CBC | CHICAGO BIOMEDICAL CONSORTIUM *presents*

TECHICAGO

Chicago BioCapital Summit

Where vision meets investments ★★★★

November 2, 2023
Fulton Labs, Chicago, IL

With support from: The Searle Funds at The Chicago Community Trust, The University of Chicago, Northwestern University, UIC, P33, World Business Chicago

A message from CBC Executive Director, Michelle Hoffmann, PhD

Hello,

I am thrilled to welcome you to the inaugural Chicago BioCapital Summit, coordinated by the Chicago Biomedical Consortium (CBC) in collaboration with our member institutions, The University of Chicago, University of Illinois Chicago, and Northwestern University. The Chicago BioCapital Summit is the first of its kind event that showcases the remarkable innovations in the field of life sciences and biotechnology right here in our vibrant city of Chicago.

As a not-for-profit organization, the CBC is dedicated to helping build the can-do Chicagoland biotech ecosystem and we are privileged to support university researchers as they take the first steps from lab discoveries to medical breakthroughs. One of the CBC's goals is to build bridges between industry, venture, and our great academic innovators, lowering the barriers to translation and helping build a robust biotech community.

Central within the Midwest's dense network of world-class research institutions, Chicago is developing a distinct "engineering-meets-medicine" ecosystem built on new drug delivery methods, new sensors, and – of course – new molecules. However, the path from science to commercialization is fraught with many challenges. Our program today is designed to be both informative and inspirational as we gather venture capitalists, successful drug hunters, and academics to shed light on biotech success, the implications for healthcare, the economy, and most importantly, the well-being of people around the world.

The Chicago BioCapital Summit, showcasing science from multiple universities is a testament to the spirit of collaboration that will define our ecosystem and embodies our shared commitment to advancing healthcare and improving lives through groundbreaking research and cutting-edge technology.

I would like to extend my deepest gratitude to our sponsors, speakers, and attendees, as well as the dedicated team who has worked tirelessly to make this event a reality. Your support and participation are invaluable to the success of this Summit.

Thank you for being here, and here's to a fantastic and productive day. Enjoy!

Michelle Hoffmann

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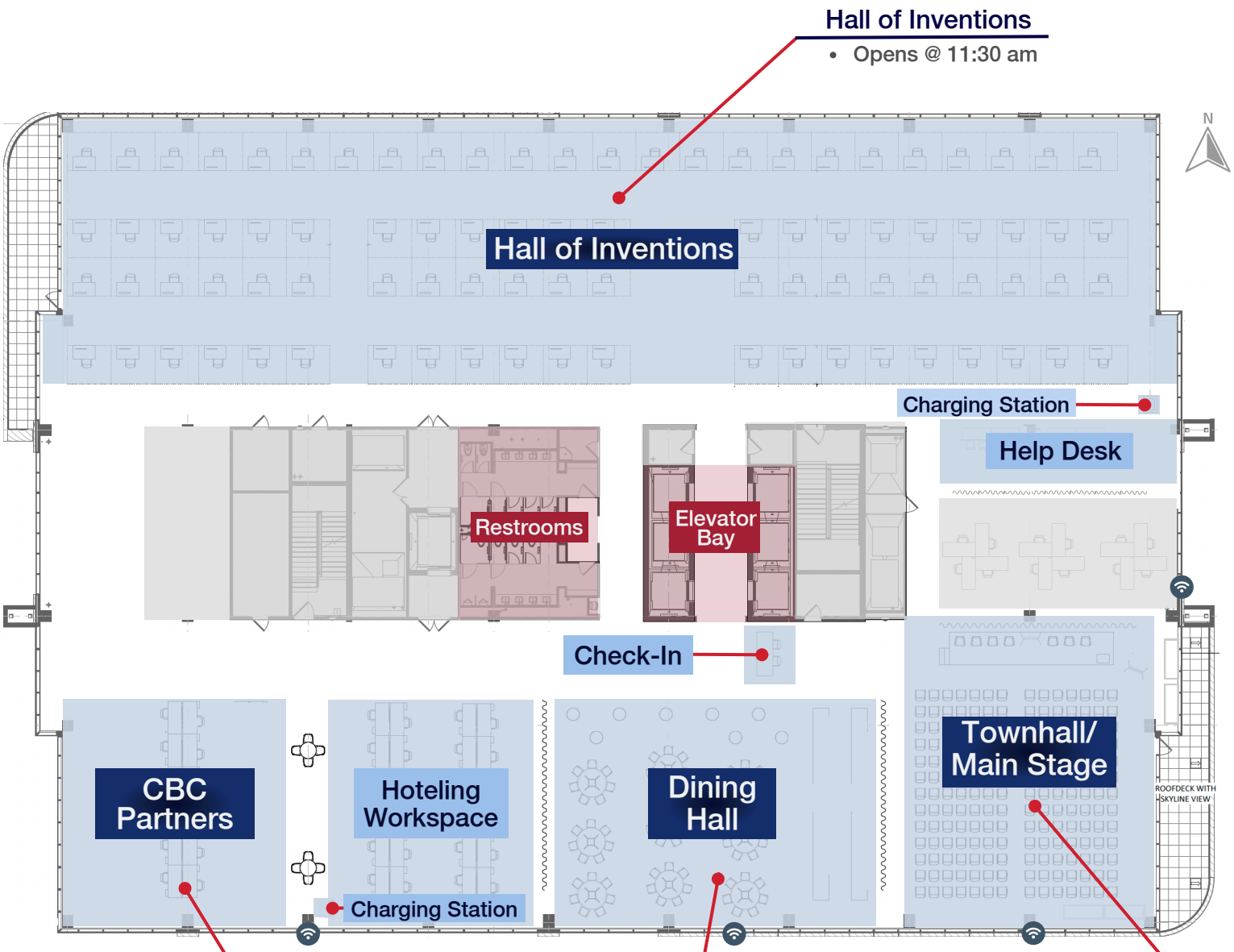
4:15 pm - Fireside Chat: Investing in Illinois Biotech	• Michael Frerichs - Illinois State Treasurer *Introduced by Paul Burton - 2Flo Ventures*
4:45 pm - Lightning Talks	• John Rogers, Northwestern University - Co-Founder, Sibel Health & Rhaeos • Allison Squires, University of Chicago - Quantum Sensing for Biophysics and Bioengineering • Nora Vazquez-Laslop, University of Illinois Chicago *Introduced by Jami Ellis - Horizon Therapeutics*
5:30 pm - Closing remarks & Reception	

Event Map

@ 400 North Aberdeen, 15th Floor, Chicago, IL



Hall of Inventions

- Opens @ 11:30 am

CBC Partners

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Dining Hall

- Breakfast @ 8:00 am
- Lunch @ 11:30 am
- Coffee Breaks: @ 10:10 am & 3:30pm

Townhall

- Welcome @ 8:30 am
- Morning Panel @ 9:15 am
- Morning Lightning Talks @ 10:45 am
- Hall of Invention Intro @ 11:25 am
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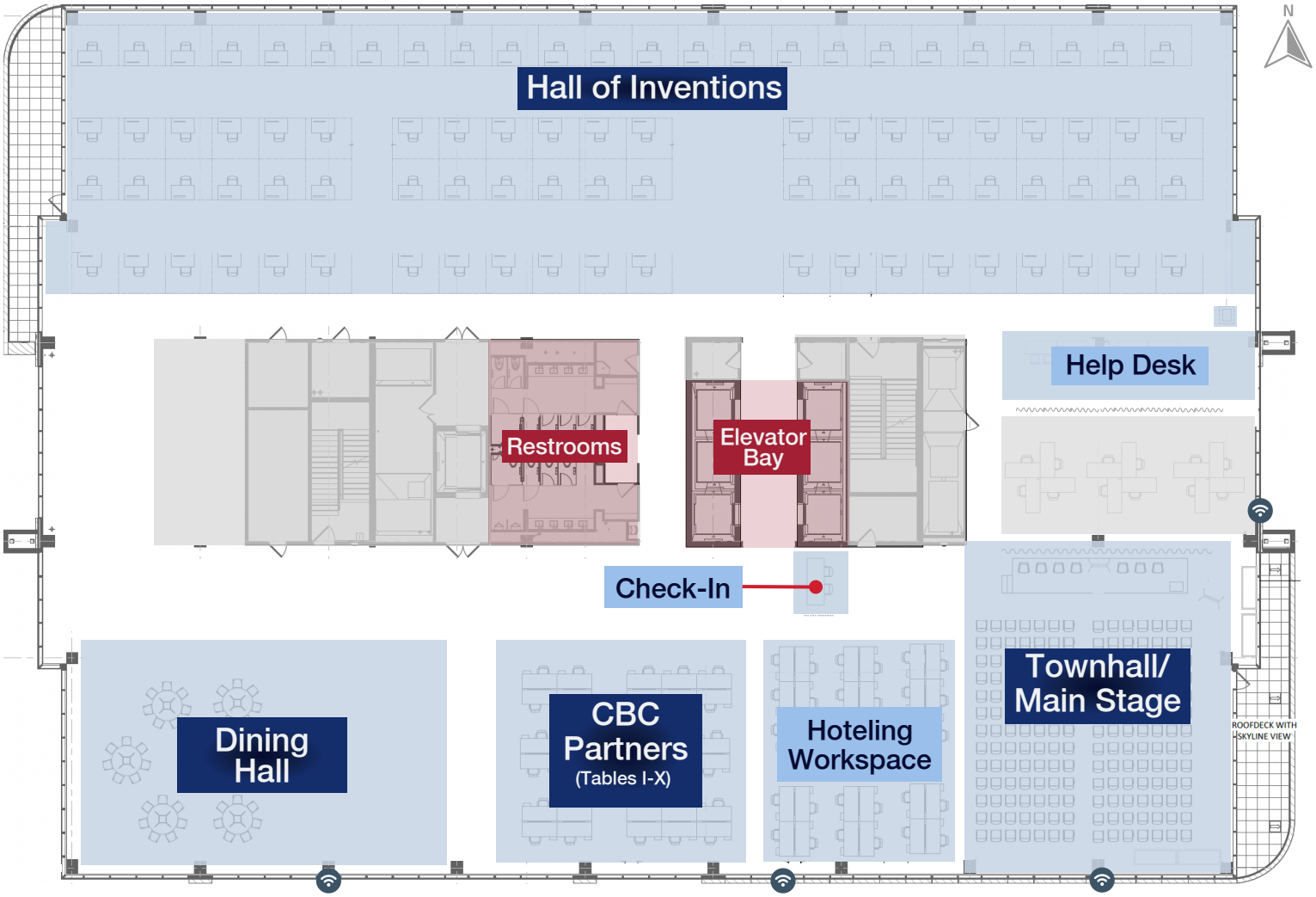

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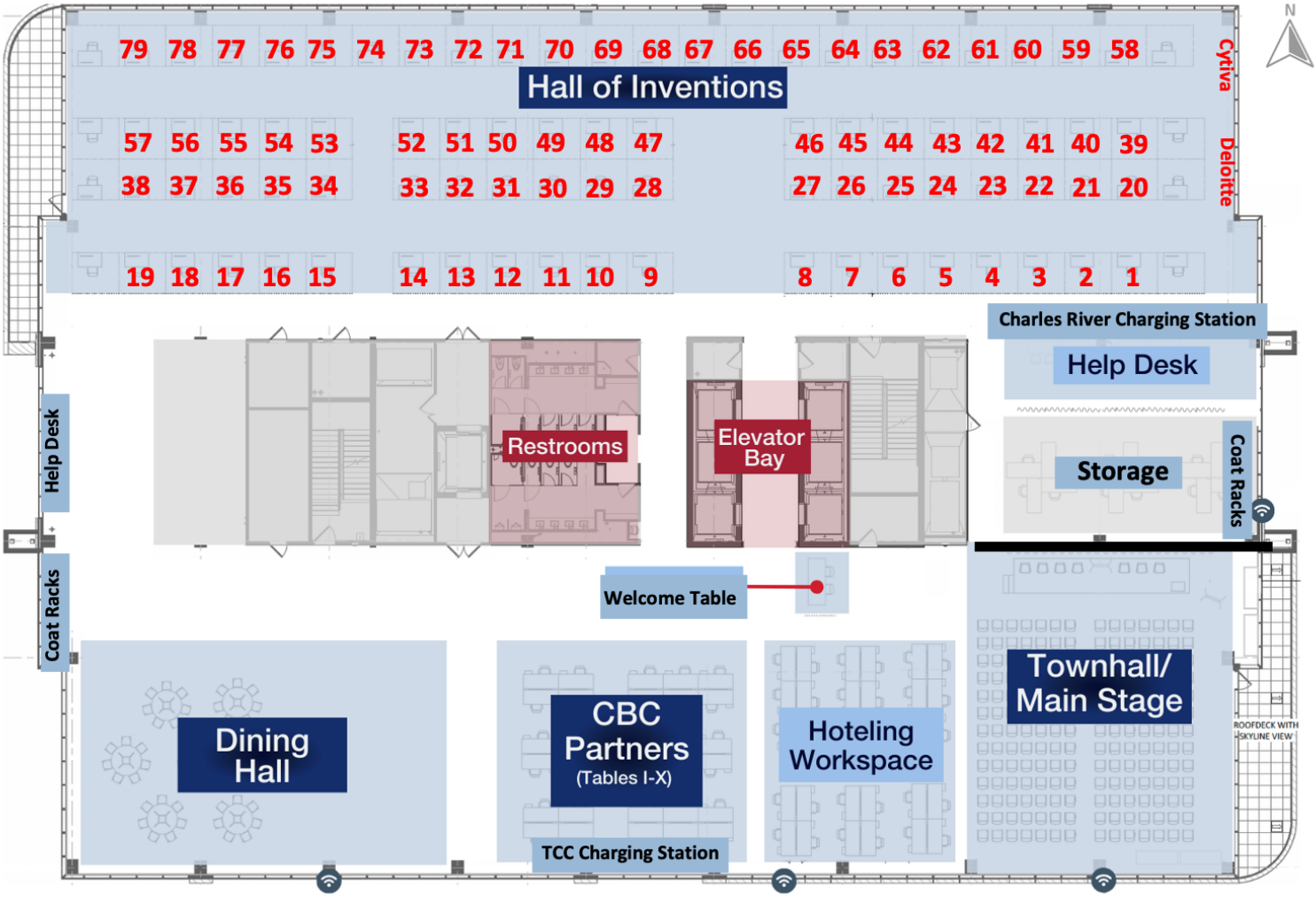

