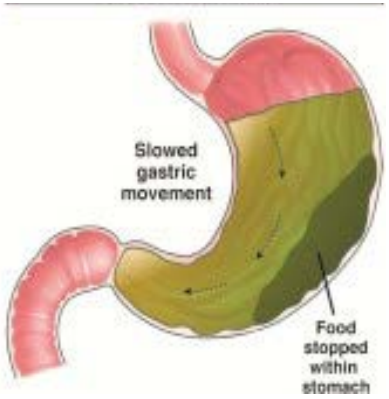
## *Gastroparesis*, Other GI Motility Conditions

# Gastroparesis

Normal Gastric Emptying




Gastroparesis




<u>Gastroparesis Symptoms</u>

Mild – Severe:

- Heartburn, too much bloating, belching

Moderate – Severe:

- Feeling full soon after starting a meal or long after eating a meal
- Nausea
- Vomiting
- Upper abdominal pain
- Early satiety

- Target Indication:
  - Treatment of moderate to severe gastroparesis
- Target Claims:
  - Improves gastric emptying rate and the symptoms associated with moderate to severe gastroparesis

# Treatment of Gastroparesis (> $1.5B Market)

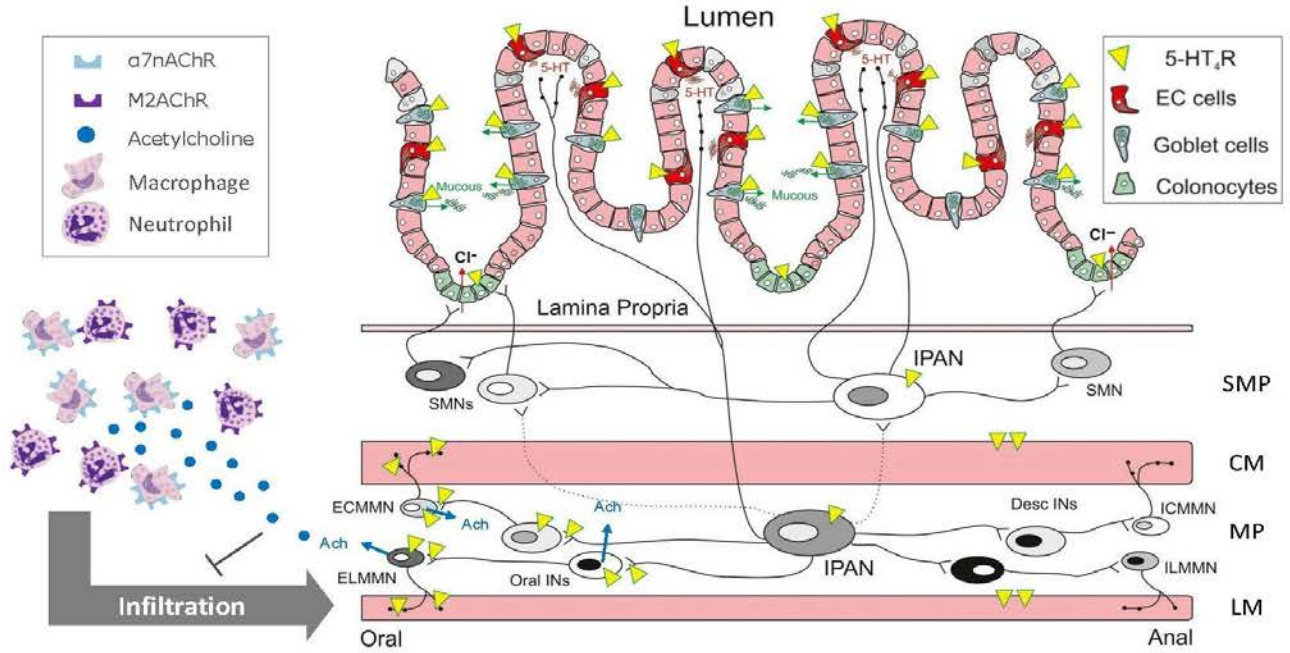
- Existing FDA approved drugs and off-labeled prescribed drugs are mainly used for the treatment of diabetic gastroparesis
- All these drugs have a poor side effect profile limiting their use
- Present market size for gastroparesis is estimated to be over $1.5B

