

(insert Company) WISCONSIN CONNECTIONS

Opportunity for *:

- Showcase expertise in the oncology, metabolic disease, and personalized medicine areas.
- Major visibility across the WI biohealth ecosystem in one place.
- Opportunities to network with leaders, experts, community partners, and students; identify clinical trial sites; and explore manufacturing and supply chain partnerships.

Wisconsin Strengths:

- Full-stack drug development ecosystem (discovery → GMP → trials → manufacturing)
- Strong oncology and metabolic depth (aligned with Lilly pipeline)
- Emerging theranostics cluster
- National CAR-T leadership
- AI-enabled manufacturing modernization opportunity
- Deep NIH funding and R1 research base
- Global leader in Alzheimer's research
- Quantum computing leadership

TOP ECOSYSTEM LIST

- University of Wisconsin–Madison** - End-to-end engine: drug discovery, AI, theranostics, CGT, metabolic science, GMP manufacturing, and clinical translation.
 - Initiative for Theranostics & Particle Therapy
 - Metabolic Research Center (obesity/diabetes)
 - Program for Advanced Cell Therapy (PACT)
 - RISE-AI initiative and data science depth
 - Global Alzheimer's research leader

Opportunity: Long-term discovery and translational super-partner.
- University of Wisconsin Carbone Cancer Center** - Wisconsin's only NCI-designated comprehensive cancer center.
 - 250+ clinical trials
 - Strong immuno-oncology and radiation synergy
 - Biomarker-driven translational programs
 - Statewide trial access via Wisconsin Oncology Network (WON)

Opportunity: Oncology pipeline acceleration and Phase I/II partnerships.
- Medical College of Wisconsin Cancer Center** - Nationally recognized CAR-T and cellular therapy leader.
 - In-house CAR-T manufacturing
 - 15+ CAR-T trials
 - Precision oncology leadership
 - Deep transplant and hematologic malignancy expertise

Opportunity: Advanced cellular immunotherapy collaboration.
- NorthStar Medical Radioisotopes** - Domestic medical isotope backbone.
 - Cu-67, Ac-225 production
 - Supports radiopharma independence
 - Strategic leverage if Lilly expands into RPTs

Opportunity: Critical infrastructure for theranostics growth.
- Catalent Biologics** - Large-scale biologics CDMO capability in-state.
 - Single-use bioreactors
 - Clinical to commercial transition support
 - Flexible biologics scale-up

Opportunity: Rapid biologic pipeline manufacturing support.
- Program for Advanced Cell Therapy at UW-Madison** - Academic GMP and IND support bridge.
 - First-in-human cell therapy readiness
 - Industry partnerships
 - Translational manufacturing infrastructure

Opportunity: Lower-risk CGT early-stage collaboration.
- Aldevron** - Core supply chain provider for gene & cell therapies.
 - GMP plasmid manufacturing
 - CRISPR tools
 - Biologic reagent production

Opportunity: Secure advanced modality supply chain.
- UW-Madison Metabolic Research Center** - Deep obesity, diabetes, and microbiome science.
 - Energy balance & appetite regulation research
 - Gut microbiome–metabolic axis
 - Translational metabolic phenotyping

Opportunity: Direct alignment with Lilly's metabolic leadership.
- Center for International Blood and Marrow Transplant Research at MCW** - Global transplant and cell therapy outcomes database.
 - Real-world evidence
 - Trial benchmarking
 - Long-term survival and safety data

Opportunity: Critical for cellular therapy evidence strategy.
- University of Wisconsin-Madison Wisconsin Alzheimer's Disease Research Center (ADRC)** - Runs longitudinal clinical cohorts and biomarker research programs.
 - Global Alzheimer's research leader
 - Includes specialized labs such as biomarker detection using blood/CSF

Opportunity: Access to research, data and patient population.

Other Entities with High Strategic Value

- SHINE Technologies
- Waisman Biomanufacturing (UW-Madison)
- Versiti Blood Research Institute
- GE HealthCare
- Microsoft AI Co-Innovation Lab at UW-Milwaukee
- Morgridge Institute for Research

KEY INSTITUTIONS AND PARTNERS BY FOCUS AREA

Theranostics (Radiopharmaceuticals and Precision Oncology)

- [Initiative for Theranostics & Particle Therapy \(ITPT\), University of Wisconsin–Madison](#) – Multidisciplinary engine integrating imaging, radionuclide therapy, and clinical translation.
- [University of Wisconsin Carbone Cancer Center](#) – NCI-designated comprehensive cancer center with 250+ active clinical trials.
- [Medical College of Wisconsin – Medical Physics Section](#) – MR-linac, adaptive radiation therapy, and machine learning integration.
- [Froedtert & the Medical College of Wisconsin Cancer Network](#) – Active radionuclide therapy clinical programs.
- [GE HealthCare](#) – Global leader in imaging and theranostic platform integration.
- [NorthStar Medical Radioisotopes](#) – U.S.-based isotope supply (Cu-67, Ac-225); strategic for domestic radiopharma independence.
- [SHINE Technologies](#) – Lu-177 and other isotope production with scalable commercial infrastructure.
- [Archeus Technologies](#) – Clinical-stage radiopharmaceutical therapy (RPT) pipeline; UW spinout.
- [Voximetry](#) – Personalized dosimetry software platform for precision radionuclide therapy.
- [RPT Labworks LLC](#) – Preclinical radiopharmaceutical therapy optimization partner.

Oncology

- [University of Wisconsin Carbone Cancer Center](#) – Only NCI-designated Comprehensive Cancer Center in Wisconsin.
- [Medical College of Wisconsin Cancer Center](#) – Internationally respected research center pursuing NCI designation.
- [Elephas](#) – Live tumor response testing platform for immunotherapy.
- [Accuray](#) – Developer of CyberKnife® and TomoTherapy® precision radiation therapy systems.
- [Wisconsin Oncology Network](#) – Statewide network expanding NCI clinical trial access.
- [Marshfield Clinic Health System](#) – Rural oncology clinical trials and care delivery network.
- [Aurora Health Care / Advocate Health](#) – Large oncology care footprint in Wisconsin.
- [UP Oncolytics](#) – Novel viral immunotherapy development.
- [McArdle Laboratory for Cancer Research \(UW–Madison\)](#) – Foundational tumor biology research center.
- [Morgridge Institute for Research](#) – Biomedical Imaging Program advancing disease diagnosis and treatment technologies.

CAR-T & Cellular Immunotherapy

- [Medical College of Wisconsin Cancer Center](#) – 15+ CAR-T trials and in-house cell therapy manufacturing.
- [Center for International Blood and Marrow Transplant Research \(CIBMTR\)](#) – Global outcomes benchmarking for transplant and cellular therapies.
- [Program for Advanced Cell Therapy, University of Wisconsin–Madison](#) – Translational cell therapy manufacturing and clinical development.
- [University of Wisconsin Carbone Cancer Center](#) – Research in CAR-T for solid tumors.
- [Versiti Blood Research Institute](#) – Translational hematologic immunotherapy research.
- [Children's Wisconsin](#) – Pediatric CAR-T clinical delivery.
- [Froedtert & the Medical College of Wisconsin](#) – Clinical deployment of CAR-T therapies.
- [Aldevron](#) – Vector backbone manufacturing for cell and gene therapy.
- [Cellares](#) – Automated CAR-T production systems (UW collaboration).
- [WiCell Research Institute](#) – Engineered cell sourcing and stem cell technology.

Cell & Gene Therapy

- [Program for Advanced Cell Therapy \(PACT\), UW–Madison](#) – GMP manufacturing and IND support for advanced therapies.
- [WiCell Research Institute](#) – Global leader in cGMP induced pluripotent stem cell (iPSC) banking.
- [Aldevron](#) – Plasmid DNA and CRISPR manufacturing backbone.
- [Center for International Blood and Marrow Transplant Research](#) – Global transplant and cellular therapy outcomes database.
- [Versiti Blood Research Institute](#) – Gene and cell therapy research for hematologic disorders.
- [FUJIFILM Cellular Dynamics](#) – Industrial-scale iPSC manufacturing.
- [Children's Wisconsin](#) – Clinical gene therapy delivery.
- [Medical College of Wisconsin Cancer Center](#) – CAR-T and engineered T-cell trials.
- [American Society of Gene & Cell Therapy](#) – International leadership organization in gene and cell therapy.
- [Mirus Bio \(Merck KGaA\)](#) – Non-viral transfection and delivery technologies.

