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**inVIsion**

A PUBLICATION OF THE DEAN MCGEE EYE INSTITUTE

vision care  
research  
education  
community

## DMEI phone directory

### Oklahoma Health Center

DMEI Building ▪ 608 Stanton L. Young Blvd. ▪ Oklahoma City, Ok 73104

#### Cornea and External Diseases

(405) 271-1095 ▪ (800) 787-9017

Rhea L. Siatkowski, M.D.  
Donald U. Stone, M.D.

#### General Ophthalmology/Cataract Surgery

(405) 271-1090 ▪ (800) 787-9012

Charles P. Bogie III, M.D.  
Gemini J. Bogie, M.D.  
Cynthia A. Bradford, M.D.  
David W. Jackson, M.D.  
Deana S. Watts, M.D.

#### Glaucoma

(405) 271-1093 ▪ (800) 787-9015

Mahmoud A. Khaimi, M.D.  
Steven R. Sarkisian, Jr., M.D.  
Gregory L. Skuta, M.D.

#### Low Vision Rehabilitation

(405) 271-1793 ▪ (800) 787-9012

Rebecca K. Morgan, M.D.

#### Neuro-Ophthalmology

(405) 271-1094 ▪ (800) 787-9016

R. Michael Siatkowski, M.D.

#### Ocular Prosthetics

(405) 271-3391 ▪ (800) 787-9012

Nancy A. Townsend, B.C.O.

#### Optical Services

##### Spectacles, Low Vision Aids

(405) 271-6174 ▪ (800) 787-9012

Sheree Lyons, Director, Optical Services

##### Contact Lenses

(405) 271-6084 ▪ (800) 787-9012

Jean Ann Vickery, Director, Contact Lens Services

#### Optometric Services

(405) 271-1090 ▪ (800) 787-9012

Dana M. Jones, O.D.  
Angela M. Plant, O.D.

#### Pediatric Ophthalmology/Strabismus

(405) 271-1094 ▪ (800) 787-9016

R. Michael Siatkowski, M.D.  
Lucas Trigler, M.D.

#### Retina/Vitreous

(405) 271-1092 ▪ (800) 787-9014

Reagan H. Bradford, Jr., M.D.  
Stephen R. Fransen, M.D.  
Darin R. Haivala, M.D.  
Ronald M. Kingsley, M.D.  
Robert E. Leonard II, M.D.  
David W. Parke II, M.D.

#### Trauma/Emergency

(405) 271-6060 ▪ (800) 787-9012

### OU Harold Hamm Oklahoma Diabetes Center

1000 N. Lincoln Blvd.  
Oklahoma City, Ok 73104

SUITE 150

#### McGee Eye Surgery Center (MESc)

(405) 232-8696

SUITE 340

#### General Ophthalmology

#### Cataract Surgery

(405) 271-2010 ▪ (877) 406-4193

Layne E. Goetzinger, M.D.  
David W. Jackson, M.D.

#### Refractive Surgery

(405) 271-2010 ▪ (877) 406-4193

David W. Jackson, M.D.

SUITE 390

#### Neuro-Ophthalmology

(405) 271-1091 ▪ (800) 787-9013

Bradley K. Farris, M.D.  
Anil D. Patel, M.D.

#### Oculoplastic Ophthalmology

(405) 271-1096 ▪ (800) 787-9018

Adam G. de la Garza, M.D.  
P. Lloyd Hildebrand, M.D.

### Dean McGee Eye Institute Satellite Locations

Edmond ▪ Lawton ▪ Northwest Oklahoma City

#### EDMOND

1005 Medical Park Blvd.  
(405) 348-0913

#### General Ophthalmology Glaucoma

Mahmoud A. Khaimi, M.D.

#### Ophthalmic Surgery

#### Refractive Surgery

Charles P. Bogie III, M.D., Ph.D.

Anil D. Patel, M.D.  
Angela M. Plant, O.D.

#### Pediatric Ophthalmology

#### Ophthalmic Surgery

Lucas Trigler, M.D.

#### Optical Services

#### Contact Lens Services

#### LAWTON

3201 W. Gore Blvd., #200  
(580) 250-5855

#### General Ophthalmology Ophthalmic Surgery

Ann A. Warn, M.D.  
John P. Fang, M.D.

#### Optical Services

#### NORTHWEST OKC

3500 N.W. 56th #101  
(405) 942-9545

#### General Ophthalmology Ophthalmic Surgery

Gemini J. Bogie, M.D.  
Ralph B. Hester III, M.D.

#### Optical Services

#### Contact Lens Services

### Dean McGee Eye Institute

Home to the Department  
of Ophthalmology of the  
University of Oklahoma

#### DMEI President and CEO

Edward L. Gaylord Professor and Chairman  
Department of Ophthalmology  
University of Oklahoma  
David W. Parke II, M.D.

#### DMEI Executive Vice President

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Matthew D. Bown

#### DMEI Vice President

Patient Accounts  
Compliance and Privacy Officer  
Loretta Yazdanipannah

#### DMEI Vice President

Development  
Lana G. Ivy

#### Controller

Kim Howard

#### Magazine Coordinator

Melody A. Marcum, MHR

#### Contributing Writers

Adam G. de la Garza, M.D.  
Bradley K. Farris, M.D.  
P. Lloyd Hildebrand, M.D.  
Lana G. Ivy, M.B.A.  
David W. Parke II, M.D.  
Raju V.S. Rajala, Ph.D.