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CBC | CHICAGO BIOMEDICAL CONSORTIUM

Invited Speakers

The Searle Funds at The Chicago Community Trust

Invited Speakers

John Leonard, MD

President & CEO, Intellia Therapeutics

Speaking at: 8:45 am - Opening remarks

After a 30-year career in pharmaceutical R&D, Dr. John Leonard retired from his position as Chief Scientific Officer and Senior Vice President of Research and Development at AbbVie in 2013. The following year, he returned to his life's passion and joined the Intellia team to make CRISPR/Cas9 technology into a therapeutic reality. Dr. Leonard is among the leading R&D executives who have led breakthrough medicines through their discovery, development and launch to become blockbuster drugs, including HIV protease inhibitors Norvir® and Kaletra® and all-time worldwide top-selling drug Humira®.

Introduction by

Julia Monfrini Peev

Partner, PACE Healthcare Capital

Robert Langer, ScD

Institute Professor, MIT • Co-Founder, Moderna Therapeutics

Speaking at: 2:00 pm - Invited Talk (Virtual)
2:35 pm - Panel 2: Commercializing academic science

Dr. Robert Langer is one of nine Institute Professors at the Massachusetts Institute of Technology (MIT). He has written over 1,500 articles, which have been cited over 401,000 times. His patents have licensed or sublicensed to over 400 companies; he is a co-Founder of a number of companies, including Moderna. Dr. Langer served as Chairman of the FDA's Science Board (its highest advisory board) from 1999-2002. His over 220 awards include both the United States National Medal of Science and the United States National Medal of Technology and Innovation, and the Charles Stark Draper Prize (often called the Engineering Nobel Prize).

Introduction by

Nancy Sullivan

CEO & Managing Director, Illinois Ventures

Invited Speakers

Anil Vasudevan, PhD

Executive Director, AbbVie

Speaking at: 3:40 pm - Invited Talk: Developing early-stage assets

Dr. Anil Vasudevan is currently an Executive Director at AbbVie, where he is the Head of Technology and Therapeutic Platforms. In this role, he has responsibilities for a range of Chemistry and Chemical Biology platforms. He is also the global head of the Antibody Drug Conjugate and Protein Degradation Platform Teams.

Introduction by

Thelma Tennant, PhD

Assistant VP, Corporate Engagement, University of Chicago

Michael Frerichs

Illinois State Treasurer

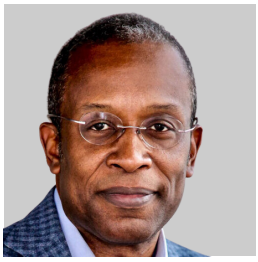
Speaking at: 4:15 pm - Fireside Chat: Investing in Illinois Biotech

Michael Frerichs was first elected Illinois State Treasurer on Nov. 4, 2014. He has since been re-elected twice and started his third term in January 2023. In Illinois, the Treasurer is the state's Chief Investment and Banking Officer, actively managing approximately $52 billion. Under Frerichs' tenure, the office has earned more than $1.5 billion for taxpayers through safe, smart investing. Frerichs was unanimously elected president of the bipartisan National Association of State Auditors, Comptrollers, and Treasurers in 2022. As vice chair of the Illinois State Board of Investment, Frerichs manages over $23 billion in pension assets for state employees.

Introduction by

Paul Burton, JD, MBA

Managing Partner, 2Flo Ventures



Panel 1: Biotech capital formation and Midwestern hubs

9:15 am, Main Stage

John Flavin, MBA

Founder & CEO, Portal Innovations

John Flavin is the Founder and CEO of Portal Innovations, a premier venture development engine that builds and invests in life sciences ventures. Flavin has a track record of bringing valuable corporate, academic, and civic enterprises from concept to reality, including Advanced Life Sciences, MediChem, MATTER and the Polsky Center for Entrepreneurship and Innovation at the University of Chicago. Flavin is co-Founder and Chairman of Pyxis Oncology (NASDAQ: PYXS), Executive Chair of ClostraBio, and Board member at Grove Biopharma. Over his career, Flavin has successfully raised more than $425 million of private and philanthropic capital and three NASDAQ IPO's.

Vikram Chaudhery, PhD

Co-Founder & COO, General Inception

Dr. Vikram Chaudhery is co-Founder, President, and COO of General Inception. He has more than 15 years of experience as a business executive, life sciences investor, management consultant, and entrepreneur across life sciences. Since 2019, Dr. Chaudhery has also been a partner at Genoa Ventures. Dr. Chaudhery earned his PhD in electrical engineering and biomedical instrumentation at University of Illinois Urbana-Champaign.

Daniel Gottlieb, MBA

Associate Director, Broadview Ventures

Daniel Gottlieb is Associate Director at Broadview Ventures. His prior experience includes roles in corporate venture capital, business development, marketing, and strategy at Proteon Therapeutics, Abbott Vascular, and Guidant. Gottlieb holds a BA from the University of Pennsylvania and an MBA from the Tuck School of Business at Dartmouth. He has board roles at Cardiosense, Nyra Medical, XII Medical, and CroíValve, and prior board roles at Puzzle Medical, Nido Surgical (acquired), CardioMEMS (acquired), and Neovasc (acquired).

Panel 1: Biotech capital formation and Midwestern hubs

9:15 am, Main Stage

Stephen Squinto, PhD

Chief Investment Officer, JP Morgan Life Sciences Private Capital

Dr. Stephen Squinto is an entrepreneur and biotechnology industry veteran with more than 30 years in drug development and more than 8 years as a venture capital investor. He is currently the Chief Investment Officer for the newly formed JP Morgan Life Sciences Private Capital organization. He has contributed to multiple drug approvals in the US, EU, and other major global markets. In November 2014, Dr. Squinto retired as the Executive VP and Chief Global Operations Office at Alexion Pharmaceuticals, where he guided the discovery, development and commercial launches of Soliris and Stensiq. Prior to co-founding Alexion, Dr. Squinto helped build the drug discovery program at Regeneron Pharmaceuticals.

Anya Schiess, MBA

Managing Partner, JP Morgan Life Sciences Private Capital

Anya Schiess is co-Managing Partner of the LSPC platform, which leverages the global scale, robust healthcare service ecosystem and healthcare data intelligence of JP Morgan to invest in life sciences and healthcare companies. Prior to joining LSPC, Anya was a Founder and General Partner of Healthy Ventures, an early-stage venture capital firm that invests in healthcare and life science technology. Previously, Schiess was a venture capitalist at Thomas, McNerney & Partners where her focus included biopharmaceuticals, medical devices, and genomic technology. Schiess has co-founded, helped build, or served on the boards of over 30 companies. Prior to investing, Schiess led strategy and business development for Cardinal Health and held several sales & marketing leadership roles at Medtronic. She has launched neurological, cardiovascular, and cardiac rhythm therapies around the world. Schiess earned a B.A. cum laude from Princeton University and an M.B.A. with honors from The Wharton School at the University of Pennsylvania.

Panel 2: Commercializing academic science - what works

2:35 pm, Main Stage

Michal Preminger, PhD, MBA

Regional Head, Johnson & Johnson Innovation, East North America

Dr. Michal Preminger is Head of Johnson & Johnson Innovation LLC, East North America, which builds, advances, and manages the External R&D portfolio of co-investments spanning across pharmaceutical, consumer health and medical devices. Previously, Dr. Preminger served as the Executive Director of Harvard University's Office of Technology Development (OTD) Harvard Medical School site, where she was responsible for development and commercialization of technologies emerging from research at HMS laboratories for new company formation, and for the strategy and execution of all industry collaborations. Prior to that role, Dr. Preminger held a number of senior business and technology development leadership positions in the biotech and tech industries and co-founded a biotechnology startup. Dr. Preminger has served on several Scientific Advisory Boards and Boards of Directors. She holds an MSc and Ph.D. in Biological Sciences from the Weizmann Institute of Science, an MBA from INSEAD, Fontainebleau, France, and a BA in Medicine from Hadassah Medical School, Hebrew University, Jerusalem.

Shana Kelley, PhD

President, Chan Zuckerberg Biohub Chicago

Dr. Shana Kelley is the President of the Chan Zuckerberg Biohub Chicago and the Neena B. Schwartz Professor at Northwestern in the Departments of Chemistry, Biomedical Engineering, and Biochemistry & Molecular Genetics. Dr. Kelley is a founder of four startup companies: GeneOhm Sciences (acquired by Becton Dickinson in 2005), Xagenic Inc. (acquired by General Atomics in 2017), cTRL Therapeutics (founded in 2019) and Arma Biosciences (founded in 2021).

Panel 2: Commercializing academic science - what works

2:35 pm, Main Stage

Steve Elmore, PhD

Vice President, AbbVie

Dr. Steve Elmore has over 25 years of experience in biopharma focused on discovering and advancing new therapeutics to clinical development. He is currently Vice President, Small Molecule Therapeutics & Platform Technologies at AbbVie. This highly multidisciplinary global team integrates chemistry, biology, and technology platforms to drive the AbbVie pipeline of small molecule programs from early exploratory research through clinical candidacy and beyond.

William Slatterly

Partner, Deerfield Management

William Slattery is a Partner on the Therapeutics team at Deerfield. Previously, Slattery was a senior healthcare analyst at Amerindo Investment Advisors, where he oversaw biotechnology investments. He has held various positions in research including those at National Medical Enterprises, Johnson & Johnson, and HMSS. Slattery is the Chairman of Gilda's Club New York City, a non-profit organization supporting cancer patients and their families. He holds an undergraduate degree in Biology and Chemistry from State University of New York at Albany and completed graduate coursework in Immunology at Rutgers University.

Lightning Talks - Morning Session

10:45 am, Main Stage

Introductions by

Lisa Dhar, PhD

Associate VP for Innovation, Northwestern University

Lev Becker, PhD

Co-Founder, Onchilles Pharma •
Associate Professor, University of Chicago

Dr. Lev Becker uses a multi-disease approach to develop a comprehensive understanding of macrophage biology and translates this mechanistic understanding to develop biologics and small molecules across a spectrum of human disease including cancer, anti-cancer immunity, and artherosclerosis. He is a co-Founder of Onchilles Pharma, MacroLogic, Maponos Therapeutics, and rMark Bio.

Alexis Demonbreun, PhD

CSO & Co-Founder, Ikaika Therapeutics •
Associate Professor, Northwestern University

Dr. Alexis Demonbreun's research focuses on understanding the genetic mechanisms of myopathies and using these genetic signals to drive therapy development. She holds multiple technological patents for the treatment of muscle membrane injury. Ikaika Therapeutics develops immunotherapies for fibrotic diseases such as muscular dystrophy.

Brad Merrill, PhD

Co-Founder, SyntaxBio •
Associate Professor, University of Illinois Chicago

Dr. Brad Merrill has contributed to the understanding of how transcription factors and the Wnt/beta-catenin signaling pathway control properties of stem cells. In 2021, he co-founded Syntax Bio, which has developed a unique sequential genetics technology for programming stem cells toward therapeutic uses. Syntax Bio has raised over $9M as a seed stage company and is pursuing its next stage of development.

Lightning Talks - Afternoon Session

3:40 pm, Main Stage

Introductions by

Jami Ellis

Vice President of New Product Planning, Horizon Therapeutics

John Rogers, PhD

Co-Founder, Sibel Heath • Co-Founder, Rhaeos • Professor, Northwestern University

Dr. John Rogers is Director of the Querrey Simpson Institute for Bioelectronics. He has co-authored nearly 900 papers and he is co-inventor on more than 100 patents. He is co-Founder of several biotech companies including Sibel Health, Epicore Biosystems, Rhaeos, Neurolux and Wearifi. His research has been recognized by many awards such as the Benjamin Franklin Medal and a Guggenheim Fellowship.

