EicOsis

A Revolutionary Approach to Neuroinflammation and Pain

www.eicosis.com

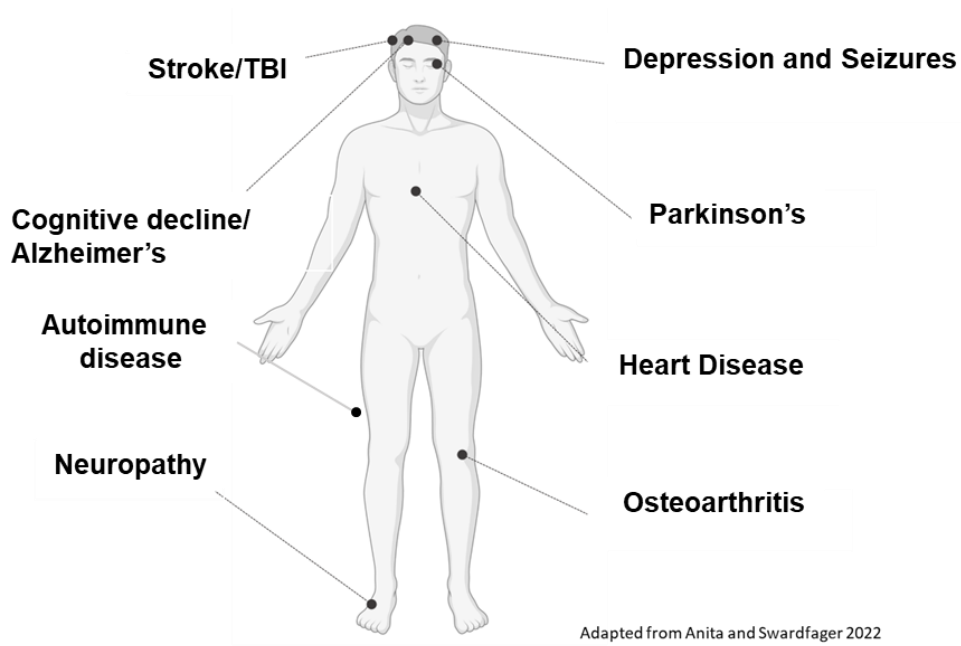
Non-confidential introduction

EicOsis: Revolutionizing Treatments for Inflammatory Disease

Key Highlights

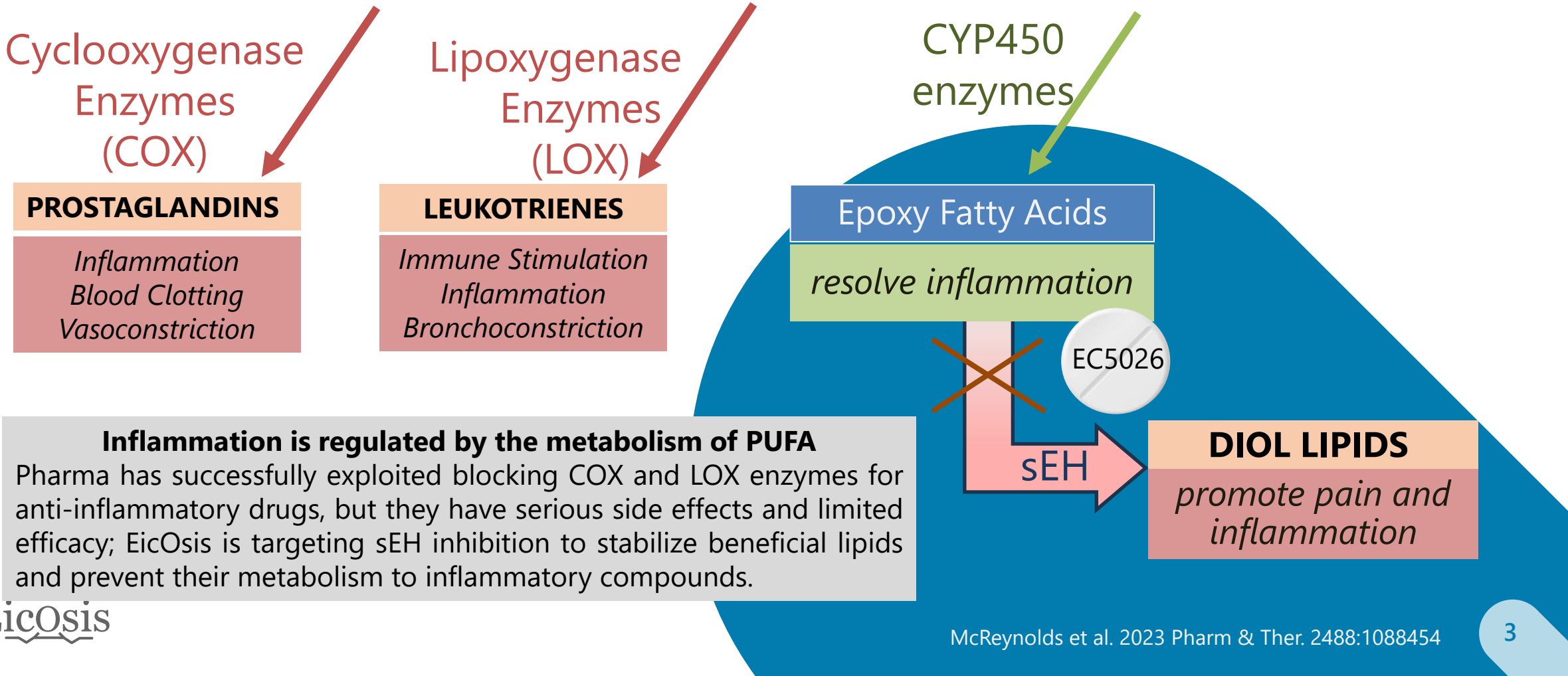
- **Ready for efficacy clinical trails:**
  Completed Phase 1 studies demonstrating safety after once daily, repeat oral doses at doses that inhibit target.
- **Derisked common early pitfalls:**
  Broad and long-lived patent portfolio for lead and back-ups, clinical formulation suitable for commercialization.
- **Efficacy demonstrated in natural disease increases translation to humans:**
  Efficacy demonstrated in dogs and horses with natural pain conditions.

EicOsis technology targets diverse inflammatory conditions



EicOsis is targeting the soluble epoxide hydrolase (sEH) as a novel and safe approach to treating neuroinflammation

Metabolism of Polyunsaturated Fatty Acids (PUFA) Regulate Inflammation



Inflammation is regulated by the metabolism of PUFA