| | PCS12852 | Other 5HT4 Drug (e.g., Cisapride, Prucalopride, Mosapride) | Dopamine D2 Antagonist (.e.g,, Metoclopramide) |
|---|---|---|---|
| Target Population | • Potentially all gastroparesis patients (e.g., diabetic, idiopathic) | • Diabetic gastroparesis patients | • Diabetic gastroparesis patients |
| Binding | • Specific & potent 5HT4 receptor binding | • Less specific binding to 5HT4 than 12852<br>• Less potent than 12852 | • Binds to Dopamine D2 receptors |
| Side Effects | • No serious side effects in clinical studies to date | • Serious cardiovascular side effects (e.g., cisapride removed from market)<br>• Suicidal ideation (e.g., prucalopride) | • Black Box Warning serious neurological side effects, Side effects require limited use |
| Efficacy | • Increase gastric emptying rate in patients with constipation | • Increase gastric emptying rate<br>• Successful treatment demonstrated | • Only drug FDA approved for treatment of gastroparesis |

# PCS12852: 5-HT4 Receptor Agonist - Wide Range of GI Motility Disorders

## Clinically Proven Mechanism of Action

- Enhancement of both GI motility & secretion via increased Ach, 5-HT, Cl-and mucus release.
- Neural anti-inflammatory effects on post-operative ileus by inhibiting macrophage and neutrophil infiltration.
- **Wide development potential to treat POGD, gastroparesis, CIC, IBS-c, OIC, and overlap syndrome.**




*Adopted from Gwynne, R.M(2019), Neurogastroenterology & Motility 31(10) and Tsuchida, Y. (2011), Gut 60, 638–647*

** Abbreviation*
POGD : postoperative gastrointestinal dysfunction
CIC : chronic idiopathic constipation
IBS-c : irritable bowel syndrome with constipation
OIC : opioid-induced constipation
Ach : acetylcholine
α7nAChR : alpha-7-nicotinic acetylcholine receptor
M2AChR : muscarinic acetylcholine receptor M2
5-HT4R : 5-hydroxytryptamine 4 receptor
EC cell : enterochromaffin cell
CM: circular muscle layer
CMMN: circular muscle motor neuron
E : excitatory
I : inhibitory
IN : interneuron
IPAN : intrinsic primary afferent neuron
LM : longitudinal muscle layer
LMMN : longitudinal muscle motor neuron
MP : myenteric plexus
SMN : secretomotor neuron
SMP : submucosal plexus

