PHARMAMATRIX

Selective oncology · Phase 1 · NCT04823897

MEDIA KIT

A selective therapy for βIII-tubulin-driven cancers.

CCI-001 — a colchicine derivative engineered for selective βIII-tubulin binding, now in Phase 1 clinical evaluation for bladder cancer with planned expansion to breast cancer.

INSIDE

01 ABOUT PHARMAMATRIX

Selective oncology, engineered.

PharmaMatrix Holdings is a clinical-stage biotechnology company developing **CCI-001**, a novel colchicine derivative engineered to selectively bind **βIII-tubulin** — the tubulin isotype most strongly associated with aggressive, treatment-resistant cancer. Conventional cytotoxics target any rapidly dividing cell, which drives the systemic toxicity associated with chemotherapy. CCI-001 is designed to retain antimitotic activity while reducing that off-target burden.

Founded on more than a decade of computational and biochemical work led by Dr. Jack A. Tuszynski at the University of Alberta, PharmaMatrix combines physics-driven molecular design with translational oncology. CCI-001 is now in **Phase 1 clinical evaluation** for bladder cancer (ClinicalTrials.gov NCT04823897), with a planned expansion into breast cancer.

βIII	Phase 1	2014
TUBULIN ISOTYPE TARGETED	ACTIVE CLINICAL TRIAL	COMPANY FOUNDED

At a glance

LEAD ASSET	**CCI-001 — selective βIII-tubulin inhibitor**
MODALITY	**Small molecule, colchicine derivative**
LEAD INDICATION	**Muscle-invasive bladder cancer**
PIPELINE	**Breast cancer (planned expansion); other βIII-enriched tumors**
TRIAL	**PMH-001 · NCT04823897 · Phase 1, open-label, dose-escalation**
HEADQUARTERS	**Edmonton, Alberta, Canada**
FOUNDED	**2014**
WEB	**pharmamatrix.com**

02 THE SCIENCE

Why βIII-tubulin?

Tubulin is essential for cell division. The βIII isotype is expressed in nearly all aggressive cancers and correlates with chemotherapy resistance and poor prognosis. Colchicine has long been known to disrupt microtubule dynamics, but its systemic toxicity has prevented its use in oncology. CCI-001 is a re-engineered colchicine scaffold that **binds preferentially at the βIII colchicine site** — the tubulin binding pocket with the greatest sequence diversity across cancer cells — preserving antimitotic activity while sparing healthy tissue.

What CCI-001 does differently

- Binds at the optimal site to inhibit βIII-tubulin function and arrest tumor growth.
- Sub-nanomolar potency in bladder cancer cell lines; more potent than several licensed agents in cell-based assays.
- Translational signal in breast cancer models, supporting indication expansion.
- Designed to reduce the off-target toxicity that has historically limited colchicine in oncology.

Mechanism, in one sentence

Instead of letting tumors divide unchecked, CCI-001 binds at the source of βIII-tubulin polymerisation, halts mitosis, and triggers selective tumor cell death.

> *“A selective approach — one that distinguishes cancer cells from healthy tissue — is what oncology has been waiting for.”*

— PharmaMatrix research team

03 CLINICAL PROGRAM

PMH-001 — Phase 1 in bladder cancer.

CCI-001 is currently in a first-in-human Phase 1, open-label, dose-escalation study in patients with advanced bladder cancer. The trial is registered on ClinicalTrials.gov as **NCT04823897**.

IDENTIFIER	**NCT04823897 · PMH-001**
PHASE	**Phase 1 · First-in-human · Dose-escalation**
INDICATION	**Advanced bladder cancer (lead); breast cancer planned**
SPONSOR	**PharmaMatrix Holdings**
STATUS	**Recruiting**
REFERENCE	**clinicaltrials.gov/study/NCT04823897**

Why this matters

Patient need. Bladder cancer remains a high-mortality indication with limited targeted options. βIII-tubulin overexpression is associated with chemoresistance, making selective βIII inhibition a rational therapeutic strategy.

Translational reach. Because βIII-tubulin overexpression spans multiple aggressive cancers, the same mechanism opens a credible path into breast cancer and other indications.

Regulatory clarity. Colchicine chemistry is well understood. Building selectivity onto a characterized scaffold offers a faster, lower-risk development path than novel-chemotype microtubule agents.

04 LEADERSHIP

Dr. Jack A. Tuszynski

Principal Investigator · Scientific Founder

● Allard Endowed Research Chair in Experimental Oncology, University of Alberta.

● Full Professor in the Department of Physics, with adjunct appointments in Medical Microbiology & Immunology, Biomedical Engineering, and Oncology (Medical Physics).

● More than three decades of work at the interface of computational physics and cancer biology, with a sustained focus on tubulin dynamics and rational drug design.

● Author of more than 600 peer-reviewed publications and several monographs on biological physics and computational oncology.

● Scientific founder of PharmaMatrix; principal architect of the CCI-001 program from computational design through Phase 1.

Speaking topics

● Why selective tubulin inhibition is the next frontier in oncology
● From computational physics to a Phase 1 cancer drug — a 12-year arc
● βIII-tubulin and chemoresistance: what the data is telling us
● How a small Canadian biotech is competing in targeted oncology

05 PRESS CONTACT

For media inquiries.

PharmaMatrix is finalising its dedicated press contact. In the interim, all media requests — interviews with Dr. Tuszynski, comment on the CCI-001 program, access to trial information, or use of brand assets — should be routed through our website.

PRESS REQUESTS	**pharmamatrix.com/media**
NAMED CONTACT	**To be announced — please use the website form for now**
RESPONSE TIME	**Within 2 business days**
HEADQUARTERS	**Edmonton, Alberta, Canada**

Boilerplate

PharmaMatrix Holdings is a clinical-stage biotechnology company developing selective therapies for βIII-tubulin-driven cancers. Its lead asset, CCI-001, is a colchicine derivative engineered for selective βIII-tubulin binding and is in Phase 1 clinical evaluation for bladder cancer (NCT04823897), with planned expansion into breast cancer. Founded in 2014 and headquartered in Edmonton, Alberta, PharmaMatrix combines physics-driven molecular design with translational oncology. Learn more at pharmamatrix.com.

Brand assets

Approved logos (light and dark), scientist portraits, mechanism diagrams, and high-resolution PDFs of this kit are available at **pharmamatrix.com/media**. Please do not modify the wordmark or recolor the logo. Photography of Dr. Tuszynski is provided courtesy of the University of Alberta — please credit accordingly.