Pharma has successfully exploited blocking COX and LOX enzymes for anti-inflammatory drugs, but they have serious side effects and limited efficacy; EicOsis is targeting sEH inhibition to stabilize beneficial lipids and prevent their metabolism to inflammatory compounds.

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McReynolds et al. 2023 Pharm & Ther. 2488:1088454

Addressing Significant Unmet Needs: Lead Indication in Pain Management with Follow on Indication in Neuroinflammation

Neuropathic Pain
Market value >**$10 Billion**

Osteoarthritis
~32.5 million patients
Market value of **$11 Billion**

Neurodegeneration (Parkinson's and Alzheimer's)
Market value of **$7 Billion**

Overall:

Blockbuster indications, unmet medical needs and potential billion-dollar profits

*US market alone

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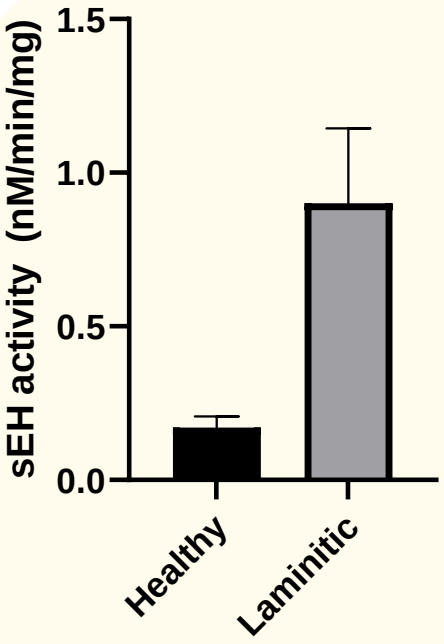
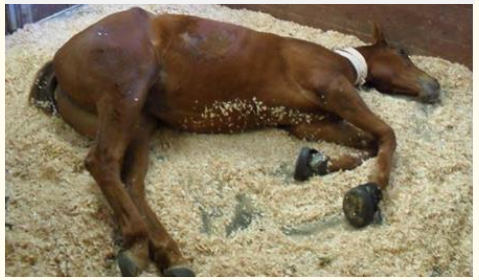
sEH inhibition (sEHI)
Efficacy in Natural Disease Supports Clinical Translation in pain

sEH activity increased in laminitis
Treatment with sEH inhibitor (SEHI) treats disease

