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HONORING **INDIVIDUALS** FOR
NEW **INVENTIONS, PATENTS,**
& **LICENSED TECHNOLOGIES**

INNOVATION 2013 AWARDS

UNMC

THURSDAY **OCTOBER 10**
DRC I AUDITORIUM
4:00 PM

MESSAGE FROM **DR. MICHAEL DIXON**

On behalf of the UNMC leadership and UNeMed staff, we welcome you to the 2013 UNeMed Innovation Awards, which recognize the significant and ongoing innovations of the UNMC faculty, staff, and students.

UNeMed's mission is simple to articulate: We are here to help *improve healthcare by fostering innovation, advancing biomedical research and engaging entrepreneurs and industry to commercialize novel technologies*. Innovations all have the same humble beginning: an idea or hypothesis. The path for an idea to become a product that improves the lives of millions is a daunting and perilous journey fraught with many obstacles. That is why UNeMed exists. We are here to help provide the advice, pathways and connections for your idea to grow and make the world a better place.

The Innovation Awards represent the culmination of Innovation Week as we celebrate the creators of novel technology at the University of Nebraska Medical Center. Today we will recognize the inventors who have submitted new inventions, received issued U.S. patents, and successfully licensed technology. In addition, today we will look to the future by recognizing new technology with strong potential, and honor Dr. Howard Gendelman with the 2013 UNeMed Innovator of the Year Award.

The UNeMed staff is committed to helping you develop your new inventions and make vital connections with industry. Please draw upon our expertise, and visit us at 4460 Farnam Street (Annex 14 on the Campus map) or in our satellite office at 1007 Durham Research Center I. Our goal is to help you create relationships that will enable your work to positively impact the lives of people throughout Nebraska and around the world.

Sincerely,

Michael Dixon, Ph.D.
President and CEO, UNeMed Corporation

INNOVATION AWARDS **PROGRAM**

Opening Remarks	**Dr. Michael Dixon,** President and CEO, UNeMed
Keynote Speaker	**Dr. Jennifer Larsen**, Vice Chancellor for Research, UNMC
Innovation Rewind: The Year in Review	**Dr. Michael Dixon**, President and CEO, UNeMed
Presentation of Awards: • New Inventions • Issued Patents • Licensed Technology	**Dr. Steven Schreiner**, Vice President & Director of Licensing and Marketing, UNeMed
Special Awards: • Innovator of the Year • Emerging Inventor Award	**Dr. Steven Schreiner**, Vice President & Director of Licensing and Marketing, UNeMed
Closing Remarks	
Reception	DRC I Atrium

NEW INVENTION NOTIFICATION **CONTRIBUTORS**

Fahd Alsalleeh*
Chandrakanth Are
Jyothi Arikkath*
O. Andres Barrera
Dhundy Bastola
Surinder Kumar Batra*
Elizabeth L Beam*
Mark W. Beatty
Keshore R. Bidasee
Ben H. Boedeker
Oliver Bonham Carter
Kathleen Brandert
Anna Brynskikh Boyum*
Eric Cruz*
Eric Cutler
Paul H. Davis
Shi-Jian Ding
Sarena P.M. Ducas
Marius C. Florescu
Howard S. Fox
Howard E. Gendelman*
Santhi Gorantla
Gregory I. Gordon
Hani Haider
James M. Hammel
Steven H. Hinrichs*
Ashish Joshi
Peter F. Kador
Tammy Kielian*
Yeong C. Kim
Venkata Kolli
Tess Kuenstling
Anastasia Kyvelidou
Joshua J. Larson
Marilynn A. Larson*
Xinming Liu
Oksana Lockridge
Jayakrishna Madabushi
Karoline C. Manthey
San Ming Wang
Vincent Morris
Prabagaran Narayanasamy
Amarnath Natarajan
Carl Nelson
Thang T. Nguyen
Dmitry Oleynikov
Qinge Ouyang
Babu J. Padanilam
Abhishek Parakh
Aimin Peng
Troy J. Plumb
L. Prasad Potluri
Anthony R. Sambol
Ashish Sharma
Bobby Simetich
Patrick Simpson
Joseph Ka-Chun Siu
Philip W. Smith
Stephen M. Smith*
Lane Stephenson
Nicholas Stergiou*
Brenda Thompson
Ram S. Veerubhotla
Serguei V. Vinogradov
Michael C. Wadman
Kay-Uwe Wagner
James K. Wahl
Hanjun Wang
Ling Wang
Hongxiu Wen
Sowmya Yelamanchili
Xiang Yi*
Li Yuan
Mohsen Zahiri
Haizhen Zhong
Lingyun Zhu
Irving H. Zucker

