ZNA ONCOLOGY

A Metallomix™ Company

Defeating cancer with new kind of TNF-α inhibitors

Company Presentation

SAFE HARBOR STATEMENT

This presentation contains certain "forward-looking statements" within the meaning of applicable securities laws. Other than statements of historical facts, all statements included in this presentation are forward-looking statements, including statements about our plans, objectives, goals, strategies and future events, the efficacy, safety, tolerability, PK and PD profile of KLS-1 and other ISM products and derivatives, the potential dosing regimen and/or potential superiority of KLS-1 compared to other therapies, our expectations regarding plans for our current and future product candidates and programs, our plans for our current and future clinical trials, our plans for clinical trial design, the anticipated timing of the initiation of and results from our clinical trials, the potential clinical benefit and half-life of KLS-1 and any other potential products, our expected timing for future pipeline updates and estimates of market size. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "can," "could," "design," "estimate," "expect," "intend," "likely," "may," "might," "plan," "potential," "predict," "suggest," "target," "will," "would," or the negative of these terms, and similar expressions intended to identify forward-looking statements. The forward-looking statements are based on our beliefs, assumptions and expectations of future performance, taking into account the information currently available to us. These statements are only predictions based upon our current expectations and projections about future events. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements, including those risks described in "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Private Placement Memorandum dated August 1, 2024, and subsequent disclosures we may file with the U.S. Securities and Exchange Commission. Although we have attempted to identify important risk factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. This presentation concerns drug candidate, KLS-1, that is under clinical investigation, and which have not yet been approved by the U.S. Food and Drug Administration. These are currently limited by federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are being investigated. The assumptions used in the preparation of this presentation, although considered reasonable by us at the time of preparation, may prove to be incorrect. You are cautioned that the information is based on assumptions as to many factors and that actual results may vary from the results projected and such variations may be material. Accordingly, you should not place undue reliance on any forward-looking statements contained herein or rely on them as predictions of future events. All forward-looking statements in this presentation apply only as of the date made and are expressly qualified by the cautionary statements included in this presentation. We do not undertake to update any forward-looking statements, except in accordance with applicable securities laws. The trademarks, trade names and service marks appearing in this presentation are the property of their respective owners. Certain information contained in this presentation relate to or are based on studies, publications and other data obtained from third-party sources as well as our own internal estimates and research. While we believe these third-party sources to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources.

Now is the time for a medicine that helps to eradicate cancer while supporting recovery of normal cells.

In an era of advanced drug discovery, our innovation encompasses the development of novel therapeutic treatments based on broad therapeutic potential of zinc supercharged by modification of stable isotopes. This leads to rendering cytotoxic effects to cancer cells significantly prior to reaching zinc toxicity levels.

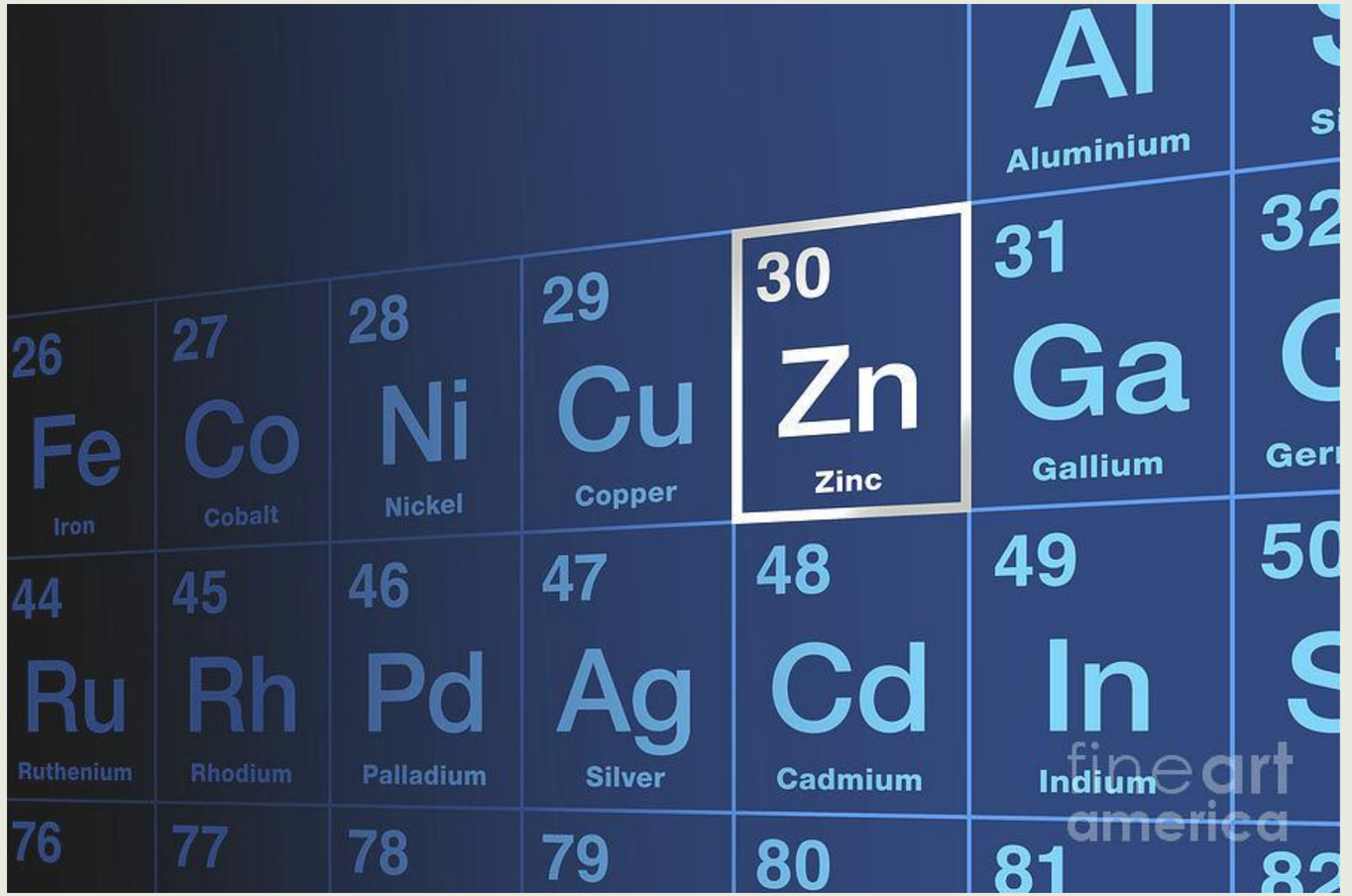
Empowered by our deep drug discovery, we seek to create novel medicines against more than a half of life-threatening tumors.