#### Design and Layout

Funnel Design Group

#### Photography

John Jernigan  
Mike Klemme Photography

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to be placed on the mailing list please contact  
the Development Office:

Dean McGee Eye Institute  
608 Stanton L. Young Blvd.  
Oklahoma City, OK 73104  
(405) 271-7801

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# • DMEI • inVision

WINTER/SPRING 2009

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# Hello...and Goodbye!



David W. Parke II, M.D., DMEI President and CEO

## **SOME TASKS ARE MORE DIFFICULT THAN OTHERS. THIS IS ONE OF 'THOSE TASKS'.**

First, I'd like to say "hello" to a new look for the Dean McGee Eye Institute newsletter. Over the years we've tried to keep our friends, patients, and colleagues up-to-date on the activities of DMEI through a periodic newsletter. As a nonprofit organization very conscious of expenses, we handled most of the production in-house. I believe the old version accomplished its objective as a source of information, but the style and format became dated. At the same time, marvelous new publishing technology brought down costs and has enabled us to (finally) refresh the appearance and the content of our communications to you—members of our community, dedicated friends, patients, and colleagues.

Ophthalmology is a visual specialty, and this new magazine—called Dean McGee Eye Institute InVision—is designed to enable us to use more

images. Some will be informational and some are included to transmit a sense of beauty and wonder—highlighting the value of vision.

There will be regular features—scientific and 'editorial opinion'—that you can search out in each issue. We will also attempt to balance the scientific information with a glimpse into the human side of the Institute and its impact. We hope you enjoy it!

“...balance the scientific information with a glimpse into the human side of the Institute...”

in this capacity, I will have the opportunity to lead some very dedicated and talented staff and volunteers to help shape and direct the future of our profession. With nearly 30,000 members, the Academy is the premier developer of educational programs and products for ophthalmologists around the world. It also is

And now to the more difficult part—goodbye! After 17 wonderful years at Dean McGee, I will be leaving the Institute. Effective March 31, 2009, I will assume the position of CEO and Executive Vice President of the American Academy of Ophthalmology. In

the public voice of ophthalmologists and their patients from Washington to the World Health Organization. Its Foundation works to assist in blindness prevention and vision restoration in both developing and developed nations.

Why am I taking this position? It is certainly NOT because I want to leave Dean McGee! It is more because I relish the chance to build new partnerships, develop dynamic new programs, and leave as a legacy a better system for eyecare in this nation. The challenges will be mammoth, but the possibilities are breathtaking. Nothing else could pry me away from the Dean McGee Eye Institute.

I leave behind one of the most dedicated, and productive group of people I've ever known—the Institute's faculty and staff. I have no doubt that under new leadership they will translate scientific discoveries into innovative medical care. With a new facility and more faculty, DMEI will grow to become a sustained international leader in our field.

I'd also like to take this opportunity to thank our Board of Trustees—led by James Tolbert, a man who defines the term 'dedicated to community'. I also thank our leadership donors—Oklahomans who share our vision of a health care institution in Oklahoma whose impact is felt around the world. They provide the fuel to recruit clinicians and scientists, to build world-class facilities, and to dream.

Finally, I'd like to thank my patients for the privilege of trusting me to be their physician.

It has been my honor.

A handwritten signature in black ink that reads "David Parke".

David W. Parke II

# EYES ON THE THUNDER

THE DEAN MCGEE EYE INSTITUTE (DMEI) has been chosen as the ophthalmologists for Oklahoma City's new NBA team—the Thunder. Next to orthopedic injuries, eye injuries are the most common medical problem in professional basketball and the NBA therefore requires a team ophthalmologist in attendance at all



games. Dr. Brad Farris is the Thunder Lead Ophthalmologist with Dr. Mahmoud Khaimi as the Thunder Associate Lead Ophthalmologist. Many other DMEI ophthalmologists have volunteered to take a turn at the home games. ■

## 32nd Annual Resident and Alumni Meeting



Joel S. Schuman

THE ANNUAL RESIDENT AND ALUMNI MEETING was held June 14, 2008 in Oklahoma City. Awards presented and received at the meeting included: James Chodosh, M.D., the Edward and Thelma Gaylord Faculty

Honor Award, and Allyson D. Schmitt, M.D., the Dr. and Mrs. T.E. Acers Resident Honor Award. Keynote Speaker was Joel S. Schuman, M.D. University of Pittsburgh Medical Center, Eye and Ear Center. The next meeting is scheduled for June 20, 2009. ■

## 2008 WALTER J. STARK MEMORIAL LECTURESHIP



Julia A. Haller

DR. JULIA A. HALLER, Ophthalmologist-in-Chief of the Wills Eye Institute, and Professor and Chair of the Department of Ophthalmology at Jefferson Medical College of Thomas Jefferson University

was guest speaker of the 2008 Walter J. Stark Memorial Lectureship. The lectureship was well attended by faculty, family members, residents and fellows. Created by colleagues, family, and friends the Walter J. Stark Memorial Lectureship was established as a tribute to and in memory of Walter J. Stark, former administrator of the Dean McGee Eye Institute, from 1978 to 1991. ■

## Dean McGee/OU Physicians take leadership roles in the American Academy of Ophthalmologists

DR. CYNTHIA BRADFORD, PROFESSOR, OU DEPARTMENT OF OPHTHALMOLOGY,

has been elected to serve as Senior Secretary for Advocacy. The role of this position is to provide the Board of Trustees with insight into the development of programs and activities that establish ophthalmology as the most respected and effective advocate for quality eye care, ensuring that they further the Academy's mission and goal for advocacy. This elected position starts January 1st and Dr. Bradford will serve a three year term.