Allison Squires, PhD

Assistant Professor, University of Chicago • Institute for Quantum Sensing for Biophysics and Bioengineering (QuBBE)

Dr. Allison Squires leads an interdisciplinary research group studying biomolecular systems at the single-molecule level. Her labs engineers advanced sensing platforms to deliver novel manipulation and high-precision spectroscopic measurement capabilities. QuBBE is an NSF Quantum Leap Challenges Institute that aims to create quantum measurements and imaging systems to extract novel information from biology.

Nora Vásquez-Laslop, PhD

Research Professor, University of Illinois Chicago

Dr. Nora Vásquez-Laslop's research interests are elucidating fundamental principles of protein synthesis and ribosome function and understanding the mechanism of action of ribosome-targeting antibiotics and induction of antibiotic resistance genes.

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Hall of Inventions

The Searle Funds at The Chicago Community Trust

UIC

P33

Hall of Inventions - Table Index

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II	Discovery Partners Institute	Multiple	Multiple
III	Halo	Multiple	Multiple
IV	Loyola University	Multiple	Multiple
V	Lurie Children's Hospital	Multiple	Multiple
VI	Rosalind Franklin University	Multiple	Multiple
VII	SmartHealth Catalyzer	Multiple	Multiple
1	SNC Therapeutics (NU)	Nanotechnology & Synthetic Biology; Platform Technology	Oncology; Autoimmunity & Allergy; Metabolic Diseases & Diabetes
2	Bioaerium (UIC)	Diagnostics	Infectious Diseases
3	Vortex Therapeutics (NU)	Small Molecules & Peptides	Oncology; Proteostasis and Protein Degradation
4	Gabe Rocklin, PhD (NU)	AI and Algorithms; Platform Technology; Protein Engineering	Drug & Target ID
5	Acorn Genetics (NU)	Diagnostics	Multiple
6	CellCipher (UC)	AI and Algorithms	Drug & Target ID
7	Grove Biopharma (NU)	Small Molecules & Peptides; Nanotechonology & Synthetic Biology; Platform Technology	Oncology
8	EnteroTrack LLC (UIC)	Diagnostics	Autoimmunity & Allergy
9	Dimension Inx (NU)	Nanotechnology & Synthetic Biology	Metabolic Diseases & Diabetes
10	Riptide Therapeutics (UC)	Small Molecules & Peptides	Oncology
11	CartilaGen (UI)	Small Molecules & Peptides	Orthopedics & Osteoarthritis
12	Bin He, PhD (Faculty) (UIC)	Gene Therapy & Nucleic Acids	Infectious Diseases; Oncology
13	Encue	Small Molecules & Peptides	Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders
14	ClostraBio (UC)	Nanotechnology & Synthetic Biology	Inflammatory Bowel Disease; Autoimmunity & Allergy; Agbio & Food
15	Sibel Health (NU)	AI and Algorithms; Diagnostics	Acute Care & Surgical
16	Akava (NU)	Small Molecules & Peptides	Neurology & Neurodegeneration; Proteostasis and Protein Degradation
17	Claudyn (UC)	Small Molecules & Peptides	Inflammatory Bowel Disease
18	Jaehyuk Choi, MD, PhD (Faculty) (NU)	Biologics & Antibodies; Platform Technology	Oncology; Autoimmunity & Allergy
19	TBI Alert (UIC)	Diagnostics	Neurology & Neurodegeneration; Acute Care & Surgery
20	BiAffect & KeyWise (UIC)	AI and Algorithms; Healthtech	Neuropsychiatry & Mood Disorders
21	ReAx Therapeutics (UC)	Small Molecules & Peptides; Platform Technology	Oncology; Autoimmunity & Allergy
22	Thomas Meade, PhD (Faculty) (NU)	Diagnostics; Imaging	Oncology; Multiple
23	Tensor (UC)	AI and Algorithms; Diagnostics; Platform Technology	Oncology; Drug & Target ID
24	SELAGINE, Inc (UIC)	Biologics & Antibodies	Ophthalmology; Autoimmunity & Allergy
25	MicroMGX	Small Molecules & Peptides; Platform Technology	AgBio & Food
26	VisionStem / RegenEyes (UIC)	Cell Therapy & Exosomes; Biologics & Antibodies	Ophthalmology; Rare & Genetic Diseases
27	Cardiosense (NU)	AI and Algorithms; Diagnostics	Cardiovascular & Vascular Diseases
28	Prenosis	AI and Algorithms; Diagnostics	Acute Care & Surgical; Autoimmuniy & Allergy
29	Joseph Mazzulli, PhD (Faculty) (NU)	Small Molecules & Peptides	Neurology & Neurodegeneration; Proteostatis and Protein Degradation
30	Yulia Komarova, PhD (Faculty) (UIC)	Biologics & Antibodies	Ophthalmology
31	Stemloop (NU)	Diagnostics; Nanotechnology & Synthetic Biology	AgBio & Food
32	Bright Minds Biosciences (UIC)	Platform Technology	Drug & Target ID; Neuropsychiatry & Mood Disorders; Neurology & Neurodegeneration
33	Rhaeos (NU)	Medical Device	Acute Care & Surgical; Neurology & Neurodegeneration
34	COUR Pharmaceuticals (NU)	Platform Technology; Nanotechnology & Synthetic Biology	Autoimmunity & Allergy
35	Terry Vanden Hoek, MD (Faculty) (UIC)	Small Molecules & Peptides	Cardiovascular & Vascular Diseases; Acute Care & Surgical
36	cTRL Therapeutics (NU)	Gene Therapy & Nucleic Acids	Oncology
37	Pax Neuroscience (UIC)	Diagnostics	Neuropsychiatry & Mood Disorders
38	CCBLabs (IIT)	Platform Technology; AI & Algorithms	Drug & Target ID

Affiliated Institutions

IIT - Illinois Institute of Technology

NU - Northwestern University

Lu - Ann & Robert H. Lurie Children's Hospital of Chicago

UC - University of Chicago

UI - University of Iowa

UIC - University of Illinois Chicago

UIUC - University of Illinois Urbana-Champaign

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40	Brian Layden, MD, PhD (Faculty) (UIC)	Small Molecules & Peptides	Metabolic Diseases & Diabetes
41	Xentria	Biologics & Antibodies	Autoimmunity & Allergy; Rare & Genetic Diseases
42	Xiaoping Du MD PhD (Faculty) (UIC)	Small Molecules & Peptides	Cardiovascular & Vascular Diseases
43	Irina Balyasnikova, PhD (Faculty) Roger Stupp, MD (Faculty) (NU)	Biologics & Antibodies	Oncology
44	Tsutomo Kume, PhD (Faculty) (NU)	Gene Therapy & Nucleic Acids	Ophthalmology; Rare & Genetic Diseases
45	Clarix Imaging (UC)	AI and Algorithms; Diagnostics; Imaging	Oncology
46	Evozyne (UC)	AI and Algorithms; Protein Engineering	Autoimmunity & Allergy; Multiple
47	Enzyme by Design (UIC)	Protein Engineering	Oncology
48	CancerIQ (UC)	AI and Algorithms; Diagnostics	Oncology
49	Vivacelle Bio, Inc	Nanotechnology & Synthetic Biology	Cardiovascular & Vascular Diseases; Acute Care & Surgical
50	Temprian Therapeutics (NU)	Gene Therapy & Nucleic Acids; Platform Technology	Autoimmunity & Allergy; Multiple
51	TTC Oncology (UIC)	Small Molecules & Peptides	Oncology; Infectious Diseases
52	YouYang Zhao, PhD (Faculty) (Lu)	Small Molecules & Peptides	Cardiovascular & Vascular Diseases
53	OrisDX (UC)	Diagnostics	Oncology
54	Bryan Dickinson, PhD (Faculty) (UC)	Platform Technology; Gene Therapy & Nucleic Acids	Oncology; Multiple
55	Ikaika Therapeutics (NU)	Biologics & Antibodies	Neurology & Neurodegeneration; Rare & Genetic Diseases
56	Siloam Vision (UIC)	AI and Algorithms; Diagnostics	Ophthalmology
57	ReVive Biotechnology (UIUC)	Nanotechnology & Synthetic Biology; Platform Technology	Ophthalmology
58	Atzeyo Biosensors (UIUC)	Diagnostics; POC	Oncology
59	Xiaoyu Zhang, PhD (Faculty) (NU)	Small Molecules & Peptides	Proteostasis and Protein Degradation; Multiple
60	Paul Goldspink, PhD (Faculty) Beata Wolska, PhD (Faculty) (UIC)	Small Molecules & Peptides	Cardiovascular & Vascular Diseases; Rare & Genetic Diseases
61	Concilio (UC)	Nanotechnology & Synthetic Biology	Cardiovascular & Vascular Diseases
62	Varchas Bio (NU)	Cell Therapy & Exosomes; Biologics & Antibodies	Oncology
63	iBrain (UIC)	AI and Algorithms; Diagnostics	Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders
64	NUAgo Therapeutics (NU)	Gene Therapy & Nucleic Acids	Oncology
65	Alex Adibekian, PhD (Faculty) (UIC)	Platform Technology; Chemical Biology	Drug and Target ID
66	SimBioSys (UIUC)	AI and Algorithms; Diagnostics	Oncology
67	Opera Bioscience (NU)	Protein Engineering; Platform Technology	AgBio & Food; Oncology; Multiple
68	Syntax Bio (UIC)	Nanotechnology & Synthetic Biology; Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes; Platform Technology	Rare & Genetic Diseases
69	NanoCytomics, LLC (NU)	AI and Algorithms; Diagnostics	Oncology
70	Addgraft (UC)	Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes	Neuropsychiatry & Mood Disorders
71	Valjuvant Vaccines (UC)	Vaccines	Infectious Diseases
72	Schedule 1 Therapeutics	Small Molecules & Peptides	Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders
73	Bellur Prabhakar, PhD (Faculty) (UIC)	Biologics & Antibodies	Oncology; Autoimmunity & Allergy
74	Covira Surgical (UC)	Platform Technology; Nanotechnology & Synthetic Biology	Infectious Diseases; Acute Care & Surgery
75	Syenex (NU)	Nanotechnology & Synthetic Biology; Gene Therapy & Nucleic Acids;Cell Therapy & Exosomes; Platform Technology	Multiple
76	Juan Mendoza, PhD (Faculty) (UC)	Biologics & Antibodies	Oncology; Autoimmunity & Allergy
77	ModuMab (NU)	Platform Technology; Protein Engineering	Oncology; Multiple
78	Neuroplastica (NU)	Platform Technology	Drug and Target ID; Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders
79	ExoMira Medicine (NU)	Cell Therapy & Exosomes	Oncology

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UC - University of Chicago

UI - University of Iowa

UIC - University of Illinois Chicago

UIUC - University of Illinois Urbana-Champaign

Biotech Ecosystem Partners

Table I

ILLINOIS IGB

Carl R. Woese Institute for Genomic Biology at the University of Illinois Urbana-Champaign

Tracy Parish, PhD • Director of External Relations and Strategic Partnerships

The Carl R. Woese Institute for Genomic Biology at the University of Illinois Urbana-Champaign (IGB) is an interdisciplinary institute dedicated to transformative research and technology in life sciences using team-based strategies to tackle grand challenges in the areas of health and wellness, agriculture and energy, and technology and society. The mission of the IGB is to advance life science research and to stimulate bio-economic development in the state of Illinois and beyond. The IGB's commitment to industry partnerships and an entrepreneurial culture has resulted in 23 spin out companies in the 15-year history of the institute.

Table II

Discovery Partners Institute

Bob Okabe • Director of New Ventures

The Discovery Partner Institute empowers people to jumpstart their tech careers or companies in Chicago. Led by the University of Illinois System in partnership with top research universities, DPI does three things: train people for high-demand tech jobs, conduct applied R&D, and build businesses to grow Chicago's tech ecosystem. With state investment and a new innovation district in development, DPI has the resources to attract, develop, and leverage the most ambitious people and companies the region has to offer — and keep them here.

Table III

Halo

Kevin Leland, MBA • Chief Executive Officer and Founder

Halo is an AI-powered tech platform that helps R&D teams discover new technologies, build relationships with the researchers and startups behind them, and more efficiently scale external partnerships globally. Learn more at: www.halo.science

Biotech Ecosystem Partners

Table IV

Loyola University

Michael Bloom, PhD • Founding Director of Center for Health Innovation and Entrepreneurship
Rachael Drucker • Technology Transfer Administrator

Loyola University Chicago's commitment to excellence in research and education, and ultimately to excellent care for every patient, is realized through the work performed at Loyola's new Center for Translational Research and Education. This Center houses 500 scientists, doctors, nurses, and students from Loyola's Strich School of Medicine, Parkinson School of Health Sciences and Public Health, Marcella Niehoff School of Nursing, and the Loyola University Health System.

Table V

Lurie Children's Hospital

Kosh Ghosh, MS/MBA, • Executive Director of Innovation Programs
Kelley Elahi, MSE, BSN, RN, CPN • Manager, Innovation Portfolio

Stanley Manne Children's Research Institute at Ann & Robert H. Lurie Children's Hospital of Chicago aims to generate new knowledge and translate advancements in the prevention, diagnosis, and treatment of diseases that affect children's health through adolescence and adulthood. As one of the nation's premier institutes for pediatric research, the Manne Research Institute collaborates with Northwestern University, community partners, and other medical centers and academic institutions across the globe.