ABOUT METALLOME

Metallome is the essential inorganic component of life. While organic elements constitute 99% of an organism's mass, life would be impossible without the inorganic essential elements, collectively termed the "metallome"

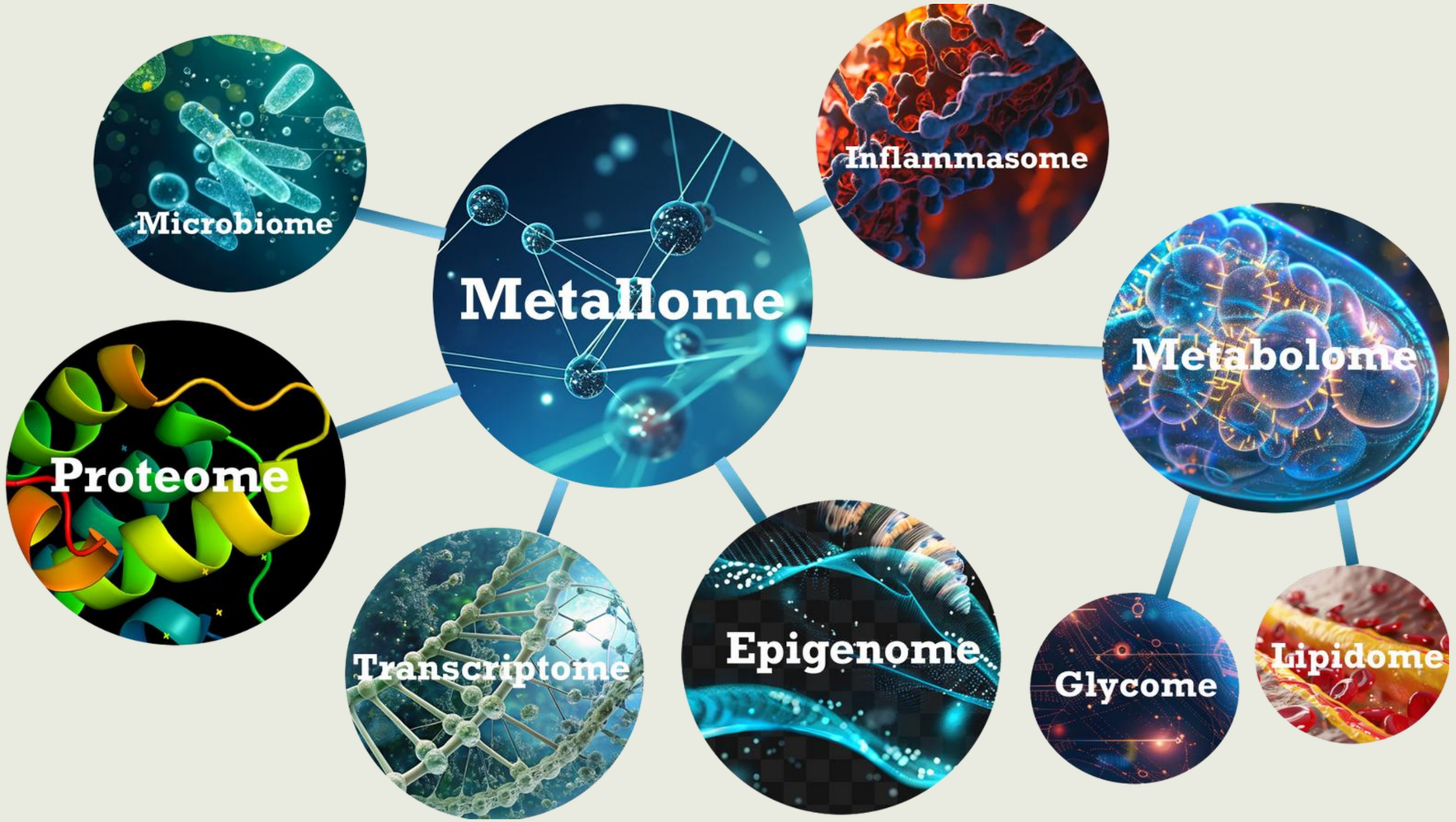
Metallome is vital for:

- Amino acids and protein synthesis
- DNA integrity and repair
- Charge balance & electrolyte activity
- Structure & signaling
- Redox catalysis & energy storage
- Stem cell function
- Biomineralization

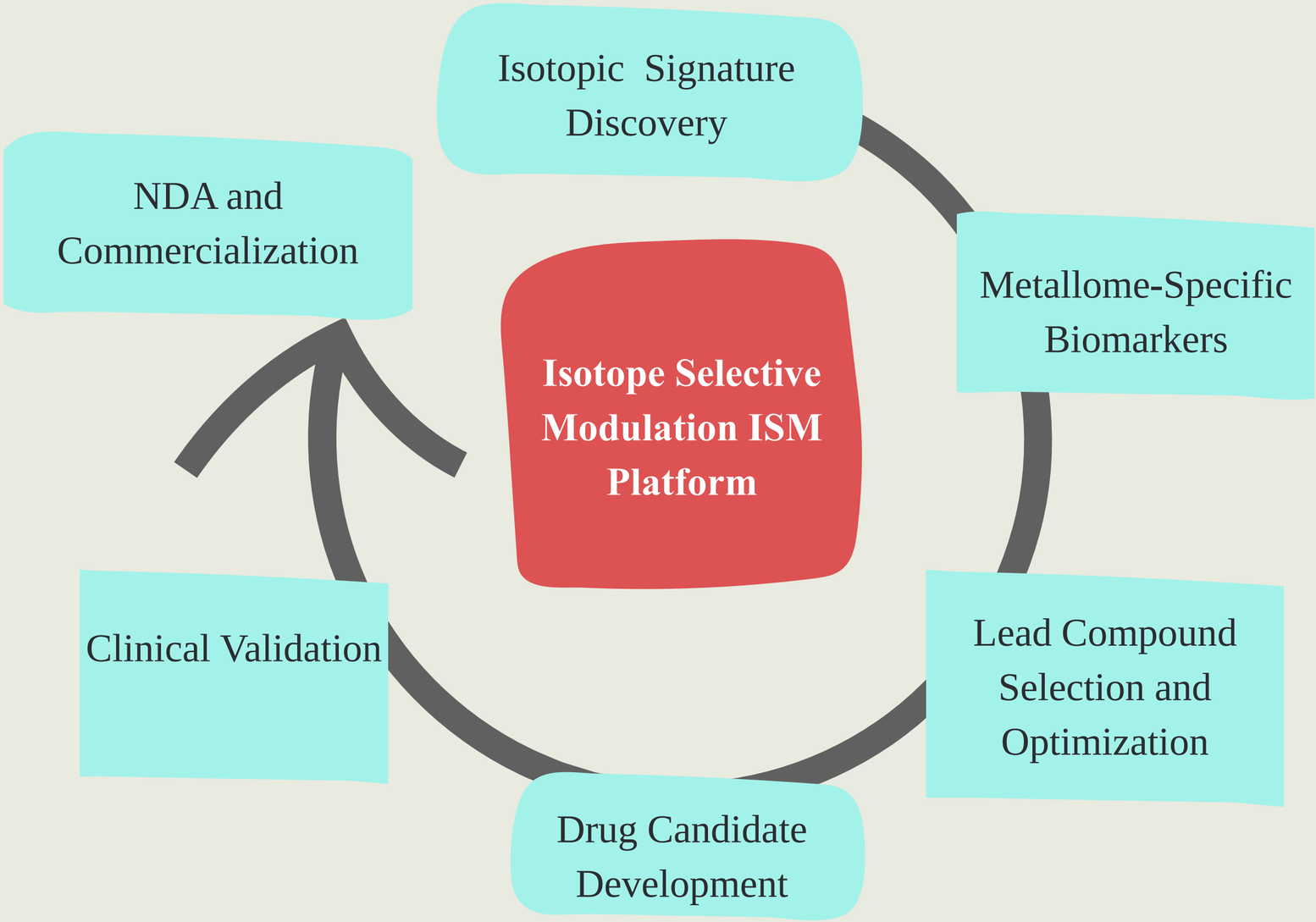


CONNECTING THE “OMES”

Metallome modulates biological processes including metalloenzymes, transporters, transcription factors, mitochondrial function, DNA integrity & repair, stem cell activity



OUR ISOTOPE-SELECTIVE MODULATION PLATFORM



A VANGUARD IN METALLOMICS FOR ONCOLOGY

Equipped and empowered by proprietary isotope-selective modulation, we are a leading research in the field of practical therapeutic application of isotopic metallomics in oncology

Proprietary Innovation

- Composition of matter and methods of use patents issued and pending.
- Proprietary knowledge-base collected through a decade-long research.
- Ongoing discoveries for combination therapies with leading immunotherapy drugs.