KEY INSTITUTIONS AND PARTNERS BY FOCUS AREA CONTINUED

AI and Quantum Computing for Drug Discovery, Trials & Manufacturing

- [UW-Madison, AI + RISE Initiative](#) – Cross-disciplinary AI research initiative.
- [UW-Madison, Quantum Computing Alliance](#) – Academic–industry collaboration for quantum technologies.
- [Morgridge Institute for Research](#) – Computational biology and machine learning programs.
- [Institute for Clinical and Translational Research \(ICTR\), UW-Madison](#) – AI-enabled clinical trial design and translational science.
- [Waisman Biomanufacturing](#) – Academic-to-clinic GMP biomanufacturing platform.
- [Microsoft AI Co-Innovation Lab, UW-Milwaukee](#) – Industry collaboration hub for AI deployment.
- [Northwestern Mutual Data Science Institute](#) – Multi-university data science collaboration.
- [Milwaukee School of Engineering](#) – GPU supercomputing and applied AI engineering.
- [Connected Systems Institute, UW-Milwaukee](#) – Smart manufacturing and industrial analytics.
- [Tempus AI](#) – Clinical and genomic AI analytics.

Metabolic Disease (Obesity, Diabetes, Cardiometabolic)

- [UW-Madison Metabolic Research Center](#) – Research on energy balance, obesity, and microbiome.
- [TOPS Center for Obesity and Metabolic Research, Medical College of Wisconsin](#) – Genetics of obesity and fat distribution.
- [Cardiovascular Research Center, UW-Madison](#) – Cardiometabolic disease interface research.
- [UW Health Endocrinology](#) – Clinical metabolic trials.
- [Endsulin](#) – Gene therapy for type 1 diabetes.
- [Regenerative Medical Solutions](#) – iPSC-based diabetes therapy.
- [Children's Wisconsin](#) – Endocrinology – Pediatric metabolic disease programs.
- [BrainXell](#) – Cellular models of neurological and metabolic disease.
- [Medical College of Wisconsin](#) – Endocrinology & Molecular Medicine – Salt-sensitive hypertension and obesity genetics.

Alzheimer's

- **University of Wisconsin-Madison** –
 - [Wisconsin Alzheimer's Disease Research Center \(ADRC\)](#) – Runs longitudinal clinical cohorts and biomarker research programs; Includes specialized labs such as biomarker detection using blood/CSF.
 - [UW Initiative to End Alzheimer's](#) – Large umbrella program supporting research, clinical programs, community outreach, and education around dementia.
 - [Wisconsin Alzheimer's Institute \(WAI\)](#) – Statewide research and clinical outreach program that develops memory clinics, trains dementia care providers, and supports community programs. Runs the WAI-Affiliated Dementia Diagnostic Clinic Network (~40 clinics statewide).
 - [Wisconsin Registry for Alzheimer's Prevention \(WRAP\)](#) – One of the largest and longest-running studies of Alzheimer's risk in the world. Tracks thousands of people with family history of Alzheimer's to study early biomarkers and prevention.
 - [Community-Academic Aging Research Network \(CAARN\)](#) – Statewide research collaboration linking UW researchers with community partners across WI counties. Focuses on aging and dementia interventions and community-based research.
 - [Community-Academic Partnerships for Cognitive Health & Wellness Lab](#) – Research group focusing on inclusive Alzheimer's research and underrepresented populations.
 - [Center for Health Disparities Research](#) – Advancing research, education, & clinical innovations to eliminate health disparities.
- [Wisconsin Institute for Healthy Aging \(WIHA\)](#) – Nonprofit that works with community partners and researchers to scale prevention and wellness programs statewide.
- [Wisconsin Dementia Resource Network](#) – Statewide collaborative network coordinated by WAI to share best practices and support dementia-friendly communities.

Advanced Biologics & Manufacturing

- [Catalent Biologics](#) – Large-scale biologics CDMO with single-use bioreactors.
- [Scientific Protein Laboratories](#) – FDA-registered cGMP biologics manufacturing.
- [Waisman Biomanufacturing](#) – Academic GMP manufacturing bridge.
- [Pfizer – Middleton Facility](#) – Biologic enzyme production expertise.
- [Sterling Pharma Solutions](#) – Drug substance manufacturing.
- [Siegfried](#) – Global pharmaceutical manufacturing partner.
- [Promega Corporation](#) – Life science tools and biologics R&D.
- [University of Wisconsin-Platteville](#) – Hands-on manufacturing engineering education.
- [Milwaukee School of Engineering](#) – Automation, robotics, and Six Sigma workforce training.
- [University of Wisconsin-Milwaukee](#) – R1 engineering and manufacturing systems research.
- [Wisconsin Technical College System](#) – Workforce pipeline for biomanufacturing technicians.

LISTING OF STRATEGIC RESOURCES AND PARTNERS

Theranostics (Radiopharmaceuticals and Precision Oncology)

- **UW-Madison**
 - UW-Madison is very active in theranostics right now and is building a multidisciplinary program that spans basic chemistry, imaging agent development, radiopharmaceutical production, preclinical testing, and clinical translation.
 - Launched the Initiative for Theranostics and Particle Therapy (ITPT) to coordinate researchers across medical oncology, radiation oncology, nuclear medicine, medical physics and engineering to accelerate translation of theranostic agents and integrate particle therapies with radiopharmaceutical approaches.
 - Jamey Weichert, PhD – Professor in Radiology & Medical Physics and co-leader of the Initiative for Theranostics and Particle Therapy (ITPT), a cross-disciplinary program driving UW-Madison's theranostics research and translation.
 - Zachary Morris, MD, PhD – Co-director of ITPT and professor in Human Oncology, involved in coordinating clinical and translational theranostics research.
 - Mohammed (Parvez) Bhuiyan, PhD – Associate Professor in Radiology and Director of the Radiopharmaceutical Production Facility, involved in radiochemistry and production of imaging/theranostic agents.
 - Reinier Hernandez, PhD – Assistant Professor in Medical Physics focusing on radiochemistry, targeted radionuclide therapy, and radio-immunooncology, including theranostic radiotracers.
 - Scott Perlman, MD, MS – Professor and Section Chief in Nuclear Medicine & Molecular Imaging with involvement in PET imaging and theranostic approaches.
 - Matthew Larson, MD, PhD – Assistant Professor in Nuclear Medicine & Molecular Imaging (research and imaging expertise).
 - Paul Ellison, PhD – Nuclear and radiochemistry, development of matched diagnostic/therapeutic radiolabeled molecules.
 - Jonathon W. Engle, PhD – Cyclotron and radionuclide production research.
 - Bryan P. Bednarz, PhD – Medical Physics faculty with work linking radiation physics to imaging/therapy platforms.
- **Marquette /MCW**
 - Amit Joshi, PhD – Dr. Joshi's work focuses on molecular image-guided and remote-triggered therapies involving nanoparticles for imaging and photo-thermal cancer therapy, and imaging contrast agents development (optical/MRI). Joshi leads the Nanomedicine & Image-Guided Interventions Laboratory, which develops technologies that blend diagnostic imaging and therapeutic action which is a core principle of theranostics.
- **MCW**
 - The Medical Physics Section within MCW's Department of Radiation Oncology includes many faculty physicists actively involved in research and clinical innovation.
 - Ergun Ahunbay, PhD – Professor; works on intensity-modulated radiation therapy (IMRT) and image-guided radiation therapy (IGRT).
 - Asma Amjad, PhD – Assistant Professor; focuses on deep learning algorithms for CT/MR-guided treatment planning.
 - Xinfeng Chen, PhD – Assistant Professor; works on MR-linac dosimetry and adaptive radiotherapy.
 - Mi Huang, PhD – Associate Professor; machine learning, radiomics, and predictive modeling for precision oncology.
 - Eenas Omari, PhD – Associate Professor; MRI-guided adaptive radiotherapy and toxicity assessment. George Noid, PhD – Assistant Professor; ultrasound and image quality research.
- **Theranostics-Related Companies**
 - NorthStar Medical Radioisotopes, LLC – A commercial radiopharmaceutical company producing medical isotopes (like Cu-67 and n.c.a. Ac-225) that can be paired with targeting molecules for both imaging and therapy; part of Wisconsin's growing "nuclear medicine corridor."
 - Archeus Technologies – A clinical-stage biopharma company advancing small-molecule radiopharmaceutical therapies (RPTs) and companion diagnostics, with leadership tied to UW-Madison and a local presence focused on theranostic agents.
 - RPT Labworks LLC – Specialized contract research organization focused on design, optimization, and preclinical evaluation of radiopharmaceutical theranostics (RPTs).
 - Voximetry Incorporated – Healthtech and software company developing patient-specific radiopharmaceutical planning and dosimetry tools to support personalized theranostic treatments.
 - SHINE Technologies – While not purely a theranostics company, SHINE produces medical isotopes (including Lu-177 and others used in radiopharma) through advanced neutron and fusion-based technologies; works closely with UW researchers and helps supply key isotopes.
- **Healthcare Partners**
 - Froedtert & the Medical College of Wisconsin (Froedtert Hospital) – Offers theranostic cancer care services (e.g., radionuclide therapy and imaging) as part of clinical practice in Wauwatosa, WI.
 - The Section of Nuclear Medicine & Molecular Imaging within UW Health's Radiology department provides a variety of nuclear medicine services, including procedures that use radiopharmaceuticals for both diagnosis and therapy, foundational components of theranostics. These include PET/CT and SPECT/CT imaging and treatments involving radioactive agents for conditions like thyroid cancer.
 - Specialists such as Dr. Steve Cho, a nuclear medicine physician within UW Health | Carbone Cancer Center, are involved in treating patients using radioactive drugs that target cancer cells, a key theranostic approach combining diagnosis and therapy.
 - UW Health is part of the University of Wisconsin Carbone Cancer Center's Initiative for Theranostics and Particle Therapy, which aims to integrate theranostic treatments into clinical care alongside cutting-edge research and personalized therapy planning.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Cell and Gene Therapy (CGT)