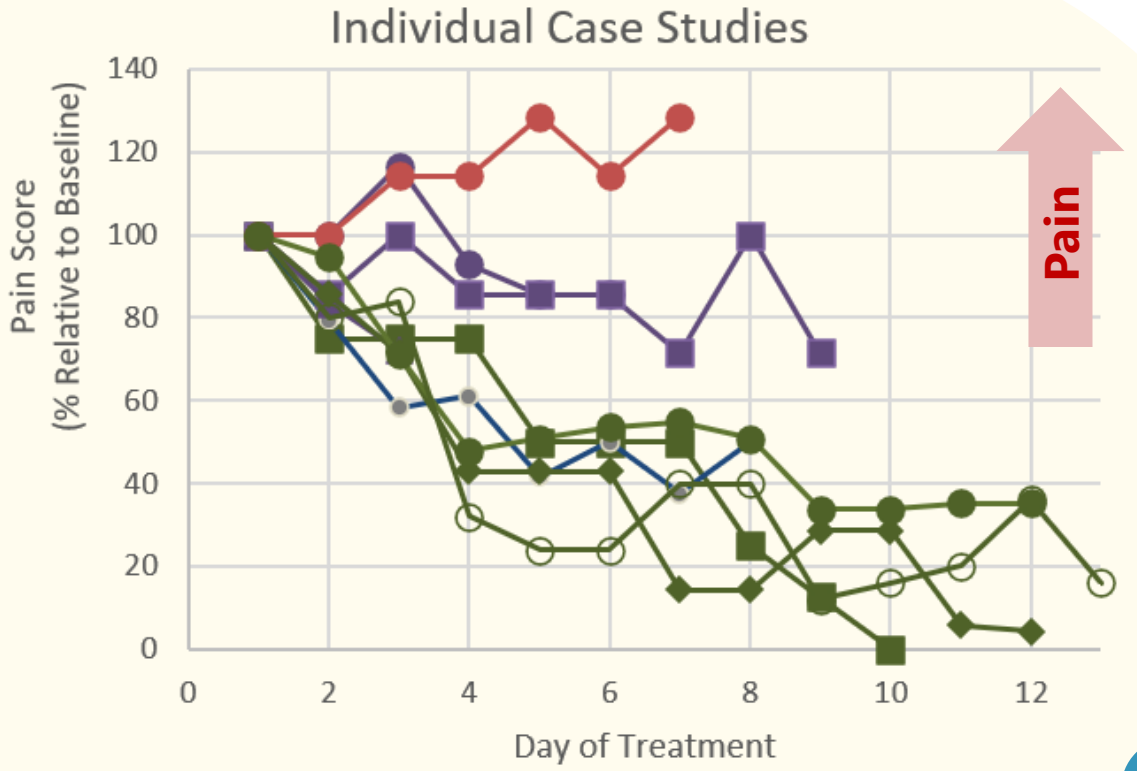


Before sEHI



After 5d sEHI Rx

Efficacy observed in multiple cases



YouTube video of results: https://youtu.be/oy2jFgSfqlc

Laminitis results: Guedes et al. 2017

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Animal Studies Derisk Translation to Humans

Efficacy in Natural Osteoarthritis (OA)
sEHI reverses pain in aged dogs with natural osteoarthritis. McReynolds et al. 2019

Efficacy in Natural Neuropathic Pain
sEH inhibitors (sEHI) treat natural pain and Inflammation in horses. Guedes et al. 2017

Efficacy in Preclinical Models
Dose dependent rodent efficacy treating pain and neuroinflammation

sEH inhibitors (sEHI) show robust efficacy in preclinical models and animals with natural disease