Validated Early Data

- Clinical phase 1 started. Regulatory approval for phase 2 received in Ukraine. Preparing for filing IND application in the U.S.
- MTD/Safety is determined in non-registrational Phase 1 clinical trial in Mexico
- Regulatory approval received for Phase 1-2 clinical trials in Ukraine for KLS-1 monotherapy

Unique Capabilities

- Development of sequential formulations involving cold isotopes of other elements.
- Capable to make final products (although prefer to cooperate with Big Pharma.)

UNIQUE SCIENTIFIC STANCE

Unhealthy Omics

Exposure to environmental and dietary hazards

Metallome dyshomeostasis manifests as isotopic fractionation, which causes cellular dysfunctions

Healthy Omics

Healthy environment and diet

High risk of protein misfolding and DNA damage

Chronic inflammation and oxidative stress

Shift of isotopic ratios within key molecules causes prevalence of heavy isotopes in cells and tissues

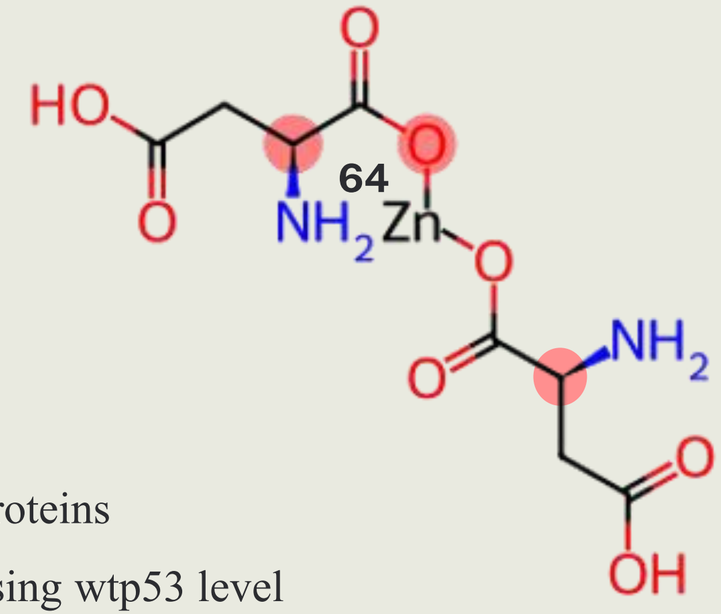
Average risk of protein misfolding and DNA damage

Mild but persistent inflammation and oxidative stress

Progressive Oncology

FIRST-IN-CLASS DRUG CANDIDATE

KLS1 (64Zn-Aspartate) is a patented small molecule that has shown ability to trigger an increase in wtp53 levels and anti-tumor activity, to induce proper protein conformation, and to reduce local and systemic inflammation and oxidative stress.

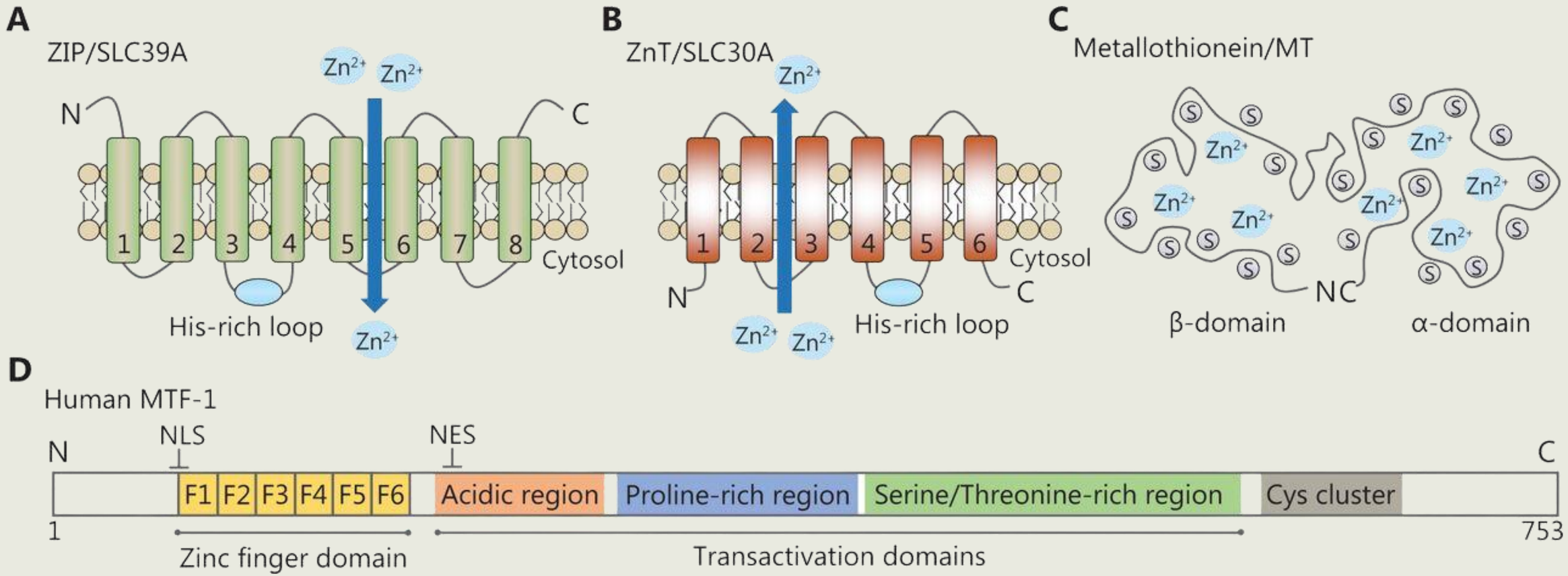


- Intrinsically safe
- Has linear PK profile
- Preclinical POC achieved
- Uses L-Aspartate as binder and chelator
- Shown ability to break the feedback cycle of age-related diseases
- Acts upstream of wtp53 synthesis to decrease formation of misfolded proteins
- Reduces systemic inflammation and oxidative stress while increasing wtp53 level

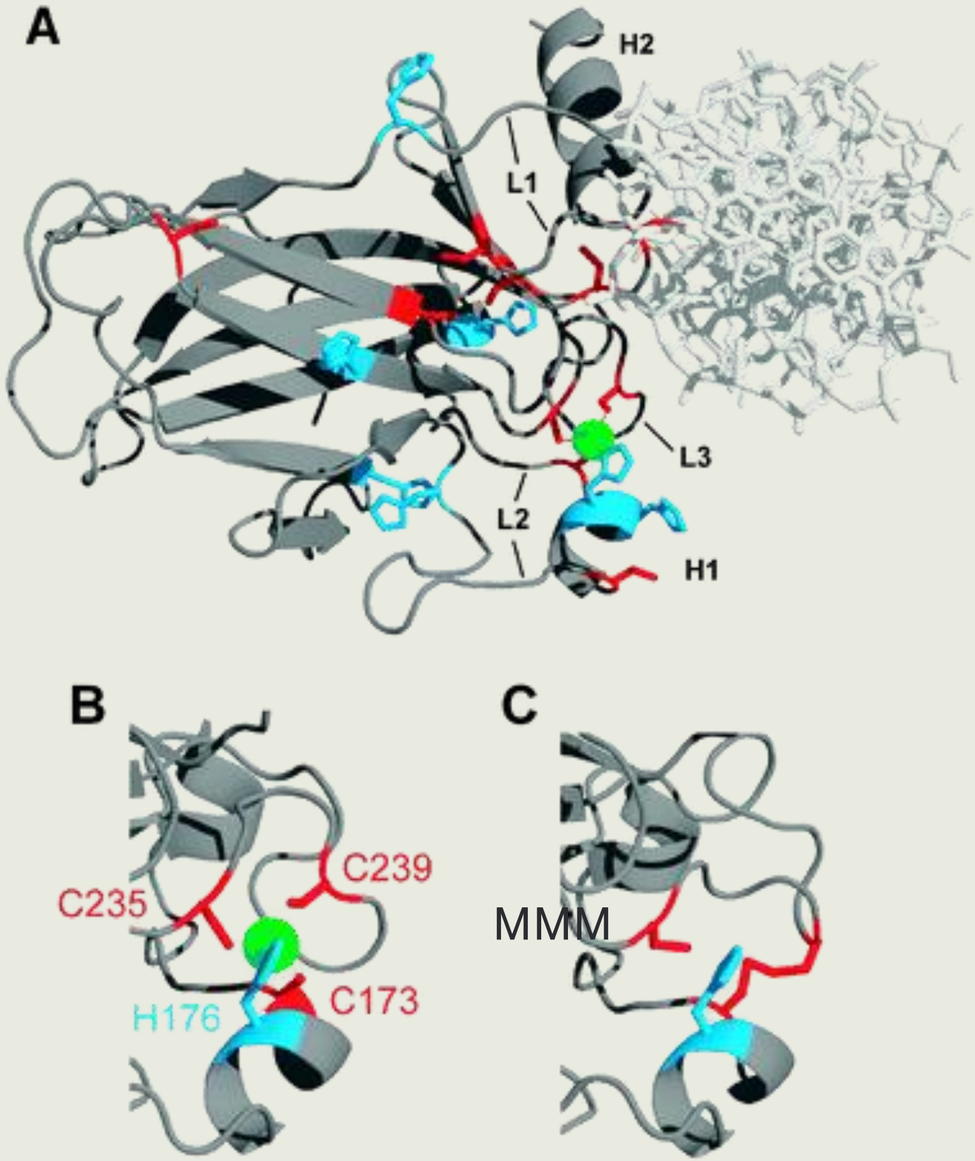
Considering to seek FastTrack designation for 40-85% of cancer patients that are non-responsive to presently approved immunotherapies