- **UW–Madison’s Stem Cell and Regenerative Medicine Center (SCRMC)** is a hub for extensive research into stem cell biology, reprogramming, tissue regeneration, and developing therapeutic approaches using pluripotent and adult stem cells.
- **UW–Madison** – Most research is preclinical, but, programs like the Program for Advanced Cell Therapy (PACT) focus on developing personalized cellular therapies for immune disorders and cancers and advancing first-in-human studies.
- **UW–Madison Key Faculty in Cell and Gene Therapy**
 - Jacques Galipeau, MD (Medicine) – Director of the Program for Advanced Cell Therapy (PACT) at UW–Madison, which aims to develop personalized cell therapies and advance first-in-human trials.
 - Barak Blum, PhD (Cell & Regenerative Biology) – Works on human pluripotent stem cell differentiation and regulatory networks, core knowledge for many cell therapies.
 - Quanyin Hu, PhD (School of Pharmacy) – Focuses on delivery systems that integrate cell therapy and immunotherapy, which enhances translation of gene-modified cells.
- Within the **Marquette–MCW Joint Department of Biomedical Engineering**, labs like the Tissue Regenerative Engineering Laboratory work on biomaterials, nanotechnology, and engineered tissues that augment or deliver therapeutic cells, intersecting with gene therapy delivery questions.
- **American Society of Gene & Cell Therapy (ASGCT)** is headquartered in Milwaukee and acts as professional community linking local and national researchers.
- **The Human Induced Pluripotent Stem Cell Program at MCW** creates and maintains iPSC lines for translational research, which is a key resource for disease modeling and future gene correction approaches.
- **MCW is home to the Center for International Blood and Marrow Transplant Research (CIBMTR)**, a global data and research hub that supports large-scale outcomes analysis and clinical trial design in transplant and cellular therapies.
- Within the **MCW Cancer Center**, there’s a **Cell Therapy Shared Resource** that enables academic and clinical researchers to produce and process cell therapy products (including engineered T cells), access immune profiling tools and monitoring assays, and participate in collaborative immunotherapy research.
- The **Human Induced Pluripotent Stem Cell Program at MCW** creates and maintains iPSC lines for translational research.
- **Juliana Alvarez Argote, MD - Dr. Alvarez-Argote** is currently an assistant professor in the division of hematology and medical oncology at the **Medical College of Wisconsin** and the **Clement J. Zablocki VA Medical Center**. Her professional interests include solid tumors, benign hematology, and gene therapy. She is currently part of a research project with Dr. Jeffrey Medin that focuses on gene therapy for sickle cell disease. She is a member of the Education Committee of the American Society of Gene and Cell Therapy.
- **MCW** is internationally known for its cellular therapy and stem cell transplant research, which blends with cell therapy approaches (e.g., CAR-T and stem cell genetics)
 - **Bronwen Shaw, MD, PhD** – Chief Scientific Director of the Center for International Blood and Marrow Transplant Research (CIBMTR) at MCW and a leading figure in transplant research.
 - **Mary M. Horowitz, MD** – Leader in large clinical trial networks for transplant outcomes and therapeutic research.
- **Cell and Gene Therapy Related Companies**
 - **Aldevron** – Provides plasmids, CRISPR reagents, proteins and biotech materials used in gene editing and cell therapy research and development in Madison, WI.
 - **Cellular Dynamics (Fujifilm)** – Focuses on induced pluripotent stem cells (iPSCs) and related products that are widely used in cell therapy development and research.
 - **JangoBio** – Works on regenerative and stem cell therapies with a focus on restoring hormone balance and mitigating age-related diseases, including cell-based therapeutic approaches.
 - **BrainXell** – Develops enriched neural cells for therapeutic discovery and potentially for cell therapy applications.
 - **WiCell Research Institute** – Not a company but a major institute in Madison that supports cell therapy research by providing pluripotent stem cell banks, cell lines, and cGMP-grade materials for translational programs.
 - **Orchestra Life Sciences** – A consultancy based in the Forward Biolabs network that provides expertise in cell and gene therapies, regenerative medicines, and biotechnology support services (including strategy and development).
 - **Mirus Bio** – Known historically for non-viral gene delivery technology and reagents used in gene therapy research; now part of Merck KGaA but with roots in Madison’s biotech scene.
 - **Promega Corporation** – Offers cell and gene therapy research solutions (reagents, assays, workflows) used in therapeutic development.
- **Clinical and Treatment Partners**
 - **Children’s Wisconsin** – Children’s Wisconsin’s MACC Fund Center for Cancer and Blood Disorders offers FDA-approved gene therapy (e.g., Casgevy) for sickle cell disease and transfusion-dependent thalassemia in eligible pediatric patients, integrating genetic correction with clinical care.
 - **UW Health** – UW Health provides CAR T-cell therapy for certain blood cancers, such as diffuse large B-cell lymphoma and acute lymphoblastic leukemia, which is a form of cell therapy delivered clinically.
 - **Froedtert & the Medical College of Wisconsin** – Through its Precision Medicine and Oncology programs, this health network offers personalized treatments including cell therapy modalities and precision medicine approaches that incorporate genetic and cellular therapies into cancer care planning.
 - **Program for Advanced Cell Therapy (UW-affiliated)** – A clinical, research and manufacturing hub embedded within UW Health and UW School of Medicine and Public Health. It enables development of novel cell therapies, GMP-compliant manufacturing, IND/clinical trial support, and partnerships with industry to translate cell therapy technologies toward clinical use.
 - **Versiti Blood Research Institute** – Part of the broader Versiti network, this institute includes research programs investigating gene and cell therapies for blood disorders such as hemophilia and sickle cell disease, supporting translational research that can interface with clinical partners.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Advanced Biologics & Manufacturing