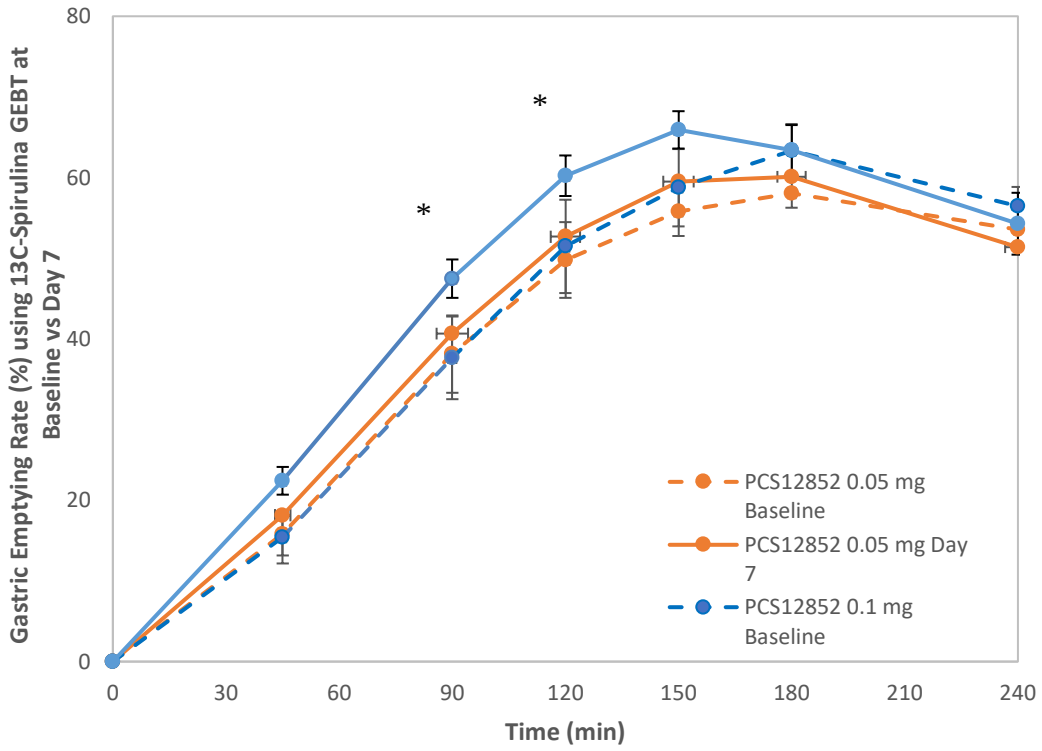
# PCS12852 Increase Gastric Emptying

## PCS12852 is a More Potent and More Selective 5HT4 Agonist than Previous 5HT4 Agonists

**Phased 2A Trial in Healthy Volunteers & Constipation Patients**

7 – 8 patients per group

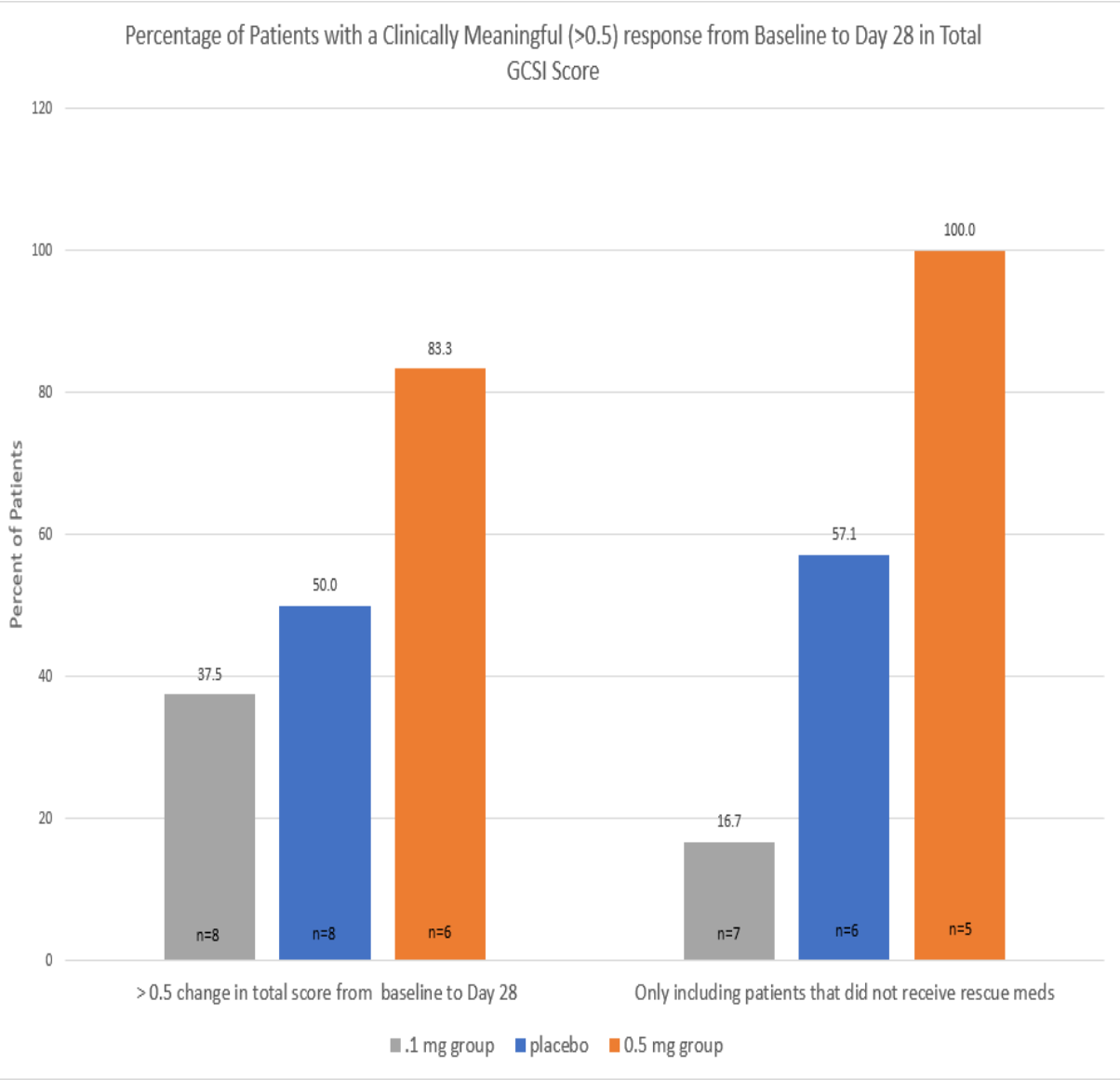
Healthy Volunteers (< 3 Bowel Movements per Wk) or Functional Constipation Patients