- Spinal cord injury
- 3 models of peripheral neuropathy
- Osteoarthritis
- Natural disease: laminitis and osteoarthritis

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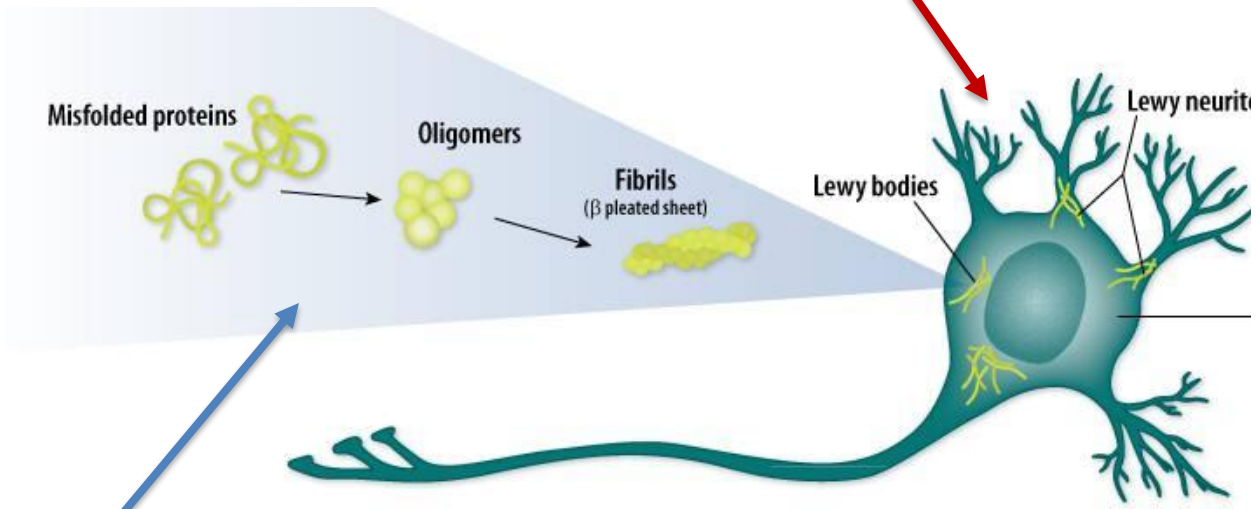
Clinical trial in spinal cord injury initiated in 2025

Strong preclinical data justify using sEHI in Parkinson's disease (PD)
Clinical trial starting in 2025

Positive correlation between sEH expression and α-synuclein phosphorylation in the striatum of PD patients (Ren et al. 2018)

sEH protein increased in patients with Lewy body dementia (Ren et al. 2018)

sEHI improved phenotype in PD cell assay and two PD animal models and increased dopamine and tyrosine hydrolase. EC5026 demonstrates efficacy in models of PD (unpublished data)



Lee and Trojanowski (2006) Neuron **52**:33.

Reduced dopamine
Oxidative stress
Mitochondrial dysfunction
Activation of Nf-Kb

sEH inhibition resolves these pathologies

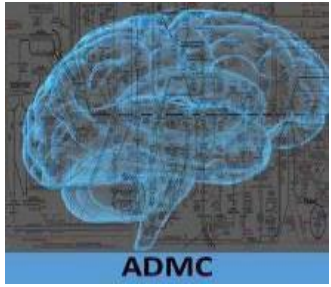
sEHI decrease α-synuclein aggregation (unpublished data)

Neuroinflammation

sEHI prevents neuroinflammation and neuron cell death in human PARK2 iPSC-derived dopaminergic neuron model (Ren et al. 2018)