- **MSOE** trains students in Mechanical, electrical, biomolecular, and industrial engineering with strong applied labs and industry-driven capstone programs. Their coursework has an emphasis on Six Sigma, quality, and manufacturing systems.
- **UW-Madison** is the largest and most influential source of engineering graduates in Wisconsin:
 - Biomedical Engineering – Prepares students to work on biologics, medical devices, bioprocess design, and automation of life-science systems.
 - Chemical Engineering – Trains engineers in process design and scale-up, critical for biologics and injectable manufacturing.
 - Mechanical & Industrial Engineering – Focuses on automation systems, controls, robotics, and quality systems.
 - Electrical & Computer Engineering – Develops skills in instrumentation, controls, data systems, and automation.
 - Biotechnology & Bioengineering Tracks – Some programs include coursework in bioprocessing and molecular technologies.
- **University of Wisconsin–Milwaukee** offers strong programs in:
 - Mechanical and Industrial Engineering
 - Biomedical Engineering
 - Electrical and Computer Engineering
 - Graduates often enter manufacturing and automation roles supporting medical device and biologics production.
- **University of Wisconsin–Platteville** is known for engineering technology and practical manufacturing training in:
 - Manufacturing Engineering Technology
 - Industrial Engineering Technology
 - These programs emphasize hands-on automation, CAD/CAM, robotics, and quality systems, directly applicable to life-science manufacturing jobs.
- **Wisconsin Technical Colleges** in Wisconsin are a major feeder into manufacturing roles, especially for hands-on engineering technicians and operations roles:
 - Madison Area Technical College
 - Gateway Technical College
 - Waukesha County Technical College
 - Milwaukee Area Technical College
 - Programs offered:
 - Automation and Robotics Technician
 - Quality Assurance & Regulatory Compliance
 - Industrial Maintenance Technician
 - Biomanufacturing & Bioprocess Technology
 - PLC (Programmable Logic Controller) & Controls Training
 - These create skilled workers for automation, validation, and quality systems in biotech facilities.
- **Biohealth Manufacturing-related Companies**
 - Catalent Biologics – Madison, WI – A major biologics contract development and manufacturing organization (CDMO) with cGMP production capacity (including large-scale single-use bioreactors) for clinical and commercial biologics, biosimilars, and cell-line development support.
 - SPL (Scientific Protein Laboratories) – Waunakee, WI – Operates a state-of-the-art biopharmaceutical manufacturing facility that is FDA registered and cGMP compliant, producing biologics and protein products.
 - Pfizer (PGS Middleton, WI) – This facility focuses on the manufacture and purification of biologic enzymes and proteins (e.g., bovine thrombin) used for therapeutic and surgical applications.
 - Wisconsin BioProducts – Supplier to the pharmaceutical industry offering custom fermentation, cell culture development, process optimization, quality control, and contract manufacturing services relevant to biologics workflows.
 - Waisman Biomanufacturing – Although a nonprofit/academic-affiliated entity, it advances novel biologics and vaccines toward early clinical testing and provides hands-on biotechnology and manufacturing expertise.
 - Promega Corporation – Madison, WI – A major producer of enzymes and molecular biology reagents used in R&D, quality systems, and life science workflows across biotech and pharma.
 - Adevron – Madison, WI – Manufactures plasmids, proteins, CRISPR tools, and other biologic materials widely used in gene therapy development and biologics production.
 - Cell Line Genetics – Madison, WI – Provides cell characterization and QA services for regenerative medicine and biologics development, including quality-assured cell line products.
 - Alator Biosciences – Sun Prairie, WI – Offers custom manufacturing services and research products in cytokines and molecular biology relevant to life sciences.
 - Sterling Pharma Solutions – Germantown, WI - a global contract development and manufacturing organization (CDMO) that helps pharmaceutical and biotech companies develop and manufacture drug substances—especially complex small-molecule active pharmaceutical ingredients (APIs).
 - Seigfried – Graffon, WI – A contract research and manufacturing organization providing drug development and biologics services.
 - Exact Sciences – Madison, WI – While focused on diagnostics, Exact Sciences supports molecular and precision-medicine technologies and quality systems that intersect with life-science workflows.
 - Protein Foundry – Milwaukee, WI – Small manufacturer of vaccines and related biologic materials.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Oncology

• **UW-Madison**

- University of Wisconsin Carbone Cancer Center (UW Carbone) is the flagship cancer research hub on campus. It is one of the National Cancer Institute (NCI)-designated comprehensive cancer centers, a designation meaning it conducts cutting-edge basic, translational, and clinical research.
 - Brings together 300+ scientists and clinicians from many departments across UW–Madison.
 - Organizes research around scientific programs that include genetic/epigenetic mechanisms, tumor biology, immunology, prevention, clinical trials, and outcomes research.
 - Hosts 250+ clinical trials testing novel therapies, vaccines, early-phase drugs, and biomarker-driven interventions.
- Research labs at UW–Madison (including those in departments like Oncology and at the McArdle Laboratory for Cancer Research) study fundamental processes in cancer such as:
 - Genetic and epigenetic changes that drive tumor initiation and progression.
 - Signal transduction, cell cycle regulation, and mechanisms of carcinogenesis using advanced genomic and proteomic tools.
 - Tumor microenvironment and how immune cells interact with tumors (tumor immunology).
 - Experimental models including mouse models and human tissue studies to link basic discoveries to clinical questions.
- Faculty in the Department of Human Oncology combine physics, biology, and clinical expertise to:
 - Test novel combinations of radiation therapy with other treatments (like drugs or immune modulators).
 - Study ways to refine medical imaging and radiation delivery to maximize tumor control while limiting side effects.
 - Lead clinical outcome studies that evaluate real-world effectiveness of evolving cancer therapies.
- Research programs in immunology focus on:
 - How the immune system recognizes and responds to tumors.
 - Mechanisms of immune escape used by cancers.
 - Design and implementation of immunotherapies and their integration into clinical trials.
- Specialized Research Cores and Shared Resources
 - Translational Science Biocore (TSB) – provides histological, molecular, and imaging analyses for tumor samples.
 - Animal pathology and biobanking services that help link findings from the bench to clinical questions.
- Population Science and Prevention Research
 - Cancer epidemiology, screening, and prevention research to understand risk factors and design interventions.
 - Outreach programs that translate scientific understanding into public health recommendations.
- The Wisconsin Blood Cancer Research Institute (WBCRI) is a partnership between UW Carbone and the UW–Madison School of Medicine and Public Health that focuses on:
 - Transformative discovery science in blood cancers (e.g., leukemia and lymphoma).
 - Multidisciplinary work that integrates genetics, immunology, and clinical translation.
- UW-Madison Key Faculty in Oncology
 - Christian Capitini, MD – Acting Director of the UW Carbone Cancer Center, leading overall cancer research strategy.
 - Paul Ahlquist, PhD – Associate Director for Basic Sciences; expert in molecular oncology and virology.
 - Nataliya Ubaha, MD, PhD – Associate Director for Clinical Research; leads early-phase oncology therapeutics research.
 - Randall Kimple, MD, PhD, MBA – Associate Director of Faculty Development & Education; radiation oncology and translational oncology researcher.
 - Joshua Lang, MD, MS – Associate Director of Translational Research; focuses on biomarker and clinical trials integration.
 - Kari Wisinski, MD – Deputy Director and Associate Director of Clinical Research; breast oncology clinical trials and translational research.
 - Lee Wilke, MD, FACS – Senior Medical Director of Clinical Cancer Services; surgical oncology leadership.
 - Sharon Weber, MD, FACS – Medical Director of Surgical Oncology; specializes in surgical approaches to cancer.
 - Paul Harari, MD – Professor and leader in head and neck cancer research and clinical care.
 - Gopal Iyer, PhD – Assistant Professor studying molecular mechanisms in lung and pancreatic cancers.
 - Zachary Morris, MD, PhD – Associate Professor and Chair of Human Oncology; translational studies on radiation and immunotherapy.
 - Paul Sondel, MD, PhD – Professor of pediatric oncology, researching innate immune cell activation against tumors.
 - Randal Tibbetts, PhD – Professor investigating gene regulation and its role in tumorigenesis.
 - Deric Wheeler, PhD – Professor focusing on cancer signaling and targeted therapies.
 - Shannon Kenney, MD – Virology program leader with implications for virus-associated cancers.
 - Weibo Cai, PhD – Biomedical engineering and radiology professor working on imaging and targeted therapy strategies.
 - Krishanu Saha, PhD – Professor whose work in genome editing intersects cancer biology and immunotherapy strategies.
 - Melissa Skala, PhD – Professor integrating biomedical imaging and cancer diagnostics research.
 - Vincent Ma, MD – Assistant Professor involved in immuno-oncology and melanoma research.
 - Hamid Enamekhoo, MD – Associate Professor focused on genitourinary cancers and precision oncology trials.

