MESSAGE FROM THE Executive Director

There's an exciting buzz in the air around Ann Arbor these days. The enormous changes that have occurred on campus since I joined the University less than five years ago mirror the changes throughout our community and region. In this short time, we have seen a tremendous increase in the availability of venture capital, in entrepreneurship and intellectual property, in attendance at technology and business events, and in the participation of our students, faculty, and researchers in technology transfer. The University has played key roles in much of this activity and is increasingly seen as a vibrant and effective partner connecting our business, government, and community neighbors.

This has been a great year for UM Tech Transfer. The solid performance of our Tech Transfer satellite offices at the College of Engineering and the Medical School, along with the effectiveness of our central licensing, legal, business development and administrative functions, were important factors in this success. Fueled by changes in attitudes and practices over the last few years, many initiated by my predecessor, Interim Director Marvin Parnes, our entire Tech Transfer team set new records this year for technology disclosures, patents, licenses, startups, and revenues. All of this is made possible by the dedication and impressive accomplishments of UM researchers.

And the best is yet to come. With the addition of several new faces to our central Office of Technology Transfer (formerly the Technology Management Office) and our satellite school offices, UM Tech Transfer is building a tradition of professional, energetic, and world-class service for our faculty, researchers, and business partners. These business partners now include venture capital firms, entrepreneurs and consultants from across the country, as well as local resources that are establishing impressive capabilities and track records. Our efforts are further leveraged by internal resources such as student interns, research initiatives, state and local organizations, and of course, our fellow alumni and friends of Michigan.

We're proud of our accomplishments and enthusiastic about building continued connections between our truly world-class technologies and the marketplace. We at UM Tech Transfer will continue to strive to be "The Leaders and the Best."

Ken Nisbet

Ken Nisbet, Executive Director

On the stairs: Ken Nisbet, Executive Director, UM Tech Transfer; Elaine Brock, Director, Medical School Tech Transfer; Tim Faley, Director, College of Engineering Tech Transfer; Robin Rasor, Director of Licensing, Office of Technology Transfer

The University of Michigan is world renowned for its research, scholarship, and creative activities. It's gratifying to see fruits of this labor reach the marketplace and have substantial and positive impact in many fields, including health, information technology, advanced manufacturing, education, engineering, and communications.

—Marvin Parnes
Associate Vice President for Research &
Executive Director of Research Administration
University of Michigan

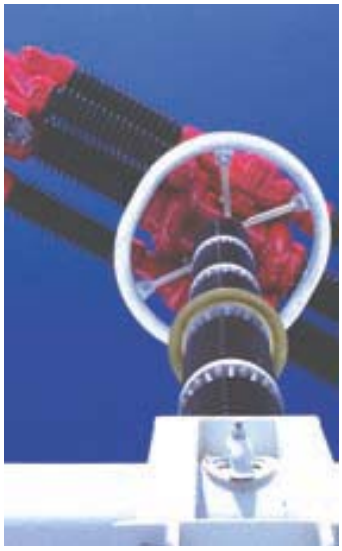
THE IMPACT OF Technology Transfer

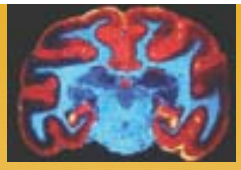
When the University of Michigan licenses a research discovery to a company, the University realizes its mission of conducting research for public benefit. This transfer of technology contributes new products and services to the marketplace, improves the economy through job and revenue creation, and contributes to our quality of life.

Moving research results from the University to the marketplace requires creativity, planning, and hard work. Initially, Tech Transfer staff must assess the potential commercial value of a discovery that is often so new that it has no defined market appeal. Once a commercialization plan is completed, additional steps include securing patent protection, building prototypes, or funding additional development. These activities help to attract the commercial partners needed to bring the technology to market. As you will read in this report, the benefits of technology transfer justify the challenging investments.

University technology transfer has had a significant impact on the economy. The Association of University Technology Managers (AUTM) has estimated that the technology transfer activities pursued by North American universities in 1999 resulted in the creation of 325 new companies. In addition, AUTM estimates that in 1999, academic technology transfer resulted in $40.9 billion in economic activity, supporting 270,900 jobs.

Since 1995, the University of Michigan has licensed more than 325 discoveries, including licenses to 45 startup companies. These licenses stimulated economic activity and helped bring to market new and useful products, such as improved lasers for eye surgery, smaller and more powerful cellular phones, and security systems for computer networks.





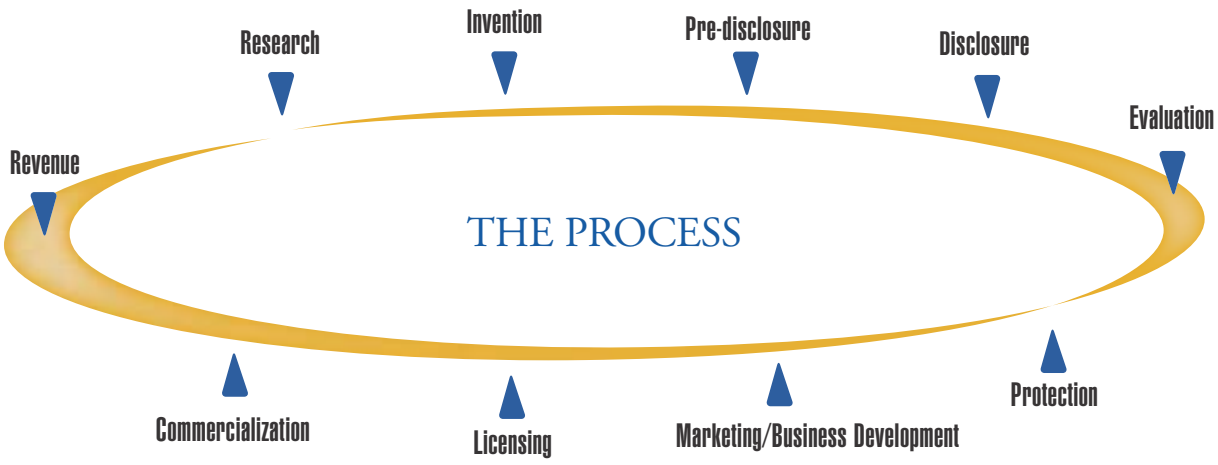
The Bayh-Dole Act

One of the first technology transfer offices was created as a result of the discovery that ultraviolet radiation produced Vitamin D in milk. The Wisconsin Alumni Research Foundation (WARF) was established in 1925 to bring this discovery to the marketplace. Commercialization of this process led to the virtual worldwide elimination of rickets by the 1940s.

Most university technology transfer offices, however, were established after Congress passed the Bayh-Dole Act of 1980. This Act, designed to improve the technological competitiveness of the United States, provides recipients of federal research funds with the right to retain ownership of their discoveries—previously held by the federal government—but charges them with commercializing these inventions for the benefit of the general public. The University of Michigan opened its first technology transfer office in 1983.