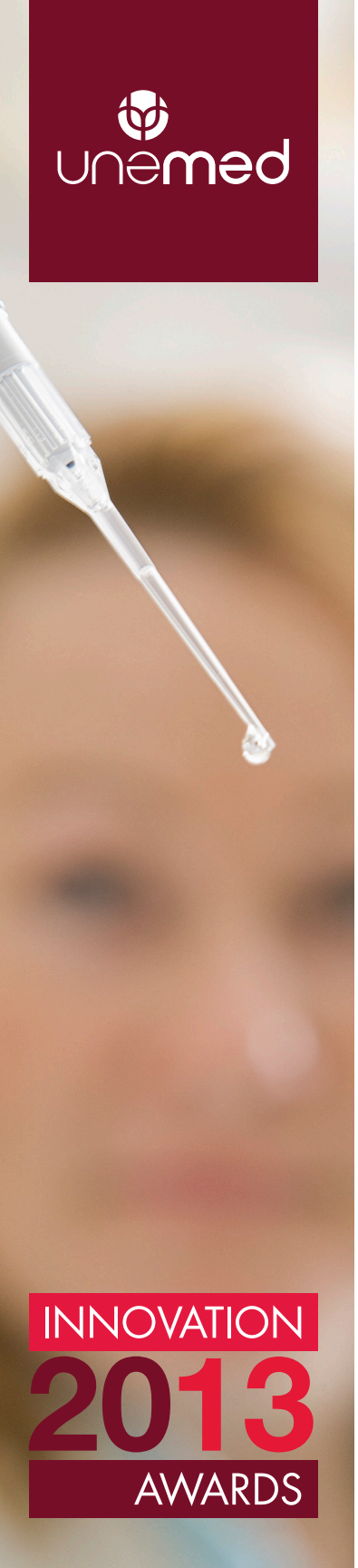
*Multiple NIN's Submitted

INVENTORS WITH ISSUED PATENTS

Ben Boedeker
Tatiana Bronich
Mark C. Faulkner
Shane M. Farritor
Jeff Hawks
Hongxia Jin
Alexander V. Kabanov
Peter F. Kador
Donald Miller
Amy Lehman
Stephen R. Platt
Mark Rentschler
Ken Siegner
Marcus Snow
Jonathan L. Vennerstrom

CREATORS OF LICENSED TECHNOLOGY

Jyothi Arikkath
O. Andres Barrera
Surinder K. Batra
Elizabeth L. Beam
Fu Chen
Hani Haider
Angela Hewlett
Zhenshan Jia
Keith R. Johnson
Ashish Joshi
Vinod Labhasetwar
Marilynn A. Larson
Thomas L. McDonald
Daniel T. Monaghan
Aimin Peng
Dipika Singh
Philip W. Smith
Stephen M. Smith
Jonathan L. Vennerstrom
James K. Wahl
Dong Wang
Ling Wang
Annika Weber



1. "Multifunctional Antioxidants and Methods of Use Thereof"
U.S. Patent No. 8,268,849 – issued September 18, 2012
Peter F. Kador
Hongxia Jin

2. "Tongue Retractor"
U.S. Patent No. D669,171 – issued October 16, 2012
Ben Boedeker