• **Medical College of Wisconsin**

- Gustavo W. Leone, PhD – Director of the MCW Cancer Center and Senior Associate Dean for Cancer Research; leads strategic cancer research initiatives and programs with expertise in basic and translational oncology science.
- Razelle Kurzrock, MD, FACP – World-renowned precision oncology and rare cancers researcher; Associate Director of Clinical Research at the MCW Cancer Center, leads rare cancer research labs and precision oncology efforts. She has extensive clinical trial leadership and is highly cited in cancer research.
- Mehdi H. Hamadani, MD – Dr. Hamadani is a professor of medicine and chief of hematologic malignancies at the Medical College of Wisconsin (MCW) in Milwaukee, WI. He serves as the Associate Director of Clinical Research at the MCW Clinical Cancer Center and holds the Cancer Center Scholar Endowed Chair. He is considered an international key opinion leader in the fields of hematopoietic cell transplantation, cellular therapy and lymphoid malignancies. He has authored over 450 peer-reviewed publications.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Oncology Continued

- Hui-Zi Chen, MD, PhD - Dr. Chen is a medical oncologist specializing in thoracic malignancies and a physician scientist committed to genomics research in advanced solid cancers. As a physician scientist, she aims to enable discovery of new therapeutic vulnerabilities in advanced solid cancers such as small cell lung cancer by leveraging her expertise in translational genomics to ultimately improve patient care.
- James P. Thomas, MD, PhD - Dr. Thomas is a professor of medicine at the Froedtert & the Medical College of Wisconsin Clinical Cancer Center. His research interests are in the development of new cancer therapies and he specializes in the treatment of gastrointestinal cancers. One of Dr. Thomas's key strengths is participation in early-stage therapeutic development.
- Xue-Zhong Yu, MD, MS, MBA – Associate Director of Basic Research; expert in cancer immunotherapy, hematologic malignancies, and adaptive T-cell therapy research.
- Mary M. Horowitz, MD, MS – Deputy Director of the Cancer Center and a respected expert in hematology and bone marrow transplant research. [LINK](#)
- MCW received an NCI R25 award (R25CA298917) (~\$324,000) to support the Student-Centered Pathway to Advance Research and Cancer Careers (SPARCC), designed to train and mentor undergraduate students in cancer research. <https://www.higher.gov.com/grant/R25CA298917/>
- In early 2025, the MCW Cancer Center formally submitted a comprehensive Cancer Center Support Grant to the NCI, a signal effort aimed at securing a multi-million-dollar federal Cancer Center Support Grant (P30-type), which funds infrastructure, shared scientific resources, and multidisciplinary cancer research programs (NCI CCSGs are among the largest awards cancer centers pursue). While final award details are pending review, just hosting the NCI site visit marks a major milestone on the road to potentially receiving that large federal support. [LINK](#)
- **Oncology-Related Companies**
 - Exact Sciences Corporation (Acquired by Abbvie) – Headquartered in Madison, Exact Sciences develops and commercializes cancer screening and precision oncology tests used to detect, characterize, and guide treatment decisions in various cancers.
 - Centrose (Madison, WI) – A biopharmaceutical company focused on developing small-molecule therapeutics for cancer treatment.
 - Elephas (Madison, WI) – Builds imaging diagnostic platforms using live human tumor biopsies to predict immunotherapy response, helping clinicians tailor cancer treatments.
 - AdvantiGen Biosciences (Madison, WI) – Focused on immuno-oncology, identifying novel targets and developing therapeutic antibodies and biomarkers for cancer immunotherapy.
 - UP Oncolytics (Milwaukee, WI) – A biotech spin-out from quneuro-oncology research developing novel oncolytic virus-based therapies for brain cancers and other tumors.
 - Tempus AI – A national company with presence in the area that uses genomics and AI to advance precision medicine and oncology analytics.
 - Accuray – Headquarters in Madison; develops advanced radiation therapy systems (e.g., CyberKnife, TomoTherapy) used to treat cancer with precision.
 - GE HealthCare – Major global healthcare technology company with a large presence in Wisconsin (multiple facilities, R&D and manufacturing sites). Its medical imaging systems (e.g., PET/CT, MRI, molecular imaging) are heavily used in cancer diagnosis, staging, therapy planning, and monitoring, making the company a key oncology partner. The Wisconsin sites also include advanced manufacturing and innovation centers.
- **Oncology Healthcare Partners**
 - UW Health | Carbone Cancer Center - Wisconsin's only National Cancer Institute (NCI)-designated Comprehensive Cancer Center, part of UW Health and the University of Wisconsin–Madison. It integrates basic, translational, clinical research and patient care, and leads statewide oncology research efforts including clinical trials and precision medicine programs.
 - Froedtert & the Medical College of Wisconsin Cancer Network - A large academic oncology care network based on the Froedtert Hospital and Medical College of Wisconsin Cancer Center, offering multidisciplinary cancer care through a coordinated network of specialists and treatment sites. Provides clinical services, advanced treatments (e.g., CAR-T), hereditary risk counseling and support programs.
 - Children's Wisconsin MACC Fund Center for Cancer and Blood Disorders - The pediatric oncology partner for Froedtert & MCW specializing in childhood cancers and bone marrow disorders, with dedicated programs for adolescents and young adults and supportive care services.
 - Aurora Health Care Cancer Clinics - A broad network of community and regional cancer care clinics throughout Wisconsin. Aurora Cancer Care provides patient-centered oncology treatment with multidisciplinary teams and often works with academic centers on care standards and clinical protocols.
 - Marshfield Clinic Cancer Care - Part of the Marshfield Clinic Health System, offering cancer care close to home with multiple treatment centers throughout the state, providing medical oncology, radiation therapy and supportive care.
 - Mayo Clinic Health System - Although part of a multi-state health system, Mayo Clinic Health System campuses in Wisconsin deliver oncology care and collaborate with academic partners (like UW campuses) on screening and research initiatives.
 - Wisconsin Oncology Network (WON) - A statewide clinical trial and research collaboration coordinated through UW Carbone Cancer Center that connects community health centers and clinics to NCI-supported cancer trials, helping Wisconsin patients access advanced therapies locally.
 - Versiti Blood Research Institute & Versiti Diagnostic Labs - Partnered with the MCW Cancer Center and Froedtert network to provide hematology expertise, precision oncology testing and advanced diagnostics critical in leukemia, lymphoma and other blood cancers.
 - Children's Research Institute (MCW) - Embedded within the MCW Cancer Center, focused on translational pediatric cancer research and innovation, moving discoveries from the lab into clinical care for children.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Metabolic Disease (Obesity, Diabetes, Cardiometabolic)