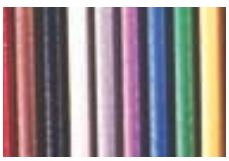
Disclosures: Where Tech Transfer Begins

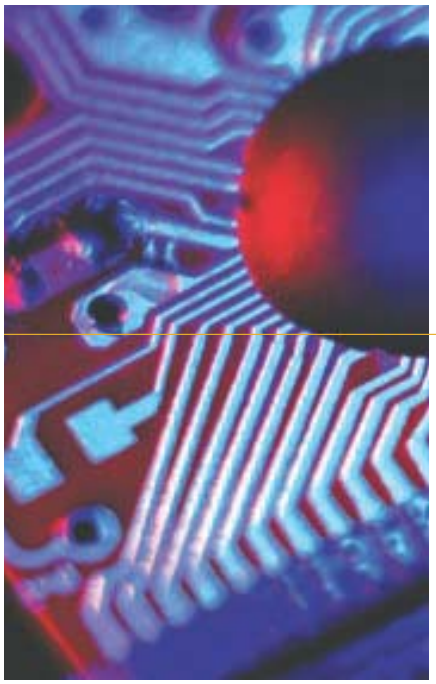
The technology transfer process begins when a researcher informs UM Tech Transfer of a newly developed or improved invention or software program. After an initial (pre-disclosure) meeting with a Tech Transfer representative, the researcher submits an official disclosure, which describes the invention in detail. The submission of this form—a vital step in the patent protection process—establishes the identity of the inventors and documents the invention. When the Tech Transfer office receives a completed disclosure form, it assigns the technology to a Tech Transfer professional, and a path for commercialization is planned and pursued.



Why We Patent

Patent protection is often the best approach to ensure that a technology can be fully developed to reach the general public. A patent grants the owner protection against outside competition, but only for a limited time—at most 20 years. Although this limits an invention to those who license it, patenting encourages full commercialization by providing an incentive for an outside party to risk the additional investments necessary to fully develop a technology for market.



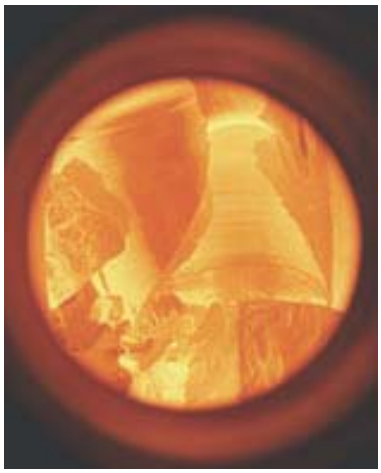


UNIVERSITY OF MICHIGAN
Tech Transfer

Increased faculty awareness, as well as changes to the University of Michigan Tech Transfer team over the last few years, contributed to an increase in the number and quality of disclosures, and improved interactions with commercial partners.

Satellite offices at the Medical School and at the College of Engineering brought Tech Transfer resources closer to inventors within these schools. This allows more frequent and meaningful interactions between inventors and Tech Transfer staff, a broader connection to our research and corporate programs, and a focus on commercialization.

Our Director of Licensing—a new position this year—works with these school offices and other UM licensing professionals to enhance and streamline the process of patent protection, marketing, and licensing. This position also improves our focus on responsiveness, best practice benchmarking, and consistency in policy and practices.



Wow! You proved that a university can move at the speed of an entrepreneur. Thanks for your excellent work!

—Mike Klein
President and CEO, Interlink Networks

The New Business Development team offers business formation assistance to startup companies that license University of Michigan technology. These services include market research, business plan development, and connections to consultants, investors, and potential management. All are designed to improve the speed and quality of our startup initiatives.

Two legal specialists from the University of Michigan Office of the General Counsel work in the Tech Transfer central office to provide critical legal assistance with patents, contracts and business activities.

The TechStart student internship program, supported in part by the UM School of Business Zell-Lurie Institute for Entrepreneurial Studies, provides students with opportunities to put theory into practice. The program offers business assistance to UM startup companies and faculty inventors from talented graduate students in the Business School, College of Engineering,

Medical School, Law School, and School of Information. The program's intensive mentoring feature provides a rich educational experience and potential local job connections after graduation.

The expanded capabilities of UM Tech Transfer assist in attracting and retaining the very best faculty, students, and researchers while providing benefits to the general public through the effective transfer of UM technology.

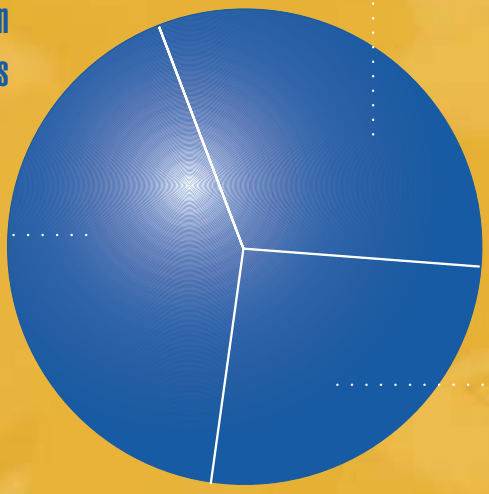
UM Tech Transfer played a crucial role in helping us transfer this technology from a research setting to a commercial environment. The responsiveness of Tech Transfer's business and legal teams was truly phenomenal at every step in the process.

— Dr. Farnam Jahanian
College of Engineering Professor, and Chief Scientist and Co-founder, Arbor Networks

Fiscal Year 2001 Results

Our tech transfer activities mirror the power and breadth of our research and academic programs, with exciting invention disclosures from all corners of our campuses. Our broadening tech transfer efforts are producing more patents, more license agreements, and more new startup businesses, all indications of continued progress in deploying the benefits of our research.

2001 Invention Disclosures



Medical

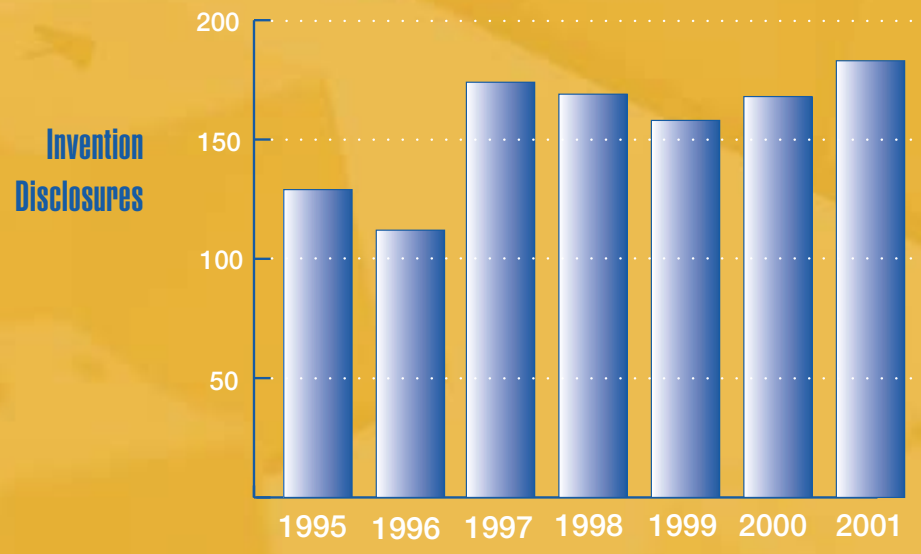
Bio Chemistry	7	4%
Bio Nanotech	3	2%
Dermatology	7	4%
Human Genetics	5	3%
Internal Medical	16	9%
Microbio & Immun	3	2%
OB/GYN	3	2%
Ophthalmology	3	2%
Pathology	11	6%
Pharmacology	3	2%
Rad Oncology	3	2%
Other Medical	13	7%
Total	*77*	*42%*