Cynthia Bradford

"Ophthalmology faces challenges in 2009 and beyond. On a state level, legislative advocacy is important to ensure quality patient care in all 50 states and Puerto Rico. Federal advocacy will be critical as the new president and Congress work on Medicare reforms and major changes in the delivery of medical care that will occur over the next 4 years. Experience in advocacy teaches that if you are not at the table, you will be on the menu." states Dr. Bradford.

DR. GREGORY L. SKUTA, JAMES P. LUTON CLINICAL PROFESSOR, OU DEPARTMENT OF OPHTHALMOLOGY,

will serve as Senior Secretary for Clinical Education. In this role, Dr. Skuta will provide leadership in the planning, organization and oversight (including the development of strategic directions and goals) of the Academy's clinical education, quality of care, and knowledge base development programs, activities, and materials.

Dr. Skuta stated, "Although the Academy has been highly active and successful in a variety of arenas, education always has been and continues to be our very highest priority. In my



Gregory L. Skuta

role as Senior Secretary for Clinical Education, it has been an extraordinary privilege to join the hundreds of AAO members who willingly volunteer their time, energy, talents, and resources to support the Academy's mission "to enhance lifelong learning of ophthalmologists ensuring that the public can obtain the best possible eye care." ■



# Q&A

## Adam G. de la Garza

CLINICAL ASSISTANT PROFESSOR

Clinical Focus: Ophthalmic Plastic and Reconstructive Surgery

### What attracted you to the field of ophthalmology?

During summer breaks in college I had the privilege of working for a wonderful group

of ophthalmologists in my hometown in North Carolina. At the time I had no intention of even pursuing medicine, but their example and influence changed my mind, and helped me pick a specialty as well. While in medical school I considered a wide variety of fields, but always found myself coming back to ophthalmology.

### What do you most enjoy about your practice?

I love my patients! My father is a family medical doctor, and since choosing medicine I knew that I, like him, would want to treat all ages. I truly enjoy the interaction I have with all of my patients, from infants with their families to the elderly and everyone in between.

### What do you consider to be your most important professional contribution to date?

My fellowship preceptor and I co-authored a chapter on eyelid and eye socket reconstruction for an upcoming book on facial surgery in the setting of extensive trauma or cancer. The target audience is non-ophthalmologists, specifically craniofacial and ear, nose and throat surgeons. It was exciting to be able to give an eye centered perspective to this important area.

### What attracted you to Oklahoma?

Definitely the people. I interviewed all over the country, and kept finding myself gravitating to the people I had met while visiting Oklahoma City. Growing up in the South gave me an appreciation for warmth and hospitality, and I received a very sincere welcome from everyone I met. I've spent a lot of time in the Midwest as well, and I find Oklahoma to be a great blend of the best aspects of the South and Midwest. Plus, it's exciting to be part of a state and city that are up and coming. ■



Above left: Dr. Adam G. de la Garza; above right: Dr. de la Garza measuring patient for surgery

# AN INCREDIBLE JOURNEY

## A CHINESE ORPHAN IS GIVEN NEW HOPE



Dr. Lloyd Hildebrand and Casi Burrows (formerly Dang Ting)

**THREE YEARS AGO 12-YEAR-OLD** Dang Ting lived in a Chinese orphanage spending her days sweeping the floors and playing with toddlers. She didn't go to school and was considered unadoptable. Ting was born with one eye completely undeveloped and the other with very poor vision.

In those dark days, Ting didn't know a family from Edmond, Oklahoma, was looking—to give her hope. Linda and Gerald Burrows have a heart for children.

In 2006, the Burrows were in the process of adopting their second child Dang Xiyuan from China. The adoption paperwork listed the child's closest friends and Ting was on that list. When the Burrows realized Ting urgently needed medical care, they began searching for her as a potential medical foster child. Their search

to bring Ting to Oklahoma to correct her eye problems took two years to become reality.

Dr. Lloyd Hildebrand, an ophthalmic plastic and reconstructive surgeon with the Dean McGee Eye Institute, helped the Burrows complete the paperwork to secure Ting's trip to Oklahoma in April 2007.

On her first visit Dr. Hildebrand discovered that Ting was very near sighted in one eye and the other eye was so poorly developed she had no vision. Corrective eyeglasses and surgeries made a huge difference. Fitting Ting with an artificial eye was a painstaking process, slowly fitting her with larger prosthetic glass eyes while at the same time surgically preparing her eye socket. Dr. Hildebrand also corrected her droopy eyelids, a condition called ptosis.