Table VI

Rosalind Franklin University

Connie M. Cleary, DPM • Director of Innovation & Industry Relations
Michael S. Rosen • Managing Director: Innovation, Research Park, Helix 51 Incubator

RFU has many exciting initiatives in biomedical technology and commercialization with a goal of accelerating the discovery and development of new diagnostics, devices, and therapeutics. Among these initiatives include the Innovation and Research Park and Helix 51 Incubator, which house 122 bioscience companies and 33,000 bioscience jobs across complementary fields including brain diseases, cancer and immunology, genetic diseases, proteomics and therapeutics, and wound healing.

Hall of Inventions

Table 5

Acorn Genetics

Technology: Diagnostics • Lead Focus: Multiple • Seed • Founded 2019

- Acorn Genetics' third-generation graphene-based genetic sequencer provides results with higher accuracy, cost-efficiency, and speed than other systems on the market. Their business model emphasizes privacy and protection of genetic data.
- The company's services include delivering at-home genetic testing through a fast and precise genetic sequencer, enabling clients to take action against diseases such as cancer, Alzheimer's, and heart disease years before their health is affected.
- Founder and CEO Ana Cornell is a Thiel Fellow and was previously an undergraduate at Northwestern. Based on work done in Professor Nathan Gianneschi's lab at Northwestern University, Acorn is currently sponsored by the NSF, the Thiel Foundation, Venturewell, and The Garage at Northwestern.

Table 70

Addgraft

Technology: Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes • Lead Focus: Neuropsychiatry & Mood Disorders • Pre-Seed • Founded 2021

- AddGraft's cell therapy platform is building stem cell-based bio factories capable of producing and deploying any protein directly into a patient's bloodstream.
- AddGraft hopes to address some of the major problems with current cell therapies including toxicity, transgene capacity, dose flexibility and control, stable long term expression, and complicated CMC with an ex vivo method of introducing genetically modified stem cells.
- Addgraft's technology is based on the work of CTO Xiaoyang Wu, PhD, an Associate Professor of tissue engineering in the Biological Sciences Division at the University of Chicago. CEO Ryan Meyers, MBA obtained his MBA from the Booth School of Business at the University of Chicago. CSO Ming Xu, PhD is a Professor in the Biological Sciences Division at the University of Chicago.

Hall of Inventions

Table 65

Alex Adibekian, PhD

Technology: Platform Technology; Chemical Biology • Lead Focus: Drug and Target ID

- Alexander Adibekian, PhD is Full Professor in Chemistry and LAS Endowed Professor of Chemistry at the University of Illinois Chicago.
- Dr. Adibekian's laboratory works at the interface of synthetic chemistry, biochemistry, and proteomics to develop novel tools for therapeutic target identification and drug discovery in various diseases. The lab specializes in chemoproteomics, or the interactions between small molecules and proteins, and leverages mass spectrometry techniques to identify and drug biological pathways involved in disease progression.

Table 16

Akava

Technology: Small Molecules & Peptides • Lead Focus: Neurology & Neurodegeneration; Proteostasis and Protein Degradation • Founded 2019

- Akava Therapeutics is developing inhibition therapeutics addressing unmet medical needs in neurodegeneration and oncology, allowing patients to live longer with improved quality of life.
- Akava's lead compound, AKV9, is a protein aggregation inhibitor that was identified to be the first compound to improve the health of upper motor neurons that degenerate due to motor neuron diseases.
- Founder Richard Silverman, PhD, is a Professor of Chemistry and Molecular Biosciences at Northwestern University and the inventor of Lyrica™, a blockbuster drug produced by Pfizer to treat epilepsy, fibromyalgia, and neuropathic pain. His research focuses on enzyme inhibitors and activators related to neurodegenerative and neurological diseases and cancer.

Hall of Inventions

Table 39

Angiotensin Therapeutics

Technology: Small Molecules & Peptides • Lead Focus: Infectious Diseases; Nephrology • Pre-Seed • Founded 2018

- Angiotensin Therapeutics has created fusion proteins based on Angiotensin Converting Enzyme 2 (ACE2) as a therapeutic for kidney diseases such as scleroderma and post-transplant acute kidney injury.
- Additionally, the ACE2 fusion proteins may be useful to treat COVID-19, as the ACE2 protein is the natural receptor used by SARS-CoV-2 to enter cells.
- Founder and CSO Daniel Batlle, MD is a Professor of Medicine at Northwestern University and was previously Nephrology/Hypertension Division Chief for 18 years. Interim CEO Cory Gutterman, MPH is Head of Business Development for Medical Research Network and has 20+ years of experience in both academia and the pharma industry.

Table 58

Atzeyo Biosensors

Technology: Diagnostics; POC • Lead Focus: Oncology • Pre-Seed • Founded 2023

- Atzeyo Biosensors has created an ultrasensitive, highly accurate targeted biomarker detection platform that enables the world's first point-of-care (POC) diagnostic platform using Photonic Resonator Absorption Microscopy (PRAM).
- Azetyo combines the quality, accuracy, and reliability of core lab with the speed, ease of use, and cost of POC. This improves on current cancer diagnostics, which suffer from high cost, long testing time, and complex results.
- Atzeyo's technology originates from the lab of co-Founder Brian Cunningham, PhD, Professor of Electrical & Computer Engineering and Intel Alumni Endowed Chair at University of Illinois-Urbana Champain. Co-Founder Priya Balachandran, PhD has 20+ years of experience in building specialized technologies from concept to market. Senior Leader Dominique Kendrick RPh, MBA, RAC has > 25 years of biotech experience.

Hall of Inventions

Table 43

Irina V. Balyasnikova, PhD
Roger Stupp, MD

Technology: Biologics & Antibodies • Lead Focus: Oncology

- Irina V. Balyasnikova, PhD is a Professor in Neurological Surgery at Northwestern University. The Balyasnikova Lab develops Bi- and Tri-specific T-cell engagers (BiTE & TriTE). Roger Stupp, MD is the Chief of Neuro-oncology in the department of neurology and the pioneer of the current standard of care in GBM, the “Stupp Protocol”.
- Dr. Balyasnikova and Dr. Stupp are collaborating to develop novel treatments for Glioblastoma Multiforme (GBM). Their TriTEs for GBM target IL13Rα2 and EGFRvIII to stimulate an immune response, address tumor heterogeneity, and reduce antigen escape and GBM recurrence -- ultimately treating a wider GBM population.

Table 20

BiAffect

Technology: AI and Algorithms; Healthtech • Lead Focus: Neuropsychiatry & Mood Disorders • Pre-Seed • Founded 2016

- BiAffect is a smartphone application that turns a smartphone into a brain fitness tracker able to evaluate cognitive processes and determine mood patterns.
- Its clinical uses include the ability to monitor a patient's mental health in real-time and can alert providers of changes, such as an increase in the severity of a patient’s depression or mania.
- Alex Leow, MD, PhD is a Professor in Psychiatry and Bioengineering at University Illinois Chicago. Olusola Ajilore, MD, PhD is a professor in the Department of Psychiatry. They are collaborating to develop health technologies for improving mood disorders.

Hall of Inventions

Table 2

BioAerium

Technology: Diagnostics • Lead Focus: Infectious Diseases • Founded 2021

- BioAerium provides comprehensive technological solutions for the detection of airborne viruses and adapts assays to build portable and wearable devices.
- Their primary device uses a LAMP-based approach to detect less than 10 copies of virus per liter air.
- Co-Founder Michael Caffrey, PhD is a professor in the department of Biochemistry and Molecular Genetics at UIC. His general interests are in the mechanisms of viral and toxin entry. Co-Founder Igor Paprotny, PhD is the Faculty Research Director of the Nanotechnology Core Facility at University of Illinois Chicago. His special interests are air-microfluidics, microelectromechanical systems, and energy systems harvesting. Co-Founder Nitin Jayakumar developed the technology during his graduate research.

Table 32

Bright Minds Biosciences

Technology: Platform Technology • Lead Focus: Drug & Target ID; Neuropsychiatry & Mood Disorders; Neurology & Neurodegeneration • Series A • Founded 2017

- Bright Minds Bio strives to develop a new generation of highly targeted serotonergic drugs that will address specific patient populations that today's mood disorder therapeutics cannot reach.
- Bright Minds Bio has a lead compound BMB-101 that has completed Phase I clinical trials for seizures.
- CEO and Director Ian McDonald is an entrepreneur and former investment banker. Prior to BMB, he served on the management team at a TSX-listed gold mining company. Scientific Officer Alex Vasilkevich previously served as a scientist at the National Academy of Belarus. The technology originated from the lab of Alan Kozikowski PhD, former Professor at the University of Illinois Chicago, who found inhibitors for the brain glycogen synthase kinase-3β (GSK-3β). Their expertise in translational science and data-driven processes favors a high rate for clinical success.

Hall of Inventions

Table 48

CancerIQ

Technology: AI & Algorithms; Diagnostics • Lead Focus: Oncology • Series B • Founded 2013

- CancerIQ is a precision prevention platform that empowers healthcare providers to engage patients, stratify risk and ensure adherence with the latest evidence-based strategies to get ahead of cancer.
- CSO & co-Founder Olufunmilayo I. Olopade, MD, is a University of Chicago professor. CEO & co-Founder Feyi Olopade Ayodele, MBA is a Chicago Booth New Venture Challenge winner, a Rock Health fellow, a winner of 1776's Global Challenge Cup, and has signed partnerships with several billion-dollar institutions in the healthcare technology industry.
- In 2022, CancerIQ closed a $14 million Series B financing round co-led by Merck Global Health Innovation Fund (Merck GHI) and Amgen Ventures. McKesson Ventures, OSF Ventures, as well as CancerIQ's Series A lead investor, HealthX Ventures, also participated in the Series B round.

Table 27

Cardiosense

Technology: Diagnostics; AI and Algorithms • Lead Focus: Cardiovascular and Vascular Diseases • Series A • Founded 2020

- Cardiosense is building a digital biomarker platform that leverages novel, multi-sensor devices and an advanced proprietary signal processing pipeline to identify pre-symptomatic markers of cardiac disease.
- CEO Amit Gupta, MBA attained his MBA from Kelloff School of Management at Northwestern University. CTO Andrew Carek, PhD attained his doctorate in electrical engineering from the Georgia Institute of Technology. The technology originates from the Northwestern lab of co-Founder Mozziyar Etemadi, MD, PhD, Assistant Professor of Anesthesiology and McCormick School of Engineering.
- At the end of 2022, the company announced $15.1 million in Series A funding, co-led by Broadview Ventures and Hatteras Venture Partners, with participation from Laerdal Million Lives Fund, OSF Ventures, UnityPoint Health Ventures, and Portal Innovations.

Hall of Inventions

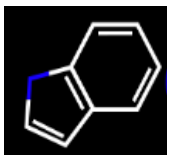
Table 11

CartilaGen

Technology: Small Molecules & Peptides • Lead Focus: Orthopedics & Osteoarthritis • Pre-Seed • Founded 2016

- CartilaGen is developing a disease-modifying therapy for cartilage injuries and early osteoarthritis. Their drug-eluting hydrogel is scheduled for Phase I & IIa clinical trials.
- CG-001 is a disease-modifying small-molecule representing novel target for osteoarthritis, while CG-002 is a temperature controlled delivery vehicle to allow sustained release and provide joint lubrication
- CEO and co-Founder Jaison Marks is currently pursuing a PhD in biomedical engineering at University of Iowa, where he performs orthopedic surgery research in the Carver College of Medicine

Table 38



CCBLabs

Technology: Platform Techonology; AI & Algorithms • Lead Focus: Drug & Target ID • Pre-Seed • Founded 2023

- Approximately ⅓ of FDA-approved drugs target G protein coupled receptors (GPCR), and <½ of known GPCRs have been targeted to date; however, current drug campaigns require extensive trial-and-error synthesis.
- CCBLabs' technology will predict intrinsic efficacy of GPCR ligands for multiple pathways. Virtualizing cell line assay efficacy predictions can accelerate optimization of functionally selective ligands in GPCR drug discovery campaigns.
- Co-Founder David Minh, PhD is the Robert E. Frey, Jr. Endowed Chair in Chemistry, an Associate Professor of Chemistry, and the Associate Director for the Center for Interdisciplinary Scientific Computation at the Illinois Institute of Technology (IIT). Daniel Cooper is an undergraduate Medicinal Chemistry student at IIT.

Hall of Inventions

Table 6

CellCipher

Technology: AI and Algorithms • Lead Focus: Drug and Target ID • Pre-Seed

- CellCipher is bringing together a novel human organoid model, single cell genomics, and machine learning with the goal of identifying better and safer drugs earlier in the drug development pipeline.
- CellCipher's Multi-Tissue Organoid system is highly replicable, scalable, and captures over 70 human cell types that faithfully recapitulate expected patterns of gene expression.
- Co-Founder and CEO Katie Rhodes, PhD is also a postdoctoral researcher studying gene regulation in the laboratory of co-Founder Yoav Gilad, PhD, Professor of Genetics at University of Chicago. Previously, Dr. Rhodes earned her PhD in human genetics at the University of Chicago.