Engineering

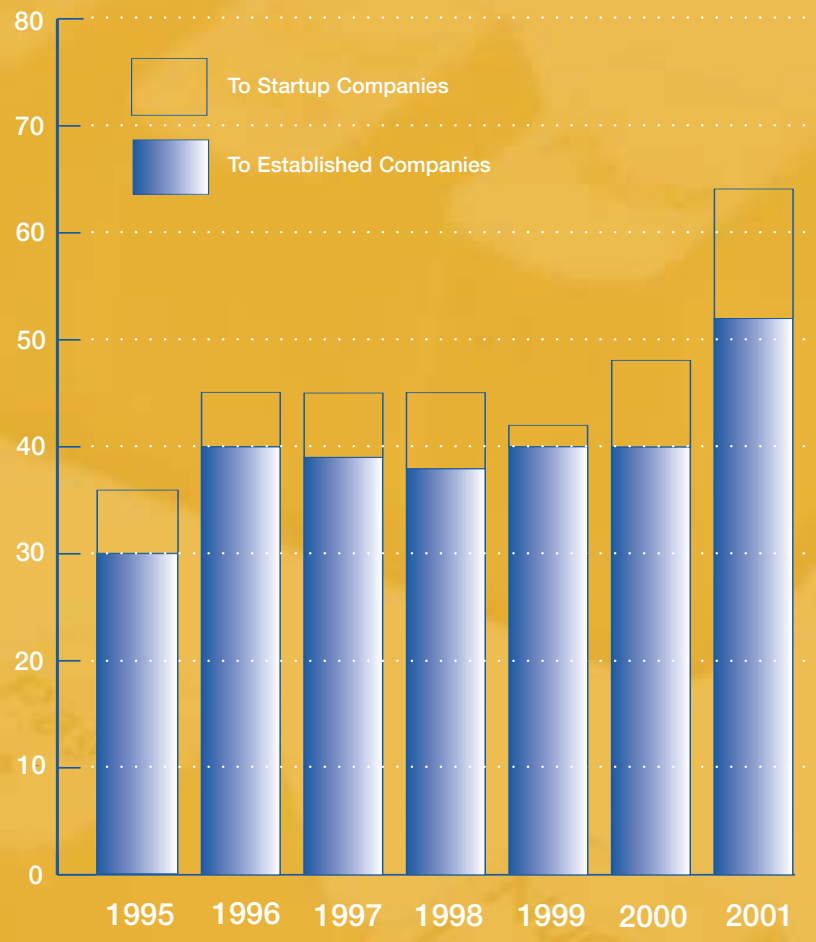
Aerospace	1	1%
Atmospheric	2	1%
Biomedical	8	4%
Chem Engineering	4	2%
Civil Engineering	2	1%
Elect/Computer Sci	21	12%
Mech Engineering	13	7%
Materials Science	3	2%
Nuclear Engineering	2	1%
Other Engineering	2	1%
Total	*58*	*32%*

Others

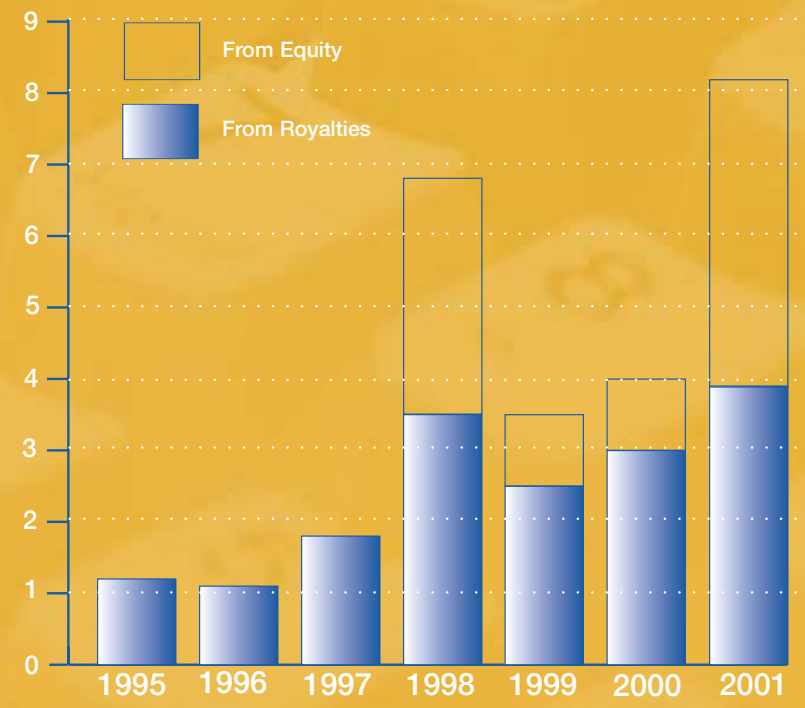
Art	2	1%
Education	6	3%
Dental	8	4%
LSA	24	13%
Nursing	2	1%
Pharmacy	3	2%
Other	2	1%
Total	*47*	*26%*



License Agreements



License Revenue (in millions of dollars)



We're striving even harder to provide responsive, professional services to our faculty, licensees, and business partners. 2001 was a very solid year and we are confident that our progress will continue.

—Robin Rasor
Director of Licensing,
Office of Technology Transfer,
University of Michigan

Welcome Startup Class of 2001

Molecular Therapeutics, Inc.

NanoBio Corporation

CSCG, Inc.

Discera, Inc.

Sensicore, Inc.

Arbor Networks, Inc.

Xeotron Corporation

Translume, Inc.

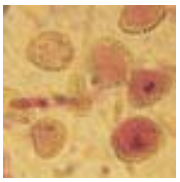
TheraSonics, Inc.

KeraCure, LLC

Originus, Inc.

Thinking Bridges, Inc.

