

## **Forward-looking statements**

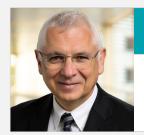
Certain statements in this presentation, and statements by management or other persons acting by or on behalf of PharmalN Corporation ("PharmalN") made in connection with this presentation, constitute "forward-looking statements" within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. Because forward-looking statements relate to the future, they are inherently subject to significant known and unknown risks, uncertainties and other factors that are difficult to predict and are beyond the control of PharmalN. The actual results, level of activity, performance or achievements of PharmalN may be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forwards-looking statements.

Forward-looking statements generally are accompanied by words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "should," "would," "plan," "future," "outlook," and similar expressions that predict or indicate future events or trends. All statements that are not statements of historical matters are forward-looking statements. The forward-looking statements include, but are not limited to, (i) statements concerning the potential safety and efficacy of PharmalN's drug products, and (ii) the potential for PharmalN to partner its drug products with other pharmaceutical companies.

The forward-looking statements made in this presentation are based on PharmalN's current assumptions and judgments regarding future events and results. Actual events and circumstances are difficult or impossible to predict and will differ from assumptions. Many actual events and circumstances are beyond the control of PharmalN. Some important factors that could cause actual results to differ materially from those in any forward-looking statements could include changes in domestic and foreign business, market, financial, political, regulatory and legal conditions. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied upon as, a guarantee, an assurance, a prediction or a definitive statement of fact, probability or outcome.



### **Leadership team**



#### **Elijah Bolotin, PhD**

President & Chief Executive Officer









### **Andy Stubbs, PhD**

Chief Development Officer









#### **Lorraine Tracey, PhD** VP, Clinical Development









### **Craig Philips**

Chairman of the Board & Advisor













#### **Jenny Martin, RN** VP, Clinical Operations









#### **Gerardo Castillo, PhD**

VP, IP and Grants | Distinguished Scientist



UNIVERSITY of WASHINGTON



#### **Shawn Iadonato, PhD** Advisor





W UNIVERSITY of WASHINGTON



### Mike Shetzline, MD, PhD

Board member









# PHIN-214: evolutionary subcutaneous vasopressor therapy for patients with advanced cirrhosis

Developing best-in-class subcutaneous therapy for patients with advanced cirrhosis

### Actively seeking a 2025 strategic partnership



Decompensated cirrhosis

No effective therapies for long-term treatment of decompensated cirrhosis ~500K patients in the US



**PHIN-214** 

The only subcutaneous vasopressor therapy currently in development (phase 1) Robust evidence of clinical activity after a single dose with benign safety profile Projected global peak sales: \$4B at 10% market penetration



Milestones

Phase 1 Single ascending dose in advanced cirrhosis: complete
Phase 1 Multiple ascending dose: enrolling

Complete phase 1 (Q1 2026); Initiate phase 2/3 (Q4 2026)



# Decompensated cirrhosis presents enormous unmet medical need and \$4B global market opportunity

## Compensated cirrhosis 4.2M annually in the US <sup>1</sup>

**Decompensated cirrhosis** 

~500K annually in the US <sup>1</sup>

**Liver function** 

**Portal Pressure** 

Estimated survival >12 yrs<sup>2</sup>

Estimated survival <2 yrs<sup>2</sup>
Complications of increased portal hypertension: Ascites, Varices, Encephalopathy, Hepatorenal Syndrome, Acute Kidney Injury etc.

- Portal hypertension drives decompensation
  - Rapidly progressing disease with immense morbidity & mortality
  - Abysmal quality of life
  - High healthcare resource utilization
- Competitive landscape is wide-open
  - Current treatments are largely palliative liver transplant is the only curative option
- Potential for LCM/market expansion into compensated cirrhosis



# PHIN-214 MOA: partial V1a agonism causes splanchnic vasoconstriction and relieves portal hypertension

Cirrhosis increases resistance to portal blood flow due to scarring & vascular remodeling, resulting in portal hypertension.

This diverts blood to the **splanchnic circulation** around abdominal organs, causing complications including ascites, esophageal varices, & hepatorenal syndrome.

The resulting low arterial volume places an extra burden on the heart & reduces perfusion of the kidneys.

#### **PHIN-214**



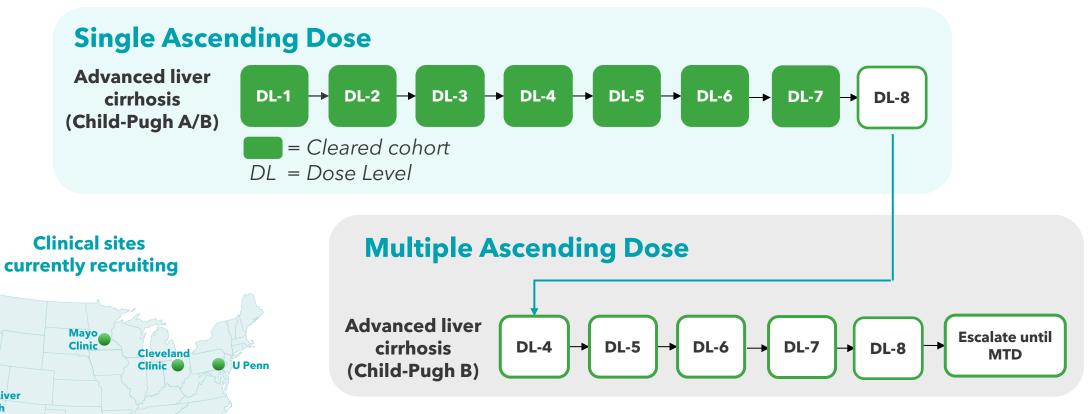
- Induces splanchnic vasoconstriction
- Redistributes blood back to the systemic circulation