**U.S. Phase 2A Proof-of-Concept Trial in Gastroparesis Patients**

- Gastric Emptying Breath Test (GEBT) results demonstrated that a daily dose of 0.5 mg of PCS12852 over 28 days in 6 patients improved the gastric emptying rate compared to baseline more than a daily dose of placebo
- GEBT for 0.1 mg of PCS12852 was not significantly different from the placebo
- Adverse events were mild to moderate with no clinically significant cardiovascular, unexpected, or serious adverse events

# PCS12852 Clinically Improves Gastroparesis Symptoms




- A 0.5 mg PCS12852 daily dose over 28 days resulted in a clinically meaningful improvement in gastroparesis symptoms as defined by greater than a 0.5 reduction in the ANMS GCSI-DD score compared to baseline.

- **83.3% of the patients receiving a 0.5 mg PCS12852 daily dose had a clinically meaningful reduction in gastroparesis symptoms, greater than the 50% response rate on placebo.**

- **100% of the patients on a 0.5 mg PCS12852 daily dose who did not receive rescue medication the last week of treatment had a clinically meaningful reduction in gastroparesis symptoms, greater than the 57.1% response on placebo.**

- Over 28 days the mean gastroparesis symptoms score continually improved more for the 0.5 mg PCS12852 group than the placebo group suggesting that longer treatment than 28 days may result in greater differences in gastroparesis symptoms for a 0.5 mg daily dose of PCS12852 than for placebo.

# PCS12852 Milestones in 2023

- Meet with the FDA the 1H2023 to define the next steps of the gastroparesis development program and to agree on the design of the Phase 2B trial.
- Evaluate additional regulatory approaches to expedite the development program.
- Evaluate current studies to determine the potential for new intellectual property or life extension.
- Initiate Phase 2B trial in 2023 depending on priorities, funding, and licensing/partnering opportunities.