Table 18

Jaehyuk Choi, MD, PhD

Technology: Biologics & Antibodies; Platform Technology • Lead Focus: Oncology; Autoimmunity & Allergy

- Jaehyuk Choi, MD, PhD is a physician-scientist, Jack W. Graffin Professor at Feinberg School of Medicine and Associate Professor of Dermatology and Biochemistry and Molecular Genetics.
- The Choi lab studies the molecular and cellular properties of skin biology, with the ultimate goal of developing strategies and technologies to improve the diagnosis and treatment of skin cancers and skin autoimmune diseases. The lab approaches disease through the framework of computational clinical oncology and dermatology, mechanistic dissection of skin cancer, and technology development.

Hall of Inventions

Table 45

Clarix Imaging

Technology: AI and Algorithms; Diagnostics; Imaging • Lead Focus: Oncology • Seed • Founded 2016

- Clarix Imaging's mission is to empower clinicians with clear tumor visualization and intelligent analysis for precision and personalized medicine based on breakthrough innovations in imaging science and AI.
- The company's first product is the FDA-cleared true 3D VSI-360™, which offers surgeons and radiologists unprecedented clarity for intraoperative specimen margin visualization in breast cancer surgeries such as lumpectomy – right inside the operating room.
- CEO and co-Founder Xiaochuan Pan, PhD is a Professor of Radiology at University of Chicago. His lab focuses on physics, algorithms, and engineering underpinning tomographic imaging and its biomedical and clinical applications.

Table 17

Claudyn Biotech

Technology: Small Molecules & Peptides • Lead Focus: Inflammatory Bowel Disease • Pre-Seed • Founded 2022

- Claudyn has developed a novel class of molecules that block claudin-2 pores to prevent paracellular ion and water transport. These molecules increase epithelial barrier function, reduce sodium and water transport in human organoids, and limit colitis in mouse models of IBD.
- In contrast to existing therapies that target the immune system, claudin-2 blockers target the tight junction, do not suppress the immune system, and act without need for absorption.
- Co-Founder Chris Weber, MD, PhD, is a physician-scientist who studies tight junction biology in the gut and is an associate professor of Pathology at the University of Chicago. He collaborates with Le Shen, PhD, Research Professor at University of Chicago and Fatemeh Khalili-Araghi, PhD, Associate Professor at University of Illinois Chicago to develop drugs via computational models of claudin pores.

Hall of Inventions

Table 14

ClostraBio

Technology: Nanotechnology & Synthetic Biology • Lead Focus: Inflammatory Bowel Disease; Autoimmunity & Allergy; AgBio & Food • Series A • Founded 2016

- Based on work developed at University of Chicago by Jeff Hubbell, PhD, Eugene Bell Professor in Tissue Engineering and Vice Dean and Executive Officer at the University of Chicago, and Cathryn R. Nagler, PhD, Bunning Family Professor in the Biological Sciences Division, Pritzker School of Molecular Engineering and the College, ClostraBio offers versatile solutions for bacterial metabolites delivery.
- Non-communicable diseases are associated with impaired barrier function due to an altered intestinal microbiome. ClostraBio directly delivers bacterial metabolites via a proprietary, oral, targeted metabolite delivery platform to enable metabolites to achieve their maximum therapeutic potential.
- The company is led by CEO Ritu Shah, a seasoned biotech executive with over two decades of experience. COO Brett Newswanger focuses on managing the company's drug development activities and business operations.

Table 61

Concilio

Technology: Nanotechnology & Synthetic Biology • Lead Focus: Cardiovascular & Vascular Diseases

- Concilio uses a patented nanotechnology platform to effectively deliver miR-92a inhibitor to inflamed endothelial cells.
- The first indication is arteriovenous fistula (AVF) failure. Intravenous administration of Concilio's therapeutic would limit the number of follow-up surgeries needed for renal dialysis patients.
- President Matthew Tirrell, PhD is the D. Gale Johnson Distinguished Service Professor Emeritus at the University of Chicago and former inaugural Dean of the Protzker School of Molecular Engineering. CSO Yun Fang, PhD is an American Heart Association Fellow and Associate Professor of Medicine at The University of Chicago. CEO Jeffrey Hubbell, PhD is the Eugene Bell Professor in Tissue Engineering and Vice Dean at the Pritzker School of Molecular Engineering at the University of Chicago.

Hall of Inventions

Table 34

COUR Pharmaceuticals

Technology: Platform Technology; Nanotechnology & Synthetic Biology • Lead Focus: Autoimmunity & Allergy • Series A • Founded 2012

- COUR's nanoparticle platform harnesses the immune system's own learning power to induce tolerance to specific problematic antigens, while preserving all immune functionality.
- COUR has 4 products in Phase 2 Clinical trials targeting celiac disease, primary biliary cholangitis, myasthenia gravis, and peanut allergy.
- CEO, President, and co-Founder John Puisis is a senior executive with over 25 years' experience in transforming technology-based companies into product-based organizations. Prior to co-founding COUR, Puisis led Tolera Therapuetics as CEO through completion of a Phase 2 clinical trial. COUR's founding technology was based on work from Northwestern Emeritus Professor of Microbiology and Immunology, Stephen Miller, PhD.

Table 74

Covira Surgical

Technology: Platform Technology; Nanotechnology & Synthetic Biology • Lead Focus: Infectious Disease; Acute Care & Surgery • Seed • Founded 2018

- Covira discovers and develops novel therapeutics for modulating the gut microbiome to prevent diseases.
- Covira's lead asset (CS-0003) is a platform technology that modulates bacterial virulence and restores microbial communities to prevent post-surgical infection.
- CEO Peter Farmakis, MBA earned his MBA in Marketing and Strategic Management from University of Illinois at Chicago. Business advisory board member Patrick Hennessey, MD is a board-certified surgeon and graduate of Georgetown University School of Medicine. Covira is based on work from Founder and CSO John Alverdy, MD, a surgeon-scientist who is the Sarah and Harold Lincoln Thompson Professor, Department of Surgery; Director, Minimally Invasive Surgery; and Director of the Center for Surgical Infection Research at the University of Chicago.

Hall of Inventions

Table 36

cTRL Therapeutics

Technology: Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes • Lead Focus: Oncology • Seed • Founded 2022

- cTRL Therapeutics is developing a next-generation cell therapy platform with broad applicability across numerous solid tumors. Their approach is non-invasive to reduce complexity and cost, provides greater efficacy than TIL approaches by improving immune phenotype, and is broadly applicable to solid tumors—not just those that are resectable.
- The company launched in April 2023 with $10M in a seed round led by General Catalyst.
- CTO and Founder Shana Kelley, PhD was recently named President of the Chan Zuckerberg Biohub Chicago. She is also the Neena B. Schwartz Professor of Chemistry and Biomedical Engineering at Northwestern University.

Table 54

Bryan Dickinson, PhD

Technology: Platform Technology; Gene Therapy & Nucleic Acids • Lead Focus: Oncology; Multiple

- Bryan Dickinson, PhD is Professor of Chemistry at the University of Chicago. His research group aims to harness the power of evolution to solve molecular design challenges and pave the way to new medicines for seemingly intractable disease by developing new evolution technologies, engineering RNA-targeting biotechnologies, and leveraging chemical biology to study bimolecular interactions.
- Dr. Dickinson has developed a human protein-based programmable RNA delivery system and programmable RNA reader proteins to better study the roles of regulatory sites in the transcriptome. He is also the founder of Tornado Bio, Inc., a company developing RNA-programmable therapies.

Hall of Inventions

Table 9

Dimension Inx

Technology: Nanotechnology & Synthetic Biology • Lead Focus: Reproductive Health • Series A • Founded 2016

- Dimension Inx creates biomaterials to recapitulate human physiology. The company's products offer a bio-fabrication process that provides the versatility, manufacturability, and affordability necessary for the widespread adoption of regenerative medical products, enabling clinicians and surgeons to eliminate the need for organ transplantation
- Dimension Inx received FDA clearance for CMFlex, the first 3D-printed regenerative bone graft for oral and facial bone defects.
- CEO and co-Founder Caralynn Collens, MD, MBA has experience across biotechnology, advanced manufacturing, and entrepreneurship. CSO and co-Founder Ramille Shah, PhD, is currently Professor of Biomedical Engineering at University of Illinois Chicago and has 20+ years of experience in biomaterials and tissue regeneration.

Table 42

Xiaoping Du, MD, PhD

Technology: Small Molecules & Peptides• Lead Focus: Cardiovascular & Vascular Diseases

- Xiaoping Du, MD, PhD is a physician-scientist and Professor of Pharmacology at University of Illinois Chicago, College of Medicine.
- The Du Lab focuses on translation in the field of thrombosis, hemostasis, and vascular biology. Specifically, the lab studies cell adhesion and signaling, including: 1) signaling mechanisms of platelet adhesion receptor, glycoprotein Ib-IX; 2) signaling mechanisms of integrins, particularly β3 integrins; 3) the role of GTP binding proteins in platelet activation; and 4) the role of nitric oxide-cGMP-dependent signaling pathway in regulating platelet function.

Hall of Inventions

Table 13

ENCUE

Technology: Small Molecules & Peptides • Lead Focus: Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders • Seed • Founded 2020

- ENCUE has developed small peptide binding to the insulin-like growth factor 2 receptor (IGF2R), a novel target in CNS drug discovery, enhancing synaptic plasticity and reverse synaptic dysfunction.
- One lead peptide, JB-2, has a unique synaptic modulation mechanism enabling a robust safety profile and is applicable across a range of CNS disorders, including neurodegenerative and seizure disorders.
- ENCUE's co-Founders Joseph Moskal, PhD and Jeffrey Burgdorf, PhD are Professor and Research Associate Professor, respectively, of Biomedical Engineering at Northwestern University. Dr. Moskal and Dr. Burgdorf have worked together for two decades studying neural communication pathways, and the team has a history of building successful biotech startups, namely Naurex and Aptinyx.

Table 8

EnteroTrack, LLC

Technology: Diagnostics • Lead Focus: Autoimmunity & Allergy • Founded 2013 • Series B

- Enterotrack has developed a minimally invasive, in-office procedure to collect mucosal samples from the upper GI tract. Patients with eosinophillic esophagitis swallow a capsule that releases a collection string that travels through the patient's upper GI tract. The collection string is easily removed and analyzed; specific locations of the collection string correlate to specific sections of the patients' GI tract.
- A pilot study clinical trial has been announced to screen for Barrett's esophagus and esophageal cancer.
- CEO Robin Shandas, PhD is a serial entrepreneur with experience in multiple biotechnology startups. Steve Ackerman, PhD & Vadim Gaponenko, PhD are both professors of Biochemistry and Molecular Genetics at the University of Illinois Chicago.

Hall of Inventions

Table 47

Enzyme by Design

Technology: Protein Engineering • Lead Focus: Oncology • Pre-Seed • Founded 2017

- Enzyme by Design aims to engineer safer cancer therapeutics for cancers in which there is a large unmet clinical need. Their lead asparaginase-based therapeutic has high anti-cancer activity with minimal off-target effects.
- The startup has been awarded >$3.5M in SBIR funding, including a Phase 2 grant.
- President, CEO, and CSO Arnon Lavie, PhD, is Professor of Biochemistry and Molecular Genetics at University of Illinois Chicago. He is an expert structural biologist with documented success in modifying the substrate specificity of medically relevant enzymes. COO, Amanda M. Schalk, PhD spent five years as a postdoc in Dr. Lavie's lab characterizing the structures and enzymatic activities of L-asparaginases.

Table 46

Evozyne

Technology: AI & Algorithms; Protein Engineering • Lead Focus: Autoimmunity & Allergy; Multiple • Series B • Founded 2020

- Evozyne uses evolutionary deep learning to mimic millions of years of evolution in the lab. Using sequence-based computational algorithms for molecular design, the team designs adaptive, high-performance proteins that solve long-standing challenges in therapeutics and sustainability.
- The company recently announced an $81 million Series B investment round led by Fidelity and OrbiMed with participation from NVentures, NVIDIA's VC arm, Paragon Biosciences, and Valor Equity Partners.
- Co-Founder and CSO Rama Ranganathan MD, PhD is the Joseph Regenstein Professor in the Department of Biochemistry and Molecular Biology at University of Chicago. CEO Mike Gamson is the former CEO of Relativity, a Chicago-based software company. He significantly grew and expanded the company, accelerated industry adoption of new products, and developed the company's social impact programs.

Hall of Inventions

Table 79

ExoMira Medicine

Technology: Cell Therapy & Exosomes• Lead Focus: Oncology • Pre-Seed

- The mission of ExoMira Medicine is to establish innovative, unique “exotic & exosome miracles” for targeted immunotherapy in cancer, viral infections, and other diseases.
- Their flagship USP22 inhibitors is an immunotherapeutic small compound that simultaneously targets both solid tumor cells and regulatory T cells with. They also engineer anti-cancer exosomes that delivering chemotherapeutic payloads specifically to primary tumors and metastases.
- Co-Founder Huiping Liu, PhD is an Associate Professor of Pharmacology and Medicine (Hematology/Oncology) at Northwestern University.