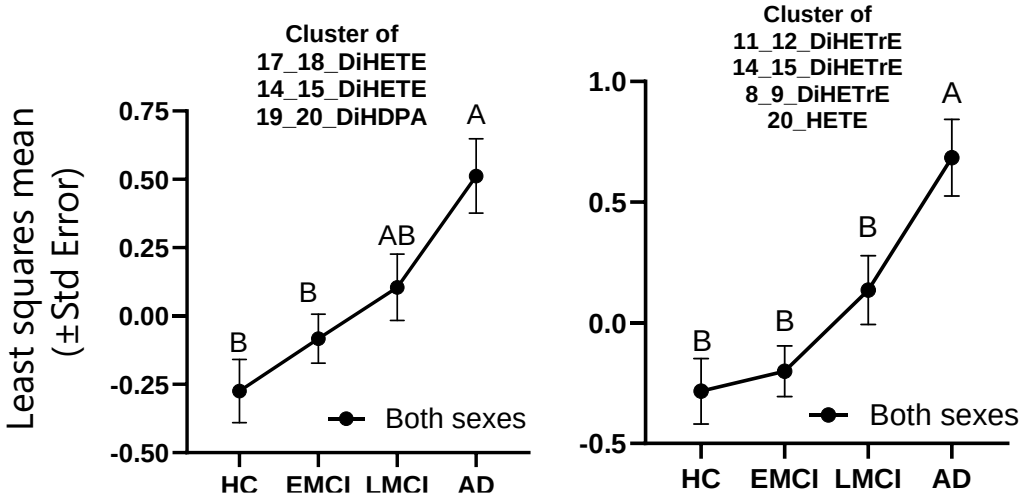
Neuron cell death

Increased sEH activity linked to Alzheimer's Disease and Related Dementias

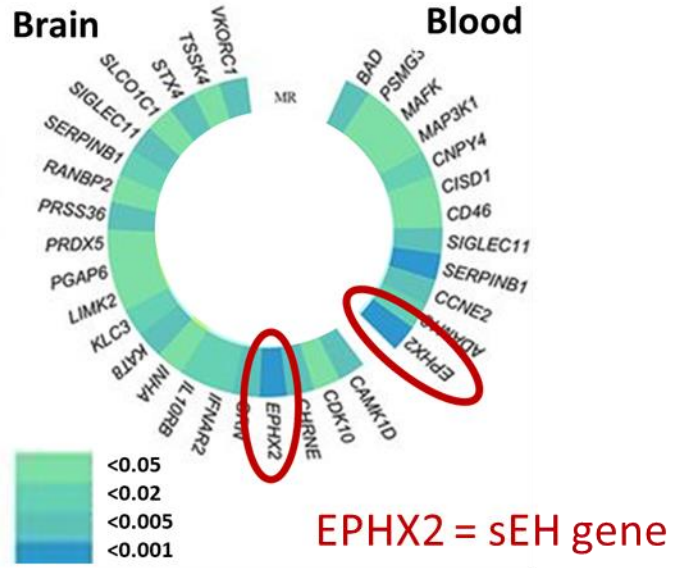


Plasma soluble epoxide hydrolase (**sEH**) metabolites increase along disease progression
(Nature Sci Rep 2024 doi: 10.1038/s41598-024-67177-5)

sEH identified as a key risk factor and therapeutic target for Alzheimer's disease
J. Neurol Neurosurg Psy. 2023 DOI: 10.1136/jnnp-2023-331142



Diagnosis: HC=healthy control early mild cognitive impairment (EMCI), late mild cognitive impairment (LMCI), and Alzheimer's disease (AD)



7 independent GWAS studies associate increased sEH and genetic polymorphisms with increased risk of AD:

Schwartzentruber, J. *et al. Nature Genetics* **53**, 392-402 (2021).; Wightman, D.P. *et al. Nature Genetics* **53**, 1276-1282 (2021).; Bellenguez, C. *et al. Nature Genetics* **54**, 412-436 (2022).; Kunkle, B.W. *et al. Nat Genet* **51**, 414-430 (2019).; Padhy, B. *et al. Hum Mol Genet, 26*, 4519-4529. (2017); Padhy, B. *et al. Gene, 854*, 147096. (2023); J. Chapuis *et al.* Acta Neuropathol., 133 pp. 955-966, 10.1007/s00401-016-1652-z (2017)

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✓ **EC5026 reduces alpha-synuclein and improves behavioral outcomes in animal models**

Clinical Development Momentum

Pharmacokinetics

- Nanomolar potency
- Specific receptor binding
- Once daily oral dosing
- Good bioavailability
- Minimal drug-drug interactions