Candidate for Monetization by Partnering or Out-Licensing in 2023

Processa Pharmaceuticals

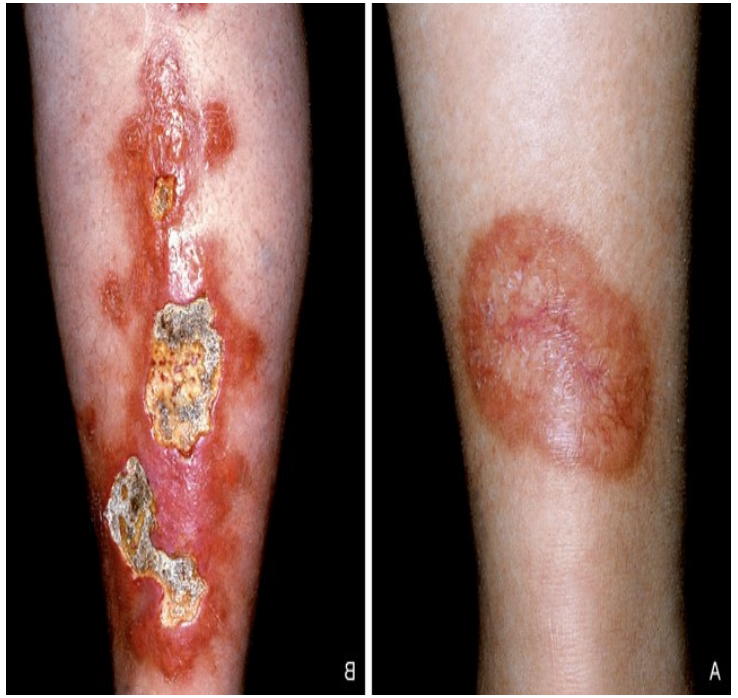
# PCS499

## *Ulcerative Necrobiosis Lipoidica (uNL), Venous Ulcers*, Other Indications

# PCS499: Would be the First Drug Approved to Treat Ulcerative Necrobiosis Lipoidica (uNL) or Any Form of NL

- Skin, tissue below the skin becomes necrotic forming open ulcers; can last from months to years with complications such as infections, amputation, and cancer.
- Literature reports a **prevalence of approximately 22,000 – 55,000** uNL patients in the U.S. will have painful ulcers occurring naturally or from contact trauma to the lesion (**Probably closer to 5,000 to 10,000 patients in U.S.**).
- Natural **complete healing or wound closure of moderate to severe ulcers during the first 1-2 years after onset occurs in less than 5% of uNL patients.**
- 60% of NL patients are diabetic resulting in the **Phase 2B trial being significantly affected by COVID.**
- **Market potential of > $1B** given the unmet medical need in this serious condition.

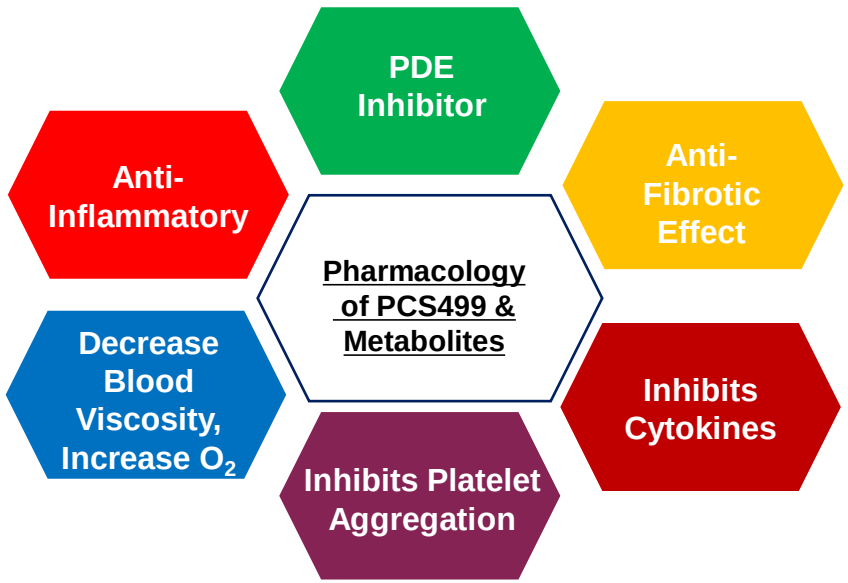
**Severe NL** **Mild NL**



# Unmet Medical Need, Evidence of Clinical Efficacy

- **No FDA approved treatment** for uNL or NL, no standard of care, all treatments are inadequate
- **Drugs have been used off-label with mixed success (e.g., pentoxifylline (PTX)); provide poor safety profile** given their limited efficacy
- **PCS499 is the deuterated analog of a major metabolite of PTX**; has identical metabolites and pharmacological targets but PK of 499 and its metabolites is different than PTX and its metabolites, resulting in a better 499 safety profile and allowing for the administration of a higher, more efficacious dose of 499
- **Pharmacological targets of 499 and its metabolites positively affect 6 of the 7 pathophysiological changes** that can occur with NL