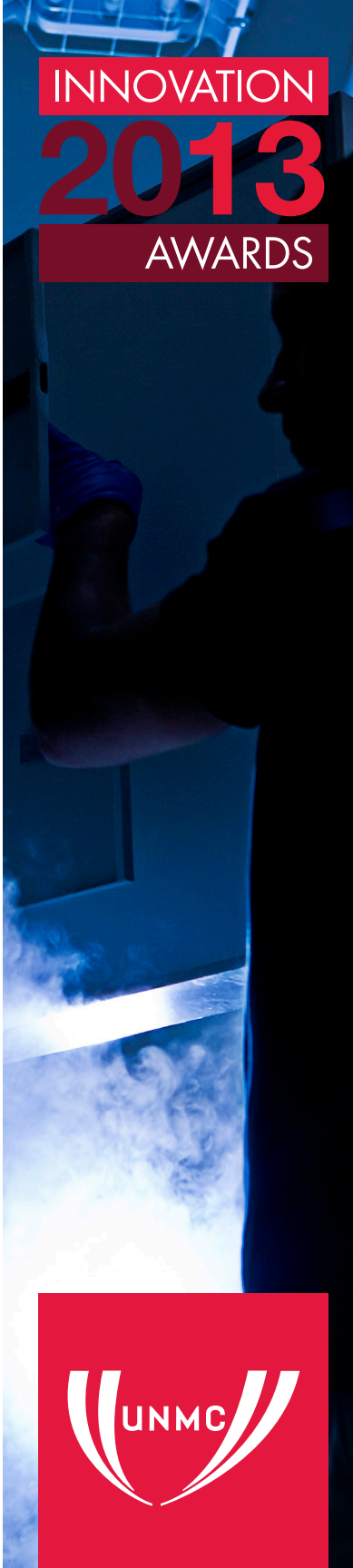
3. "Methods and Systems of Actuation in Robotic Devices"
U.S. Patent No. 8,343,171 – issued January 1, 2013
Shane M. Farritor
Amy Lehman
Jeff Hawks
Mark Rentschler
Stephen R. Platt

4. "Creatine Oral Supplementation Using Creatine Hydrochloride Salt"
U.S. Patent No. 8,354,450 – issued January 15, 2013
Jonathan L. Vennerstrom
Donald Miller
Mark C. Faulkner

5. "Pediatric Lumbar Puncture Positioning Device"
U.S. Patent No. 8,393,329 – issued March 12, 2013
Marcus Snow
Ken Siegner

6. "Cross-Linked Ionic Core Micelles"
U.S. Patent No. 8,415,400 – issued April 9, 2013
Tatiana Bronich
Alexander V. Kabanov

NHERF-2 & Cadherin 11 Antibodies	• James K. Wahl • Keith R. Johnson
Creatine Ethyl Ester	• Jonathan L. Vennerstrom
Freezing Media and Neurons	• Jyothi Arikkath • Dipika Singh
MUC4 Expression as Biomarker	• Surinder Kumar Batra
Computer Assisted Orthopaedic Surgery	• Hani Haider • O. Andres Barrera
Mastl Antibody	• Aimin Peng • James K. Wahl • Ling Wang
MUC4 Antibody	• Surinder Kumar Batra
Human SAA	• Annika Weber • Marilynn A. Larson • Thomas L. McDonald
NMDA Modulators	• Daniel T. Monaghan
Clean Sweep App	• Elizabeth L. Beam • Philip W. Smith • Stephen M. Smith • Angela Hewlett
Internet Enabled Anticoagulation Monitoring System	• Ashish Joshi
Improved Oral Products	• Dong Wang • Fu Chen • Zhenshan Jia
Biodegradable Nanoparticles	• Vinod Labhasetwar • Maram Reddy



INNOVATION 2013 AWARDS

Keshore Bidasee, Ph.D.
Associate Professor,
Department of Pharmacology and Experimental Neuroscience

Targeted Glyoxalase-1 Gene Transfer to Prevent Cardiovascular and End-Organ Complications in Diabetes

The most promising new invention of 2013 is an exciting new development that could mitigate the disastrous effects of diabetes, particularly degenerative and destructive cardiovascular complications more often seen in the elderly.

Keshore Bidasee, Ph.D., identified a viral construct that strategically overexpresses the enzyme Glyoxalase-1. The enzyme targets and degrades the suspected cause of diabetic complications—a naturally occurring chemical, methylglyoxal, which is created by damaged cells when blood sugar levels are high.

The construct also improves the functions of the heart, kidney, and brain—three key organs negatively impacted by diabetes. Even more promising, the therapy also helps blunt cerebral vascular dysfunction and cognitive impairment, and minimizes the amount of brain tissue affected by a stroke. All while significantly helping reduce blood sugar levels.

Dr. Bidasee's novel therapeutic strategy seeks to reduce cardiovascular complications and improve the quality of life for individuals with diabetes.

Dr. Bidasee received his Ph.D. in analytical chemistry from the University of the West Indies, St. Augustine, Trinidad in 1991 and post-doctoral training at the Indiana University School of Medicine. He joined UNMC in 2002, and now also serves as chair of the graduate committee in the Department of Pharmacology and Experimental Neuroscience.