Safety

- Non-toxic
- Non-addictive
- No tolerance development
- No serious Adverse Events in Phase 1

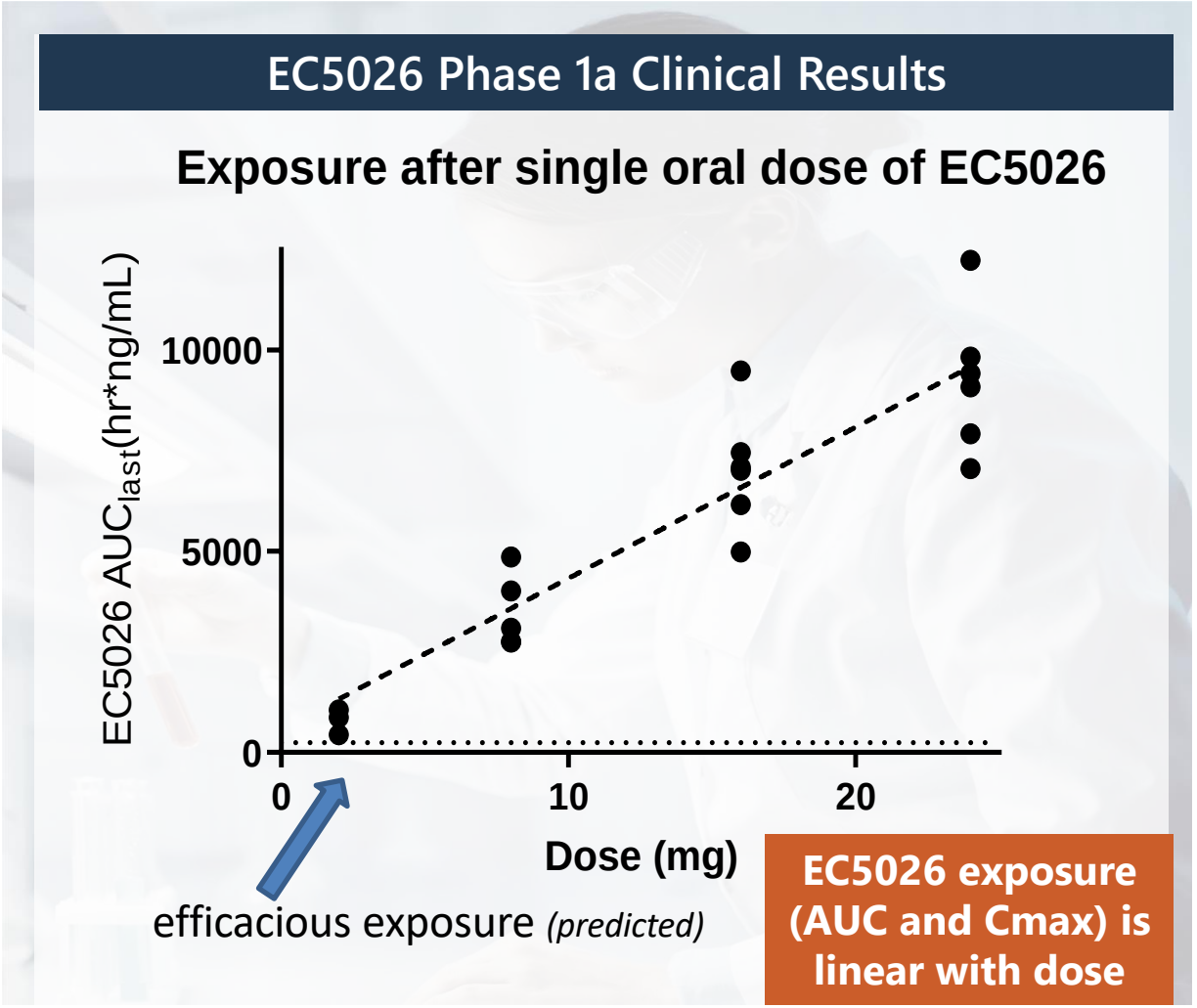
Competitive Advantage

- Favorable profile vs. standard of care
- Robust efficacy in multiple animal models
- Phase 1 complete
- Phase 1b initiated in spinal cord injury

sEHI, EC5026, Has Demonstrated Phase 1 Clinical Safety

In Phase 1a/b and fed-fasted clinical studies, oral EC5026 was administered in healthy volunteers and monitored in plasma:

- **No clinically significant drug-related adverse events were observed**
- Cmax and AUC was linear with dose
- $T_{1/2}$ of about 2 days
- Commercial tablet developed
- Fed-fasted study completed and determined mild increase in AUC with high-fat diet
- **Target engagement demonstrated**



Hammock et al. J Med Chem. 2021
Schmidt et al. Clin Transl Sci 2024

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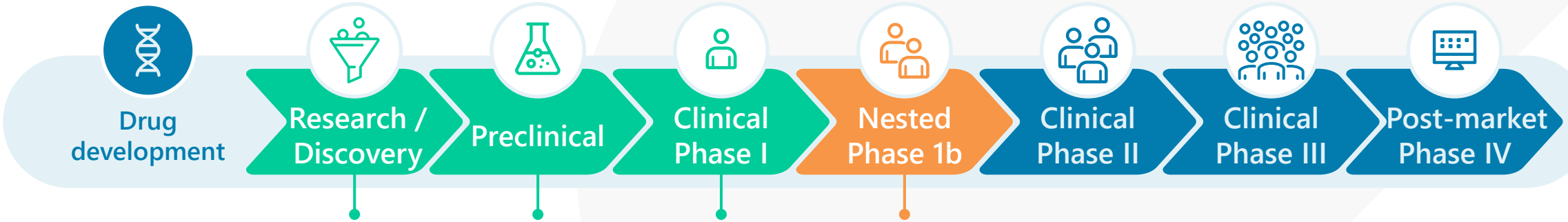
EC5026 clinical development program



EicOsis Progress	✓ EC5026 Selection	✓Preclinical Efficacy	✓ Phase 1a/b safety	➢Efficacy Studies

2025: EicOsis is initiating clinical trials in patient populations to characterize PK/PD in select indications

FDA designations for accelerated timeline*

*Granted **Fast Track designation** for "unmet need" as an alternative to opioids for treating neuropathic pain.

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EicOsis: Supported by Strong Science and Business Team

Financial journey:
$24MM in non-dilutive grants support clinical program

Cindy McReynolds, PhD
Founder, CEO

sEH researcher and business manager, acquired 25 MM grants from DoD, NIH and private foundations

Bruce Hammock, PhD
Founder, CSO

Inventor of sEH field
>1500 publications on sEH biology, National Academy of Science Member

Clinical Team

William K. Schmidt, PhD
Clinical Development, EicOsis
>25 years of clinical experience

Sung Hee Hwang, PhD
Chemist, Quality Control, EicOsis

Irene Cortes-Puch, MD
Clinical Scientist, EicOsis

Jun Yang, PhD
Analytical Chemist, EicOsis

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Opportunity: $2.5M Safe note adds value and reduces timelines

	Value Added
Phase 1 Efficacy SCI and PD*	• Clinical validation of target • New patent determination
New Patent Determination	
preIND meeting scheduled, new compound, new IND	• New IND • Derisk efficacy and toxicity for class (e.g. cardiovascular safety waiver, $10MM value), breakthrough designation
Phase 1 efficacy OA Regulatory advancements	
Target Partnering/Exit	
EC5026: Phase 2 New compound: Phase 1a/b and clinical validation of efficacy	• Phase 2 efficacy (EC5026) • New indication for backup

Activities supported by current funds

Activities supported by bridge

Target partnering/exit
Bridge round improves timelines by 1.5 years

*SCI = spinal cord injury; PD = Parkinson's Disease

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Thank You

Why Us

EicOsis is the **world leader** in sEHI discovery, innovation and development with **unique IP position**

Why Now

EicOsis is ready to determine clinical profile with well designed studies incorporating validated biomarkers

Competitive Advantage

Proven efficacy, potency, and clinical safety

Latest News:

EicOsis selected 2024 Most Fundable Company from Pepperdine Business School

https://tinyurl.com/4actpur6

For further information please contact:

Cindy McReynolds, CEO
cbmcreynolds@eicosis.com

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