"A Masonic Charity"

Knights Templar Eye Foundation, Inc.

(Sponsored by The Grand Encampment of Knights Templar)

SOMEWHERE IN THE WORLD, SOMEONE GOES BLIND EVERY 5 SECONDS

AT LEAST 7M PEOPLE GO BLIND EVERY YEAR

"To improve vision through research, education, and supporting access to care."

From the President

The Knights Templar Eye Foundation, Inc. is pleased to announce the latest publication of our handout booklet. As you look at this publication it briefly reviews the history from our humble start to where we are today. We are very proud of the Knights Templar Eye Foundation and its accomplishments in research to eradicate eye diseases in our children. We provide funding for endowed professorships, research endowments and other programs to ensure the next generation of pediatric ophthalmology doctors. Our foundation is fulfilling the mission to improve vision through research, education, and supporting access to care.

As a result of the hard work of the Eye Foundation staff, our scientific advisory doctors, trustees, officers, and our numerous supporters, such as yourself, the Eye Foundation has grown to 153 million while expending 164 million on research, education, and patient care, awarding 32 million for research grants and 10 million in endowments at five leading ophthalmology research and educational institutions.

We hope you will assist us in our efforts to eradicate pediatric eye disease whether you do it through a planned gift, annual sustaining support, or a one-time contribution.

Sincerely,

Michael B. Johnson

Michael B. Johnson
President

KNIGHTS TEMPLAR EYE FOUNDATION, INC.
CORPORATE
SEAL
MARYLAND
1956

Inquiries & Requests for materials regarding the Knights Templar Eye Foundation, Inc. should be made directly to:

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Office Administrator/Assistant Secretary

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Flower Mound, TX 75028

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Fax: (214) 888-0230
E-mail: manager@ktef.us
Website: ktef.org

The report of the
Knights Templar Eye Foundation, Inc.
as of June 1, 2021.

$164 million has been spent on research, patient care and education.

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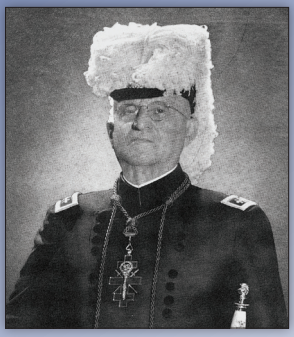
Who are the Knights Templar?...

Today's organization known as the Knights Templar does not claim to be a direct descendant of the ancient order of Knights Templar that was founded during the crusades in the 12th century. The purpose of those crusader knights was to protect pilgrims from danger when on their way to the Holy Land. These men took vows of poverty, chastity, and obedience, and were renowned for their courage in battle. In 1118 A.D., nineteen years after the successful crusade, these Poor Fellow Soldiers of Christ and the Temple of Jerusalem, as they termed themselves, were officially recognized, sanctioned, and given, for their headquarters, a building on Mount Moriah, the site of the Temple of King Solomon. Consequently, they became known as Knights of the Temple, or Knights Templar.

What are Knights Templar doing today?...

Eight centuries after the crusades, the current organization is still dedicated to assisting those in need and in using its efforts for the prevention of blindness. Because sight is a most precious gift, *The Knights Templar Eye Foundation* is often referred to as *"A Great Humanitarian Charity."*

History of Foundation



Walter Allen DeLamater
Most Eminent Grand Master - 1958
First President and Founder of
The Knights Templar Eye Foundation

A history of the Knights Templar Eye Foundation must begin with knowing something about its founder, Walter Allen DeLamater, a truly remarkable man. He was born in New York City, April 18, 1880, son of Washington Irving and Clara DeLamater, descendants of the DeLamaters who, under the name of DeLamater Iron Works, were the builders of the Monitor of the historic Monitor-Merrimac Battle during the War between the States. DeLamater, Sr. was the first president of the Village of Rhinebeck, New York, founded in 1688.

Walter DeLamater's illustrious career covered a broad range of interests. He was a soldier with a brilliant WWI record in both combat and important staff assignments. He was an executive in a broad range of industries and businesses focusing primarily on matters of organization, management, research and development, sales promotion and was a public relations consultant.

With all these diverse fields of interest in which he excelled, one ponders his decision to choose the Great Order of Templary to be his life's work.

Young DeLamater was educated in New York City public schools and St. Mark's private school. In 1901, at the age of 21, he married Marie West, who died March 31, 1940. They had two children, Marie Lillian (Mrs. Herbert Norton) and Walter, Jr.

His public career began March 2, 1900, when he enlisted as a Private in the 71st Infantry, New York National Guard. He became the only person in the Regiment's long history, dating back to 1850, to rise from a Private to a Major General. In 1916 he served in the Mexican Border affair for which he received special commendation for action under extremely trying circumstances.

Remaining in the service through WWI, he was engaged in several difficult campaigns in France, received a number of awards, decorations and citations for exceptional bravery and distinguished service under heavy shell fire without regard for his personal safety, repaired roads, opening them to traffic, and supervised the evacuation of wounded under deadly shell fire.

He had been promoted from Major to Lieutenant Colonel in the 106th Infantry. Soon he was transferred to the 79th Division in France, and became Assistant Chief of Staff, then to the 77th Division, Chief of Staff and a full Colonel by 1920.

By the end of the war he had received numerous awards and citations for exceptional bravery as well as for brilliant staff work many times performed under deadly shell fire. For this he was awarded the Distinguished Service Medal. He had been promoted to the rank of Major General.

Although a Republican, Major General Walter A. DeLamater, RET. then a Soldier Citizen, upon request by Major Fiorello LaGuardia, approved by President Franklin D. Roosevelt was appointed Federal Civil Works Administrator of New York City. Several other important civilian assignments followed.

His Masonic Career

He was raised a Master Mason in Halteman Lodge #412 at Middletown, New York, July 26, 1917. As might be expected, this extraordinarily energetic and talented individual joined and rose rapidly in the many degrees, orders, and rites of Masonry.

He was Knighted in Yonkers Commandery #47, New York State, March 17, 1921, and moved up rapidly through the lines. He served as Right Eminent Grand Commander, State of New York, 1934, and was elected to the Grand Encampment Line in 1937.