- **UW-Madison**
 - UW Metabolic Research Center is a central hub for metabolism research, founded to advance understanding of body weight regulation, energy balance, obesity, diabetes, and related cardiometabolic disorders. The center provides core technologies and supports collaborations across departments.
 - Major themes include:
 - Energy balance and appetite regulation
 - Adipose tissue biology
 - Glucose metabolism and insulin sensitivity
 - Neuroendocrine control of metabolism
 - Gut Microbiome and Metabolic Health
 - The MRC also provides core facilities such as metabolic phenotyping, animal models, and tracer metabolic studies to support faculty research.
 - Key Metabolic Disease Faculty at UW-Madison
 - Ty Carroll, MD – Division Chief of Endocrinology, Diabetes & Metabolism, involved in comprehensive metabolic disease research and clinical translation.
 - Dawn Davis, MD, PhD – Associate Professor focusing on pancreatic beta-cell gene expression and regulation in obesity and metabolic dysfunction.
 - Vincent Cryns, MD – Professor and leader in endocrinology research with ties to diabetes and metabolic pathways.
 - Andrea Galmozzi, PhD – Assistant Professor studying metabolic regulation of adipose tissue (fat biology).
 - Michelle Kimple, PhD – Associate Professor researching beta-cell responses and metabolic hormone signaling relevant to diabetes.
 - Dudley Lamming, PhD – Associate Professor studying the regulation of energy balance, nutrient signaling, and healthy aging in the context of diet/metabolism.
 - Alan Attie, PhD – Professor of Biochemistry studying genetics of obesity, diabetes and metabolic diseases.
 - Rozalyn Anderson, PhD – Professor exploring metabolism of aging, caloric restriction, inflammation and metabolic regulators of disease.
 - Ricki Colman, PhD – Associate Professor using primate models to study diet and metabolism across aging.
 - Brian Parks, PhD – Associate Professor investigating gene–diet interactions influencing obesity and diabetes.
 - Federico E. Rey, PhD – Professor of Bacteriology studying how gut microbiome influences host metabolism and cardiometabolic disease.
- **Medical College of Wisconsin**
 - Dr. Srividya Kidambi, MD, MS - Dr. Kidambi is a Professor and Chief in the Division of Endocrinology and Molecular Medicine at the Medical College of Wisconsin/Froedtert Hospital.
 - Her current research involves exploration of mechanisms of salt-sensitive hypertension in human subjects. She is also interested in research in obesity management.
 - Dr. Kidambi leads one of the area's most visible research hubs on obesity genetics and cardiometabolic risk, bridging basic biology and clinical application, the TOPS Center for Obesity and Metabolic Research at MCW. The TOPS Center investigates how body fat distribution influences risk for diabetes, cardiovascular disease, and metabolic dysfunction.
 - At MCW, the physiology department houses labs focused on glucose homeostasis, adiposity regulation, and hormonal modulators of metabolism.
 - MCW Endocrinology & Molecular Medicine Faculty represent a core group driving metabolic research in the region and includes both basic science researchers studying hormonal and cellular regulation, and clinician-scientists conducting clinical and translational metabolic research
 - Established in 1992, the Cardiovascular Research Center (CVRC) at the Medical College of Wisconsin has a mission to improve cardiovascular health in Southeast Wisconsin and beyond through cutting-edge research, cost-efficient and high-quality health care delivery, rigorous training of the next generation of cardiovascular scientists, and engaging the community to eliminate disparities in health outcomes.
 - Research focuses on Cardiovascular, Metabolic, and Inflammatory disease.
- **Companies related to Metabolic Disease**
 - Endsulin - Early-stage biotech based in Madison with a mission to develop a genetic therapy for type 1 diabetes designed to restore the body's ability to produce and regulate insulin, potentially reducing or eliminating the need for daily insulin injections.
 - Regenerative Medical Solutions, Inc. - Focuses on regenerative medicine and stem cell-based therapies for diabetes, working on iPSC (induced pluripotent stem cell) treatments intended to restore pancreatic function and potentially "cure" type 1 and type 2 diabetes.
 - BrainXell – Stem cell and biology research tools that can be applied to metabolic disease mechanisms.
 - Other biohealth firms in Wisconsin like Cell Line Genetics, Elephas Biosciences, and Axio BioPharma provide research platforms, cellular models, or biologic solutions that help metabolic disease science even if not focused exclusively on diabetes/obesity.
- **Metabolic Disease Healthcare Partners**
 - UW Health, Endocrinology & Metabolism - Part of the University of Wisconsin School of Medicine and Public Health, UW Health offers:
 - Diabetes and metabolic clinics providing comprehensive care (type 1 and type 2 diabetes, obesity, lipid disorders, metabolic syndrome).
 - Specialized programs for continuous glucose monitoring, insulin pump therapy, bariatric surgery coordination, and nutrition management.
 - Collaboration with UW research on metabolic disease mechanisms and clinical trials.
 - Froedtert & the Medical College of Wisconsin (MCW), Diabetes & Endocrine Care - A major academic health system centered in Milwaukee offering:
 - Comprehensive diabetes care (adult and pediatric endocrinology).
 - Bariatric and metabolic surgery programs.
 - Clinical research and trials in metabolic disease, including lifestyle and medication interventions.
 - Children's Wisconsin, Endocrine & Metabolic Disorders Center - Specialty pediatric care for:
 - Type 1 diabetes and metabolic conditions.
 - Growth and endocrine disorders.
 - Education, support, and care coordination for children and families living with chronic metabolic diseases.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

CAR-T & Cellular Immunotherapy

- **UW-Madison** is heavily researching CRISPR-based CAR-T cell therapies targeting cancers, especially trying to overcome challenges with solid tumors. Researchers are developing nonviral gene editing methods and manufacturing strategies to improve safety and scalability of engineered T cells.
 - A recent collaboration between UW–Madison and industry (Cellares) aims to automate clinical-scale production of CRISPR-edited CAR-T cells, particularly a GD2 CAR-T approach for solid tumors like neuroblastoma and melanoma. This work greatly increases the possibility of human trials.
 - Krishanu Saha, PhD (Biomedical Engineering) – Leads the Saha Lab focused on CRISPR-based genome editing, nonviral CAR-T engineering and stem cell technologies for next-generation cell and gene therapies. His work includes advancing CRISPR-edited CAR-T cells toward clinical translation.
 - Rebecca (Becky) Richards, MD, PhD (Pediatrics) – Works on CAR T-cell therapies for pediatric cancers, focusing on overcoming challenges such as tumor heterogeneity and expanding CAR T's therapeutic reach.
- **MCW** is an early pioneer of CAR T-Cell Therapy and a leader in the field.
 - This spring, the FDA approved another B-cell maturation antigen- (BCMA) targeted treatment as a second-line therapy for multiple myeloma, after promising results from the Phase 3 CARTITUDE-4 study were published in The New England Journal of Medicine and subsequently presented by its lead author, MCW's Binod Dhakal, MD, associate professor of hematology and oncology, at the 2023 American Society of Clinical Oncology Annual Meeting.
 - MCW Cancer Center recently treated the 100th patient in a ongoing clinical trial using in-house manufactured, dual-targeted CAR-T therapy for patients with B-cell malignancies.
 - MCW Cancer Center has conducted more than 15 CAR-T clinical trials for blood cancers like lymphomas, leukemias, and multiple myeloma. Notably, Dr. Nirav Shah, MD, associate professor of hematology and oncology, was involved in the development of lisocabtagene maraleucel for patients with CLL as a key investigator on the TRANSCEND CLL 004 trial. Results of this study were published in The Lancet, where Dr. Shah served as a co-author, and led to FDA approval of this agent in patients with relapsed, refractory CLL that has failed other lines of therapy.
 - MCW Cancer Center researchers are developing new CAR-T therapies for solid tumors
 - <https://cancer.mcw.edu/stories/mcws-car-t-cell-lab-helps-scientists-bring-lifesaving-therapies-to-patients-with-blood-cancers>
- **CAR T-Cell Therapy Companies**
 - Cellares - A life-science company partnering with the University of Wisconsin–Madison to support clinical-scale automated manufacturing of CRISPR-edited CAR-T therapies, including programs developed at UW targeting solid tumors. Cellares provides manufacturing platforms (Cell Shuttle™) and quality-control automation to enable scalable CAR-T production.
- **Healthcare Partners**
 - Froedtert & the Medical College of Wisconsin (MCW) - A major academic health system in Milwaukee that offers CAR-T therapy to patients and conducts related clinical research.
 - Froedtert & MCW Cancer Network provides access to CAR-T treatments for eligible patients with blood cancers such as certain lymphomas and leukemias.
 - The system supports a Cell Therapy Shared Resource (CTSR) that helps process, manufacture, and manage CAR-T products for clinical use.
 - Froedtert & MCW specialists also participate in clinical trials of new CAR-T approaches and collaborate with industry and academic partners.
 - UW Health | University of Wisconsin Carbone Cancer Center - A major academic cancer center in Madison with active CAR-T therapy programs and clinical investigation.
 - UW Carbone partners with the Program for Advanced Cell Therapy (PACT) and clinical teams to deliver CAR-T and other cellular immunotherapies.
 - The center participates in clinical trials and translational research aimed at expanding CAR-T indications, including potentially for solid tumors.
 - UW Carbone integrates CAR-T into patient care pathways and collaborates internally and with industry partners on manufacturing and clinical protocols.
 - UW Health provides CAR T-cell therapy for certain blood cancers, such as diffuse large B-cell lymphoma and acute lymphoblastic leukemia, which is a form of cell therapy delivered clinically.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Alzheimer's