- Decreases portal hypertension
- Reduces incidence of complications of decompensation
- Improves kidney function (eGFR)



# Development status: Phase 1 Single Ascending Dose complete; Multiple Ascending Dose enrolling



Primary objectives include safety, tolerability, PK/PD assessments & evidence of clinical activity (renal function)



**Arizona Liver** 

Health

Methodist

**Texas Liver** 

Institute ¶

**Tandem** 

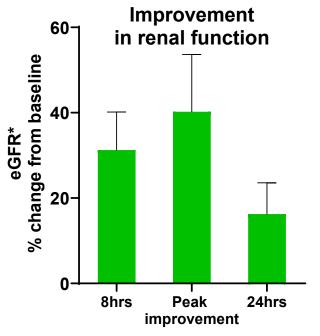
Clinical

Research

S. CA Liver

## Compelling evidence of clinical benefit after a single dose

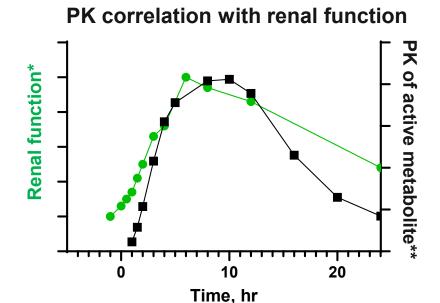
- Improved renal function observed in all subjects, across all dose levels.
- Clinical activity sustained up to 24h.



\*eGFR: estimated glomerular filtration rate

Error bar: 95% CI; n=15

 Improved renal function correlates strongly with PK of active metabolite.



- \* Kidney function by estimated glomerular filtration rate (eGFR)
- \*\* PHIN-156 (active metabolite of PHIN-214) concentration Representative data set



## PHIN-214: single dose well tolerated - safety profile consistent with on-target V1a engagement

- 4/15 patients experienced AEs (mostly grade 1/2) related to PHIN-214 administration:
  - Injection site blanching
  - Abdominal pain/cramping
  - Diarrhea
  - Hematochezia
  - Hypertension
- AE profile is consistent with on-target MOA (V1a receptor engagement)

## **Future development**



Primary indication (phase 2/3)

- Prevention of disease progression in patients with decompensated cirrhosis (500K patients in US)
- Study Design: Randomized, double-blind, placebo-controlled study evaluating PHIN-214 plus SoC vs SoC alone
- Primary Endpoint: Time from randomization to disease progression (further decompensation) or death [composite endpoint]



Regulatory outlook

- Primary endpoint follows FDA guidance to industry in patients with compensated cirrhosis
- Potential for breakthrough designation: Extremely high unmet need, high morbidity, mortality & healthcare-resource utilization



Label expansion opportunities

- Treatment of patients hospitalized with ACLF or HRS/AKI
- Prevention/delay of decompensation in compensated patients with clinically-significant portal hypertension at high risk of decompensation



## PHIN-214: Upcoming development milestones

	2025				2026			
Anticipated Milestones	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Completed phase 1 single dose	$\overline{\checkmark}$	 	 	 				
Initiate phase 1 multiple dose		$\overline{\mathbf{V}}$		 				
Complete phase 1 study	 	   	 	 				
Type A FDA meeting		 	 	 				
Initiate phase 2/3 clinical study	 	   		 				



# PHIN-214: Partnership opportunity to translate compelling clinical activity into blockbuster potential

## Actively seeking a 2025 strategic partnership



#### **Feature**

- Subcutaneous vasopressin analog
- Patent protection up to 2041
- Established & scalable manufacturing, liquid form stable at RT
- Low cost of goods



### **Opportunities**

- A novel therapy for long-term treatment providing:
  - Inpatient & outpatient care applications
  - Addresses immense unmet need, improves morbidity & mortality
- \$4B global peak sales at 10% market penetration



- Target indication with ~500k patients in US: Prevention of disease progression in patients with decompensated cirrhosis
- Potential for label expansion



# For additional information:

Andy Stubbs, Chief Development Officer AStubbs@pharmain.com

Lorraine Tracey, VP, Clinical Development <a href="https://linical.com">https://linical.com</a>

Akiko Nishimoto-Ashfield (西本晶子), Associate Director, BD <u>aashfield@pharmain.com</u>

To discuss business opportunities:

bd@pharmain.com

https://pharmain.com/