WHY ZINC

Understanding the isotopic fractionation of metallome and its role in protein synthesis and DNA repair is the key to repairing critical cellular functions and saving lives. Zinc is critically important and has wide spectrum of biological function, so we start with 64Zinc.



WHY LIGHT ISOTOPE 64ZINC



(Source ref.)

Present focus on wtp53 “guardian of the genome”

Zinc plays critical role in maintaining the proper structure and function of p53. This relationship is particularly important in the context of cancer, where mutations in p53 cause loss of lives.

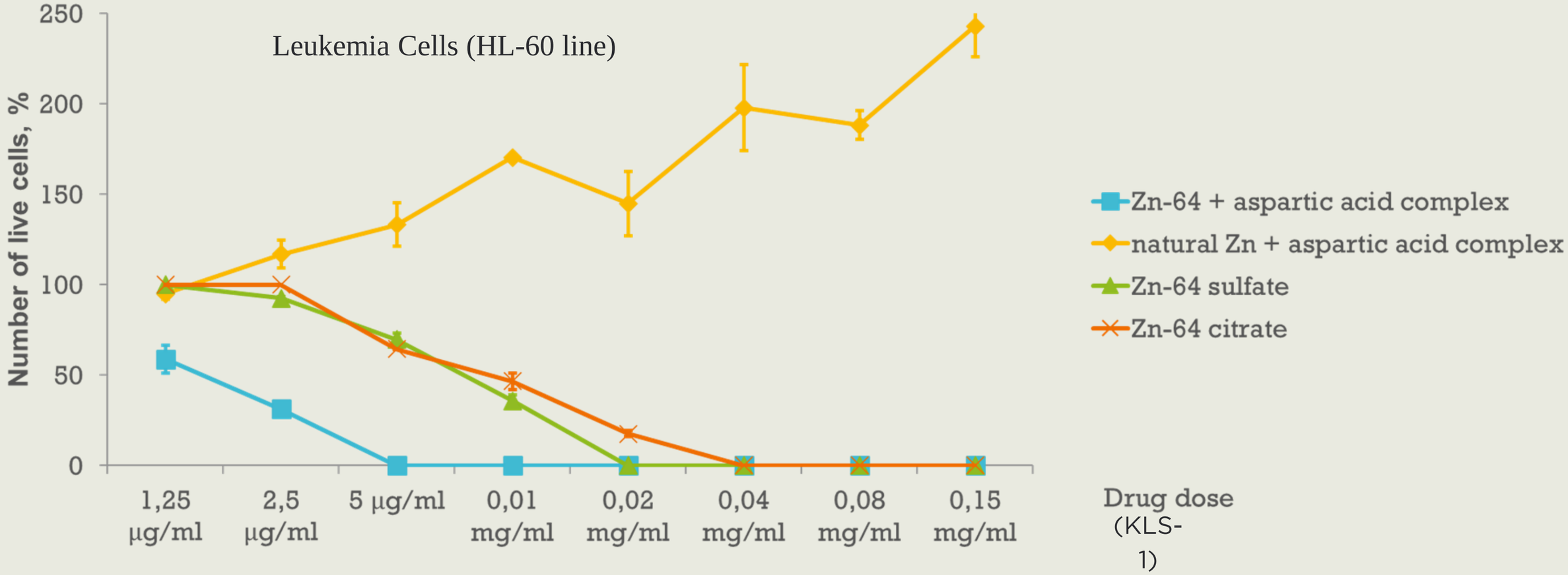
Zinc at concentrations within the physiological range (5 μM) is required for renaturation and reactivation of wild-type p53 (ref.)

The wtp53 requires the binding of a single zinc ion for proper folding and function. This zinc ion is coordinated by four specific amino acids within the DNA-binding domain (DBD) of the protein: Cysteine 176; Cysteine 238; Cysteine 242; and Histidine 179. Cysteine (S-ligands) preferentially binds isotopically light Zn, while normally tighter binding histidine (N-ligands) and aspartate (O-ligands) preferentially complex isotopically heavy Zn (ref.)

Our studies show that various tumors feature prevalent heavy zinc.