Table 60

Paul Goldspink, PhD & Beata Wolska, PhD

Technology: Small Molecules & Peptides • Lead Focus: Cardiovascular & Vascular DIseases; Rare & Genetic Diseases

- Paul Goldspink, PhD is a Research Associate Professor at University Illinois Chicago in the Department of Physiology and Biophysics. Beata Wolska, PhD is a Professor in the Department of Physiology and Biophysics at University of Illinois Chicago.
- Goldspink and Wolska have a range of biophysical assays and tools to interrogate hypertrophic cardiomyopathy (HCM), which is a genetic form of heart failure caused by mutations in the proteins that allow the heart to contract and relax. Thin filament HCM mutations are severe, but no treatment exists. The team has screened 1.3 billion virtual compounds using a machine learning (AI) platform to identify small molecules that target the protein interaction that allows relaxation of the heart muscles.

Hall of Inventions

Table 7

Grove Biopharma

Technology: Small Molecule & Peptides; Nanotechnology & Synthetic Biology; Platform Technology • Lead Focus: Oncology • Seed • Founded 2020

- Grove Biopharma develops Precision-Linked Proteomimetics (PLPs), which are customizable, synthetic, multivalent, protein-scale "proteomimetics" with the selectivity, potency and cell-permeability needed to engage intracellular targets.
- Grove's goal is to use PLPs to disrupt protein-protein interactions involving challenging oncology targets such as MYC, which is overexpressed in over 70% of cancers, and its interaction network.
- CEO and co-Founder Geoffrey Duyk, MD, PhD is currently a partner at investment firm Circularis Partners. Co-Founder Nathan Gianneschi, PhD is the Jacob & Rosaline Cohn Professor of Chemistry at Northwestern University. CTO Paul Bertin, PhD is a polymer chemist by training, holds 40+ US patents, and has 15+ years of experience in R&D leadership and entrepreneurship.

Table 12

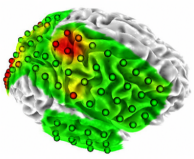
Bin He, PhD

Technology: Gene Therapy & Nucleic Acids • Lead Focus: Infectious Diseases; Oncology

- Bin He, PhD is an Associate Professor in the Department of Microbiology and Immunology at University of Illinois Chicago College of Medicine.
- Dr. He's laboratory specializes in the study of herpes simplex virus (HSV) dynamics and the interplay between viral and host mechanisms that determine infection outcomes. By integrating molecular analyses of the viral genome and innate immune regulatory networks, the lab aims to uncover virus-host interactions, and engineer antivirals as well as potent, next generation oncolytic viruses that can harness the immune system to destroy the primary tumor and distant metastases.

Hall of Inventions

Table 63



I-BRAIN

Technology: AI & Algorithms; Diagnostics• Lead Focus: Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders • Seed• Founded 2020

- Illinois Brain Analytics Institute (I-BRAIN) brings together multimodal integrated patient data, disease-specific subject experts, and a novel data platform called INTUITION. Combining integrated data with an artificial intelligence-based analysis contributes to a better understanding of the human brain and has led to a pipeline of new diagnostics and therapeutics to combat brain disorders.
- Jeffrey Loeb, PhD is the John S. Garvin Endowed Chair in Neurology, Professor and Head of Neurology and Rehabilitation at University of Illinois Chicago, College of Medicine. A physician-scientist who specializes in the treatment of seizure disorders, Dr. Loeb is developing multiple translational projects in both epilepsy as well as neurodegenerative diseases.

Table 55

Ikaika Therapeutics

Technology: Biologics & Antibodies • Lead Focus: Neurology & Neurodegeneration; Rare & Genetic Diseases

- Ikaika Therapeutics is developing first-in-class therapies that slow disease progression by preventing fibrosis accumulation and preserving organ function.
- The lead therapeutic IKN-001 is an antibody that protects latent TGF-β binding protein 4 (LTBP4), a driver of fibrotic disease severity in conditions such as muscular dystrophy. IKN-001 regulates the release of activated TGF-β by stabilizing the large latent complex.
- Co-Founder Elizabeth J. Ward is a Professor of Genetic Medicine and Director of the Center for Genetic Medicine at Northwestern University. She specializes in the genetics of rare diseases including cardiomyopathies and dystrophies. Co-Founder Alexis Demonbreun, PhD is an Associate Professor in the Center for Genetic Medicine at Northwestern University. She focuses on understanding the genetic mechanisms of myopathies and using these genetic signals to drive therapy development.

Hall of Inventions

Table 20

KeyWise

Technology: AI and Algorithms; Healthtech • Lead Focus: Neuropsychiatry & Mood Disorders • Seed • Founded 2018

- KeyWise AI is developing an innovative digital technology that turns smartphones into fitness trackers for the brain. It tracks factors of brain health such as processing speed, attention, mood stability, and impulse control in a way that is automatic, objective, and nonintrusive.
- Skye™ is an advanced system designed and developed by KeyWise AI™ to continuously assess cognitive performance by capturing keystroke behavior, never content. Data is collected passively as a person uses their phone as they normally do to type emails, social media posts, text messages, etc.
- Co-Founder Alex Leow, MD, PhD is a Professor in Psychiatry and Bioengineering at University Illinois Chicago. Co-Founder Olusola Ajilore, MD, PhD is a professor in the Department of Psychiatry.

Table 30

Yulia Komarova, PhD

Technology: Biologics & Antibodies • Lead Focus: Ophthalmology

- Yulia Komarova, PhD is an associate professor of Pharmacology at University of Illinois Chicago, who focuses on microvascular endothelial cells within the eye and the role they play in wet age-related macular degeneration.
- Dr. Komarova is developing a novel topical therapy that can treat the root cause of both dry and wet age-related macular degeneration (AMD). This non-invasive therapy is based on EB3-inhibitory (EBIN) peptide, which reduces the effects of environmental stress on endothelial cells thus rolling back aging-related genetic modifications.

Hall of Inventions

Table 44

Tsutomo Kume, PhD

Technology: Gene Therapy & Nucleic Acids • Lead Focus: Ophthalmology; Rare & Genetic Diseases

- Tsutomu Kume, PhD is a Professor of Cardiology, Ophthalmology, and Pharmacology at Northwestern University, studying vascular formation and angiogenesis. His research interests focus on cardiovascular development, cardiovascular stem/progenitor cells, and angiogenesis.
- Dr. Kume has identified a key developmental gene that can address the underlying limbal stem cell deficiency (LSCD) responsible for progressive loss of sight in PAX6 aniridia, a condition with no currently effective treatments. Together with Robert Lavker, PhD, the Jack W. Graffin, M.D. Professor of Dermatology and Director of Research at Northwestern University, Dr. Kume aims to rescue this deficit by adeno-associated virus (AAV)-mediated gene delivery of FOXC1.

Table 40

Brian Layden, MD, PhD

Technology: Small Molecule & Peptides • Lead Focus: Metabolic Diseases & Diabetes

- Brian T. Layden, MD, PhD is a physician-scientist and Professor of Medicine, Chief of the Division of Endocrinology, Diabetes, and Metabolism as well as the Director of the UIC Diabetes Center at University of Illinois Chicago. His lab focuses on uncovering metabolic pathways that contribute to obesity and diabetes and identifying small molecules or drugs that can be used to target those pathways to prevent and treat disease.
- Dr. Layden has developed a class of lead molecules tthat target GP41/FFA3, a free fatty acid receptor. These FFA3 antagonists can reverse propionate action at FFA3 and can mediate inhibition of food intake.

Hall of Inventions

Table 29

Joseph Mazzulli, PhD

Technology: Small Molecules & Peptides • Lead Focus: Neurology & Neurodegeneration; Proteostasis and Protein Degradation

- Joseph Mazzulli, PhD is an Associate Professor in the Department of Neurology at Northwestern University. His lab studies the effects of protein misfolding and amyloid formation in the nervous system, and their effects on cell death.
- The Mazzuli lab is developing lysosomes to regulate cell death in diseases such as Alzheimer's disease, Parkinson's disease, and Lewy body dementias.

Table 22

Thomas Meade, PhD

Technology: Diagnostics; Imaging • Lead Focus: Oncology; Multiple

- Thomas Meade, PhD is the Eileen Foell Chair in Cancer Research and Professor of Chemistry, Biochemistry and Molecular & Cell Biology, Neurobiology & Physiology, and Radiology, as well as the Director of the Center for Advanced Molecular Imaging (CAMI).
- The Meade lab seeks to understand and utilize Co(III)-Schiff base complexes (Co(III)-sb) as research tools and potential therapeutics. By inhibiting the activity of transcription factor proteins, gene transcription can be regulated. This can be exploited for use in cancer, developmental, and disease biology.
- Dr. Meade founded three biotech companies, Clinical Micro Sensors, PreDx and Ohmx which are developing hand-held devices for protein and DNA detection and bioactivated MR contrast agents for in vivo imaging of cancer.

Hall of Inventions

Table 76

Juan Mendoza, PhD

Technology: Biologics & Antibodies • Lead Focus: Oncology; Autoimmunity & Allergy

- Juan Mendoza, PhD is an Assistant Professor of Molecular Engineering in the Department of Biochemistry and Molecular Biology at the University of Chicago. Dr. Mendoza's research brings together cancer research, bioinformatics, protein engineering, structural biology, and immunology to forge a new path forward in the discovery and design of new immunotherapeutics through novel approaches in "tuning" cytokine signaling within cells.
- The Mendoza lab is developing a new class of type 3 IFNs that will potently act at mucosal barriers, like in the respiratory system, and may act as exciting low-toxicity broad-acting drugs preventing and treating respiratory viral infections.

Table 25

MicroMGX

Technology: Small Molecules & Peptides; Platform Technology • Lead Focus: AgBio & Food • Seed

- MicroMGX uses a discovery platform integrating metabolomics, genomics, and bioinformatics to identify natural products and their derivatives with bioapplications.
- The MGX 1001 herbicide has a novel mechanism of action which overcomes herbicide resistance and allows farmers to dramatically reduce the crop loss due to weeds.
- CEO Jack Kloeber, PhD has experience in running an analytics consulting company and working with executives in the pharmaceutical and agriculture industries. Co-Founder Dr. Neil Kelleher, PhD is the director of the Proteomics Center of Excellence of Northwestern University. Co-Founder Regan Thomson, PhD is Professor of Chemistry at Northwestern University. Co-Founder Bill Metcalf, PhD is a Professor of Microbiology at University of Illinois Urbana-Champaign.

Hall of Inventions

Table 77

ModuMab

Technology: Platform Technology; Protein Engineering • Lead Focus: Oncology; Multiple • Pre-Seed

- ModuMab has developed a platform for rapid generation and high-throughput testing of multi-functional antibodies. Using ModuMab's Megamolecule platform, only 15 proteins need to be made to form 125 combinations that can be optimized - reducing labor and increasing screening capacity.
- Dozens of antibodies have been optimized for immunotherapy and enhanced drug internalization.
- ModuMab co-Inventor Milan Mrksich, PhD is the Henry Wade Rogers Professor of Biomedical Engineering at Northwestern University and the founding director of Northwestern's Center for Synthetic Biology. Dr. Mrksich is also the founder of SAMDI Tech, Inc., a leading provider of high-quality, label-free high-throughput screening (HTS) solutions for drug discovery research that was acquired by Charles River Laboratories. Co-Inventor Justin Modica, PhD is a research associate scientist in the Mrksich Group at Northwestern University.

Table 69

NanoCytomics LLC

Technology: AI & Algorithms; Diagnostics • Lead Focus: Oncology • Pre-Seed • Founded 2012

- NanoCytomics is a medical device company developing instruments for early cancer detection based on partial wave spectroscopy (PWS), an innovative and powerful optical technology. The company's long-term goal is to develop the PWS platform as a highly accurate, low-cost, non-invasive testing to identify which patients are likely to benefit from gold-standard cancer diagnostic procedures.
- Nanoscale imaging and computational technologies are deployed to interrogate global patterns of gene expression and their clinical translation for disease diagnostics and therapeutics.
- Chairman and co-Founder Vadim Backman, PhD is the Sachs Family Professor of Biomedical Engineering and Medicine at the McCormick School of Engineering and Applied Sciences, Professor of Medicine (Hematology/Oncology) and Biochemistry and Molecular Genetics, Northwestern University. He is widely regarded as a leader in the biophotonics-cancer community and Technology Review magazine named Dr. Backman one of the "Top 100 Young Innovators in the World."

Hall of Inventions

Table 78

Neuroplastica

Technology: Platform Technology • Lead Focus: Drug and Target ID; Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders

- Neuroplastica is building a high-throughput drug discovery platform that measures neuroplasticity and synaptic function. The platform can identify new therapeutics affecting spine formation and function and harness the power of neuromodulators to functionally reconfigure, and sometimes even literally rewire, neural circuits.
- The Kozorovitsky lab can also interrogate new molecules with a range of new optical imaging and synthetic biology techniques.
- Founder Yevgenia Kozorovitskiy, PhD is the Soretta and Henry Shapiro Research Professor of Molecular Biology in the Weinberg College of Arts and Sciences at Northwestern University.