Howard E. Gendelman, M.D.
Margaret R. Larson Professor of Internal Medicine and Infectious Diseases and Chairman of the Department of Pharmacology and Experimental Neuroscience

Howard Gendelman, M.D., is our 2013 Innovator of the Year in recognition of his remarkable work against neurodegenerative and neuroinfective diseases.

In prior works, Dr. Gendelman was credited with unraveling how functional alterations in brain immunity induce metabolic changes, and ultimately lead to neural cell damage for a broad range of infectious, metabolic and neurodegenerative disorders. Within the last year Dr. Gendelman's laboratory has made major advances on two translational research projects. Early in 2013 a partnership was established with a major pharmaceutical company to develop nanoformulations for improved treatment and possible eradication of HIV. Most recently, in September of 2013, a human proof of concept study began on his immunotherapy strategy for Parkinson's disease. Both of these projects have the potential to revolutionize the treatment of life-threatening diseases.

Before joining the University of Nebraska Medical Center in 1993, Dr. Gendelman occupied senior faculty and research positions at the Johns Hopkins Medical Institutions, the National Institute of Allergy and Infectious Diseases, the Uniformed Services University of the Health Sciences, the Walter Reed Army Institute of Research, and the Henry Jackson Foundation for the Advancement in Military Medicine.

In 1979 and 1999, respectively, he received his M.D. and was named the Distinguished Alumnus of the Pennsylvania State University-Hershey Medical Center. He completed his residency in internal medicine at Montefiore Hospital, Albert Einstein College of Medicine and was a Clinical and Research Fellow in Neurology and Infectious Diseases at Johns Hopkins University Medical Center.

Dr. Gendelman has authored more than 400 peer-reviewed papers, edited nine books and monographs, is an inventor on three issued patents and thirty two pending patent applications, is the Editor-in-Chief and Founder of the Journal of Neuroimmune Pharmacology, along with service on numerous editorial boards, national and international scientific review and federal and state committees. He has been the recipient of numerous local, national and international honors including the Henry L. Moses Award in Basic Science, the Jacob Javits Neuroscience Research Award, the 2008 UNMC Scientist Laureate, and was named a Carter-Wallace Research Scholar in HIV/AIDS and was a J. William Fulbright Research Scholar at the Weizmann Institute of Science.

INNOVATION AWARDS HISTORY

Innovation Week can be traced back to 1998 when UNeMed and the Intellectual Property Office began hosting the Inventor's Recognition Reception. As the name implies, the annual reception honored UNMC researchers who had applied for or received patents in the previous year.

In 2007, UNMC restructured its technology transfer efforts into one organization, merging UNeMed with the Intellectual Property Office. Under the leadership of Dr. James Linder, UNeMed transformed the Recognition Reception into the Research Innovation Awards.

A year later, the awards ceremony became the final event in a week of activities that celebrated the research and innovation at UNMC. In addition to recognizing researchers who secured intellectual property rights, UNeMed also added emerging inventor and lifetime achievement awards. In 2008 it also added the "Most Promising New Invention" as an annual award, and this year marks the first occassion that UNeMed will recognize an "Innovator of the Year." In previous years UNeMed had presented Emerging Inventor and Lifetime Achievment awards on a biennial schedule.

Today, Innovation Week is about far more than recognizing a handful of UNMC scientists who secure patents. It's a celebration that recognizes, rewards and encourages innovative thoughts and ideas, whether they come from the most seasoned and esteemed researcher or the least-known first-year student who might know a better way.

PREVIOUS AWARDEES

Most Promising New Invention

2013	Keshore Bidasee, Ph.D.	*Targeted Glyoxalase-1 Gene Transfer to Prevent Cardiovascular and End-Organ Complications in Diabetes*
2012	Gregory Oakley, Ph.D.	*Small Molecule in Vivo Inhibitors of the N-Terminal Protein Interacting Domain of RPA1*
2011	Babu Padanilam, Ph.D.	*Novel Target for the Treatment of Renal Fibrosis*
2010	Stephen Bonasera, M.D., Ph.D.	*Noninvasive Monitoring of Functional Behaviors in Ambulatory Human Populations*
2009	Paul Dunman, Ph.D.	*Novel Antibiotic Compounds*
2008	Guangshun Wang, Ph.D.	*Anti-HIV Peptides and Methods of Use Thereof*
2008	Janina Baranowska-Kortylewicz, Ph.D.	*Sex Hormone Binding Globulin: New Target for Cancer Therapy*