He told of being stricken and paralyzed in 1941 for a period of two months from a clot on the brain. During those two months the doctors said it was impossible for him to live and there wasn't one chance in a million of his doing so. After the physicians gave him up, why then and for what purpose was he saved? It was during the Grand Conclave in 1946 that we first heard the story of Sir Knight DeLamater's vision he had while still anesthetized for an operation. In his vision, heavenly bodies, angels, admonished him that if he lived he must do something to heal the blind as Jesus had done when on earth. After his miraculous recovery from near death he firmly believed that his recovery must have been for this divine purpose.

Prior to the September 20-26, 1952, Triennial Conclave in New Orleans, Louisiana, then Deputy Grand Master Walter Allen DeLamater, began his campaign in earnest. With all the skills of a public relations consultant he launched his campaign promoting Knights Templar Eye Hospitals in connection with existing hospitals throughout the United States. Thus fulfilling the admonitions of his vision "to heal the blind."

The idea of a hospital or hospitals for the blind lead to many long debates and bitter arguments, prior to and during the Grand Encampment meeting. Arguments were still going on in the halls and cloakrooms before the meeting was called to order by Most Eminent Grand Master William Catron Gordon. At the conclusion, the original resolution was amended to include instead of " Eye Hospitals" the words "Eye Foundation". After a vote, the Grand Master declared "the chair rules that the resolution is adopted by the required three-quarters vote", but following a break another 3 hours of debate resulted in around 25 additional proceeding pages containing resolutions and clarifications which finally resulted in a final and conclusive vote which again passed by three-quarters vote.

From the very beginning, a Medical Advisory Council consisting of able and dedicated ophthalmologists from all over the country guided the Foundation. For a good many years funds for research were granted somewhat haphazardly on recommendations from knowledgeable Sir Knights but without particular focus. This would be corrected in 1985 when the distinguished Dr. Alfred Edward Maumanee, Jr., Director of the Wilmer Eye Institute at Johns Hopkins University in Baltimore, established a Scientific Advisory Committee. The Scientific Advisory Committee consists of five distinguished ophthalmologists from throughout the United States. This committee screens all proposals for grants for research in pediatric ophthalmology.

(Taken from "A History of the Founding of the Knights Templar Eye Foundation", written by the late Edmund F. Ball K.G.C., H.P.G.M. and Trustee of the Foundation.)

Knights Templar Eye Foundation, Inc.

Where we are today . . .

The Knights Templar Eye Foundation, incorporated in 1956, is a charity sponsored by the Grand Encampment of Knights Templar. The Foundation is governed by a Board of Trustees comprised of the six elected officers of the Grand Encampment, all Past Grand Masters of the Grand Encampment, and six trustees-at-large elected from and by the membership for a term of nine years. It is exempt from federal income taxation under Section 501(c)3 of the Internal Revenue Code and contributions made to the Foundation are deductible by donors.

The original mission of the Foundation was "to provide assistance to those who face loss of sight due to the need for surgical treatment without regard to race, color, creed, age, sex or national origin provided they are unable to pay or receive adequate assistance from current government agencies or similar sources and to provide funds for research in curing diseases of the eye."

On December 31, 2010, the Knights Templar Eye Foundation, Inc., by direction of the board, shifted the Foundation's focus and adopted a new mission statement "to improve vision through research, education, and supporting access to care." The Foundation now only participates in direct patient care through the Seniors Eye Care Program in partnership with EyeCare America and the Foundation of the American Academy of Ophthalmology. With this change, the Foundation is benefitting untold millions in generations to come through grants that support research and education. Our research dollars have helped develop new, non-surgical, treatments for strabismus (crossed eyes) and ophthalmologists have told us that our efforts in funding pediatric ophthalmology research have been the primary reason that there are fewer and fewer surgeries for strabismus. The Knights Templar Eye Foundation, Inc., annually announces its call for research grant applications. The Foundation invites eligible investigators to submit applications for pediatric ophthalmology research grants for the award period which normally runs from July 1 to June 30. From the applications received, the Scientific Advisory Committee recommends to the Trustees which requests should be funded.

Since its inception, the Foundation has expended over $164 million on research, patient care, and education. Research grants totaling in excess of $32 million have been awarded to researchers working in the fields of pediatric ophthalmology and ophthalmic genetics.

Pediatric Ophthalmology Grants

The Knights Templar Eye Foundation, Inc. is committed to support research that can help launch the careers of clinical and basic researchers focused on the prevention and cure of potentially blinding diseases in infants and children. Grants supported by the Knights Templar Eye Foundation, Inc. are awarded to impact the care of infants, children, and adults. Clinical and basic research on conditions that may be potentially preventable or correctable such as amblyopia, cataract, glaucoma, optic nerve hypoplasia, nystagmus, retinopathy of prematurity, and hereditary diseases that occur at birth or within early childhood, such as retinoblastoma, is encouraged. Proposals for support of basic research on eye and visual system development also are welcome.

Each year the Knights Templar Eye Foundation, Inc., invites eligible investigators to submit applications for pediatric ophthalmology research grants:

Career-Starter Research Grants
up to $70,000 per grant. Applicants for these grants must be at the beginning of their academic careers and must have received an M.D., Ph.D., or equivalent degree.

Competitive Renewal Grants
up to $70,000 per grant to extend the original grant project for one additional year when the data collected from the original grant is compelling enough to apply.

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3201 Cross Timbers Rd., Bldg. 4 - Suite 300
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Sources of Funds

Funds for the operation of the Knights Templar Eye Foundation (KTEF) are obtained from an annual assessment of each Knight Templar, contributions made by Masons from throughout the Masonic Family, fund-raising activities, memorials, wills and bequests, and donations from endowment funds or similar sources.

Special award programs for contributions include:

- ***Life Sponsor** – Available to Sir Knights (members of a Commandery) who donate $30.
- ***Associate Patron** – Available to any person or organization that makes a donation of $50.
- ***Patron** – Available to any person or organization that makes a donation of $100.