Compositions Against Dermal Matrix-degrading Enzymes | Muscle-specific Vectors for Gene Therapy | Surgical Knife | H-Automated Nursing Data System (H-ANDS) | Method for DNA Fragment Identification | Catalysts for Selective Oxidation of Ammonia to Nitrogen | Pico-Map Educational PDA Software | Dynamic Filter



to Protect Servers from Overload | UVA (>360-400) and UVB (300-325) Specific Sunscreens | A Biochip-based Protein Microarry System | Compounds to Suppress HIV replication | MEMS Force-multiplication Device | High-Q Tunable Micromechanical Capacitor | A Novel 3-D Protein Analysis System | 2-D Protein Imaging | An Apparatus and Method for Constructing 3-D Models | Maintaining Vascularization Near Implant | Creating Polymers with Enhanced Biocompatibility | Boltzman Machine | Statistical Physics Demonstrator | Novel Nitric Oxide Releasing Polymers Base | Inhibitor for Preventing Photoaging in Human Skin | Micro-Integrated Flow Cytometer | Digital Circuits with Unateness Properties | IkappaB “Super-repressor” | Microplatform Process for Technology Merging | Alloying Based Laser Lap Welding of Galvanized Steel | Micro-mechanism for Force/Displacement Amplification | Secure Multi-party Communication System | Production of Recombinant Adenovirus Vectors | Identifying Therapeutically Useful Cytotoxic Agents | Liquid Metering In Microchannels | Xenograft Human Epithelial Cancer Model | Sodium Channel ß1 Subunit Knockout Mice | Prediction of Organic Contaminate

Some Recent University

Desorption Rates | Controlled Growth Factor Release by Mechanical Signaling | Antiangiogenesis Therapy | Dystrophins for Gene Therapy of Muscular Dystrophy | Protection Against Mustard Gas | Trans-Golgi Network and Endosomes in Cystic Fibrosis | Color-coded Mass Mapping for Proteins from Human Breast | Cancer Whole Cell Lysates | Padless and Wireless Mouse System | Microtubular Materials | PathView Image Database | Treatments of Mood Disorders | Drug Delivery to Ablate Fat Tissue | Interactive Health Kiosk Project | New

Dendrimer Compositions | Inhibitors

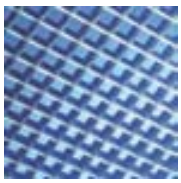
of Proprotein Processing Proteases | Diagnosis of Nonpalpable and Small Tumors | Candida Glabrata Strain | Treatment to Reduce Brain Damage and Chemokine Production | Lowering Detection Limit of Membrane Electrodes | Genetic Tests and Therapies for Glaucoma | Adenovirus Expressing RelA/p65 | Method for Rapid Protein Characterization | Molecular Diagnostics of Human Specimens | Gyro Calibrator | M-Fit Nutrition Facts Database | The Living Voice: Tour of the Human Larynx–Video | Antimicrobial Preparations | Wound Healing With Therapeutic Light Sources | Compositions for Treating Tinea Versicolor | Devices for Tissue Regeneration and Factor Delivery | Generation of Crystalline Polymorphs | Air-liquid Two-phase Microfluidic Systems | Gene Mutations Associated with Sensorineural Hearing Loss | Gene Responsible for Thrombotic Thrombocytopenic Purpura (TTP) | Self Calibrating Alignment System | A New Polymorph of Carbamazepine | Gene Diagnostic Test for Spastic Parplegia | Chemotherapeutic Agents for Protozoal Diseases | Multi-data Set Image Conversion | CTIS HOMElink | An Innovative Spare Tire Retrieval Mechanism | Noninvasive Detection of Carcinogenesis | Planarizing Recess Etch | Nrl - Knockout Mouse | Compositions and Method for Treatment of Rosacea | Nanomolar Inhibitor of KDO 8-P | Protein Binding to a Surface Sensor | An Invention for the Generation of Ultrafiltrate | Invention for

the Measurement of Protein Concentrations | Measurement of Protein Concentrations | A Circuit Encapsulation Technique | 3D MEMS Structure Fabrication | Sorbents for Water Purification | Erbin Protein Involved in Cancer Development | Drill Temperature Measurement System | Diagnosis and Inhibition of Metastatic Prostate Cancer | Crystal Structure of LUXS | Novel Human Blood Group B Specific Lectin | Tumor Antigen that Induces Immune Response in Lung Cancer | Novel Nitric Oxide Releasing Polymer Fillers | A Method to Make a Targeted Point Mutation, Deletion, Insertion or Replacement | Feedforward Data Rate Control in Wireless Networks | Low-temperature Sealing of Microcavities at Wafer-Level | Isoreticular Metal-organic Frameworks (IRMOFs) | Capillary Gas Filled Detector | Fluorescent Compounds for Measuring GTP Hydrolysis | Anti A20 Monoclonal Antibody 8E8.38 | Radiopharmaceuticals for *In Vivo* Imaging | Reconfigurable, In-process, Inspection Machine | Microfluidic Devices for Sorting Cells and Particles |

Energetic, Tunable, Coherent X-rays with Long Wavelength Light | Three-dimensional Protein Mass | Dr. Scheduler | A Rat M2H4 Dental Pulp Cell Line | Mass Spectrometric Identification of Phosphorylated Peptides | Melodic Motive Extractor | Zero Interaction Authentication | Flavinoids to Prevent Skin Irritation Due to Retinoids | A Differential Display Map Based upon Two-Dimensional Liquid Separations | Inhaler Series | Optimization of Oligonucleotides Synthesis and Purification on | Therapeutic Modulation of Signal Transduction Aberrations | Traveler Information Notification System |

# of Michigan Discoveries

Tool Wear Monitoring in Machine Processes | A Portable Muscle Power and Strength Measurement System | Shared Air '98 | Amino Ceramide-Like Compounds and Therapeutic Methods of Use | American Customer Satisfaction Index | Method of Ligonucleotide Purification Using Nucleases | Orphain FQ Receptor Gene | Fling-It Web Viewing Software for PDAs | Artemis Digital Library Registry | Genetic Test for Glaucoma | Pitch Period Detection Method | Vitrification Container | A Novel Method for Display of Materials at Any Chosen Density | Pept1 and Pept2 Antisera | The Ounce of Prevention Scale | Serum Markers for the Detection of Liver Cancer | Helmet - Why Do I Need to Wear A Bicycle Helmet | Phone Unit - How Can We Design a Safer Cell Phone | Planar Filters Utilizing Periodic Via Holes | Method for Protecting and Restoring Skin | A Tissue Engineered Human Oral Mucosa | High-Throughput Tissue Microarray Process | Tissue Microarray Data Management Software Application | Amplifying Transverse Displacements Using Retroreflectors | Assessing RGS Activity and Inhibition by Radioligand Binding | Hurricanes '98 | Supplemental Communicable Disease Unit Using Model-It | Water Unit - What Is Water