## PCS499: Poly-Pharmacy with One Drug

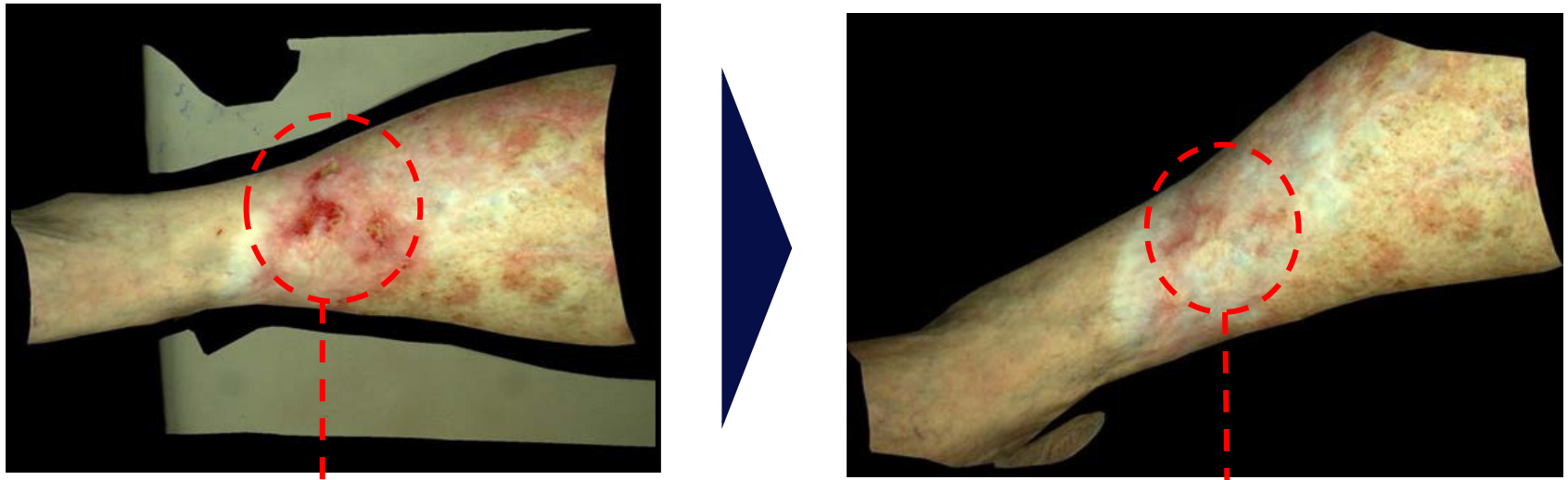



### Pathophysiological Changes in NL

- **Decrease in blood flow & Oxygenation**
- **Decrease in platelet survival**
- **Increase inflammation**
- **Increase fibrosis**
- **Increase cytokines**
- **Degeneration collagen**
- Alters fat deposition

# PCS499 Phase 2A Trial Demonstrates Complete Ulcer Closure

- 1.8 gm/d of 499 has a better safety profile than 1.2 gm of PTX in animal tox studies and Phase 1 healthy human volunteer studies.
- Determined 1.8 gm/d of 499 was safe  in 12 NL patients and effective in closing the open ulcers of the 2 patients with uNL in an open-labeled Phase 2A trial.



**Baseline** **Complete Closure**

- FDA has defined uNL as a serious condition based on communications with Processa.
- Collaborated with FDA to define the information needed from a Phase 2B trial to guide us in the design of a single pivotal Phase 3 trial in 2023.

# PCS499 Milestones in 2023

- Complete enrollment of the interim analysis group in 1H2023 and evaluate the likelihood of completing full enrollment.
- Meet with FDA and submit an IND for Venous Ulcers, a second indication that requires the diverse pharmacology of PCS499.
- Evaluate additional regulatory approaches to expedite the development program.
- Evaluate current studies to determine the potential for new intellectual property or life extension.
- Initiate Phase 2 trial for Venous Ulcers in 2H2023 depending on priorities, funding, and licensing/partnering opportunities.

Candidate for Monetization by Partnering or Out-Licensing in 2023