  **Payments for Life Sponsor, Patron, and/or Associate Patron will exempt your Grand Commandery from further assessment to the Knights Templar Eye Foundation, Inc.*
- ****The Grand Master's Club** – One Thousand Dollars enrolls you as a concerned individual in the humanitarian work of the Foundation. The Grand Master's Club is available to all individuals, whether Templars or others, but not to organizations. Your membership in the Grand Master's Club entitles you to a **lapel pin**, an **engraved wall plaque and the Crusaders Cross issued for the first 5 Grand Master Clubs**.
- ****The Grand Commander's Club** – You can enroll in the Grand Commander's Club by sending in your first installment of $100.00 or more. At the time of your enrollment, you will receive a **lapel pin** and **wallet card** (signifying your membership). In addition, members of the Grand Commander's Club pledge to make annual contributions of $100.00 or more for nine more years until the total of $1,000.00 is reached. Once contributions total $1,000.00, the individual is enrolled in the Grand Master's Club.

  ***The **Grand Master's Club** and **Grand Commander's Club** are available to all individual Templars or others, but not to organizations.*
  (As of 2/1/2015 once 25 Grand Master's Clubs are reached, a Sword of Merit will be awarded.)
- **Memorial Donations** – These donations are of any amount in memory of a deceased person. A form is provided on the donor envelope.
- **Honorary Gifts** – These donations are given in honor of a living person in recognition of service or friendship.
- **Wills and Bequests** – Anyone who believes in the service provided by the Knights Templar Eye Foundation, Inc. may leave a bequest to the Foundation in their will.

- **Sight Crusader** – Anyone who designates the KTEF in their will and provides suitable notification to the Knights Templar Eye Foundation, Inc. will be listed in the Gold Book and designated a Sight Crusader.
- **The Permanent Donor Fund** – This unique fund gives perpetual recognition to any person or organization that becomes a recipient of the Golden Chalice or Sword of Merit. Recognition is given by presentation of the Golden Chalice or Sword of Merit and the name and amount contributed appear in the Annual Report on a continuing basis. Additional donations by the individual or organization in the amount of $1,000 or more will be acknowledged in future annual reports. The donor may be an organization, foundation, corporation, or individual.
- **The Golden Chalice** – The Chalice is awarded in recognition of a single donation of $10,000 or more. The donation may be applied to the Permanent Donor Fund.
- **The Grand Master's Sword of Merit** – This coveted award is given in recognition of a single donation of $25,000 or more. The donation may be applied to the Permanent Donor Fund.

The Golden Chalice

The Grand Master's Sword of Merit

Endowed Professorship Awarded

In 2011, the Board explored the feasibility and desirability of establishing endowed professorship programs focusing on ophthalmic education at leading research universities and teaching hospitals. Preliminary groundwork proved constructive and in 2012 the President formed a committee of Board members to further explore this idea. This concept was approved and the endowed professorship program was subsequently created. In 2020, the Board expanded the endowment program by authorizing funding for research endowments. Research endowments support research programs as a whole and increase the number of investigators who benefit from the endowment.

Each endowed professorship and research endowment is awarded $2 million which is matched dollar for dollar by the partner institution. Each one-time investment provides a perpetual benefit to both the Foundation and the recipient institution and is consistent with the Foundation's mission statement.

Research endowments create new partnership legacies for the Foundation. As the Foundation is credited on all publications that result from endowment funding, it receives valuable publicity and recognition which serve to further its mission.

MAYO CLINIC

AUGUST 2013
"Knights Templar Eye Foundation Inc., Professor in Ophthalmology Research"
Michael Brodsky, M.D.
The Mayo Clinic | Campuses in: Rochester, MN, Phoenix, AZ, Jacksonville, FL

WILMER EYE INSTITUTE

AUGUST 2015
"Knights Templar Eye Foundation Inc., Professor of Ophthalmology"
Thomas McCarthy Bosley, M.D.
The Wilmer Eye Institute of Johns Hopkins University | Baltimore, MD

BCM Baylor College of Medicine

AUGUST 2017
"Knights Templar Eye Foundation Inc., Presidential Chair in Ophthalmology"
Wei Li, Ph.D.
Baylor College of Medicine | Houston, TX

VANDERBILT UNIVERSITY MEDICAL CENTER

JANUARY 2021
"Knights Templar Eye Foundation Directorship in Pediatric Vision Research"
Honoring Dr. John S. Penn, Ph.D.
Vanderbilt University | Medical Center | Nashville, TN

Children's Hospital LOS ANGELES

JANUARY 2021
"The Knights Templar Eye Foundation Research Endowment"
The Vision Center
Children's Hospital Los Angeles | Vision Center | Los Angeles, CA

Knights Templar Eye Foundation, Inc.

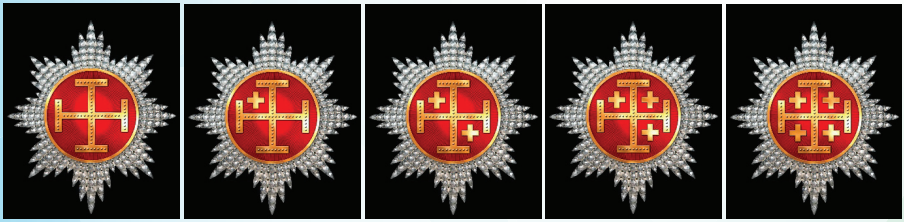
The Crusader's Cross

The Knights Templar Eye Foundation, Inc. has a number of donation programs most with associated recognition programs. One of our primary contribution programs is the Grand Master's Club. These are contributions of $1,000 which can be accumulated over time. These accumulations are known as the Grand Commander's Club ($100 each until $1,000 is reached). Currently Grand Master's Club donors receive a plaque, lapel pin and now to thank our donors we have introduced a new jewel, the Crusader's Cross, for those who are in the Grand Master's Club.

The Jewel comes in 5 levels, $1,000, $2,000, $3000, $4,000 and $5,000 or above. The $1,000 level has the single, larger cross in the center. Each additional $1,000 is identified with an additional small cross in a quadrant until at $5,000 or above all four quadrants are occupied to complete the emblem known as the Crusader's Cross also known as the Cross of Jerusalem. The various levels of the Crusader's Cross are displayed on this page.