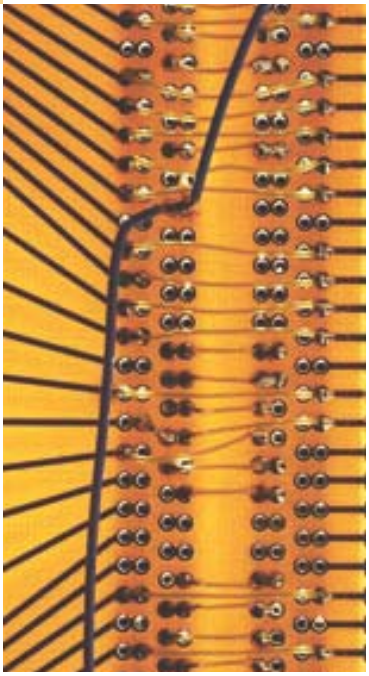


Like In Our River? | Communicable Disease - Can Good Friends Make You Sick? | Supplemental Decomposition Unit Using Model-It | Artemis Digital Library Science Inquiry Curricular Units | Big Things - How Do Machines Help Me Make Big Things | Air Unit - What Affects the Quality of Air in My Community | Mouse Control Copper Transporter cDNA, Genomic Clone and Mice and Cell | DFF-Design for Facility Over Net | New Polyamidoamine Dendrimer | PAMAM Dendrimer Synthesis | Strategies for Enhanced Separation Resolution | Statistical Image Reconstruction Process for XRay | EPO for Treatment of Parkinson's Disease and ALS | PalmSheets | Cooties Virus-Transfer Simulation for PDAs

Drs. Farnam Jahanian and Rob Malan of Arbor Networks in their Ann Arbor office.

UNIVERSITY OF MICHIGAN'S

Connections to the Market



University of Michigan research has led to commercial products in many sectors, including health, education, computing, and engineering. Recent examples of University of Michigan technology in the marketplace include:

Arbor Networks

Arbor Networks, launched in February 2001, has been recognized by business technology magazines *Red Herring* and *Network World* as one of the ten startups to watch in 2001. Arbor Networks provides a network availability solution that detects, traces, and counters the availability threats facing service providers and enterprises. The patent-pending technology is based on three years of pioneering research in the availability, reliability, and security of networks and distributed systems, conducted at the University of Michigan College of Engineering by Arbor Networks founders and funded by Cisco Systems, Intel, and DARPA. Arbor Networks has received $11 million from two funding partners, Battery Ventures and Cisco Systems.

Aviron Nasal Spray Vaccine

The *New England Journal of Medicine* says, "This vaccine has the potential for overcoming one of the chief barriers to immunization: the need for yearly injections." University of Michigan School of Public Health professor Dr. Hunein F. Maassab and his colleagues started research in the 1960s on the use of live virus vaccines to prevent influenza. Their invention allows vaccines to be administered via a nasal spray rather than through a needle injection. Aviron, the biopharmaceutical company that developed the nasal spray vaccine, is pursuing FDA approval for its product, FluMist.

FluMist, a vaccine to prevent influenza, is administered via a nasal spray rather than through a needle injection.

Thinking Bridges

Founded by educators and researchers at UM's Center for Highly Interactive Computing (hi-ce), Thinking Bridges develops educational software and curriculum for the K-12 marketplace. Products include the Artemis Digital Library (ADL), a research engine designed for children, and Model-It, a modeling and simulation tool that lets students create models of their world and explore scientific phenomenon. Current products in middle-school and high-school science are in use in classrooms nationwide.

Ardesta CEO Rick Snyder and Discera's Dr. Clark Nguyen

Discera, Inc.

Thanks to Discera's microsystems technology, cellular phones and similar personal communication devices will be much smaller and less expensive, and will use significantly less battery power in the future. Based on technology produced in the College of Engineering, Discera received funding from Ardesta, a local industry accelerator created for the purpose of commercializing microsystems research.

Discera, Translume, and Sensicore are three important startup companies in the Ardesta family that launched in 2001 with the help of the University of Michigan's Tech Transfer office. As these companies become leaders in the small-tech field during the next decade, I'm sure they will remember their Maize-and-Blue beginnings with pride.

—Rick Snyder
CEO and Founder
Ardesta

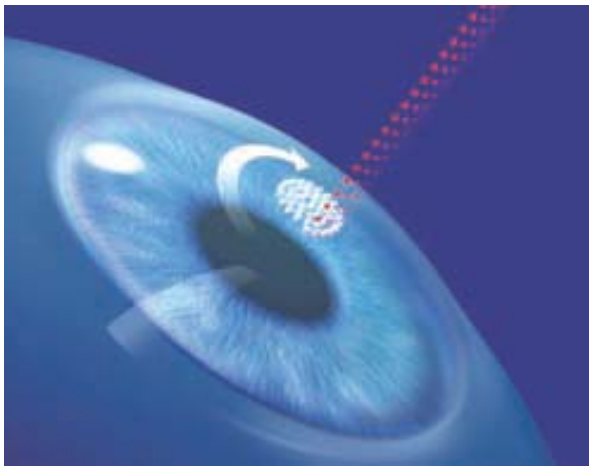
Nephros Therapeutics, Inc.

Nephros Therapeutics develops cellular medicine systems, replacing vital functions lost when body organs fail. Its first product uses living human kidney cells from adult stem cells to reverse life-threatening MODS (multiple organ dysfunction syndrome) associated with acute renal failure. The company's proprietary stem cell technologies and unique delivery systems can also be used in other therapeutic products addressing aspects of kidney failure, cardiac irregularities, and genetic therapy.

John Volbrecht of Interlink Networks and Dick Eidswick of Arbor Partners

Interlink Networks

Interlink Networks was formed from the research of Merit Network, Inc., a nonprofit corporation owned by all 13 of Michigan's four-year public universities and hosted at the University of Michigan. Interlink Networks develops RADIUS server software that provides Authentication, Authorization, and Accounting (AAA) functions for internet provider (IP) networks. Backed by Siemens Mustang Capital, Nokia Internet Communications, and Arbor Partners of Ann Arbor, Interlink Networks provides software that controls access, enforces policies, audits usage, and provides the information for billing for internet services.



A simulation of the IntraLase femto-second laser eye surgery technique.

IntraLase Corporation

IntraLase Corp. was founded in late 1997 by two University of Michigan faculty members, leveraging their research on laser surgery and short pulse femto-second technology at UM, in collaboration with the University of Michigan's Kellogg Eye Center and Center for Ultrafast Optical Sciences (CUOS). IntraLase develops and markets ultrafast, minimally invasive lasers for use in next generation eye surgeries, including vision correction, corneal transplants, and glaucoma. Funding sources for the company include EDF Ventures of Ann Arbor, Brentwood Venture Capital, Domain Ventures, and InterWest Partners.

Xtera Communications, Inc.

Xtera Communications, Inc. is an optical networking start-up providing products aimed at maximizing the performance and profitability of optical backbone networks. The company aims to provide customers with greater distance and more bandwidth at lower costs. Xtera has received funding from several venture funds including ComVentures, Sevin Rosen, New Enterprises Associates (NEA), Rho Management, Star Ventures, and EDF Ventures of Ann Arbor.

Xtera's patented Raman amplifier technology developed by UM Professor Mohammed Islam.