Meanwhile, the Burrows set out to adopt Ting, and in September 2008, Ting became Casi Burrows with full U.S. citizenship.

Ting's vision is significantly better and her new prosthetic eye gives her a much more natural look. She is homeschooled and works with a neurodevelopmentalist to help overcome the developmental delays caused by her physical condition and a poor learning environment.

The Burrows family has made an incredible journey to bring a child, their daughter, from hopelessness—to home. ■



Rescue teams gather in Sichuan Province to discuss assignments

# eye to eye crisis

## CHINA TRIP 2008

**OVERBURDENED BY BLINDNESS DUE TO CATARACTS**, officials of Chengdu, China in the Sichuan Province approached Dr. Bradley K. Farris, a neuro-ophthalmologist, at Dean McGee in 2001. With more than 90 million people living in the Province this has become a burgeoning health issue for the region. For five years Dean McGee's China Vision Project has entailed taking a team of physicians and senior residents at least once a year to train Chinese ophthalmologists in new surgical techniques for treating cataracts. The team spends at least one day in the countryside with a mobile eye-surgery vehicle treating patients who have no means to get to a hospital.



Above: Dr. Bradley K. Farris teaching Chinese ophthalmologists

In May, 2008, just ten days prior to the team's sixth trip departure, a massive earthquake hit killing more than 72,000 people. The eight member group had a decision to make. The uncertainty of the situation led Dr. Farris to survey the team who decided to go regardless of the devastation. The team left May 22nd, unsure of what they would face. "We decided we could help them in a time of need when they hurt so much," said Dr. Farris. "We anticipated that we would address the needs of the poor with eye and facial traumas," he said.

Upon arriving at their hotel a powerful aftershock hit. Although no one was hurt, it reinforced the danger.

Dr. P. Lloyd Hildebrand, an oculoplastic ophthalmologist at Dean McGee, blogged on May 29th the devastation he saw.

"The first village we visited was Xiang'e. This was the tragic site where the entire middle school collapsed on the students and teachers. So many were lost in this tragedy. The area was surrounded by rubble, with a central pile of lye (used to cover decomposing bodies). This was somber and overwhelming to fathom," he wrote.

Essentially two teams were on ground: the Ophthalmology team working with the Hospital Ophthalmology Department and the Service Team helping with Heart-to-Heart International earthquake response teams. The large province

hospital in Chengdu where the DMEI team was scheduled to work was not damaged. The ophthalmology ward had become a triage and waiting area for orthopedic injuries. Many of the injured had leg and foot injuries as a result of jumping from windows or from direct blows from rocks and collapsing buildings. Susan Wei, the team's interpreter, lost several family members in the earthquake.

One afternoon was spent shopping for "high demand" supplies like fruit, tents, water, and medical supplies. The team spent time reviewing difficult cases that had been saved for them, presenting lectures, doing wet lab surgery, and

conducting a "techniques exchange" which was very beneficial to both groups.

Reflecting on the trip, Dr. Hildebrand concluded with, "Despite the challenges of the trip, most of us and them felt that we achieved more this time than on previous trips. We formalized (and they adopted) many of the ways in which we train residents in the US...and they have adopted it readily, enthusiastically and very quickly."

"We felt welcomed and needed in an emotional catastrophe. Due to our relationship and the success of the program we have built on over the years, they trusted us and knew of our intentions." concluded Dr. Farris. ■

“...we achieved more this time than on previous trips...”

Other Dean McGee Eye Institute physicians/residents on the China trip included Drs. Don Stone, Gene Chen, Matt Traynor, and Scott Guess. Other team members included Dr. Bill Clifford, Garden City, Kansas, and Dr. Paul Chen, San Francisco.

# IMPROVING STUDENTS' eyesight at college prep school

**WHETHER IT BE SEEING THE LEAVES ON A TREE** for the first time or reading college-prep homework, good eyesight clearly defines the quality of a person's life. Dean McGee Eye Institute (DMEI) has improved the quality of 140 Harding Charter Preparatory High School students' lives over the past three years.

This unique partnership grew when it was discovered many students' vision was impaired due to no glasses or an old prescription. "We were seeing more and more of our students squinting at written instructions on the board or frowning to recognize their friends down the hall," Richard Caram, Harding Charter Preparatory High school principal, said.

"After contacting DMEI, they quickly helped our students who had immediate needs. This partnership includes a yearly screening, dilated exams and glasses. To date over 516 students have been screened by DMEI professionals," Mr. Caram said.

"Making a difference in Oklahomans' lives is what DMEI has done for our students. One good example is our recent graduate, Montana Rangel. After being screened, she was discovered to have a serious vision problem which would



Harding students presenting fundraising check to Dean McGee Eye Institute



Dr. Lucas Trigler examining patient

eventually lead to two surgeries performed by Dr. R. Michael Siatkowski, DMEI Pediatric Ophthalmologist. She later went on to become the school's Valedictorian and recipient of a full-scholarship at the University of Oklahoma," Caram said.

"I am very thankful for Dr. Siatkowski and his team of medical professionals coming into my life when they did. I was very thankful for the new glasses and thought that would be the extent of my care.