Because this is one of the Grand Encampment philanthropies. As such, it is a Grand Encampment jewel and may be worn on the right side of the uniform. However, generally all medals are worn on the left of the uniform as space permits.

Only the Grand Master's Club donations given by the individual will count toward this award.



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E-mail: manager@ktef.us

Fund Raising Can be Fun

There are numerous ways to raise funds for the Annual Voluntary Campaign of the Knights Templar Eye Foundation, Inc. You can be creative, put on your thinking cap and ask other Sir Knights to get involved. One project may raise enough to reach the Goals set for the Campaign or more.

PURPOSE OF THE ANNUAL VOLUNTARY CAMPAIGN

The purpose of the Annual Voluntary Campaign is to supplement the income of the Knights Templar Eye Foundation, Inc. through bequests, gifts, endowments and other sources so that sufficient funds are available to provide the assistance as stated in the Mission Statement of the Knights Templar Eye Foundation, Inc. The Voluntary Campaign runs from October 1st to April 30th annually. Funds received in the office at any time throughout the year will be credited to a campaign. It should be noted that bequests and wills are counted for credit of the Commanderies or Grand Commanderies during each Campaign.

Commanderies reaching the goal of $10.00 per member or more will receive a plaque and seal, and those Commanderies reaching a contribution of $5.00 per member but less than $10.00 per member will receive appropriate recognition for their efforts.

THE QUESTION IS OFTEN ASKED: "HOW CAN WE RAISE FUNDS?"

FIRST METHOD (The Easy Way)

Even though it may seem painful to some Sir Knights, an out of pocket or check donation from ALL SIR KNIGHTS requires the least effort. It does require a charitable attitude which we have all committed ourselves to in the Order of the Temple. The Knights Templar Eye Foundation is THE RESPONSIBILITY OF EVERY SIR KNIGHT. This method is almost painless. "Your attitude will determine your altitude."

SECOND METHOD (Special Approach)

Donations from outside of our membership may be accomplished with a tactful approach. These sources are businesses, fraternal organizations, foundations, and generous individuals.

THIRD METHOD (Efforts of many)

Projects require special effort, dedication, and enthusiasm of many Sir Knights who enjoy fund raising and believe in the purpose. Fun and Fellowship are part of working on projects. Give it a try.

SOME FUND RAISING METHODS FOR CONSIDERATION

1. Dinners before Conclaves
2. Public Dinner/Dance/Entertainment
3. A “Big Band” Dance
4. Hoagie Sale
5. Flea Market
6. Auction
7. Jewelry Sale
8. Fish Fry
9. Spaghetti Dinner
10. Bake Sale
11. Candy Sale
12. Fruit Cake Sale
13. Pancake/Sausage Breakfast
14. Plant Sale
15. Shirt Sale
16. Baseball Cap Sale
17. Fruit Sale
18. A collection following a Conclave

Your imagination will provide many other ways and methods to provide funds so “That Others May See.”

AN IDEA FOR 100% PARTICIPATION:

Pass a collection plate at your Christmas Observance as you would at any other religious service. By doing this, every Commandery in the Grand Encampment will have participated in the Voluntary Campaign before the end of December. PLEASE EXPLAIN THIS TO THE MEMBERS AND TRY IT. YOU WILL BE SURPRISED AT THE SUCCESS.

Knights Templar Eye Foundation, Inc.

Supports the ONE® Network:
Pediatric Ophthalmology Education Center

In the pursuit of our mission to improve vision through research, education and supporting access to care, your Knights Templar Eye Foundation has partnered with the American Academy of Ophthalmology, the largest ophthalmic organization in the world, to create a Pediatric Ophthalmology Education Center. This Center, a part of the Academy's Ophthalmic News and Education (ONE®) Network, will be comprehensive in scope, and global in reach.

Our support of this global educational resource will be an important step toward addressing a large and growing burden of vision loss. More than 285 million people globally are blind or visually impaired, and at an estimated economic cost of $3 trillion annually. Childhood blindness is among the top five causes of visual loss worldwide. An estimated 500,000 children become blind annually, and up to 60 percent of these children in developing countries are thought to die within one year. Nearly half of all blindness in children is due to avoidable causes that could be prevented with interventions using existing knowledge.

The purpose of the Pediatric Ophthalmology Education Center (Education Center) is to ensure a strong educational foundation for current and future generations of ophthalmologists, and by doing so, eliminate a lack of ophthalmic education as a contributor to global blindness. It will speed the adoption of new knowledge, technology and treatments. No such resource currently exists, even though the pace of innovation is increasing, and there is a real and growing need for the Education Center among pediatric ophthalmologists.

ONE® NETWORK

THE OPHTHALMIC NEWS & EDUCATION NETWORK

The Education Center will enable pediatric ophthalmologists throughout the United States and worldwide, including countries where we have Subordinate Commanderies, to access a single online resource of the highest quality content, vetted by experts. In combination with an extensive surgical simulation library, this virtual skills transfer center will address the needs of residents and fellows, mid-career practitioners, and international training programs in less-developed countries. The Education Center will teach:

- Basic science principles
- Pathology and pathogenesis of disease
- Specific disease content
- Diagnosis and differential diagnosis
- Medical and surgical management
- Risk management
- Complications management
- Patient instructions
- Outcomes assessment

Visit: www.aao.org/one

**In recognition of our support,
the American Academy of Ophthalmology
has named the ONE® Network
pediatric ophthalmology subspecialty center:**

**The Knights Templar Eye Foundation, Inc.,
Pediatric Ophthalmology Education Center**

in perpetuity

By supporting the Pediatric Ophthalmology Education Center within the American Academy of Ophthalmology's ONE® Network, we have a real opportunity to make a difference and improve the outcomes in eye care for children worldwide.

eyecareAmerica®

The Foundation of the American Academy of Ophthalmology

EyeCare America provides eye care at no cost to those who qualify through volunteer ophthalmologists (Medical eye doctors) nationwide. To see if you qualify, visit their OnlineReferral Center at www.aao.org/eyecareamerica

WHY One-in-three Americans has some form of vision impairing eye disease by age 65, and nearly three million people of all ages have glaucoma. Most people do not know it either because there are often no early warning symptoms or they assume that poor sight is a natural part of growing older. Detecting and treating eye disease early through annual, dilated eye exams can prevent unnecessary vision loss and preserve sight well into the future.