Ergonomics Software

The Static Strength Prediction Program and Energy Expenditure Prediction Program, developed at the University of Michigan's Center for Ergonomics, provides designers and engineers with ergonomic analysis tools. The software analyzes the percent of people capable of pushing, pulling or lifting heavy objects in different postures, as well as the metabolic energy required if such manual acts are performed repetitively. The latter is of assistance when planning work to minimize fatigue or heat stress problems.

UM Technology Transfer helped us license our software programs to more than 3,000 individuals, as well as develop site licenses for Ford and UAW-GM programs. They also helped us coordinate short courses on the use of these programs.

—Don Chaffin
Professor and Director,
University of Michigan
Human Motion Simulation
Laboratory

Students in Dr. Chaffin's lab

NextHop Technologies, Inc.

Spun out from Merit Network, Inc., with the help of UM Tech Transfer's TechStart interns, NextHop is a leading source of IP routing software, routing protocols, and related technologies for Internet infrastructure manufacturers and service providers. NextHop is funded by New Enterprise Associates (NEA).

TechStart interns Jonathon White, Mihir Mahan and Tina Bissell providing assistance to a recent UM startup.

University of Michigan Health System complex

HealthMedia, Inc.

One of the best known ways to prevent illness is to change unhealthy behavior. Through custom-tailored, multimedia health action plans, Medical School and School of Public Health Professor Victor Strecher's company, HealthMedia, Inc., helps consumers participate directly in their own smoking cessation, health risk evaluation, nutrition counseling, and other wellness programs.

UM Tech Transfer helped me turn carefully researched prototypes into products that have reached more than half a million people. I've also learned how the environment of health promotion, disease prevention, and disease management works. I look forward to teaching with a renewed understanding and perspective.

—Victor J. Strecher
Professor and Associate Director, University of Michigan Health Behavior and Health Education Department
Chairman and Chief Science Officer, HealthMedia, Inc.

HandyLab, Inc.

HandyLab is developing an integrated nanofluidic platform that enables experiments to be performed at a speed, cost, and scale previously unachievable. The HandyLab lab-on-a-chip technology allows clinicians to rapidly analyze clinical specimens anywhere without special sample handling or processing. The company's first application is an ultra-simple DNA-based test where the need for speed creates a compelling value proposition. HandyLab has received funding from WVF, Ardesta, XR Ventures and EDF Ventures.

HandyLab staff and partners huddle over launch plans for their next generation DNA diagnostic tool.

Sensicore

Sensicore develops and produces microsystems technologies based on research at the College of Engineering. Silicon chips equipped with tiny sensors analyze the chemistry of water, blood, and other fluids for chemicals, microorganisms, and diseases. Sensicore has received funding from Ardesta.

NanoBio Corporation

NanoBio Corporation is a biopharmaceutical company that commercializes its patented biologic nanotechnology delivery systems on a worldwide basis primarily through licensing and partnering. Their antimicrobial emulsions platform technology has applications ranging from use in oral care to the decontamination of biological and chemical compounds, including anthrax. The technology is based on research by Dr. James Baker, Jr., School of Medicine Professor and Director of the Center for Biologic Nanotechnology.

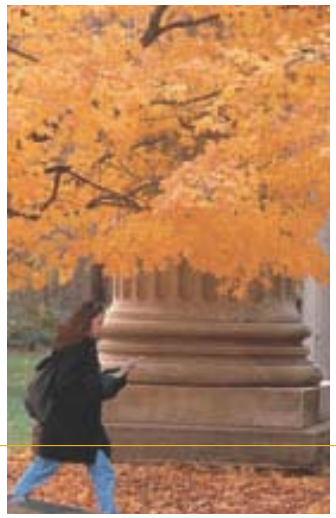
Xeotron Corporation

Xeotron develops and manufactures biochips that use proprietary photochemistry, digital photolithography, and microfluidic technology. Developed in the College of Engineering, Xeotron's products address the needs of academic research, biotech/pharmaceutical gene analysis, drug discovery and development, diagnostics, and other applications.

UM Tech Transfer was an absolute pleasure to deal with. They facilitated Xeotron's creation. We negotiated the key license terms quickly. The process was very pragmatic, and they had a terrific "can-do" attitude.

—Martin Lindenberg
Chairman and CEO, Xeotron Corporation

Lurie Engineering Center on North Campus



Community Partnerships

This year, UM Tech Transfer continued to play a leadership role in community and state organizations that assist our commercialization efforts. These partnerships increased the visibility of our technology efforts in Ann Arbor and in Michigan, provided opportunities to build relationships throughout the business community, and improved the technology transfer infrastructure state-wide.

Ann Arbor IT Zone

The Ann Arbor IT Zone promotes the growth of the information technology (IT) industry by bringing together entrepreneurs, emerging and established companies, business service providers, and university and community resources. Tech Transfer staff contributed leadership and programming to this highly successful organization.

The IT Zone would not be where it is today without the continuing support of the University of Michigan Tech Transfer team.

—Steven C. Klein
President, Ann Arbor IT Zone

2001 TechStart team meets with local entrepreneurs.

BioMed Expo

The first BioMed Expo featured speakers, workshops, one-on-one meetings, and more than 50 exhibitors in a highly interactive setting that showed the full range of resources necessary for success in the biomedical industry. UM Tech Transfer was a founding partner of BioMed Expo and continues to be involved in the planning, recruitment, and staging of this annual state-wide event.

Michigan Biosciences Industry Association

The MBIA supports the growth of the biosciences industry and its constituent companies in Michigan. The Association provides networking forums, government communication, entrepreneurial coordination, and opportunities in the biosciences arena. Tech transfer plays a significant role in connecting University activities and entrepreneurs with industry opportunities, and in providing leadership and sponsorship to the Association.

BioMed Expo planning committee meeting

TechStart allowed me to see the incredibly vital Ann Arbor entrepreneurial community from the inside, and to work with some great people from other programs around the University. I had no idea there was so much happening right here in Ann Arbor.