• **University of Wisconsin–Madison**

- Wisconsin Alzheimer's Disease Research Center ([ADRC](#)) - NIH/National Institute on Aging–funded research center. Supports ~50 active Alzheimer's studies and provides research infrastructure including biospecimens, neuroimaging, and longitudinal clinical data.
 - Key Core Programs: Clinical Core, Biomarker Core, Neuropathology Core (Wisconsin Brain Donor Program), Care Research Core, Community Partnerships Core, Data Management & Statistical Core
 - Research Areas: Preclinical Alzheimer's disease, Biomarkers (amyloid, tau, neurodegeneration), Neuroimaging (MRI, PET), Cognitive decline and mild cognitive impairment, Care delivery and caregiver support, Health disparities in dementia, Neuropathology and brain donation research
- Wisconsin Registry for Alzheimer's Prevention (WRAP) - Longitudinal cohort study. One of the largest family-history Alzheimer's prevention studies with ~2,000 participants.
 - Research Areas: Preclinical Alzheimer's disease, Cognitive decline trajectories, Genetic and lifestyle risk factors, Biomarker discovery, Early detection
- Wisconsin Alzheimer's Institute (WAI) - Improve dementia care and reduce risk through statewide programs and research.
 - Research Areas: Health disparities in dementia, Access to dementia care, Care delivery models, Community interventions
- UW Initiative to End Alzheimer's (IEA) - Umbrella program coordinating Alzheimer's research, clinical care, education, and fundraising across UW–Madison.
- UW-Madison Key Faculty in Alzheimer's
 - Sanjay Asthana, MD – clinical trials, Alzheimer's therapeutics
 - Sterling Johnson, PhD – neuroimaging biomarkers
 - Cynthia Carlsson, MD, MS – vascular risk factors and Alzheimer's
 - Nathaniel Chin, MD – clinical dementia care and trials
 - Barbara Bendlin, PhD – neurodegeneration biomarkers
 - Carey Gleason, PhD, MS – women's brain health and cognition
 - Amy Kind, MD, PhD – social determinants of dementia
 - Andrea Gilmore-Bykovskyi, PhD, RN – dementia care disparities
 - Nicole Rogus-Pulia, PhD – swallowing disorders and dementia
 - Richard Chappell, PhD – biostatistics and longitudinal studies
 - Maria Mora Pinzon – dementia care access in Latino communities

• **Medical College of Wisconsin (MCW) / Froedtert Health**

- Neurodegenerative & Memory Disorders Research Program
- Memory Disorders Clinic
- Neurodegenerative Translational Research Program (NTRP)
- Alzheimer's clinical trials program
- Research Areas: Early detection of neurodegenerative disease, Clinical trials for Alzheimer's and mild cognitive impairment, Neuropsychology of dementia, Risk factors and disease mechanisms, Interdisciplinary translational research
- Key Researchers
 - Matthew Franczak – NTRP director
 - Laura Umfleet – neuropsychology and dementia assessment

• **William S. Middleton VA Hospital (Madison)**

- Geriatric Research, Education and Clinical Center (GRECC)
- Alzheimer's clinical trials collaboration with UW
- Research Areas: Aging and dementia, Veterans' cognitive health, dementia risk factors, health services research in aging populations
- Key Researchers
 - Sanjay Asthana, MD – clinical trials, Alzheimer's therapeutics
 - Amy Kind, MD, PhD – social determinants of dementia

• **Wisconsin Institute for Healthy Aging (WIHA)** - Evidence-based health promotion programs for older adults, and dementia prevention and cognitive health initiatives

- Research Areas: dementia risk reduction, community-based interventions, aging and wellness

• **Wisconsin Brain Donor Program** - Neuropathology program providing brain tissue for Alzheimer's research.

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

AI for Drug Discovery, Trials & Manufacturing

- **UW-Madison**
 - AI for drug discovery & molecular screening
 - Campus teams are building computational pipelines that combine machine learning, molecular simulation and data-driven prioritization to speed compound screening and target ID. A funded UW “adaptive computational pipeline” project explicitly aims to accelerate chemical screening using computational tools.
 - Several research labs apply ML to prioritize experiments and design proteins/small molecules (example: the Gitter Lab in Biostatistics uses machine learning to guide biological experiment prioritization in drug discovery and protein engineering).
 - New industry entrants (e.g., FAR Biotech) are locating in Madison to run AI/ML and quantum/deep-learning drug-discovery programs in partnership with campus talent, increasing local capacity for computational discovery.
 - AI for clinical-trial optimization & research operations
 - The campus ICTR (Institute for Clinical and Translational Research) and related groups are experimenting with AI to improve recruitment, protocol optimization, and trial-operations workflows; UW runs events and pilot projects on “enhancing clinical research operations with AI.”
 - Clinical AI groups (e.g., the ICU Data Science Lab) have deployed ML screening tools in hospital workflows (example: an AI screening tool to flag patients at risk of opioid-use disorder readmission), showing the health system’s experience operationalizing predictive models for clinical use. These operational experiences are directly transferable to clinical-trial feasibility, site-selection, and retention analytics.
 - Predictive analytics & AI for biomanufacturing / production quality
 - Waisman Biomanufacturing (the university’s GMP biomanufacturing core) provides cGMP production for gene/cell therapeutics and is positioned to integrate data-driven QC/analytics and predictive process-control approaches (e.g., predictive QC, batch-failure forecasting, stability prediction) as part of platform modernization. UW’s manufacturing cores and translational units are explicit partners for analytics pilots.
 - Campus groups working in predictive modeling (data science, engineering, and process labs) are connected via the Data Science Institute and new campus AI programs (RISE-AI) to accelerate cross-cutting AIML work that includes manufacturing use cases (process optimization, anomaly detection, predictive maintenance).
 - UW-Madison Key AI in Biohealth Faculty
 - Dhananjay Bhaskar, PhD, Biomedical Engineering - Assistant Professor whose lab develops novel computational methods for biomedical discovery, combining machine learning, agent-based modeling, and topological data analysis for applications that include drug discovery, cancer biology, and complex biological systems analysis.
 - Tony Gitter, PhD, Biostatistics & Medical Informatics / Morgridge Institute - Associate Professor whose group uses machine learning to guide high-throughput biological experiments, including computational methods that help prioritize experiments and accelerate early-stage drug discovery and protein engineering.
 - Ben Lengerich, PhD, Statistics / Data Science - Assistant Professor in the Department of Statistics working on AI models for predicting and explaining health outcomes, building interpretable machine-learning tools that can be applied to clinical contexts and health data, highly relevant for clinical analytics and predictive modeling.
 - Majid Afshar, MD, MS, Medicine / ICU Data Science Lab - Associate Professor co-leads the ICU Data Science Lab, applying machine learning to predict clinical outcomes and identify risk patterns from electronic health records, an example of clinical AI that paves the way for predictive analytics in clinical trials and hospital workflows.
 - Pallavi Tiwari, PhD, Biomedical Engineering / Precision Medicine - Professor focused on developing machine-learning and imaging analytics tools for disease diagnosis and treatment planning, especially in cancer imaging and precision medicine, relevant to AI applications for clinical decision support and trial endpoints.
- **MSOE** specializes in computer science & AI programs, data science applied to healthcare, and engineering-focused software development [LINK](#)
- **The Microsoft AI Co-Innovation Lab** in Milwaukee, opened in June 2025 at the University of Wisconsin-Milwaukee’s (UWM) Connected Systems Institute, is the nation’s first AI lab focused on manufacturing. It accelerates AI adoption by providing Wisconsin manufacturers with direct access to Microsoft experts, engineers, and Azure cloud solutions to build, prototype, and deploy advanced AI tools. [LINK](#)

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Useful Resources

- **UW-Madison Additional Resources**

- Drug Discovery Core / Small Molecule Screening Facility / Medicinal Chemistry Center / Cancer Pharmacology Lab (Carbone Cancer Center) provides high-throughput screening, medicinal chemistry, pharmacology and integrated drug-development workflows useful for small-molecule programs and target validation. Good for early collaborations, target screening, and outsourcing specific preclinical work.
- UW Health Pharmaceutical Research Core (PRC) - pharmacy services for investigational products and clinical trial medication management.
- Wisconsin Alumni Research Foundation (WARF) - the university's tech-transfer/licensing arm; routes inventions to industry licenses and can be a partner for co-development / licensing discussions. WARF also funds and manages many industry-facing activities.
- Office of Corporate Relations / Industry Partnerships - centralized offices that facilitate sponsored research agreements, strategic partnerships, talent pipelines, and collaborative programs with corporate partners.
- Morgridge Institute for Research & Wisconsin Institute for Discovery - nearby translational/basic science hubs focused on biology, imaging, biomaterials, and data-driven discovery (helpful for biologics, novel modalities, and platform tech).