Table 64

NUAgo Therapeutics

Technology: Gene Therapy & Nucleic Acids • Lead Focus: Oncology • Seed • Founded 2020

- NUAgo Therapeutics' vision is to revolutionize the treatment of the world's most challenging diseases. Their platform technology targets treatment resistant cancer and are short RNAs based on a novel mechanism of cell death induced by survival gene elimination.
- NUAgo Therapeutics is combining single construct sRNAs and lipo-polyplex nanoparticle as a therapy for treatment resistant ovarian cancer (NU001) and prostate cancer (NU002).
- CEO Robert Schickel, PhD is also the founder and Managing Director of The CorStar Group with 15-years experience in strategy, business development, and advisor to senior executives in the life sciences. CSO, Marcus Peter, PhD developed NUAgo's technology in collaboration with Andrea Murmann Ph.D. Peters is the Tom D. Spies Professor of Cancer Metabolism Professor of Medicine and Biochemistry and Molecular Genetics, and leader of translational investigation of solid tumors at Northwestern University.

Hall of Inventions

Table 67

Opera Bioscience

Technology: Protein Engineering; Platform Technology • Lead Focus: AgBio & Food; Oncology; Multiple • Seed • Founded 2021

- The mission of Opera Biosciences is to make biosimilars and cell therapies affordable by transforming decades old tools for recombinant protein manufacturing.
- Opera's microbial platform allows for a simple protein purification process and avoids protein misfolding. Proteins synthesized via this new platform have higher purity and higher quality than competitors, saving time and money.
- Co-Founder and CEO Gerry Sapienza received his MBA from Northwestern University Kellogg School of Management. Co-Founder and Chief Scientific Advisor Danielle Tullman-Ercek, PhD is Professor of Chemical and Biological Engineering and Director of the MS Biotechnology Program at Northwestern University.

Table 53

OrisDX

Technology: Diagnostics • Lead Focus: Oncology • Founded 2021

- OrisDX's first product is a saliva test focused on detecting oral squamous cell carcinoma (OSCC), the most common head and neck cancer. Using biomarker-based molecular genomic techniques to diagnose oral cavity cancers earlier, OrisDX's technology is based on the latest science and has been proven in clinical studies.
- OrisDX won the Rattan L. Khosa First-Place Prize, totaling $665,000 in investment, from the University of Chicago's New Venture Challenge (NVC).
- OrisDX co-Founder Nishant Agrawal, MD is a Professor of Surgery, co-Director of Head and Neck Surgical Oncology and Chief of the Section of Otolaryngology-Head and Neck Surgery in the University of Chicago.

Hall of Inventions

Table 37

Pax Neuroscience

Technology: Diagnostics • Lead Focus: Neuropsychiatry & Mood Disorders • Pre-Seed • Founded 2009

- Pax Neuroscience transform patient outcomes by bringing the cellular biology of depression into its diagnosis and treatment. The platform is based on the biomarker, Gsα, which indicates both depression and the extent of response to antidepressant drugs.
- The team is developing diagnostic and prognostic tools to confirm diagnosis of depression, efficacy of treatment, and eventually, screen patients to predict the best treatment.
- This technology is based on the work of President and CSO Mark M. Rasenick, PhD who studied G protein signaling in the nervous system. Dr. Rasenick is a Distinguished Professor of Physiology and Psychiatry and Director of the Neuroscience Program in the University Illinois Chicago, College of Medicine. CEO Helene J. Shambelan, JD is a former law professor focused on corporation and securities law with over a decade focused on health and biotechnology.

Table 73

Bellur Prabhakar, PhD

Technology: Biologics & Antibodies • Lead Focus: Oncology; Autoimmunity & Antibodies

- Bellur Prabhakar, PhD is an Associate Dean for Technological Innovation and Training, as well as Professor of Microbiology and Immunology at the University Illinois Chicago College of Medicine.
- Dr. Prabhakar's laboratory has been focused on autoimmune diseases for over 30 years, with a recent focus on understanding the role of dendritic cells in modulating immune responses with a particular emphasis on regulatory T cell induction and maintenance. The lab is also studying map kinase activating death domain (MADD) function in anaplastic thyroid carcinoma (ATC) to provide unique insights for developing MADD targeted therapies to enhance TRAIL-induced apoptosis sensitivity of ATC.

Hall of Inventions

Table 28

Prenosis

Technology: AI and Algorithms; Diagnostics • Lead Focus: Acute Care & Surgical; Autoimmunity & Allergy • Series A

- Prenosis is a precision medicine company that aims to understand the immune response as a means of delivering improved acute care. The team has built a database of biomarker and clinical data describing the acute immune response. The Immunix AI platform provides clinicians with a patient's full immune profile, enabling faster prescription of an optimal therapy.
- Penosis has raised over $20 million, most recently with a round led by PACE Healthcare Partners.
- Prenosis technology originated from the lab of co-Founder and CSO Rashid Bashir, PhD, Dean of the Grainger College of Engineering; the Grainger Distinguished Chair in Engineering; and Professor of Bioengineering at University of Illinois Urbana-Champaign. His lab develops label-free BioMEMS and biomedical nanotechnology methods to detect of biological entities on a chip. CEO Bobby Reddy, PhD has spent more than 15 years in personalized medicine with special focus on sepsis and precision medicine in acute care.

Table 21

ReAx Biotechnologies

Technology: Small Molecules & Peptides; Platform Technology • Lead Focus: Oncology; Autoimmunity & Allergy • Seed • Founded 2021

- ReAX Biotechnologies applies next-generation chemical proteomic platforms to discover, optimize, and deliver small molecules directly into cells. This enables discovery within proteomic "dark-matter," offering novel, high-value protein targets for oncology and immunological diseases.
- ReAx's platform technology originated from the lab of Raymond Moellering, PhD, Associate Professor in the Department of Chemistry at the University of Chicago, whose research integrates chemical synthesis, cell biology and mass spectrometry platforms to identify novel biological mechanisms underlying diseases.

Hall of Inventions

Table 57

ReVive Biotechnology

Technology: Nanotechnology & Synthetic Biology; Platform Technology • Lead Focus: Ophthalmology • Pre-Seed • Founded 2018

- ReVive Biotechnology's mission is to improve visual outcomes and quality of life for patients by targeted/immediate delivery of oxygen where it's most needed.
- The lead product Rox is a dextran-encapsulated oxygen nanobubble that rapidly delivers oxygen to retinal tissues to mitigate hypoxic or ischemic conditions.
- CEO and co-Founder Michael Tsipursky, MD, MS is a vitreoretinal specialist, Department Chair and Assistant Medical Director at Carle Health as well as Clinical Assistant Professor at University of Illinois Urbana-Champaign's Carle Medical School. CSO and co-Founder Joseph Irudayaraj, PhD Founder Professor of Bioengineering at University of Illinois Urbana-Champaign, focuses on engineering, biology, and computer science to develop smart therapeutics and to understand epigenetic regulation.

Table 33

Rhaeos

Technology: Medical Device • Lead Focus: Acute Care & Surgical; Neurology & Neurodegeneration • Series A • Founded 2018

- Rhaeos is developing FlowSense, a wireless wearable device that can monitor subdermal fluid flow throughout the body.
- Rhaeos is initially targeting hydrocephalus, a life threatening condition caused by an abnormal accumulation of cerebrospinal fluid in the brain that is treated with shunt implants to drain the fluid build up. FlowSense rapidly and noninvasively assesses shunt integrity for patients with hydrocephalus.
- CEO Anna Lisa Somera, MS, MBA, MPH is a serial entrepreneur with experience in startups, venture capital, technology transfer, biomedical research, and life science consulting. Co-Founder and President John Rogers, PhD is the Louis Simpson and Kimberly Querry Professor of Materials Science and Engineering, Biomedical Engineering, and Neurological Surgery and the Director of the Querry Simpson Institute for Bioelectronics.

Hall of Inventions

Table 10

Riptide Therapeutics

Technology: Small Molecules & Peptides • Lead Focus: Oncology • Pre-Seed • Founded 2021

- Riptide Therapeutics is taking a novel approach to modulating telomerase, an enzyme found in cancer cells but not healthy cells.
- The company's lead product is RTTX401, a novel synthetic telomerase inhibitor that that targets telomerase reverse transcriptase (TERT), sensitizing tumors to radiation therapy and increasing activation of the immune system against tumors in mouse models.
- Co-Founder Steve Kron, MD, PhD is a Professor of Molecular Genetics and Cell Biology at The University of Chicago. Co-Founder Karl Scheidt, PhD is a Professor of Chemistry and Pharmacology at Northwestern University.

Table 4

Gabe Rocklin, PhD

Technology: AI and Algorithms; Platform technology; Protein Engineering • Lead Focus: Drug & Target ID

- Gabe Rocklin, PhD is an Assistant Professor at the Department of Pharmacology, Northwestern University Core Member, Center for Synthetic Biology Chemistry of Life Processes Institute.
- The Rocklin lab is focused on high-throughput protein biophysics and design and recently published a new approach to measure folding stability for almost a million protein domains in parallel, enabling more efficient protein analysis and design on an unprecedented scale. Using proteomics to perform unbiased screens on thousands of designs, the lab is building a comprehensive understanding of cytosolic delivery, opening up an entire category of therapeutic targets to attack by new protein drugs.

Hall of Inventions

Table 72

Schedule 1 Therapeutics

Technology: Small Molecules & Peptides • Lead Focus: Neurology & Neurodegeneration; Neuropsychiatry & Mood Disorders • Seed • Founded 2018

- Schedule 1 Therapeutics is a preclinical-stage biopharmaceutical company developing cannabinoid medicines for FDA and EMA approval in large, poorly managed pain and neurological conditions.
- Schedule 1 Therapeutics's lead drug product is a optimized and patented cannabinoid formulation to treat migraines, one of the world's largest, most debilitating diseases.
- Founder and CEO George Pappas has led local, state, and federal drug and criminal justice policy and regulatory initiatives, including as Field Director at Americans for Safe Access.

Table 24

SELAGINE, Inc

Technology: Biologics & Antibodies• Lead Focus: Ophthalmology; Autoimmunity & Allergy • Founded 2021

- SELAGINE, Inc. develops novel antibody-based biologic eye drops for the treatment of immunological or inflammatory ocular surface diseases such as dry eye disease, Sjögren's syndrome and ocular graft-versus-host disease.
- Their product, SLG-100, is in clinical trials as a therapeutic to treat Dry Eye Disease. It is an anti-citrullinated protein autoantibodies (ACPAs).
- Founder and CEO Sandeep Jain, MD is a clinician-scientist in the Department of Ophthalmology at University Illinois Chicago. Dr. Jain has licensed three novel drugs including brimonidine nanoemulsion, which is the first drug in the US to receive orphan drug designation for the treatment of ocular graft-versus-host disease.

Hall of Inventions

Table 15

Sibel Health

Technology: AI and Algorithms; Diagnostics • Lead Focus: Acute Care & Surgical • Series B • Founded 2018

- Sibel develops soft, flexible skin sensors for neonatal babies, pregnant mothers, and adults that deliver real-time alerts based on vital signs.
- Powered by advanced analytics and software, its user app is FDA-cleared and provides continuous monitoring of the patient's vitals.
- CEO Steve Xu, MD is a physician-engineer, board-certified dermatologist, academic, and entrepreneur. Founder John Rogers, PhD is the Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering and Neurological Surgery at Northwestern University.

Table 56

Siloam Vision

Technology: AI and Algorithms; Diagnostics • Lead Focus: Ophthalmology • Pre-Seed • Founded 2022

- Siloam Vision aims to reduce preventable blindness around the world.
- The technology integrates artificial intelligence and cloud-based services with an optimized retinal camera to implement an effective, affordable, and scalable solution for detecting blinding eye disease, especially in at-risk premature babies.
- Siloam Vision's technology is based on work from the lab of Professor Paul Chan, MD, MBA, FACS, Head of the Department of Ophthalmology and Visual Sciences; the John H. Panton Professor of Ophthalmology; Director of the Pediatric Retina and Retinopathy of Prematurity Service; and co-Director Vitreoretinal Fellowship Program at University of Illinois Chicago. CEO and co-Founder J. Peter Campbell, MD, MPH is an Associate Professor of Ophthalmology at the Oregon Health Sciences University School of Medicine.

Hall of Inventions

Table 66

SimBioSys

Technology: AI & Algorithms; Diagnostics • Lead Focus: Oncology • Series A • Founded 2018

- SimBioSys is determined to deliver on the promise of precision cancer care by combining the power of science and software into a first-of-its-kind biophysical simulation technology.
- Their lead product, TumorScope, is being developed to utilize a patient's full set of individualized, standard-of-care patient data to build a virtual version of their tumor that captures the tumor's unique biology and heterogeneity in 3D.
- SimBioSys, Inc. originated from CTO & co-Founder Joe Peterson, PhD and CSO & co-Founder John Cole PhD's doctoral research in computational biology in the lab of Zaida Luthey-Schulten PhD, Professor of Chemistry at University of Illinois at Urbana Champaign (UIUC). CEO & co-Founder Tushar Pandey holds an MBA from the University of Chicago as well as a degree in engineering from the UIUC.