—Shesh Sharma,
Michigan MBA and
2001 TechStart Intern

Michigan Universities Collaboration

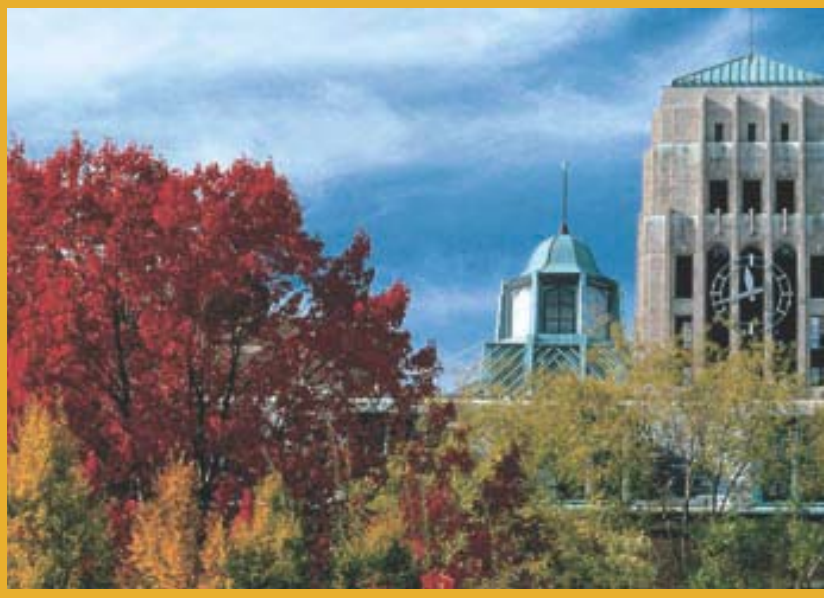
UM Tech Transfer strengthened connections with other Michigan university technology transfer offices, leveraged by programs of the Michigan Economic Development Corporation (MEDC), the state's business development organization. The major research institutions—the University of Michigan, Michigan State University, Wayne State University, and the Van Andel Institute—had a joint proposal funded by the State of Michigan's Life Sciences Corridor Fund for the creation of an early stage technology development fund. This fund will support activities such as hiring consultants, building product prototypes, educating faculty, developing a web-based tool for documenting technology transfer best practices, and finding resources.

The pursuit of research excellence across the University has led to internationally recognized research programs. We at UM Tech Transfer are working to increase the societal impact of that research through commercialization.

—Tim Faley
Director,
Technology Transfer and
Commercialization—Engineering,
University of Michigan

We have a long and close relationship with the UM's Tech Transfer group and we see the UM as one of the most promising sources of technologies for the formation of venture capital-backed companies in the region.

—Mary Campbell
Partner, EDF Ventures



New Enterprise Forum

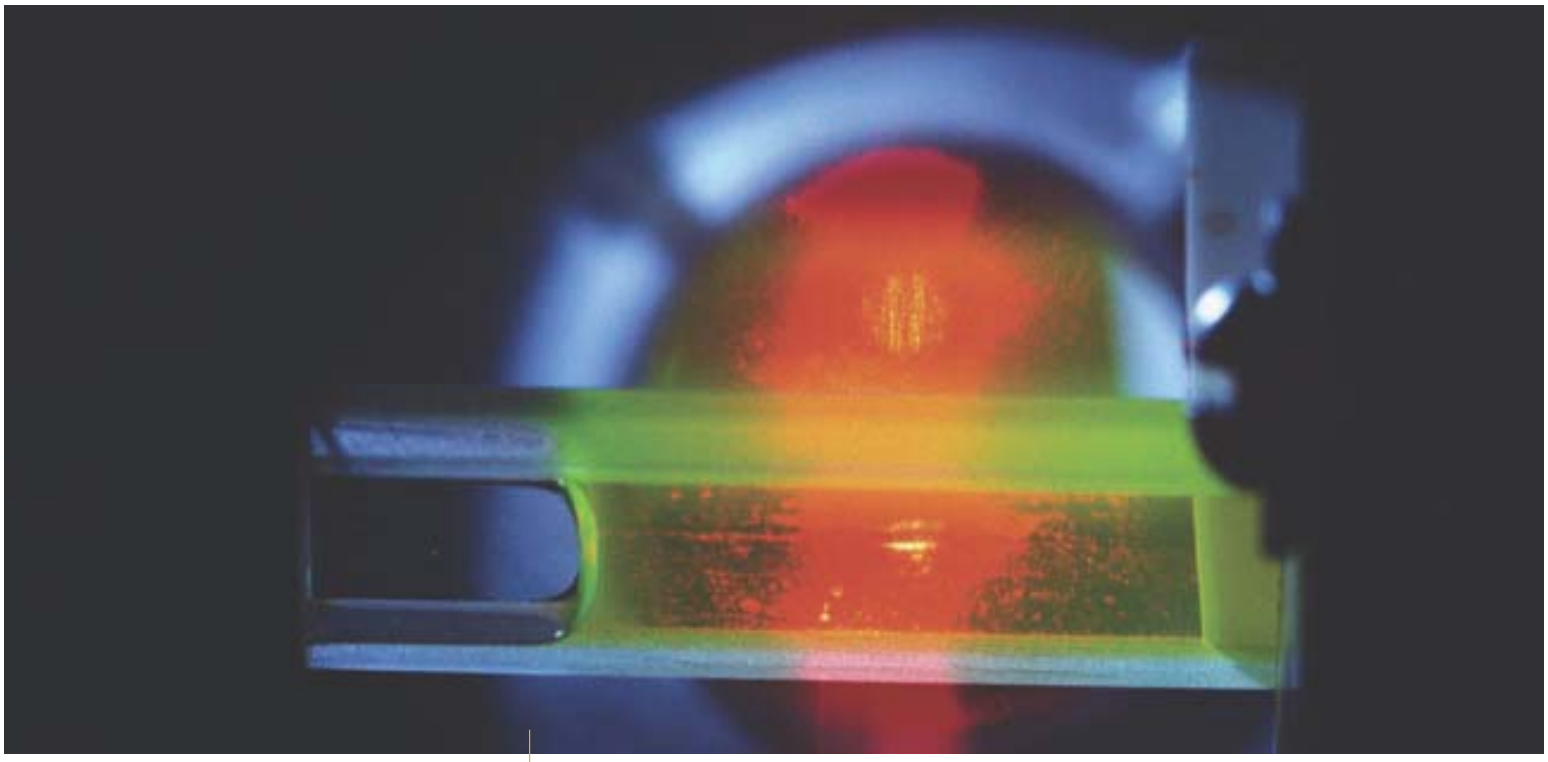
NEF (New Enterprise Forum) is a not-for-profit, all-volunteer organization founded in 1986 to help area entrepreneurs grow their businesses. Membership includes investors, university officials, government representatives, legal and accounting firms, marketing and management consultants, and entrepreneurs. UM Tech Transfer staff serve on the NEF Board and assist in program planning and networking activities.

Great Lakes Venture Quest (GLVQ) Business Plan Competition

The GLVQ is an annual business plan competition designed to support technology-minded entrepreneurship in Michigan. UM Tech Transfer and the Zell-Lurie Institute for Entrepreneurial Studies both played leading roles in GLVQ's inaugural year. During the first year, Osteomics, a University of Michigan technology startup, received the grand prize.

UM Tech Transfer also participates in the Ann Arbor Chamber of Commerce, Washtenaw Development Council, the Ann Arbor Software Council and many other associations designed to improve the regional business climate.