- **The Milwaukee Institute for Drug Discovery (MIDD)** is a research institute based at the University of Wisconsin-Milwaukee (UWM) focused on advancing drug discovery and early-stage drug development across multiple disease areas.

- The institute's mission is to promote inter-disciplinary drug discovery research, support collaborations within UWM and with external partners (academic and industry), and help move promising discoveries toward therapeutic development.
- MIDD aims to advance new drug development from early research to later stages, connect researchers across departments and institutions, support training and research opportunities for students and scientists, foster entrepreneurship and economic development through drug innovation.
- It focuses on disease areas such as cancer, neuroscience, inflammation, and infectious diseases.
- MIDD supports several specialized labs and facilities that are foundational for drug discovery research, including:
 - High-throughput screening and early discovery labs
 - Analytical instrumentation and research core facilities
 - Custom synthesis and lead development labs
 - Protein structural biology and enzyme kinetics support
 - Compound safety and large-scale synthesis labs
 - Biocalorimetry techniques

- **Northwestern Mutual Data Science Institute**

- The Northwestern Mutual Data Science Institute (NMDSI) is a groundbreaking industry-academic partnership between Northwestern Mutual, Marquette University, the University of Wisconsin-Milwaukee (UWM), Milwaukee School of Engineering (MSOE), Medical College of Wisconsin (MCW), and Waukesha County Technical College (WCTC).
- Through this collaboration, which leverages the unique strengths and resources of each partner institution, the NMDSI cultivates a dynamic tech talent ecosystem, advancing southeastern Wisconsin as a national hub for technology and research.
- Through the planning and resource support the NMDSI provides to all partner institutions (Marquette University, UWM, MSOE, MCW, and WCTC). We train ethically grounded data science professionals who are also knowledgeable in various business disciplines and can apply their data science skills to a variety of industries.

- **MSOE's Dwight and Dian Diercks Computational Science Hall**

- Combined with MSOE's new Bachelor of Science in Computer Science, this facility positions MSOE at the forefront of artificial intelligence education and next generation technologies.
 - Houses a state-of-the-art data center with an NVIDIA GPU-accelerated AI supercomputer

LISTING OF STRATEGIC RESOURCES AND PARTNERS CONTINUED

Institution Rankings

- **UW-Madison**
 - #5 in the U.S. for university research expenditures (highest in the nation based on the amount invested in research) according to the NSF survey, marking a major research achievement.
 - Ranked #20 overall worldwide and #2 among U.S. public universities on Time magazine's World's Top Universities list of 2026.
 - Ranked #53 globally in the Times Higher Education World University Rankings 2026.
 - Consistently placed in the top 0.2–0.3 % of universities worldwide (e.g., ranked ~30th globally and ~20th in the U.S. in the CWUR Global 2000 list).
 - Ranked #110 in the QS World University Rankings 2026, placing it among the world's well-recognized research universities.
- **Medical College of Wisconsin**
 - The Medical College of Wisconsin is recognized globally and nationally for its research strength and institutional quality. It consistently appears in major academic rankings, receives strong federal research funding, and earns external recognitions both as an employer and as a community-engaged institution.
 - MCW is ranked in the top ~2.3% of universities worldwide according to the Center for World University Rankings (CWUR). In 2025, it was placed #493 globally, #123 nationally (U.S.), and #141 regionally (U.S. & Canada)
 - MCW ranks in the top third of all U.S. medical schools for National Institutes of Health research funding, reflecting strong research competitiveness and external grant support. From October 2022 to September 2023, MCW received \$131.7 M in NIH awards, contributing to its robust research profile.
 - MCW has received the Carnegie CE Classification for Community Engagement, a prestigious national designation. It is one of only a few academic medical institutions nationwide with this recognition.
 - Research.com Subject Rankings (2026)
 - US Rankings
 - Medicine #49
 - Immunology #54
 - Biology & Biochemistry #79
 - Neuroscience #83
 - Chemistry #96
 - MCW's Physiology Department is ranked in the top 10 in the U.S. for NIH funding among Physiology departments. This reflects strong research competitiveness and success in securing federal research support.
- **University of Wisconsin-Milwaukee**
 - UWM consistently ranks in the top few percent of world universities, competes well among public U.S. institutions, and holds strong Carnegie research classification.
 - UWM is ranked among the top ~3.2% of universities worldwide according to the Center for World University Rankings (Global 2000 list). In the 2025 edition, it was placed #667 out of more than 21,000 universities globally.
 - UWM holds R1 status (Doctoral Universities – Very High Research Activity), the highest possible Carnegie Classification for U.S. research universities. This is a major recognition showing that UWM produces significant research output and awards many research doctorates. The university has maintained this R1 status multiple times, reflecting consistent growth and impact in research. In fiscal year 2024, UWM reported over \$66 million in research expenditures, including strong federal funding, further demonstrating robust research activity.
 - UWM's Joseph J. Zilber School of Public Health is nationally accredited by the Council on Education for Public Health (CEPH) and ranked among the top public health schools in the U.S. according to U.S. News rankings.
 - Forbes and other rankings have placed UWM high for employer culture and diversity, recognizing its impact as a large educational institution (e.g., ranking in America's Best Employers for Company Culture).
- **Milwaukee School of Engineering**
 - MSOE's engineering programs are among the best in the U.S.
 - #9 Undergraduate Engineering Programs overall in the United States in the 2026 U.S. News & World Report Best Colleges rankings (among engineering schools where the highest degree offered is a bachelor's or master's).
 - MSOE reports a 96 – 99 % career outcomes rate for graduates (meaning employed or in graduate school shortly after graduation), which is considered high among engineering-focused universities.
- **Marquette University**
 - Marquette is ranked in the top 20% of national universities, e.g., #88 overall among U.S. colleges in the latest Best Colleges list. This shows strong overall academic reputation.
 - Marquette ranks within the top ~5.1% of universities worldwide according to the Center for World University Rankings 2025 out of more than 21,000 institutions surveyed.
 - Marquette's online graduate programs, especially in business and computer/information science, have achieved strong placements, such as:
 - MBA program #78 nationally
 - Computer & Information Science master's #27 nationally
 - Multiple MBA specialties (management, finance, analytics, marketing) ranked in the top 15 based on peer assessment.
 - Ranked #6 in the U.S. for long-term job placement (10 years after graduation), and #1 in Wisconsin for career success, according to Department of Education and external employer data.

APPENDIX

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Marshfield Clinic Health System	2, 8	Wisconsin Alzheimer's Disease Research Center (ADRC)	1, 3, 11
Medical College of Wisconsin (MCW)	1, 2, 3, 5, 7-11, 14	Wisconsin Alzheimer's Institute (WAI)	3, 11
Medical College of Wisconsin Cancer Center	1, 2, 7	Wisconsin Blood Cancer Research Institute (WBCRI)	7
Metabolic Disease (Obesity, Diabetes, Cardiometabolic)	3, 9	Wisconsin Institute for Healthy Aging (WIHA)	3, 11
		Wisconsin Oncology Network (WON)	1, 2, 8
		Wisconsin Technical College System	3, 6