Until this time I was unaware of the severity of my eye problems. I was very shocked to find out that my eyes were to the point where surgery was required and that Dr. Siatkowski and DMEI would provide further medical assistance to help with the surgery. Had it not been for the team at DMEI I would not have been aware of these medical professionals who offer so much. The DMEI team has given me and other students at Harding far more than the gift of sight; they have treated us with the

**“The DMEI team has given me...far more than the gift of sight...”**

utmost respect and showed us they genuinely care for their patients.”

“Not only has the Harding Charter Prep community benefited from the care and generosity of DMEI but the Oklahoma City

community as a whole benefits when this equates to more success with our students,” Caram said.

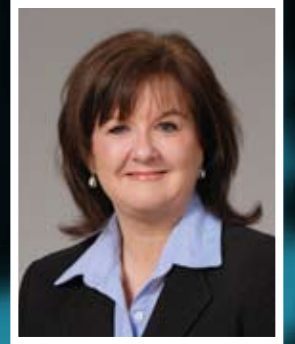
Each spring, the Harding Charter Prep Student Council adopts a non-profit to support and conducts a week-long fundraiser

for this effort. In 2008 DMEI was named the recipient for their fundraising efforts. Dr. Lucas Trigler, DMEI Pediatric Ophthalmologist, was asked to speak at the kick-off rally. He was so touched by the students' willingness and efforts that he pledged to match the amount raised. These funds are used to help DMEI pediatric surgery patient families who need help with gas, lodging and medication.

“The school raised over \$4,000 to enable DMEI to continue giving assistance to other Oklahomans and make their quality of life better,” Mr. Caram said. ■

Opposite: Dr. R. Michael Siatkowski and Montana Rangel

# PHILANTHROPY UPDATE



Lana G. Ivy  
Vice President of Development

## Tulsa Chapman Foundations Support Capital Campaign

THE CHAPMAN FOUNDATIONS of Tulsa, Oklahoma have awarded \$450,000 to the “Vision for Tomorrow” new building campaign. This is their first gift to the Dean McGee Eye Institute.

“Dean McGee Eye Institute has long been known for quality clinical eye care. Growth in eye care and treatment at the institute has indicated a need for further research in eye disease, thus expansion is necessary both in the clinical and research areas. We at Chapman Foundations Management see this need and are pleased to be a part of the expansion to further the excellent work Dean McGee Eye Institute has provided us for many years in the clinical and research areas. We are proud to be a part of this capital campaign.” said Don Pitman, Manager & Trustee, Chapman Foundations Management.

The Chapman Foundations make up The H.A. and Mary K. Chapman Charitable Trust and The Mary K. Chapman Foundation. Each trust maintains a separate charitable grant-making program. A major charitable focus of H.A. Chapman during his life, and the lives of his philanthropic parents, James A. and Leta

Chapman, was education and medical research. Mary K. Chapman was also interested in supporting education, and as a former nurse and a very compassionate person, much of her charity was directed to health, medical research, and educating and caring for the less fortunate and disadvantaged.

“We are very pleased to have the participation of the Chapman Foundations as we continue to build partnerships for the eye institute through this campaign. Our mission and vision very closely matches their charitable focus and we are honored by their confidence in our ability to address the eye care needs of all Oklahomans,” stated Dr. David Parke, M.D., CEO and President, Dean McGee Eye Institute. ■

**We are proud to be a part of this capital campaign.**



Construction progress on new DMEI facilities

## OKLAHOMA CITY COMMUNITY FOUNDATION PROVIDES GRANT

THE DEAN MCGEE Therapeutic Contact Lenses Department has been awarded an Access to Health Care Services grant from the Oklahoma City Community Foundation. The \$15,000 grant will be used for providing unique and specific therapeutic application of contact lenses for visual rehabilitation to at least 100 patients who do not have insurance to pay for this service.

Jean Ann Vickery, Director of Contact Lens Services states, “This is an extremely important service. The Institute serves as a referral center for ophthalmologists and optometrists throughout the community and state for

patients with extreme need. The referral may be due to lack of patient funding, lack of expertise or equipment or both. These services are currently being provided regardless of the patient’s ability to pay.”

“We appreciate this grant opportunity as provided by the Oklahoma City Community Foundation (OCCF), especially when so many Oklahomans are without health insurance. Our patients can be better served because of organizations like the Oklahoma City Community Foundation,” says Lana Ivy, Vice President of Development. ■

## Records-Johnston Family Foundation Gift Adds Boost to Capital Campaign

GEORGE AND NANCY RECORDS have made a substantial, additional pledge to the “Vision for Tomorrow” capital campaign, bringing their gift to one million dollars. Both have a long association with the Eye Institute, and George Records has served on the Institute’s Board of Trustees for a number of years. “Their leadership in this campaign and their commitment to our community is evidenced by their philanthropy. They believe in the Institute’s impact throughout Oklahoma in patient care, vision research, and biomedical education. On behalf of all the Institute team, I thank the Records family for this major contribution,” stated Dr. David Parke, President and CEO. ■



# PHILANTHROPY UPDATE

## Charitable IRA Rollover extension of law allows for tax-free giving from IRAs

CONGRESS RECENTLY PASSED A LAW TO REVIVE the IRA Charitable Rollover. The law allows donors age 70½ and over to make tax-free transfers from an IRA directly to their charity. The IRA Charitable Rollover is a great way for donors to satisfy charitable goals and deal with the IRA required minimum distribution. Many individuals are uncertain how to best manage required minimum distributions from an IRA. In these challenging economic times, this law may provide a tax-efficient means for you to support the capital campaign, medical education, eye research or patient care at the Dean McGee Eye Institute.