WHO Through its Online Referral Center, EyeCare America, one of the country's leading public service programs provides eye care through a pool of more than 5,000 volunteer ophthalmologists. Since 1985, EyeCare America has helped more than 2 million people. Ninety percent of the care provided is at no out-of-pocket cost to the patient. Through its Online Referral Center, the Seniors EyeCare Program offers two types of services based on qualifications.

Two programs offered:

1. The Seniors Program connects eligible seniors 65 and older with local volunteer ophthalmologists who provide a medical eye exam often at no out-of-pocket cost, and up to one year of follow-up care for any condition diagnosed during the initial exam, for the physician services.
2. The Glaucoma Program provides a glaucoma eye exam at no cost to those who are eligible and uninsured. Those who are eligible and insured are billed normal office procedure, and responsible for any co-payments. (This is an awareness program to provide a baseline glaucoma eye exam to those who may not be aware they are at increased risk).

Eligibility for each program:

Seniors Program:

- U.S. citizen or legal resident
- Age 65 or older
- Not belong to an HMO or have eye care benefits through the VA
- Not seen an ophthalmologist in three or more years

Glaucoma Program:

- U.S. citizen or legal resident
- Not belong to an HMO or have eye care benefits through the VA
- Not had an eye exam in 12 months or more
- At increased risk for glaucoma, determined by your age, race and family history

SERVICES THAT ARE **NOT** COVERED

- Additional services necessary for your care such as, hospitals, surgical facilities, anesthesiologists and medications, are the patient's responsibility and beyond the scope of EyeCare America services. The ophthalmologist is a volunteer who agrees to provide only services within these program guidelines.

EYEGLASSES ARE **NOT** COVERED:

- EyeCare America provides medical eye care, only. **The program does NOT provide eyeglass prescriptions or cover the cost of eye glasses. If you are concerned about the cost of these items, please discuss this with the doctor BEFORE the examination, or visit our eye glasses resources webpage.**

ADDITIONAL REFERRALS:

- If you were eligible for the Seniors Program, and require a re-referral to another ophthalmologist for specialty care, you or the EyeCare America volunteer ophthalmologist **MUST** contact EyeCare America in order to continue receiving care through the program. We may be able to locate another EyeCare America volunteer to provide the care.

HOW	Visit **www.aao.org/eyecareamerica** for more information or to see if you qualify for a referral to one of EyeCare America's 5,000 volunteer ophthalmologists nationwide.
EXCLUDED	Eyeglasses, prescription drugs, hospital services, and fees of other medical professionals
CONTACTS	Christie L. Morse, MD -- Chair, EyeCare America ECA staff 877-887-6327; Fax 415-561-8567, PO Box 429098 San Francisco, CA 94142

Visit: www.aao.org/eyecareamerica

EyeCare America is co-sponsored by the Knights Templar Eye Foundation, Inc., with additional support provided by Alcon and Regeneron. EyeCare America is endorsed by state and subspecialty ophthalmological societies.

A public service program of the American Academy of Ophthalmology, EyeCare America's mission is to reduce avoidable blindness and severe visual impairment through education and public service.

Knights Templar Eye Foundation, Inc.

How to join the Grand Commander's or the Grand Master's Clubs

Any individual may send a check in the amount of $100 or more specified for the purpose of beginning a Grand Commander's Club membership and made payable to the Knights Templar Eye Foundation. This initial contribution will begin your Grand Commander's Club membership. In addition, members of the Grand Commander's Club pledge to make annual contributions of $100 or more. Once contributions total $1,000, the individual is enrolled in the Grand Master's Club. Membership is open to individuals only, and Commandery Credit is given for participation.

Qualified Charitable Distributions

Congress has now made the qualified charitable distribution (QCD) option permanent for those who wish to make direct contributions from their IRA to charity. The tax law allows individuals required to make minimum distributions due to age to transfer up to $100,000 a year from their IRA to a qualified charity. This distribution counts toward their required minimum distribution but isn't added to their adjusted gross income the way a normal IRA distribution is. This can provide a tax savings of up to 40% depending upon an individual's tax situation. Please discuss with your tax professional whether this option could benefit you in your charitable and retirement planning.

Planned Giving – Create a Charitable Legacy

Your Foundation now has a full web site dedicated to Planned Giving which you can access from our web site, shown at the bottom of this page. So if you're thinking of ways to make a lasting legacy for yourself please check out the tab on the home page that says "Planned Giving". Leaving your mark on the future is so simple with a gift in your will. To leave a gift in your Will or Trust it is as easy as asking your attorney to include a sentence that says:

> I bequeath (lump sum) or (%) of my estate to:
> Knights Templar Eye Foundation, Inc. (address shown below)

Knights Templar Eye Foundation, Inc.
3201 Cross Timbers Rd., Bldg. 4 - Suite 300
Flower Mound, TX 75028

Telephone: (214) 888-0220
Fax: (214) 888-0230
E-mail: manager@ktef.us

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Scientific Advisory Committee Meeting

Pediatric Ophthalmology Grant Review 2021

Annually the Knights Templar Eye Foundation holds a meeting mid-March in Dallas with the officers and trustees of the Foundation with ten doctors specializing in pediatric ophthalmology from many leading hospitals and research institutions throughout the country to review the applications and recommend which applications based on the merits of the proposal should be funded with a grant.

Annually this meeting takes place in person but because of the evolving COVID-19 (Coronavirus) pandemic this is the second year this meeting has been held through ZOOM.

The meeting started at 9:30am CST and concluded at 4:00pm CST – our conference allowed everybody to view and share our PC screen so they could track the scoring of grants as they were recorded after each grant was discussed in detail.