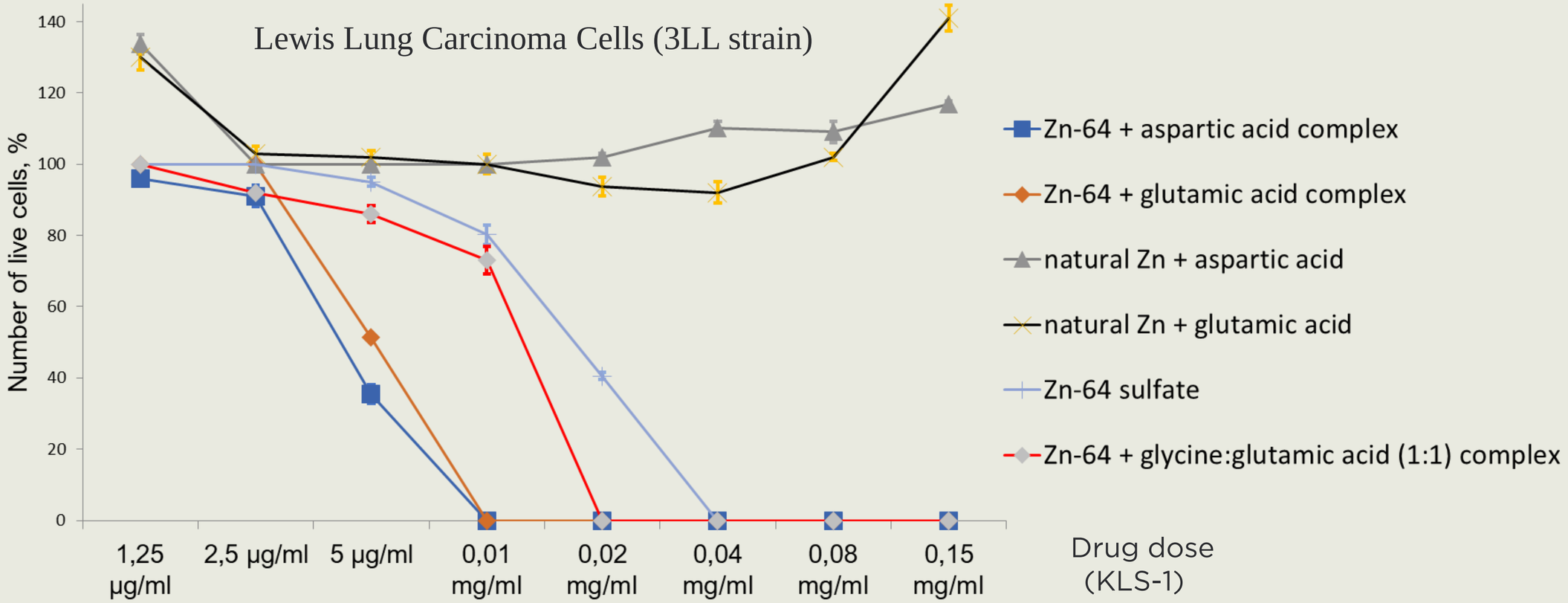
WHY 64ZN ISOTOPE

We discovered through research that enrichment of light atoms of key chemical elements in known organic compounds lead to the adoption of enhanced therapeutic effect. An initial therapeutic effect shown by dietary supplements was found to be short-lived and statistically negligent.



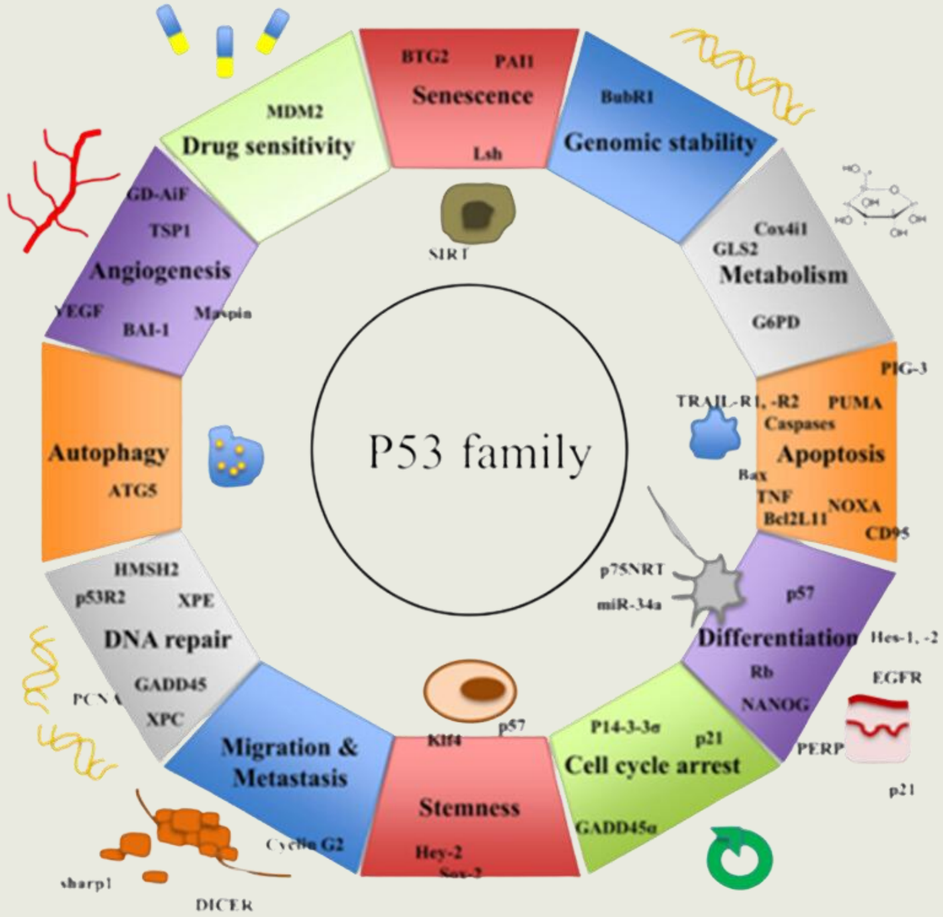
WHY 64ZN ISOTOPE

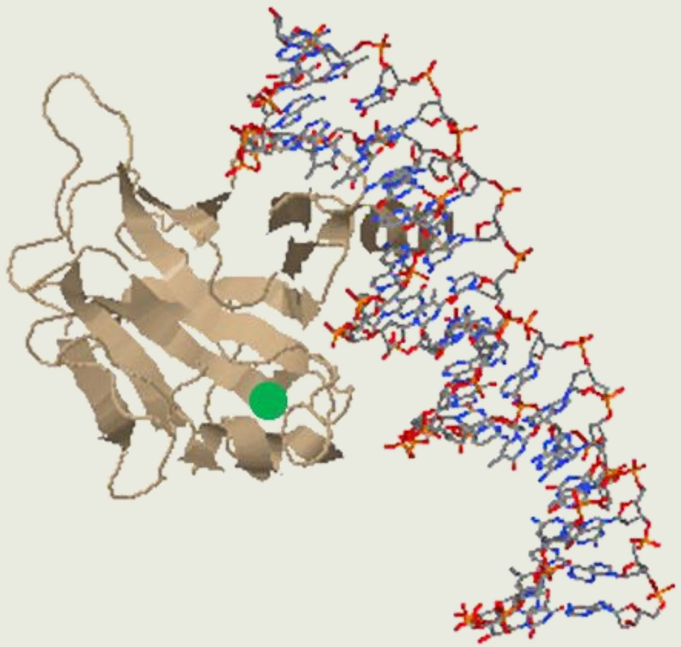
We discovered through research that enrichment of light atoms of key chemical elements in known organic compounds lead to the adoption of enhanced therapeutic effect. An initial therapeutic effect shown by dietary supplements was found to be short-lived and statistically negligent.



MECHANISM OF ACTION

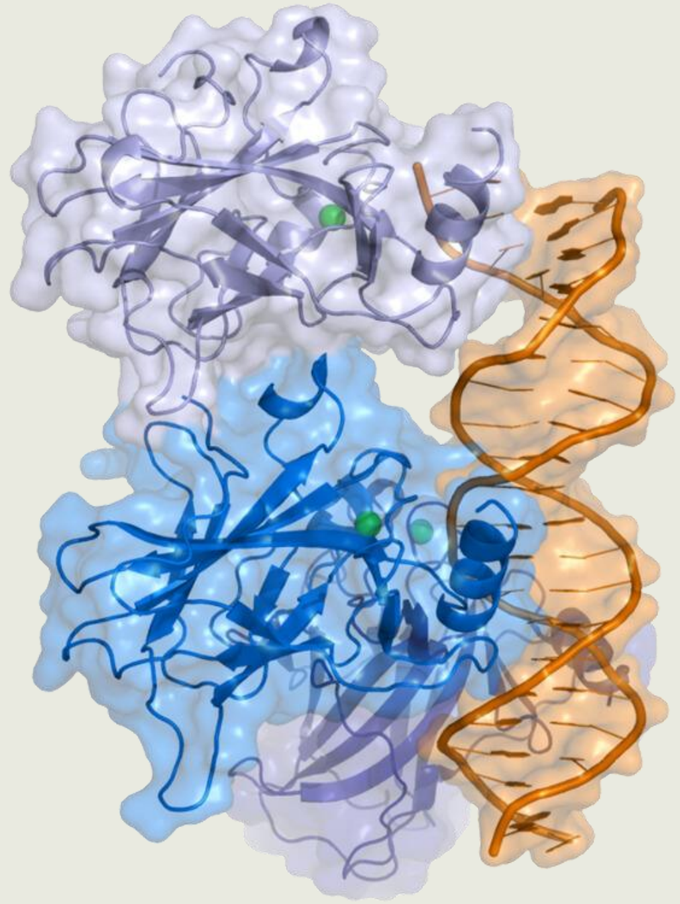
KLS1 is a wtp53 activator that inhibits tumor growth and induces tumor cell apoptosis while enhancing immune responses, reducing inflammation and oxidative stress, and improving mitochondrial and lysosomal functions.