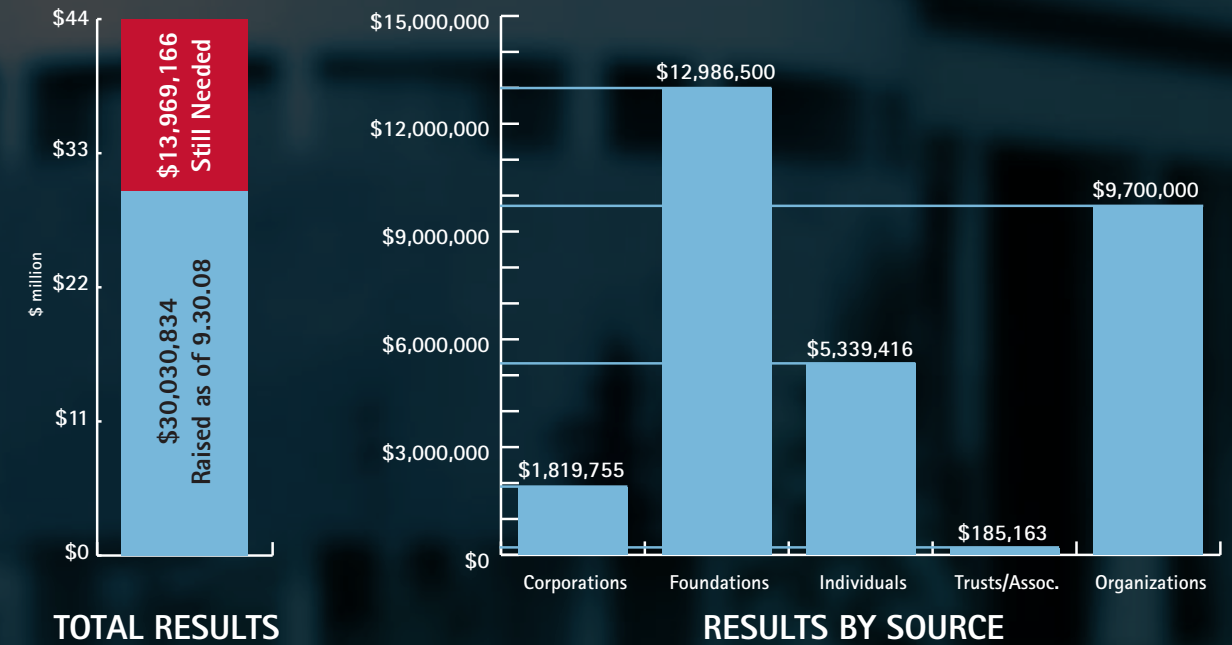
### What are the benefits?

- A donor can transfer up to \$100,000 a year directly from an IRA to a qualified non-profit, like the Dean McGee Eye Institute, and not pay taxes on the funds.
- The amount of the distribution from an IRA is excluded from the donor's income for federal estate tax purposes.
- A donor can count the amount of the distribution made as an IRA Charitable Rollover towards the required minimum distribution.

### What are the requirements?

- The donor must be 70 ½ years of age or older.
- The distribution must go directly from the IRA to the Dean McGee Eye Institute.
- Tax benefits apply to gifts up to \$100,000 per year—tax years 2008 and 2009.
- Gifts must be outright (not to a donor advised fund, support organization, charitable trust or charitable gift annuity).

For more information about this opportunity or other giving opportunities, please contact Lana Ivy, Vice President of Development, 405-271-7803 or e-mail [lane-ivy@dmei.org](mailto:lane-ivy@dmei.org)



## Vision for Tomorrow Capital Campaign Update

Campaign Goal: \$44 million  
Results thru 9.30.08: \$30,030,834  
Endowment Gifts: \$2,041,621

Eye research, patient care and education are top priorities of the campaign. To contribute, complete enclosed envelope and return to the Dean McGee Eye Institute or contact Lana Ivy, Vice President of Development, 405-271-7803.

### Who can benefit?

The IRA Charitable Rollover may be particularly appealing if:

- **You do not need the income from your IRA.** Donors who must take the required minimum distribution but do not need additional, taxable income.
- **You have maxed out your deductions.** A qualified distribution operates separately from the percentage rules that limit the tax benefit of individual charitable giving.
- **You are a non-itemizer.** Instead of taking a distribution from the IRA and realizing income, the donor can simply direct the distribution to the Dean McGee Eye Institute.