Our meeting ended with twenty-eight total Competitive Renewal & Career Starter grants for a total of $1,957,897 that were recommended by the SAC doctors and later that night approved by the

KTEF SAC committee.

CHECK PRESENTATIONS / WEBSITE UPDATE

Because of the pandemic we are sorry to say that we will not be making personal presentations of the checks but instead will be mailing the checks directly to the grant recipients. Our website ***www.ktef.org/grants*** has a complete list of the grants that were approved along with the specific research.

Ashwath Jayagopal, Ph.D.

Section Head, Ophthalmology Division, Roche Pharmaceuticals AG

The Importance of KTEF funding

I recall very fondly the year I received a Knights Templar Eye Foundation grant, as that award enabled me to dedicate my career toward the prevention and treatment of childhood blindness. As a biomedical engineer, my career goal has always been to develop solutions for treating patients. Historically, biomedical engineers have made contributions to medicine that we see every day, including cardiac pacemakers, prosthetics, MRIs, and robotic surgery. After obtaining my undergraduate degree from Vanderbilt University in this field in 2003, I wanted to sharpen my engineering skills with a Ph.D. so I could hopefully make a mark of my own, to develop the next big thing in medicine.

In graduate school, my mentor was John Penn, Ph.D.**, who himself was once a Knights Templar Eye Foundation Awardee when he began his career. He wanted me to apply my engineering skills to a difficult problem in ophthalmology: drug delivery to the eye. When drugs are delivered to the eye, a needle is inserted and the injected drug is exposed to the entire eye. Therefore, both diseased and healthy tissues receive the drug. This is particularly a problem for treating a major cause of childhood blindness, called Retinopathy of Prematurity (ROP). In ROP in newborns, who at this stage are still developing their eyes' blood supplies, some of the vessels that develop are abnormal, and if this abnormal vessel growth is not corrected, some patients can experience irreversible vision loss. However, in the newborn eye, many blood vessels, which are growing normally, can be adversely affected if any drugs are injected, since the drugs are designed to combat blood vessel growth and cannot distinguish between healthy vessels and abnormal, diseased ones.

To address this problem, Dr. Penn wanted me to engineer the surface coating of drugs with polymers, in order to make the drugs "smarter," such that the drug could only bind to abnormal vessels and correct them, while leaving healthy blood vessels alone. I proposed an engineering strategy for achieving this goal, and Dr. Penn helped me land a faculty position at the Vanderbilt Eye Institute and gave me a laboratory next to his in order to test my drug delivery strategy. He suggested that, like him, I ask the Knights Templar Eye Foundation to obtain financial assistance for developing the ROP treatment strategy so that I could prove it works. The Sir Knights and their families came through with a generous grant which enabled me to prove that targeted drug delivery can be achieved in ROP. Seven years later, I am now a head of R&D for a major drug company, Roche Pharmaceuticals in Switzerland, and it hired me to further develop my drug delivery strategy in order to make smarter drugs for diseases like ROP. Thanks to the KTEF, my dream of developing a new therapy to stop childhood blindness from ROP is a very tangible reality. I will never forget the pivotal role that the Foundation played in my career development, and I am excited to make a substantial return on its investment in the form of new treatments that will improve clinical outcomes for children facing vision loss.

** *John S. Penn, Ph.D. as referenced above is currently Vice Chair of the Department of Ophthalmology and Visual Sciences at Vanderbilt University and Chair of the Knights Templar Eye Foundation Scientific Advisory Committee.*

John S. Penn, Ph.D.

Vice Chair of the Department of Ophthalmology and Visual Sciences at Vanderbilt

In this article Dr. Penn outlines what effect KTEF funding has had on the development of his career.

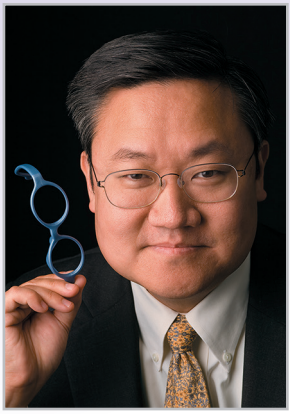
In 1986 I was an assistant professor of ophthalmology at the Cullen Eye Institute at Baylor College of Medicine, and I was just embarking on my research career. I was interested in a particularly tragic form of blindness known as retinopathy of prematurity or ROP. This condition is tragic because it blinds premature infants at the very onset of life, before they have an opportunity to appreciate the wonder of their visual surroundings. At the time we didn't know much about how ROP developed in infants or how it progressed to its blinding form. I applied to the Knights Templar Eye Foundation for two years of financial support, and I used that support to develop an animal model of the ROP condition so its pathogenesis could be investigated. Two years later, when my KTEF funding ended, I submitted an application to the National Eye Institute of NIH, relying on the model I'd developed with KTEF support. In my NEI application, I proposed experiments to better understand the onset and progression of the ROP condition. I was fortunate enough to receive NEI funding for that project, and I'm proud to say that grant has been renewed multiple times and is now in its 28th year of consecutive funding. That simply would not have happened if not for the Knights Templar grant. Our findings, first in Houston, then in Little Rock at the University of Arkansas for Medical Sciences and finally in Nashville at Vanderbilt University where I've been for the last 15 years, and those of other labs during this nearly three-decade period, have altered the way in which premature infants are cared for and the way in which ROP is treated. And I'm proud of that legacy and appreciative of the pivotal role that the KTEF played in it.

The primary pathologic feature of ROP is abnormal capillary growth in the retina of the eye. The ROP model I developed proved to be applicable to abnormal capillary growth in a wide variety of non-ocular tissues and diseases. So, the model became a valuable tool for use beyond the realm of eye disease….for studying these other conditions and for testing pharmacotherapies to address them. Over the last three decades, we've used the model to conduct drug efficacy trials in partnership with the pharmaceutical industry, and this activity has contributed to the development of a number of drugs that are on the market today.

Thus, KTEF funding had a clear and direct impact upon my early professional development and on the success of my research program. Also, it led to findings that had a significant impact on patient care in a particularly vulnerable population, tiny infants. I believe that my experience can serve as an example of what the KTEF can do for young vision scientists throughout the country. I know that's the case, because KTEF funding has catapulted the careers of four of my trainees, each of whom have gone on to make their own mark in vision science.