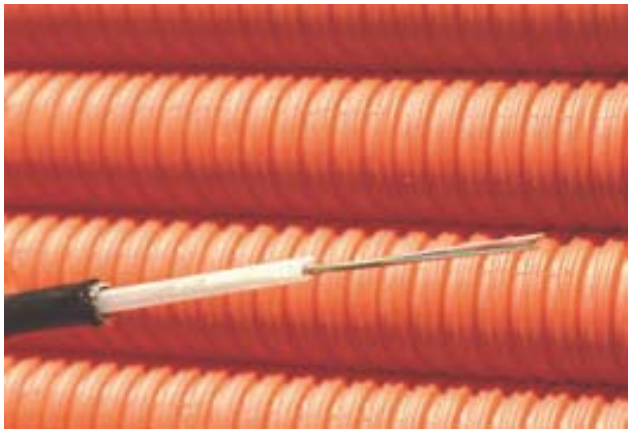
LOOKING TO The Future



The University of Michigan's broad research initiatives and interdisciplinary collaborations are producing exciting opportunities for future technology transfer. Two examples of this potential are the research initiatives in the life sciences and MEMS (Micro Electrical Mechanical Systems).

Life Sciences

The enormous body of research in the life sciences is expected to produce new ways to prevent, diagnose, and treat diseases—including the ability to fine tune diagnoses and treatments based on an individual's genetic information. The potential for technology transfer is significant, in pharmaceuticals, medical and scientific informatics, biotechnologies, and medical therapies.



Driving this progress in the life sciences is the University's campus-wide Life Sciences Initiative—recently established to coordinate and expand research and teaching in rapidly advancing biological fields. One component of the Initia-

tive is a $200 million Life Sciences Institute. The Institute, now under construction, will serve as a hub for cross-disciplinary research and teaching in the life sciences. Another component, the Life Sciences, Values, and Society Program, examines complex legal, ethical, social, and cultural issues arising from advances in the biological sciences.

Complementing the University of Michigan's Life Sciences Initiative is the state of Michigan's Life Sciences Corridor. Through the Corridor, the State of Michigan is investing tobacco settlement monies in activities that bring Michigan's institutions of higher education and research together to promote life sciences business development, economic development, and research. The Corridor includes the University of Michigan, Michigan State University, Wayne State University, and the Van Andel Institute in Grand Rapids, along with other Michigan universities, colleges, and pharmaceutical and biotechnology companies.

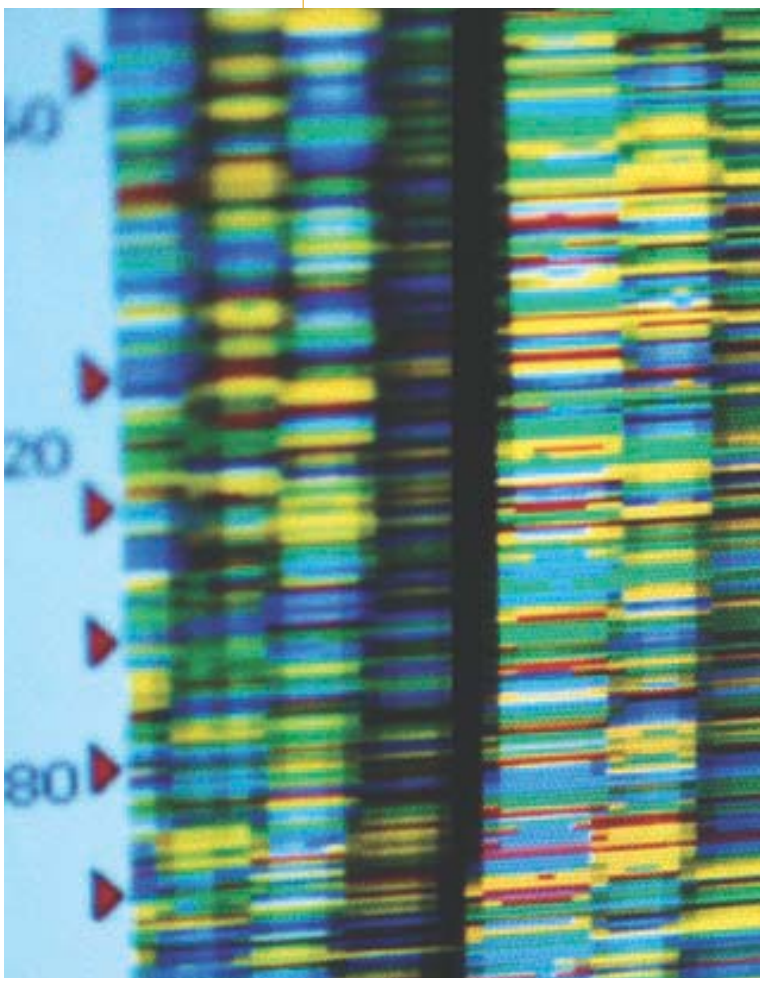
We are increasingly aware that technology disclosed today can make a difference in the lives of people in the near future.

—Elaine Brock
Director, Office of Technology Transfer and Corporate Research—Medical, University of Michigan

MEMS (Micro Electro Mechanical Systems)

These tiny electronic mechanisms are expected to transform health, communication and transportation equipment. MEMS combine mechanical systems and electronic circuitry on tiny silicon chips resulting in miniature versions of existing devices and enabling entirely new applications. More than a decade of research has made the University of Michigan a leader in MEMS technology. Technologies that have already been licensed include heat sensors used in automatic door controllers, ear thermometers, and emission gas analyzers. Pressure sensors have been developed that measure the amount of blockage in arteries or detect the amount of pressure applied to a wound.

An important focus of the MEMS research on campus is the Wireless Integrated Microsystems (WIMS) Engineering Research Center (ERC). WIMS research focuses on combining the advantages of MEMS devices with wireless communications. Developments include devices used in ultra-small phones and other communications equipment and microelectrodes used for hearing implants. Eventually, the technology could be used to treat diseases such as epilepsy and Parkinson's. The WIMS ERC is funded by the National Science Foundation. Partners include the University of Michigan, Michigan State University, Michigan Technological University, the State of Michigan, and a consortium of automotive, chemical, and microelectronics companies.



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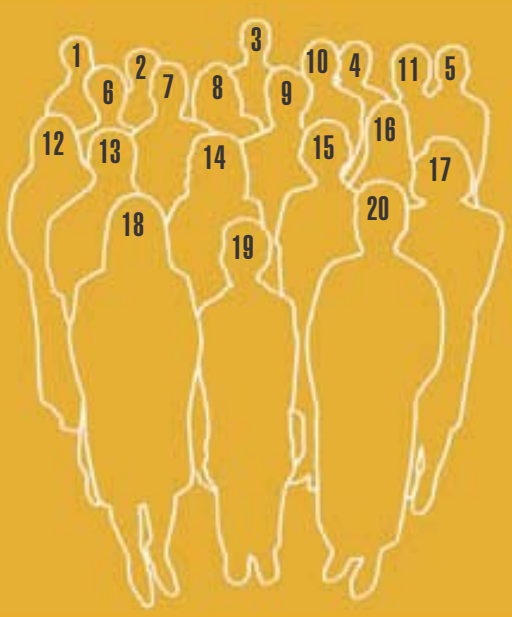

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