



# Metallomix<sup>TM</sup>

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ATTACKING DISEASES BY FOCUSING ON METALS IN BIOLOGY

July, 2024

Metal-based therapeutics transform the pharmaceutical and healthcare paradigms for treating cancer, neurological, autoimmune diseases, and metabolic dysfunctions with a focus on metallome-dependent biology

- ✓ Makes standard therapies more effective
- ✓ Inherently-safe at therapeutic doses
- ✓ Clinically de-risked development pathway
- ✓ Reduces treatment-related side effects
- ✓ A better therapy with a lower dose

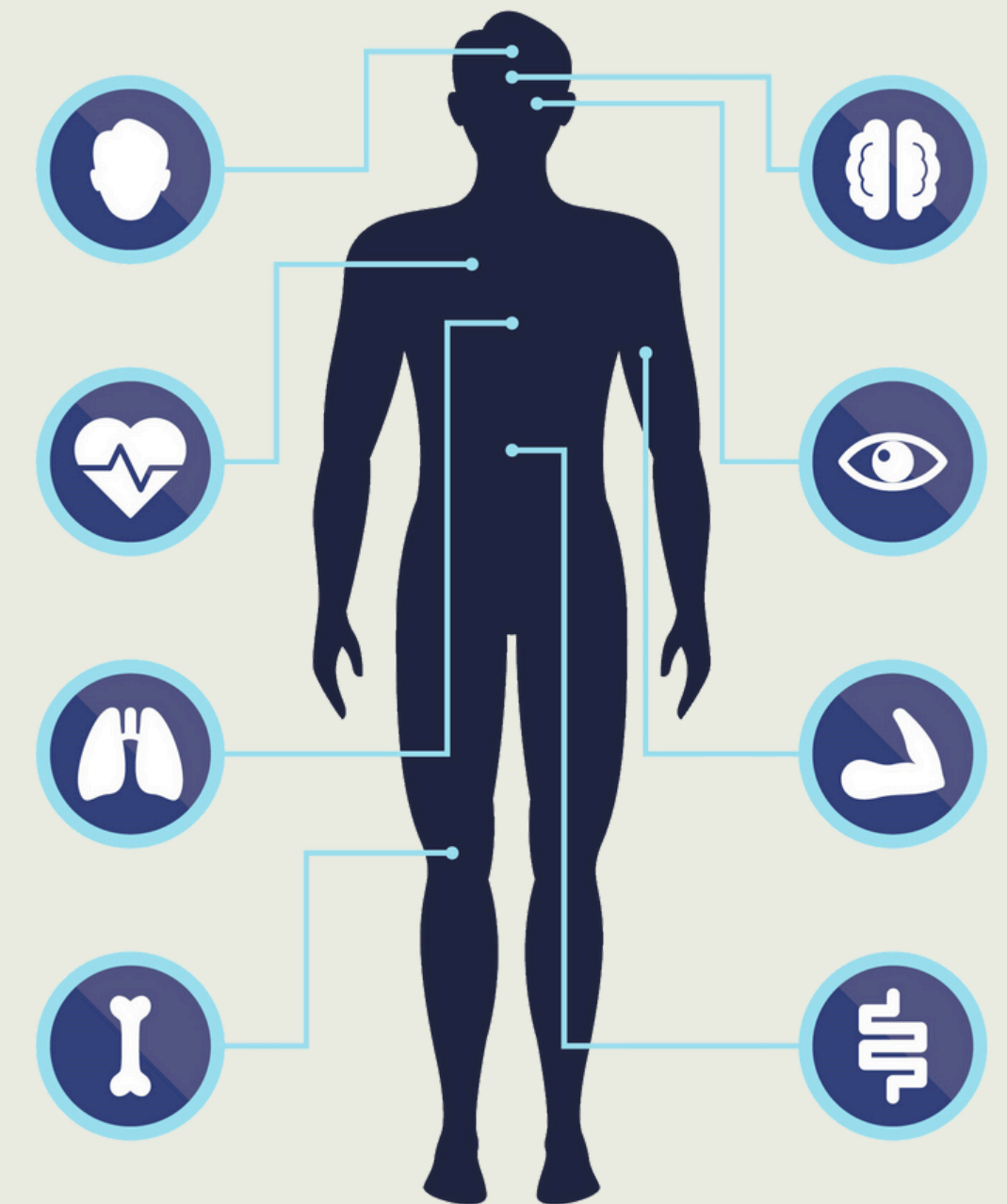
# ABOUT THE METALLOME

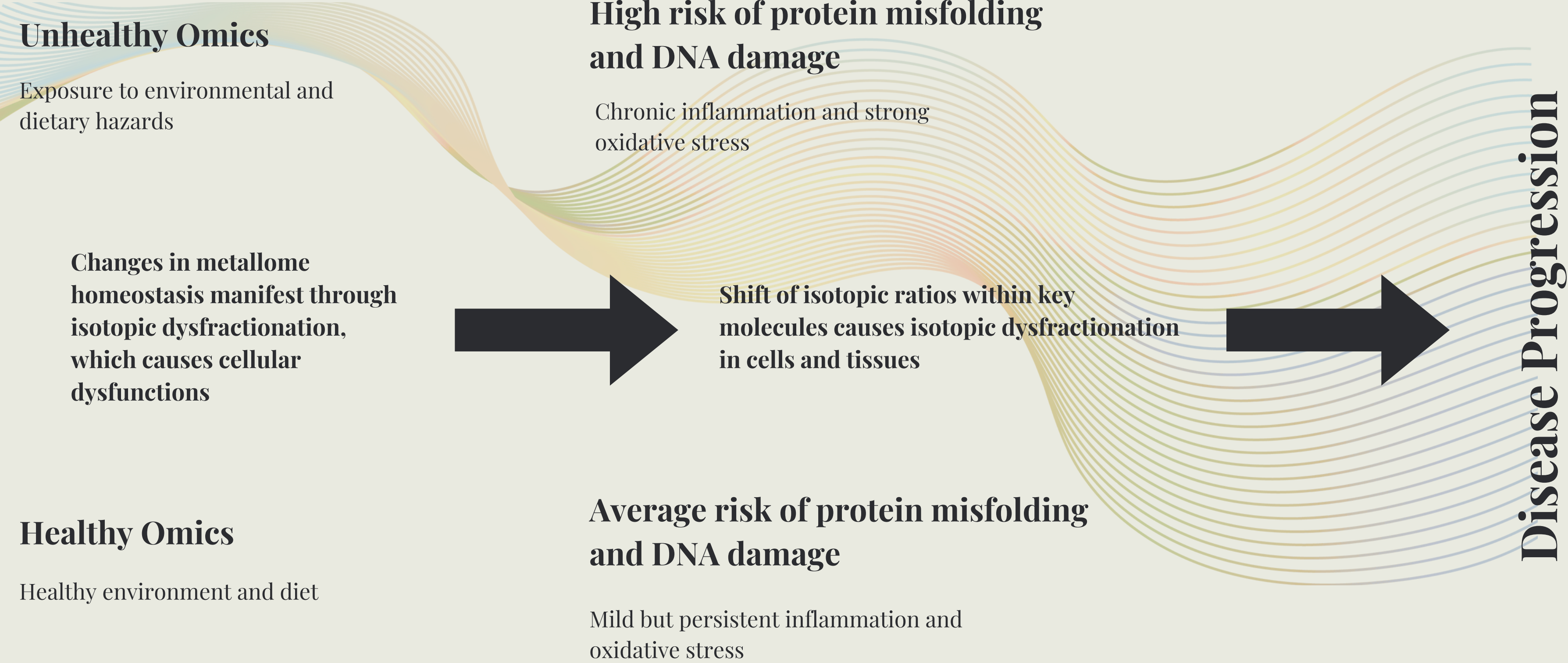
While organic elements constitute 99% of an organism's mass, life would be impossible without the inorganic essential elements, collectively termed **the metallome**

## 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
- Biom mineralization

26	27	28	29	30	31	32
Fe Iron	Co Cobalt	Ni Nickel	Cu Copper	Zn Zinc	Ga Gallium	Ge Germanium
44	45	46	47	48	49	50
Ru Ruthenium	Rh Rhodium	Pd Palladium	Ag Silver	Cd Cadmium	In Indium	Sn Tin
76	77	78	79	80	81	82