Thomas C. Lee, M.D.

Director, Vision Center
Children's Hospital Los Angeles
Member of the Knights Templar Scientific Advisory Committee



When I think of the impact the Knights Templar Eye Foundation has had on my career, I am reminded of my high school motto, ("Finis origine pendet") which is Latin for "The end depends upon the beginning." Early events can have a profound impact on the ultimate direction we take. In my case, receiving a Knights Templar Eye Foundation grant was one such event.

Growing up in Minnesota, I was sure I would become either a farmer or an astronaut. Little did I know what the future would have in store for me. My education took me out of Minnesota to Johns Hopkins in Baltimore for college, then further north to New York City where I went to medical school at Cornell and then finally up to Boston where I completed a retina fellowship at Harvard. During that journey, I knew that to create a better future, we needed to discover new treatments that would help us in our fight against childhood blindness. In my case, I focused on a hereditary cancer, retinoblastoma, which occurred in the eyes of newborn babies. In 1998, I was awarded a Knights Templar Eye Foundation grant to study the fundamental aspects of this blinding cancer. Through this work I realized that there was much more we could do to protect childhood sight. Since then, I have devoted my life to this cause, and now as Director of the Vision Center at Children's Hospital Los Angeles, I oversee seven doctors who are all equally dedicated to eradicating childhood blindness.

This path I took all started with a simple grant application 14 years ago to the Knights Templar Eye Foundation, and I am very grateful for the generosity of all of the members and their families for supporting doctors and scientists like myself. Our motto at the Vision Center is that every child should be able to see a sunset. Through the support from the Knights Templar Eye Foundation, we are now closer to making that a reality.
Thomas C. Lee, M.D.

Knights Templar Eye Foundation, Inc.

A Predictive Medicine Approach to Childhood Blindness

David Cobrinik, MD, Ph.D., Associate Professor of Ophthalmology and Biochemistry & Molecular Medicine, The USC Roski Eye Institute and Norris Comprehensive Cancer Center, Division of Ophthalmology, Children's Hospital Los Angeles and a member of the Knights Templar Eye Foundation Scientific Advisory Committee (KTEF).

As indicated I am a member of the KTEF Scientific Advisory Committee for the past five years and a member of a team of childhood blindness researchers at Children's Hospital Los Angeles (CHLA). However, I was not always a vision researcher. In college, my research focused on genes that cause tumors in plants. This got me interested in understanding how genes cause human diseases, and I continued studying cancer because that was the first area to which I was exposed. After graduate school at Case Western Reserve University, I took a postdoctoral position in an MIT laboratory that was studying a childhood eye cancer called retinoblastoma. They and others had been in a race to clone the gene that causes retinoblastoma, and by the time I arrived the challenge had turned towards understanding how this gene causes the eye cancer in children. Continuing as a faculty member at Columbia University, I realized that we had to understand the retinal origin of retinoblastoma in order to develop preventive strategies. Around this time I met Dr. Tom Lee, who passionately shared this interest and recruited me to pursue this at Cornell Medical School. As a pediatric ophthalmologist, Tom also enlisted me in efforts to study childhood blindness more broadly. He later recruited me to join the Vision Center at CHLA and the KTEF scientific board. This increased my understanding and appreciation of important childhood blinding conditions.

Of late, these experiences have enabled me to participate in the CHLA team that aims to model inherited retinal dystrophies (the main genetic cause of childhood blindness) and curative genetic approaches. (See below picture for team member details.) The team seeks to develop a predictive medicine approach that was initiated by Dr. Lee, in which a blinding disease can be modeled and a therapy developed in the interval between the first detection of the condition and the irreversible retinal damage. Unfortunately, there is no one-size-fits-all cure, so we aim to tailor approaches to the unique blinding mutations in each child. I am privileged to work with the CHLA team and the Knights Templar Eye Foundation in this endeavor - to save the vision of every at-risk child, one child at a time. Time is short and there is much to do.

David Cobrinik

CHLA Predictive Medicine Team members from left: David Cobrinik MD, Ph.D.; Jennifer Aparicio Ph.D.; Aaron Nagiel MD, Ph.D., and team originator Tom Lee MD, Additional members Jesse Berry MD and Paula Cannon Ph.D. (not shown).

Bibiana Jin Reiser, M.D., M.S.

Associate Professor of Ophthalmology at USC Roski Eye Institute
Director of Cornea and Glaucoma Services at Children's Hospital Los Angeles

The Knights Templar Eye Foundation, Inc. grant was a game changer for me.

Dr. Bibiana Jin Reiser, an Associate Professor of Ophthalmology at USC Roski Eye Institute and Director of Cornea and Glaucoma Services at Children's Hospital Los Angeles, and is a former KTEF grant recipient.

As I was finishing up my last training year on my way to becoming a cornea and refractive surgeon for adults, my mentor suggested that I do a year in pediatrics. In order to be the best, he said that I should be able to work with babies and children. He called it the "final frontier", where only the few and the brave would dare venture forth. After hearing the "to be the best" comment, I was all in. I jumped in, head first, and never looked back. This extraordinary year was only made possible with financial support of the KTEF, and today I serve as the Director of the Cornea and Glaucoma services at the Vision Center at Children's Hospital of Los Angeles, one of the busiest in the country specializing in critical eye care for children.

Growing up a daughter of immigrants, I wanted to dream big in America, and my dream was to be a doctor. My mother, a nurse, strongly discouraged it. She felt that work as a doctor would not let me be a mother to her future multiple grandchildren. Ever-stubborn and driven, I wanted to prove her wrong. I believed that I could do it all, and I have. Today, I have two children, one in college and the other in junior high school. And as my children grow older, I have many others, my patients and their parents, for whom I am a caregiver. What a privilege and honor it is to be part of their lives, shepherding care, saving a child's vision.