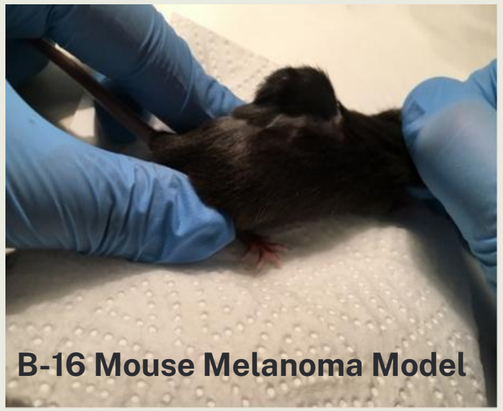
DNA-binding domain

Green spheres indicate zinc

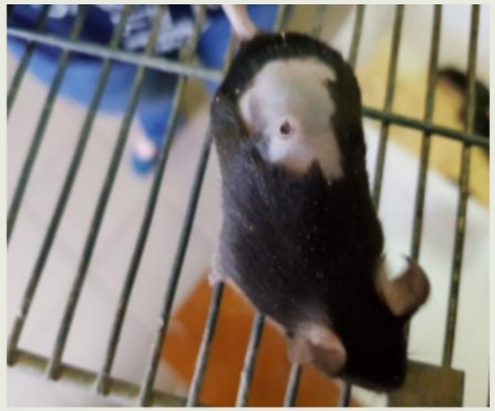


PRECLINICAL RESULTS

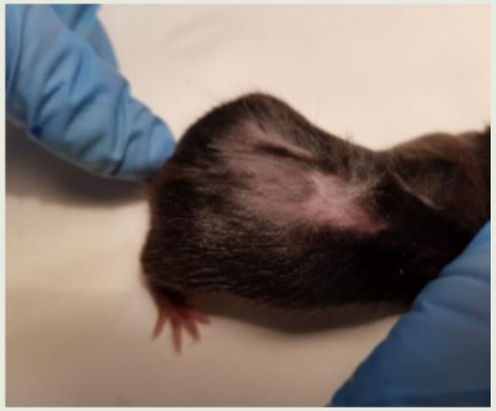
KLS-1 eradicated several tumors in cell lines and animal models.



Control mouse
3 weeks post treatment



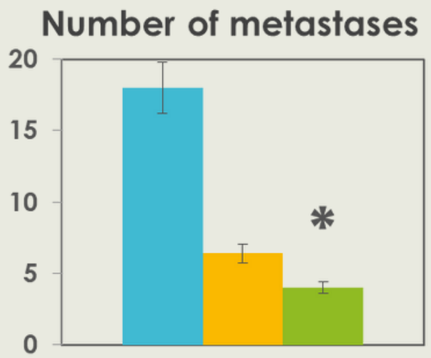
KLS-1 single injection
3 weeks post treatment

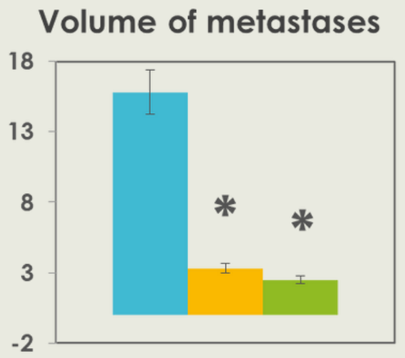


KLS-1 single injection
5 weeks post treatment

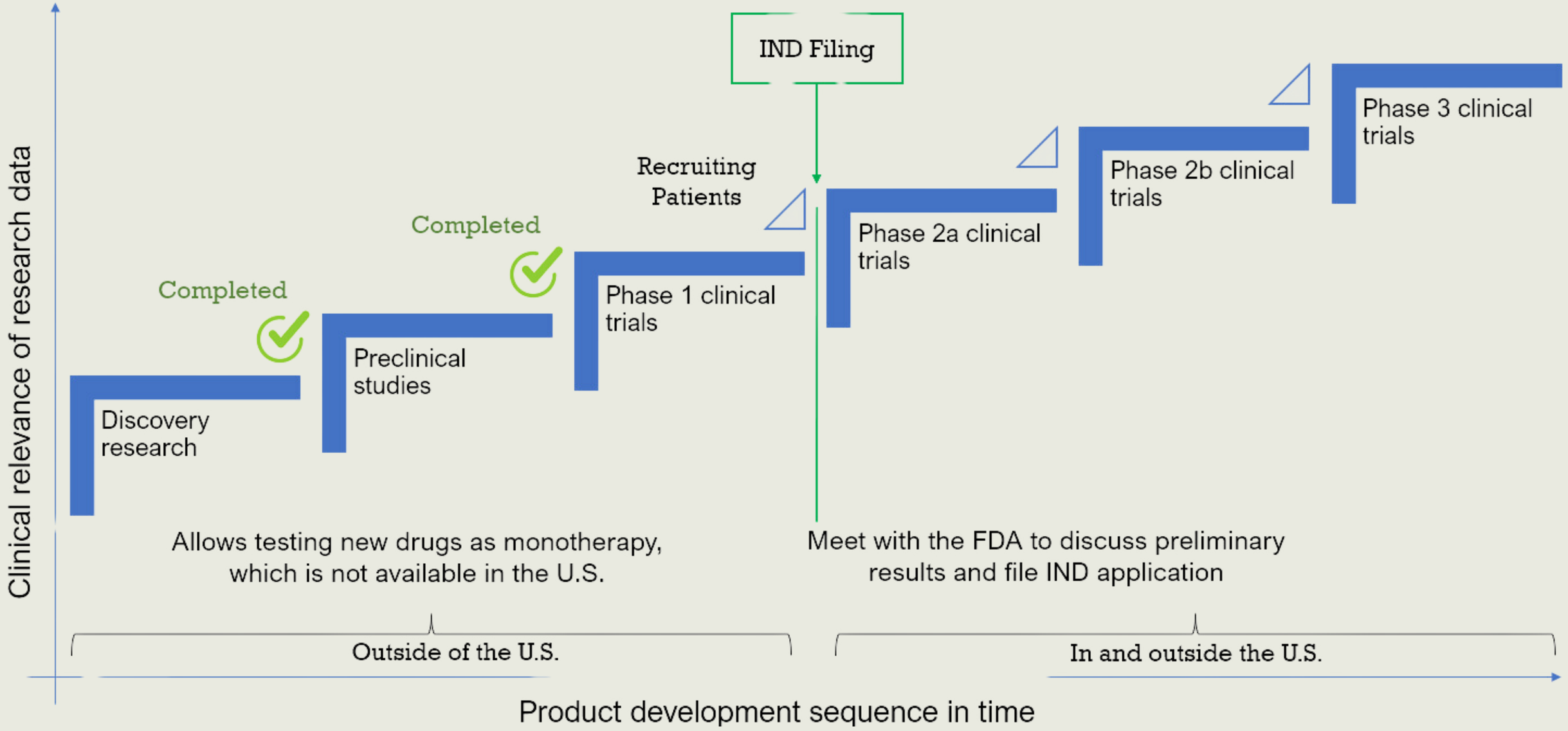
L1210 Mouse Leukemia Model

Metastatic B-16 Mouse Melanoma Model





CLINICAL DEVELOPMENT PLAN



TARGETING VALIDATED PATHWAYS

Isotopically Enriched ^{64}Zn

Induced metalloprotein expression and activities ← → Induced wtp53 synthesis, activation and anti tumor action

Enhanced mitochondrial, ubiquitin and lysosomal functions ← → Induced A20 and PPAR alpha activities