	Emerging Inventor	Lifetime Achievement	Innovator of the Year
2013	—	—	Howard Gendelman, M.D.
2012	Tammy Kielian, Ph.D.	—	—
2011	—	Jonathan Vennerstrom, Ph.D.	—
2010	Amarnath Natarajan, Ph.D.	—	—
2009	—	Rodney Markin, M.D., Ph.D.	—
2008	Dong Wang, Ph.D.	—	—
2007	—	Robert LeVeen, M.D.	—

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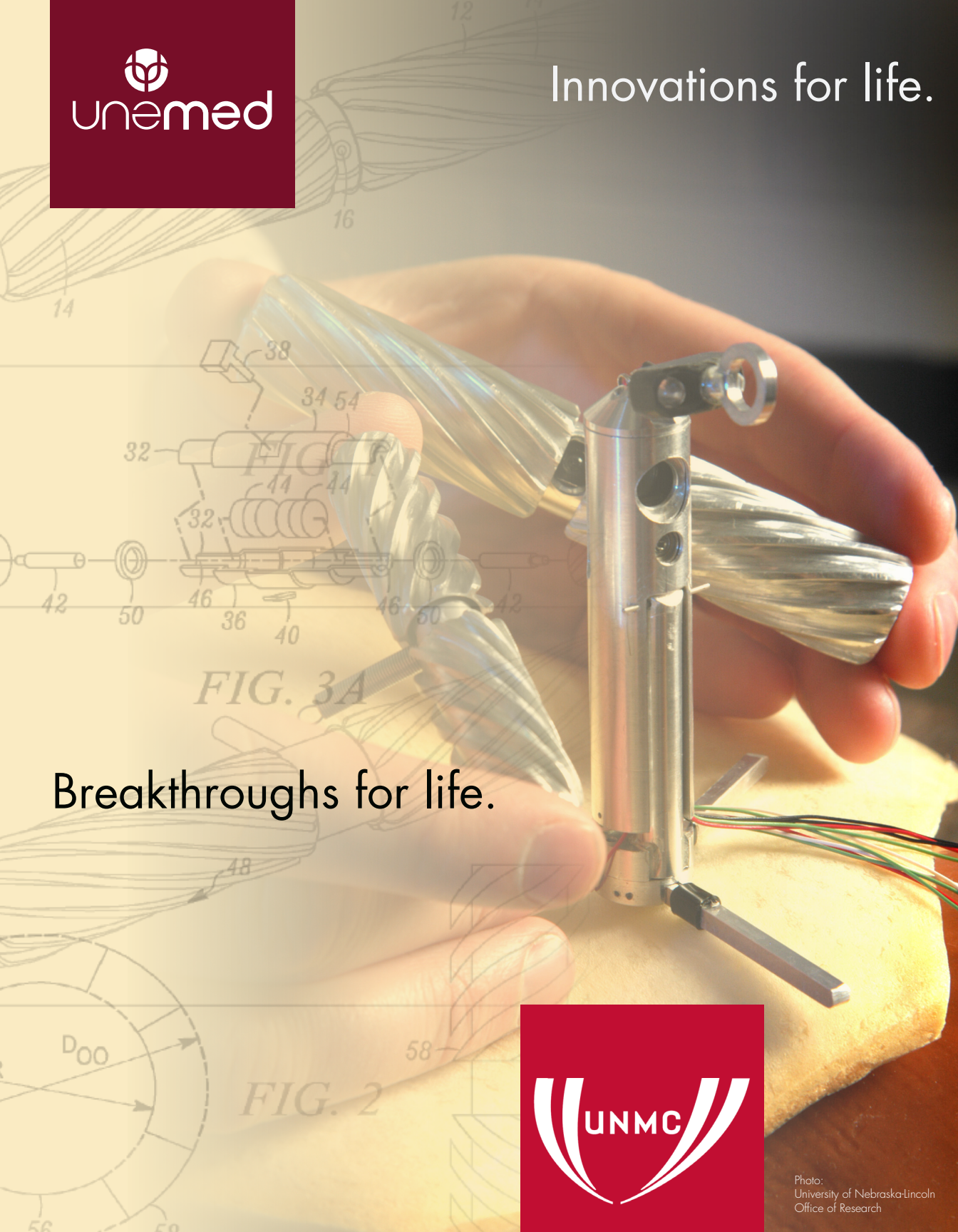

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Photo:
University of Nebraska-Lincoln
Office of Research