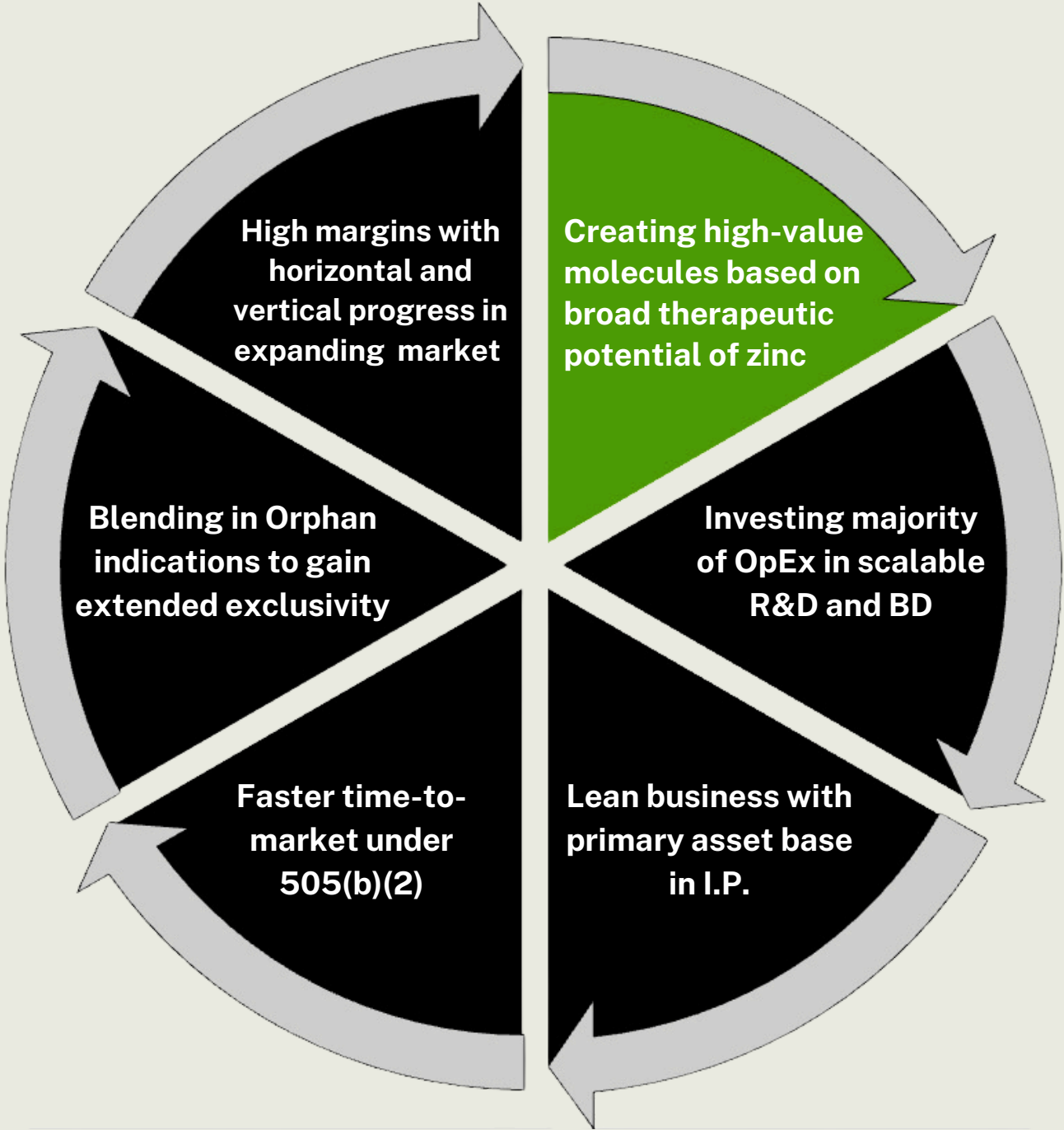




# Isotopic Fractionation Drives Diseases

Comprehensive review of isotopic fractionation in human diseases ( <a href="#">ref</a> , 2021)	Pancreatic cancer patients excrete isotopically light <sup>64</sup> Zn in their urine ( <a href="#">ref</a> , 2020)
Brain tissue accumulates heavier copper isotopes in Alzheimer's disease ( <a href="#">ref</a> , 2025)	Treatment with <sup>64</sup> Zn-Asp leads to restoration of liver and pancreatic tissues ( <a href="#">ref</a> , 2025)