Inhibition of NF-kB activation ← → Inhibition of TNF activation

Bax pathway **Interleukins' pathway** **Mn-SOD pathway** **ERK / MAPK pathway** **TGF betta & CRP pathways**

Reduced Local and Systemic Inflammation and Oxidative Stress, Cell Cycle and Apoptosis Regulation

Neuroprotective Effects, Improved Protein Folding, Improved Liver & Pancreas Functions

Enhanced Cellular Energy, Mitophagy, Autophagy

Anti-tumor Action, DNA Repair, Liver Fat Reduction

Repair of Cellular Functions => Disease Modifying Effect

NEW CLASS OF DRUGS

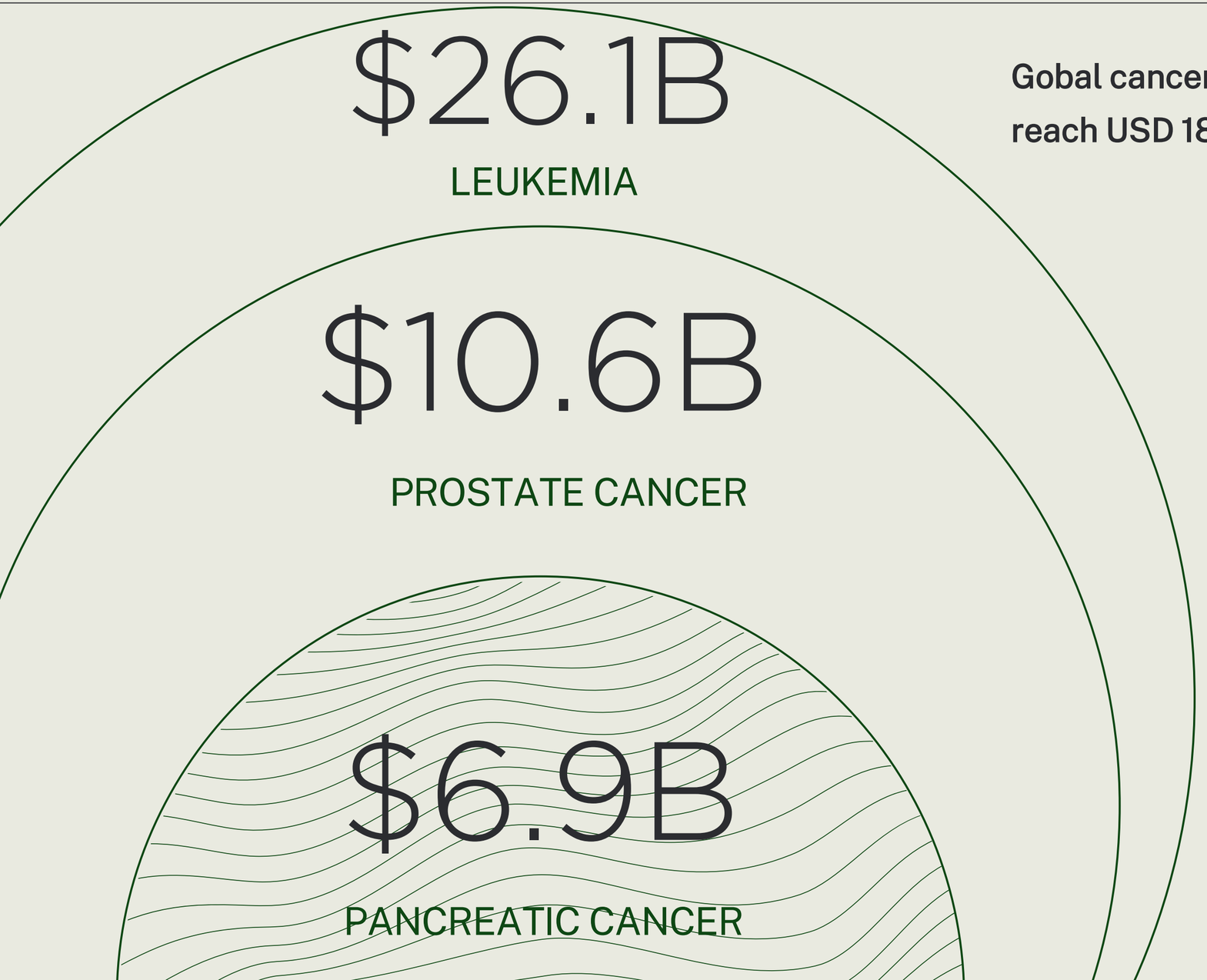
New class of immunotherapy (isotope-selective modulation)

- Fully-defined, isotope selective modulation with multi-pronged MoA
- Based on unique understanding of the etiology and pathogenesis of oncological diseases
- Composition of matter and methods of use IP issued and pending in the U.S. and internationally
- Employing multi-pronged mechanism of action that targets tumor growth and metastases along with inflammation and oxidative stress

Straightforward, efficient path to commercialization

- Working to qualify KLS-1 under the 505(b)(2) regulatory pathway (new strength - rates of cellular uptake and enzymatic function.)
- Fast Track designation will be sought for combination therapies to provide therapies for cancer patients non-responsive to currently approved immunotherapies and a relief of serious adverse effects after chemo
- Considering to seek Breakthrough Therapy designation for KLS1 for patients with pancreatic cancer, provided positive top line data received from currently approved clinical trial.

ADDRESSIBLE MARKET -PRESENT PIPELINE



Gobal cancer immunotherapy market size is expected to reach USD 188 billion by 2030, at a CAGR of 10%

LEUKEMIA

Gobal leukemia treatment market size was valued at USD 14.09 billion in 2023 and is expected to reach USD 26.08 billion by 2030, at a CAGR of 7.9%