### How do I make my gift?

After consulting your financial and tax advisors to see whether the IRA Charitable Rollover is right for you, the steps are as follows:

- Contact your IRA custodian and obtain their directions of how to make a qualified distribution directly to the Dean McGee Eye Institute.
- Provide your IRA custodian with our tax ID number: 73-6109395 and the following contact information:  
**Dean McGee Eye Institute  
Development Office  
Attention: Lana Ivy  
608 Stanton L. Young Blvd.  
Oklahoma City, OK 73104**



**THE SMALLEST LIVING UNIT OF ALL LIVING CREATURES IS CALLED THE CELL.** The average cell is about 10 micrometers (0.0004 inches) in diameter, and the human body is composed of  $6 \times 10^{13}$  or 60 trillion cells. We have many kinds of cells that make up the skin, muscle, bones etc. Groups of cells that perform specific functions, such as breathing, secretion, or digestion, are called organs, and each organ plays an important role in our life. Among the many organs, we have some that are called sensory organs, and each of these organs is designed to receive a specific type of stimulation. Thus we have organs specialized for sight, hearing, smell, touch and taste. Our eyes, one of the sensory organs respond to light rays and convert the energy in the light rays to biological nerve impulses that are carried by the fibers of the nerve cells in the eye to a part of the brain specialized for the perception of visual images, called the visual cortex of the brain.

The retina is the light-sensitive structure of the eye, and acts like the film in a camera. The retina is a highly organized structure made up of 7 layers of cells. There are also seven different kinds of neural cells that make up the retina, two kinds of photoreceptor cells, retinal pigment epithelial cells, bipolar cells, amacrine cells, horizontal cells, and ganglion cells. Each type of cell plays a special role in the processing of the image formed in the retina. We mainly use cone cells for color vision and rod cells for vision in dark and dimly lit areas.

Many retinal degenerative diseases (for example retinitis pigmentosa) show an early loss of rod cells that is followed by loss of cone cells, and this “programmed cell death” is called apoptosis. The induction of cell death is a highly regulated process and can be suppressed by a variety of extracellular signals (growth factors). All these growth factors activate a neuron survival factor, phosphoinositide 3-kinase (PI3K) and the activation of PI3K regulates or blocks the neuronal cell death pathway.

Interestingly PI3K can not regulate on its own, but is regulated through insulin receptors in the rod photoreceptor cells. In other tissues,

“Many retinal degenerative diseases show an early loss of rod cells...”

the insulin receptor is activated by insulin, but in the retina the involvement of insulin is controversial. We made a novel finding that light activates (through the visual receptor, rhodopsin) the insulin receptor which leads to the activation of neuron survival factor PI3K. *...continued on next page...*

Opposite page: Raju V. Rajala, Ph.D. in his lab

# INSULIN RECEPTOR SIGNALING IN THE RETINA



“...a valuable tool to study diabetic retinopathy...”

Dr. Raju V. Rajala with his team of researchers

*...continued from previous page...*

We hypothesize that insulin receptor signaling is vital to the photoreceptor normal functions and also protects the photoreceptors from cell death.

It is well known that defective insulin receptor signaling is a major contributory factor for type 2 diabetes (insulin resistance). Dysregulation of insulin receptor signaling in the central nervous system has been linked to the pathogenesis of neurodegenerative disorders such as Alzheimer and Parkinson disease.

Mice lacking insulin receptors are born with normal features but develop early postnatal diabetes and die with ketoacidosis. Therefore

we have used a cutting edge technology which is called Cre/lox or conditional deletion system and spatially and selectively deleted the insulin receptor gene in the rod photoreceptor cells without affecting its function in the rest of the body. This technique is called tissue- or cell-specific knockout. With this technique we were able to develop mice missing the insulin receptor in the rod photoreceptor cells. The insulin receptor knockout mice do not exhibit any signs of abnormality in the retina when we raise them in regular lighting conditions. However, the insulin receptor survival signaling (decreased PI3K neuronal survival) is significantly reduced in these knockout mice

compared to mice having insulin receptors. Interestingly when we stress these mice with acute light (a technique commonly used to examine the neuroprotective potential of the retina) we observed significant photoreceptor degeneration in mice lacking insulin receptors. This is the first study to demonstrate that insulin receptors are functionally important for rod photoreceptor survival. The significance of these findings is two-fold.

We intend to use this model to study the mechanism of cell death and apply some therapies to these mice and see whether we can prolong the life of the photoreceptors.

The insulin receptor knockout mice would be a valuable tool to study diabetic retinopathy—as insulin resistance is the hallmark of diabetes.

Our long-term goal is to understand the regulation of insulin receptors in the retina. Dysregulation of insulin receptor signaling is a known contributor of diabetic retinopathy, whereas neuronal cell death is widely seen in most retinal degenerations. Understanding the regulation and identification of novel therapeutic agents which modulate insulin receptor function might allow development of therapeutic strategies to protect the dying retinal cells. ■

# telemedicine

## PREVENTING VISION LOSS

**TELEMEDICINE ALLOWS PATIENTS TO VIRTUALLY VISIT WITH DOCTORS.** Using digital images of the eye, telemedicine is a useful tool in the early detection of several eye conditions. One major use is in detecting diabetic retinopathy (DR)—a leading cause of preventable vision loss. While diabetes patients often receive good care for the symptomatic

aspects of their disease, the eyes are too often overlooked until vision changes are permanent.