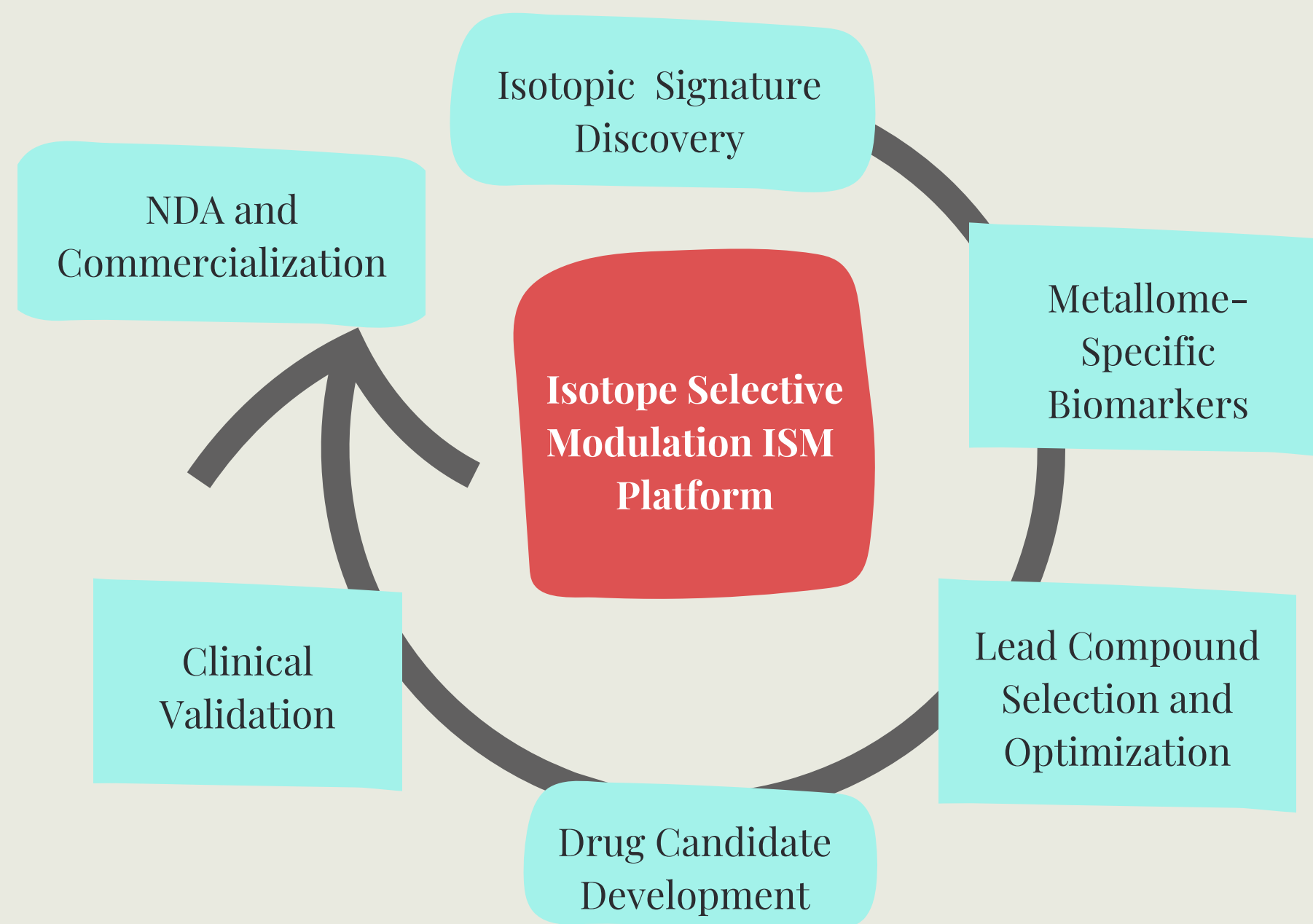
Our patents cover a broad spectrum of isotope-selective modulators to repair cellular functions



**5** Issued **composition of matter** and **methods of use** patents  
(Exp. 2035-2049)

**68** Pending **indication-specific** patent applications including international counterparts (PCT)

**16+** Provisional patent applications



**We modulate cellular pathways with proprietary drugs using atomically modified metals**

The isotope effects help to enhance cellular uptake, protein synthesis and functions, and enzymatic reactions



*Founder, President, CSO & Director*

**Max Temnik, PhD**

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



*Co-Founder & CEO*

**Sergei Petukhov, DVM, MSc**

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



*Co-Founder, EVP & Interim CFO*

**Sergey Gurin, MBA**

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



*VP, Product Development*

**Santosh Kesari, MD, PhD**

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



*VP, Product Development*

**Leonid Magilenko, MD**

Boaard-certified physician in internal medicine with 25+ years of clinical experience.



*Board Member*

**Walter Olesiak, BS, MBA**

Over 28 years experience in business development, healthcare consulting and venture investment with Remiges Ventures, Mitsui, Cambridge Pharma Consultancy (an IMS Health company), Genzyme Japan and SRL, Inc.



*Chair of Advisory Board*

**Al Beardsley, PhD**

30+ years of creating and leading complex, highly successful public and private sector biopharma companies including Galera, MSDC, Kereos, President & CEO Cirius Therapeutics



*Isotope Effects in Biological Organisms*

**Roman Zubarev, PhD**

Professor of medicinal proteomics in the Department of Medical Biochemistry and Biophysics at the Karolinska Institutet.



*Regulatory Affairs and Compliance*

**Andreia Collier, MSc**

Over 80 successful INDs and 60 NDAs with the FDA, in oncology, dermatology and cardiology divisions; regulatory approvals in Europe, Australia, Latin America, Japan and Asia; worked at Gilead, BTG, Johnson & Johnson and Merck.



*Analytical/Bioanalytical Chemistry*

**James Blackledge, PhD**

Expert in biological mass spectroscopy, 20+ years in pharmaceutical drug development, founder of Capella Imaging, R&D at BMS, Parke-Davis, Kereos, Inc, Mallinckrodt Pharmaceuticals and Galera Therapeutics.



# Thank you!



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