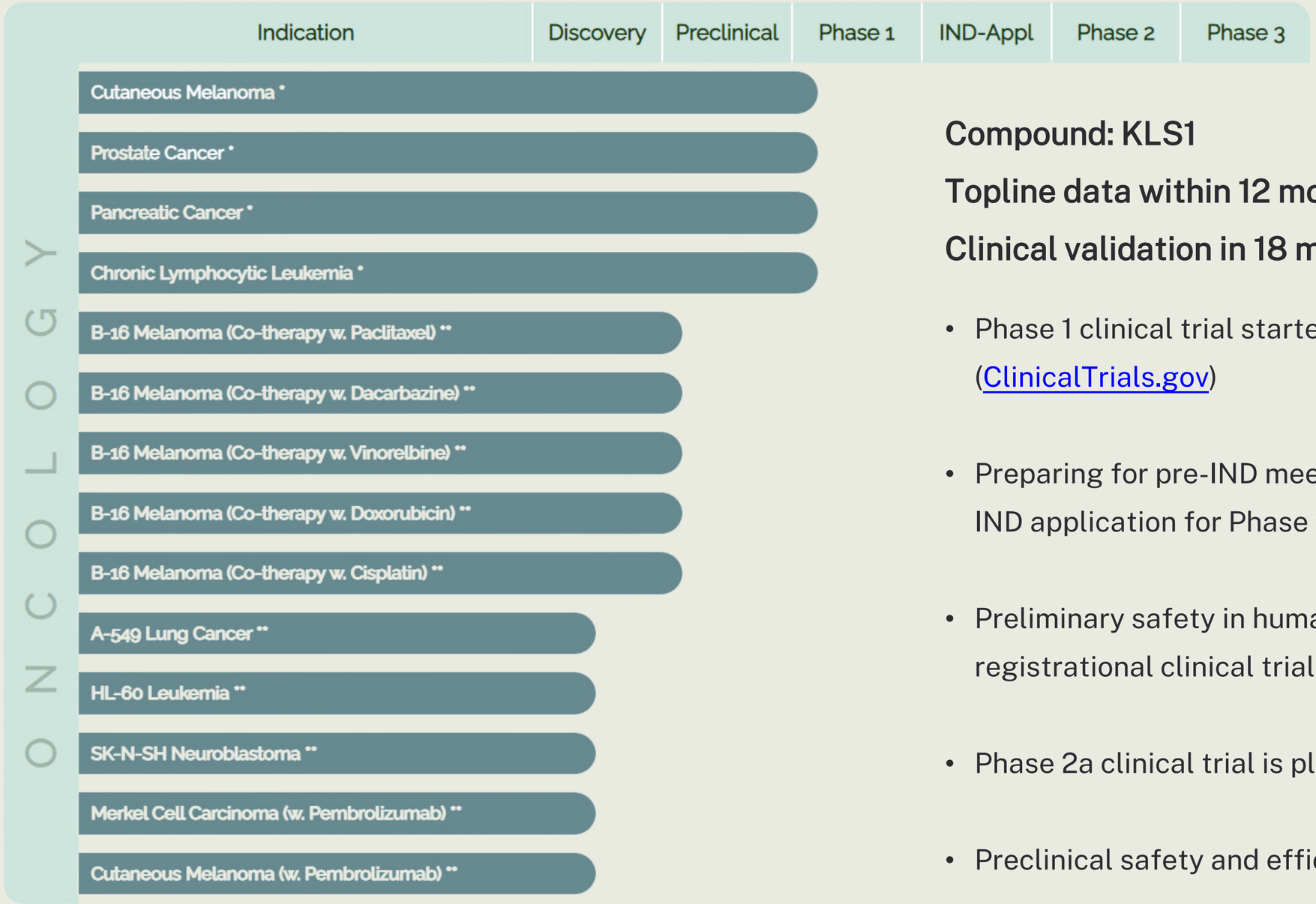
PROSTATE CANCER

Global prostate cancer treatment market size is projected to reach USD 10.6 billion by 2030, at a CAGR of 11.1%

PANCREATIC CANCER

Global pancreatic cancer treatment market size is projected to reach USD 6.9 billion by 2030, at a CAGR of 8.1%

PRODUCT PIPELINE



Compound: KLS1

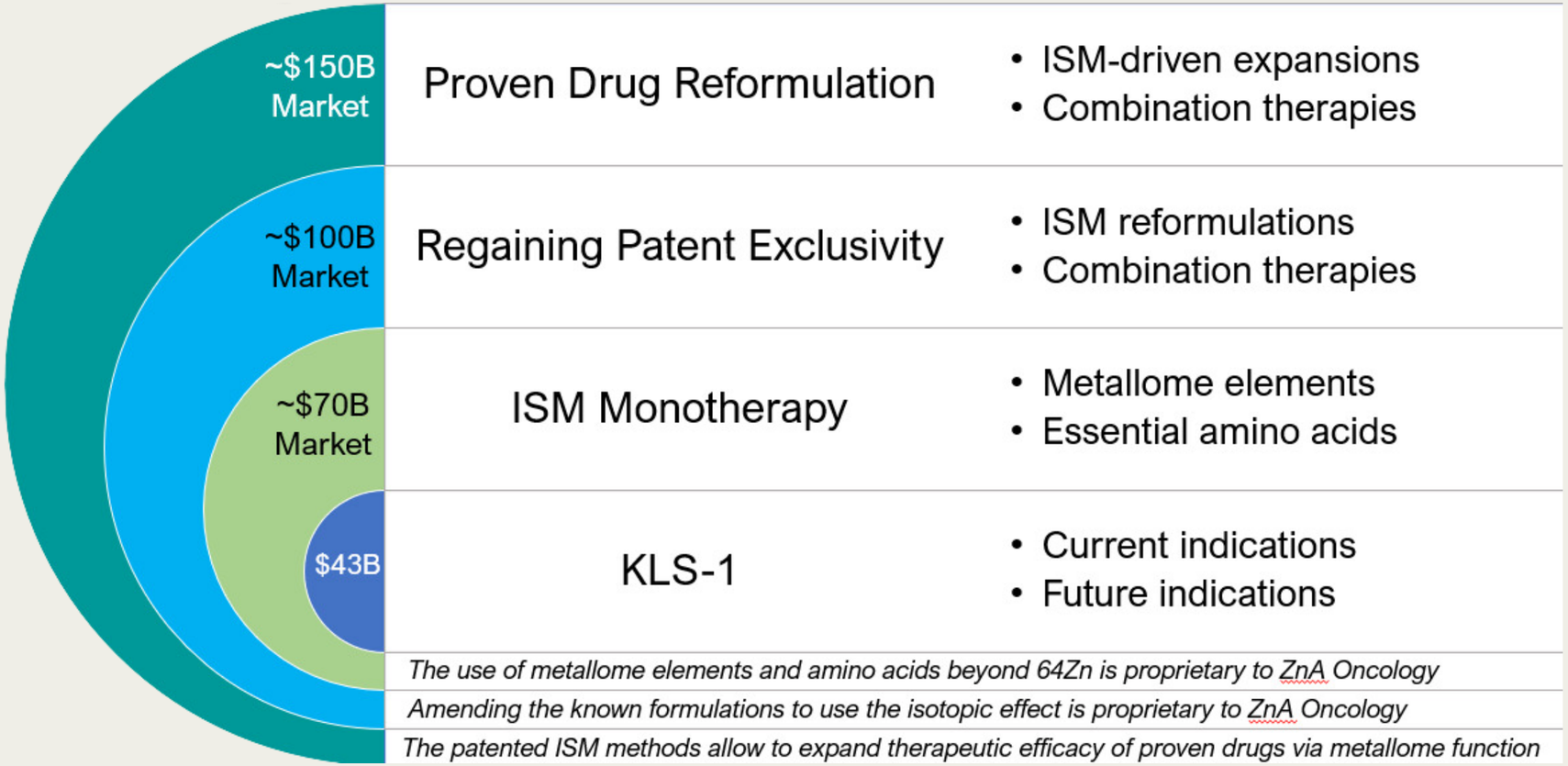
Topline data within 12 months

Clinical validation in 18 months

- Phase 1 clinical trial started with first patient in Aug-2024 (ClinicalTrials.gov)
- Preparing for pre-IND meeting with U.S. FDA in 1H2025 and filing IND application for Phase 2 clinical trial in 2H2025
- Preliminary safety in human patients was validated in non-registrational clinical trial in 2020 (Publication)
- Phase 2a clinical trial is planned to start in 2H2025
- Preclinical safety and efficacy confirmed in animal models

SOLID GROWTH POTENTIAL

Exponential business potential is rooted in the ever-growing pipeline capability leveraged by the combined biofunction of metallogenome elements and amino acids on one hand and the ISM-driven renewal of patent exclusivity for proven anti-cancer drugs and combination therapies on another.



LEADERSHIP

Founder, President & CEO

Max Temnik, PhD

Investor in several biotech startups, experienced entrepreneur with multiple business ventures, expert in chemistry.

Co-Founder & COO

Sergei Petukhov, DVM

Distinguished venture capitalist in the biotech sector, noted for securing "unicorn" IPO exits and M&As, served as a board member for various biotech companies.

Co-Founder & CMO

Santosh Kesari, MD, PhD

Leading neuro-oncologist in the U.S., distinguished by extensive research and development expertise coupled with practical experience.

Co-Founder, EVP & CFO

Sergei Gurin, MBA

Accomplished serial entrepreneur, investor, and inventor with proficiency in time management, business growth and securities offerings.

Building a team of mission-focused, industry-tempered personnel and consistently exploring a broad range of available resources to strengthen our operations

MISSION & ULTIMATE GOAL

To become a world-leading metallogenomic pharmaceutical company developing clinically de-risked, inherently safe, and effective, disease-modifying drugs to eradicate cancer.

ZNA
Oncology

Thank you.

Sergey Gurin, Executive Vice President & CFO
(917) 536-1327
SGurin@ZnaBio.com