Table 1

SNC Therapeutics

Technology: Nanotechnology & Synthetic Biology; Platform Technology • Lead Focus: Oncology; Autoimmunity & Allergy; Metabolic Diseases & Diabetes • Founded 2022

- SNC Therapeutics delivery technology platform can stabilize and deliver a broad range of therapeutic agents including small molecules, nucleic acid (mRNA & plasmid), peptides, and proteins.
- The team is currently focused on nonviral gene delivery for localized expression of multiple biologics (IL-2, IL-12 &IL-15) within tumors for cancer immunotherapy.
- Founder & CEO Evan Scott, PhD is the Kay Davis Professor of Biomedical Engineering at Northwestern University. SNC Therapeutics results from the collaborative work with Jacqueline Burke, PhD Research Assistant Professor Biomedical Engineering McCormick School of Engineering at Northwestern University and Jeffrey Hubbell, PhD, Eugene Bell Professor in Tissue Engineering and Vice Dean at the Pritzker School of Molecular Engineering at the University of Chicago.

Hall of Inventions

Table 31

Stemloop

Technology: Diagnostics; Nanotechnology & Synthetic Biology • Lead Focus: AgBio & Food • Seed • Founded 2019

- Stemloop creates biosensors that function outside of a cell, enabling rapid, sensitive, and specific target analyte detection.The technology innovation centers on Allosteric Transcription Factors (aTFs), bacterial proteins sensitive to specific chemical compounds.
- Their first product is µSense™ that rapidly tests lead levels in water, addressing America's water crisis.
- CEO Khalid Alam, PhD received his Doctorate in Biochemistry from the University of Missouri and later joined the laboratory of co-Founder Julius Lucks, PhD Professor of Chemical and Biological Engineering, and member Northwestern University's Center for Synthetic Biology and Center for Water Research. Director of Operations Kate Hildebrand, MBA has held roles across Supply Chain and Marketing at Proctor & Gamble and 3M.

Table 75

Syenex

Technology: Nanotechnology & Synthetic Biology; Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes; Platform Technology • Lead Focus: Multiple • Seed • Founded 2022

- Syenex's goal is to increase the velocity of developing new genetic medicines by harnessing the therapeutic potential of extracellular vesicles.
- Syenex makes it easier for scientists to make new cell & gene therapies by providing access to best-in-class targeted enveloped delivery vectors from research through commercialization.
- Jay Rosanelli is co-Founder and CEO. Syenex technology originates from the lab of co-Founder and acting CSO Joshua Leonard, PhD, Professor of Chemical and Biological Engineering at Northwestern University, whose group works at the interface of systems biology and synthetic biology.

Hall of Inventions

Table 68

Syntax Bio

Technology: Nanotechnology & Synthetic Biology; Gene Therapy & Nucleic Acids; Cell Therapy & Exosomes; Platform Technology • Lead Focus: Rare & Genetic Diseases• Series A • Founded 2021

- Syntax Bio's mission is to make cell therapies work for people in need of their life-altering and life-saving potential.
- Syntax Bio leverages CRISPR-Cas9 powered technology to generate preprogrammed DNA instruction sets for pluripotent stem cells.
- Co-Founder and CEO Ryan Clarke, PhD obtained his doctorate in embryonic stem cell genetics and epigenetics from University of Illinois Chicago. Co-Founder Brad Merrill, PhD is a professor in the Department of Biochemistry and Molecular Genetics at University of Illinois Chicago.

Table 19

TBI Alert

Technology: Diagnostics • Lead Focus: Neurology & Neurodegeneration; Acute Care & Surgery • Pre-Seed

- TBI Alert is revolutionizing traumatic brain injury management by leveraging non-invasive brainstem monitoring technology to reduce dependence on invasive procedures.
- TBI Alert monitors ICP and TTH progression and concurrent brain dysfunction by recording modified brainstem auditory evoked potential (mBAEP) responses, a type of neural activity evoked by auditory stimulus.
- Inventor James L Stone, MD, FACS is a professor of neurosurgery at New York University Langone School of Medicine. Dr. Stone completed his neurology residency at University of Illinois Chicago.

Hall of Inventions

Table 50

Temprian Therapeutics

Technology: Gene Therapy & Nucleic Acids; Platform Technology • Lead Focus: Autoimmunity & Allergy; Multiple • Seed • Founded 2019

- Temprian Therapeutics is developing a novel, safe, and effective treatment for vitiligo, a chronic autoimmune disease that causes patches of skin to lose pigmentation.
- Lead candidate TT-01 is a novel treatment that blocks the autoimmune response to melanocytes. It has successfully treated vitiligo in mouse and porcine models and is being developed for first-in-human studies.
- CEO Sumeet Dagar PhD, MBA is an accomplished senior executive in the biopharmaceutical industry with over 23 years of global cross-functional experience. Co-Founder & CSO Caroline Le Poole, PhD is a Professor of Dermatology, Microbiology and Immunology at Northwestern Feinberg School of Medicine.

Table 23

Tensor

Technology: AI and Algorithms; Diagnostics; Platform Technology • Lead Focus: Oncology; Drug & Target ID • Pre-Seed • Founded 2023

- By combining new statistical methods, patient samples, and transcriptional profiling, the Raman Lab is delineating the 'language' of cancer to fuel the next generation of therapies, diagnostics, and prognostics.
- As a proof-of-concept, the lab has perfectly distinguished responders from non-responders in a published paper on immunotherapy efficacy in melanoma, and identified the cell types mediating responder status.
- Co-Founder Arjun Raman, MD, PhD is the Joseph Regenstein Professor of Biochemistry and Molecular Biology, with a joint appointment in the Pritzker School of Molecular Engineering (PME) at the University of Chicago. Vivek Behera, MD, PhD is a Hematology and Oncology Fellow at the University of Chicago.

Hall of Inventions

Table 51

TTC Oncology

Technology: Small Molecules & Peptides • Lead Focus: Oncology • Series A • Founded 2015

- TTC Oncology's mission is to develop and bring to market a novel small-molecule therapy to address unmet needs in HR+/HER2- breast cancer therapy.
- TTC-352 is an orally administered selective human estrogen receptor (ER) partial agonist (ShERPA) designed to treat metastatic ER+ breast cancers that have become resistant to endocrine therapy and CDK4/6 inhibitor therapy. The Phase I clinical trial confirmed that TTC-352 is safe and revealed encouraging efficacy.
- Co-Founder and CEO Debra A. Tonetti, PhD is Professor of Pharmacology at UIC. Her lab focuses on the etiology and treatment of breast cancer, specifically on mechanisms of endocrine resistance.

Table 71

Valjuvant Vaccines

Technology: Vaccines • Lead Focus: Infectious Diseases • Pre-Seed • Founded 2019

- Valjuvant Vaccines aims to make vaccines better by reducing side effects, improving durability, protecting better and against more, and expanding into therapeutic areas.
- Valjuvant Vaccines has several pipeline products up to the pre-clinical stage and targeting infectious diseases such as flu, typhoid, and covid.
- Founder Aaron Esser-Kahn, PhD is Professor of Molecular Engineering at the University of Chicago. Jeremiah Kim, MS is a 5th year PhD Candidate in Molecular Engineering at the University of Chicago.

Hall of Inventions

Table 35

Terry Vanden Hoek, MD

Technology: Small Molecules & Peptides • Lead Focus: Cardiovascular & Vascular Diseases; Acute Care & Surgical

- Terry Vanden Hoek, MD, FACEP is a Professor and Head of the Department of Emergency Medicine at University of Illinois Hospital & Health Sciences System as well as a member of the National Academy of Medicine.
- Dr. Hoek is developing UIC-101 to be administed during CPR and thereby improve survival and quality of life after cardiac arrest. No drugs exist for this purpose, and current standard-of-care includes active thermal cooling after return of spontaneous circulation. UIC-101 inhibits the interaction of PHLPP1 phosphatase to its membrane adaptor leading to Akt activation and metabolic recovery to provide the effects of earlier cooling during CPR where minutes matter.

Table 62

Varchas Biotechnologies

Technology: Cell Therapy & Exosomes; Biologics & Antibodies • Lead Focus: Oncology • Pre-Seed • Founded 2022

- Varchas Bio aims to develop transformative cancer immunotherapy technologies through two proprietary platforms: “MASS-CAR”, and “super-mAbs”.
- Varchas’ MASS-CAR platform employs a universal CAR to engage multiple immune cells, thus instigating a more holistic and potent immune response.
- Co-Founder Vipul Shukla, PhD is an Assistant Professor of Cell and Developmental Biology at Northwestern University. Co-Founder Ashima Shukla, PhD specializes in cancer biology and immunology, earning her PhD from the University of Nebraska Medical Center.

Hall of Inventions

Table 26

VisionStem / RegenEyes

Technology: Cell Therapy & Exosomes; Biologics & Antibodies • Lead Focus: Ophthalmology; Rare & Genetic Diseases • Pre-Seed • Founded 2023

- VisionStem Therapeutics is implementing mesenchymal stem cells (MSCs) to enhance the repair and function of the cornea (epithelium and nerves).
- RegenEyes is repurposing FDA approved MEK inhibitor selumetinib to increase PAX6 in corneal cells - addressing the root cause of Aniridia.
- Founder of RegenEyes and co-Founder of VisionStem Ali Djalilian, MD is a Searls-Schenk Professor of Ophthalmology, Bio-engineering (affiliate) at University of Illinois Chicago. Co-founder of RegenEyes Mahmood Ghassemi, PhD is a Professor of Infectious Disease at University of Illinois Chicago.

Table 49

Vivacelle Bio, Inc

Technology: Nanotechnology & Synthetic Biology • Lead Focus: Cardiovascular & Vascular Diseases; Acute Care & Surgical • Series A • Founded 2013

- Vivacelle Bio, Inc. (VBI), a clinical stage life science company which is focused on saving lives by bringing to market a new paradigm in the correction of hypovolemia by fluid resuscitation.
- Vivacelle Bio's current two products (VBI-1 and VBI-S) are designed to treat hypovolemia that results from acute blood loss following trauma or surgery, medical conditions such as burns, sepsis or diarrheal disease.
- CEO Harven V. DeShield, PhD, JD previously served as Chief Legal and Operations Officer of Vivacelle Bio, Inc. for four years. He is also a former Vice President of Commercialization and Business Development for a biomedical device company developing next generation novel wound healing medical device technologies and therapies.

Hall of Inventions

Table 3

Vortex Therapeutics

Technology: Small Molecules & Peptides • Lead Focus: Oncology; Proteostasis and Protein Degradation • Seed

- Vortex Therapeutics has developed the first direct inhibitor of MYC (largely considered an "undruggable target") that has entered human clinical testing.
- Lead candidate MYCi975 can selectively inhibit the pro-cancer processes associated with MYC while leaving other essential cell processes untouched in patients with therapy resistant prostate cancer. Results show it to be safe with antitumor activity in patients with advanced solid cancers.
- Sarki Abdulkadir MD, PhD is the Vice Chair for Research and the John T. Grayhack, MD, Professor of Urological Research at the Department of Urology at Northwestern University. Gary Schiltz, PhD is a Research Professor in Chemistry at Northwestern University.

Table 41

Xentria

Technology: Biologics & Antibodies • Lead Focus: Autoimmunity & Allergy; Rare & Genetic Diseases• Series B • Founded 2020

- Xentria is a drug development company with multiple lines of research across immuno-oncology and reproductive medicine.
- XTMAB-16 is a monoclonal antibody against TNFα (biosimilar to infliximab) that was initially developed to treat sarcoidosis and has received an orphan drug designation. In 2023, XTMAB-16 was exclusively licensed by Meitheal Pharmaceuticals.
- Founding President Tom Shea, MBA is also the founding CEO of Meitheal Pharmaceutical Inc., a generic pharmaceutical company focused on injectable products. He was formerly Vice President of Global Alliance Management for Sagent Pharmaceuticals and was responsible for global partnerships, supply chain and product development.

Hall of Inventions

Table 59

Xiaoyu Zhang, PhD

Technology: Small Molecules & Peptides • Lead Focus: Proteostasis and Protein Degradation; Multiple

- Xiaoyu Zhang, PhD is an assistant professor in the Department of Chemistry at Northwestern University.
- The majority of the human proteome is considered intractable to conventional drug discovery efforts. The Zhang laboratory targets previously elusive segments of the human proteome, developing small molecule therapeutics that uniquely modulate disease pathways and targets. The lab employs chemical biology techniques and chemical proteomic technologies to uncover new drug modalities, expanding the druggable space within the human proteome.

Table 52

YouYang Zhao, PhD

Technology: Small Molecules & Peptides • Lead Focus: Cardiovascular & Vascular Diseases; Infectious Diseases; Acute Care & Surgery

- YouYang Zhao, PhD is the William G. Swartchild, Jr. Distinguished Research Professor and Director of the Program for Lung and Vascular Biology, and Head of the Injury Repair and Regeneration Research at the Stanley Manne Children's Research Institute at the Ann & Robert H. Lurie Children's Hospital of Chicago.
- Dr. Zhao's research is focused on uncovering the molecular mechanisms of vascular endothelial cell dysfunction in the pathogenesis of acute respiratory distress syndrome, pulmonary hypertension, and cancer metastasis. These studies will identify druggable targets leading to novel therapeutic strategies to activate the intrinsic endothelial regeneration program.

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