The prevalence of diabetes is expected to double by the year 2030. “Telemedicine is a way to ensure more patients receive appropriate care that prevents eye complications from diabetes,” said Dr. Lloyd Hildebrand during a



Dr. Lloyd Hildebrand

telemedicine presentation at the 2008 World Ophthalmology Congress in Hong Kong.

While there are excellent treatments for DR—and we know how to identify who is at high risk for vision loss—unfortunately, treatments often don’t reach patients who need them because many patients don’t receive their recommended yearly dilated exam.

Most diabetes patients are managed by primary care physicians, who don’t have the instruments and training to adequately monitor DR. This means patients need to go to an ophthalmologist when they’re asymptomatic—many don’t make it.

According to Dr. Hildebrand, if quality eye care can be delivered where patients get their



Dr. Stephen R. Fransen reviewing patient scans received via telemedicine system

“...a ‘better mousetrap’ to find patients at risk...”

diabetes care using telemedicine, it offers a “better mousetrap” to find the patients at risk for vision loss in time for treatment.

“The clinical trial to validate using the system for DR was done ten years ago with the Chickasaw Nation Health System in Ada, OK. After a decade of use, we’ve tested nearly 90,000 patients for DR,” according to Dr. Stephen Fransen. Using this technology developed by Dr. Hildebrand and Dr. Stephen Fransen from OU’s Department of Ophthalmology, they are expanding its potential use in other diseases such as retinopathy of prematurity and age-related macular degeneration. ■

## Argentinian Research Professor studies at Dean McGee Eye Institute



Dr. Rostein working in DMEI lab

VISITING RESEARCH PROFESSOR, Dr. Nora P. Rostein, worked in Dr. Robert Anderson's lab at Dean McGee for two months studying several aspects of the roles of polyunsaturated fatty acids on the development of retina photoreceptors in culture. Dr. Rostein from Bahia Blanca, Buenos Aires, Argentina says she is very grateful to a Research to Prevent Blindness Travel Grant that allowed her to visit and work in the research department of the Dean McGee Eye Institute. The research team plans to pursue the collaborative work they conducted with Dr. Rostein to answer remaining questions about the roles of polyunsaturated fatty acids in photoreceptors. ■

## professor awarded research grant

A RECENT GRANT FROM the National Eye Institute in the amount of \$400,000 has been awarded to Anne Kasus-Jacobi, Ph.D. Research Assistant Professor, OU Dept. of Ophthalmology, Dean McGee Eye Institute. The title of her study is *Detoxification Role of Retinol Dehydrogenases RDH11 and RDH12*. "We are particularly interested in the role of RDH12 and why its inactivation leads to a severe and early onset of retinal dystrophy," states Dr. Kasus-Jacobi. ■



Dr. Anne Kasus-Jacobi

## 3RD ANNUAL OU VISION WORKSHOP PRESENTS AWARDS FOR OUTSTANDING RESEARCH



Dr. Robert Lavker

On May 30, 2008, the 3rd Annual OU Vision Workshop was held in Oklahoma City. Dr. Robert Lavker of Northwestern University was the esteemed guest.

### The Robert E. Anderson Award

Robert E. Anderson is a professor in the Department of Ophthalmology and the current Director of Research for the Dean A. McGee Eye Institute. This award is given to honor his mentorship and leadership which has been the driving force behind the expansion of research in the Department of Ophthalmology and the Institute. Evaluated for research quality



Todd Wuest

and presentation skills the best judged presentations are awarded the Robert E. Anderson Award. One graduate student and one post-doctoral fellow are selected from papers presented at the annual OU Vision Workshop.



Ashok Kumar Dilly

Todd Wuest, Graduate Student (Dan J.J. Carr, Ph.D. Lab) and Ashok Kumar Dilly, Post-Doctoral Fellow (Raju V.S. Rajala, Ph.D. Lab) received the 2008 Robert E. Anderson Award for Best Paper.

### The Wei Cao Award for Innovation

Wei Cao was an associate professor in the Department of Ophthalmology who passed

away in the fall of 2007 just as his research career was beginning to blossom. The Wei Cao Award for Innovation will be given to the student or postdoctoral fellow whose work is determined by the judges to be the most creative, groundbreaking, or original. The hope is that the Wei Cao Award will foster innovation in the science of our trainees and at the same time acknowledge the extraordinarily creative human represented by the late Dr. Wei Cao.

Srinivas Chollangi (John D. Ash, Ph.D. Lab) received the 2008 Wei Cao for Innovation Award.



Srinivas Chollangi

### The Robert A. Patnode Award

Robert A. Patnode was a long-time Professor of the University Oklahoma Department of Microbiology and Immunology who was highly respected as a mentor, teacher and scientist. The Robert A. Patnode Award is presented to a student for outstanding research in Microbiology and Immunology and is given annually if suitable candidates are available. The award is given for superior academic, research, and leadership qualities. Students near the completion of their program are usually the recipients of this award.

The recipient of the 2008 Patnode Award is Andrea L. Moyer (Michelle C. Callegan, Ph.D. Lab). ■



Andrea L. Moyer

“No eyes that  
have seen  
beauty ever  
lose their  
sight.”

*—Jean Toomer*

*Lake Murray, Oklahoma, Photo Courtesy of Mike Klemme Photography*



• DMEI •  
**invision**

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