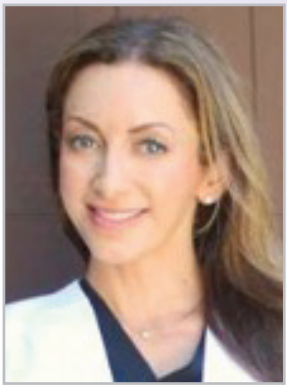
In these 10 years since my year supported by the KTEF educational grant, I have built one of the largest anterior segment practices in the country that serves not only families in Southern California but families across the globe. Today, we are developing techniques and innovations resulting in better clinical outcomes and decreased complications in very rare, blinding eye diseases, such as congenital cataracts, Peter's anomaly, and glaucoma. So, since progress cannot happen in a vacuum, we present our work internationally so others can benefit from our experience.

The fight that we fight to preserve a child's vision is not always rewarded by easy success. Sometimes, keeping and not losing vision is a hard-fought victory. Because this is the struggle pediatric eye specialist's face, it is not always the path that is chosen by many. The financial support of the KTEF grant allowed me the breathing room to give this challenging area a hard, close look. Past my gaze, staring back at me, were the eyes of a child. Behind this child stood his parents and, behind them, the will and support of many others. This includes the many who will never be in the exam or operating room but those who are tirelessly fundraising for this noble cause, the fight to prevent childhood blindness.

Thank you for your support, my work today would not have been possible without it.

Jesse Berry, M.D.

Associate Professor of Ophthalmology and Associate Director of Ocular Oncology at USC Roski Eye Institute at Children's Hospital Los Angeles, is a former KTEF grant recipient.



Knights Templar Eye Foundation funding is sky-rocketing careers and creating significant advances for children with ocular cancer

In addition to a busy clinical practice treating ocular tumors in adults and children, she trains residents and fellows in ophthalmology and ocular oncology, and leads an exciting research team in developing the first ever liquid biopsy for retinoblastoma from the aqueous humor – which is the clear fluid in front of the eye. The team calls this the 'surrogate tumor biopsy'. With funding from the Knights Templar Eye Foundation Career Starter Grant, Berry et.al. extracted and sequenced DNA from the retinoblastoma tumor, in the aqueous humor. Her initial work was published in JAMA Ophthalmology on October 12th (which also happened to be Dr. Berry's birthday!) with a commentary from another prominent ocular oncologist, Bill Harbour, MD. The media response to the manuscript has been immense. To date the paper has been viewed over 500 times, released by four news outlets, and tweeted 75 times. The research was presented at the American Academy of Ophthalmology in November 2017 in New Orleans where it was awarded best paper and featured on the One Network of the American Academy of ophthalmology as well as the Knights Templar Eye Foundation Pediatric Ophthalmology Education Center.

To say that the Knights Templar Grant has started my career is an understatement; it skyrocketed it. On March 30th I heard the official news that I was selected. I was quite literally over the moon and immediately we started sequencing our banked samples of aqueous humor with stunning results: tumor-derived DNA was present – but more exciting – certain chromosomal changes correlated with aggressive tumors that responded poorly to therapy and these changes were absent in eyes where the tumors that did well. This suggests that genomic evaluation of the aqueous could be used to predict the ability to save the eye and maybe in the future help direct more intensive therapy to the more aggressive tumors.

The Knights Templar grant has been revolutionary for me and my career – but more importantly, the research it supports will dramatically change the way we care for the children who suffer from this blinding – and deadly --- ocular cancer. Imagine a world where a tiny sample of aqueous from an eye in a child with retinoblastoma can be used for diagnosis, for prognosis of treatment response and maybe even, to provide a means for the first ever attempts at personalized, directed therapy for retinoblastoma. With the support of KTEF, that world is now within reach. Thank you for giving me the chance to jumpstart my career – thank you even more for helping me to change the paradigm of retinoblastoma management and to contribute to a new future of personalized, predictive medicine for my patients. I could not be more grateful for this opportunity.

Irina De la Huerta, M.D., Ph.D.

Assistant Professor Department of Ophthalmology and Visual Sciences, Vanderbilt University School of Medicine and was awarded the Knights Templar Eye Foundation 2019 Career Starter grant and 2020 Renewal grant

The Impact of KTEF Funding

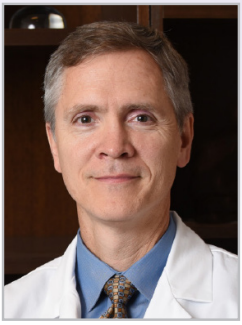
I am a practicing vitreoretinal surgeon with subspecialty training in pediatric retinal disorders. I have always wanted to be both a physician and a scientist, and to run a laboratory dedicated to developing solutions for treating children who suffer from diseases thought of as incurable. My interest in the pediatric retina grew from learning about retinal development during my Ph.D. in neuroscience. This experience inspired me to pursue clinical training in ophthalmology, and to start developing research ideas focusing on the role that retinal neurons play in pediatric disorders of the retinal vasculature. Throughout my ophthalmology residency, I continued to participate in laboratory research in retinal diseases. Following residency, I pursued fellowship training in vitreoretinal surgery with a special focus on pediatric retinal conditions. Having acquired both the laboratory and the clinical training necessary to develop new therapies for retinal diseases in children, I joined the faculty in the Department of Ophthalmology at Vanderbilt University.

When I started in my position at Vanderbilt, I was ready to begin building my research program. Yet I quickly learned that most foundations as well as the National Institutes of Health require a substantial amount of preliminary data in order to fund grant applications. This is a significant obstacle for many early career scientists, and the difficulties are further compounded for those of us who at the same time are building a medical and a surgical practice. John Penn, who is one of my mentors and who was awarded research funding from the Knights Templar Eye Foundation early in his career, understood well my predicament. He advised me to apply for a KTEF Career Starter Grant. The support I received from the Knights Templar Eye Foundation allowed me to form a laboratory team and to start putting my scientific ideas in action. I will never forget the role that the Foundation's grant played in getting my research program up and running.

Funding for research in pediatric eye disorders is extremely important and critically needed. The Knights Templar Eye Foundation is one of the few organizations that provide support for pediatric ophthalmology research. I have learned from my mentors who are successful and respected principal investigators about the difficult times they faced early in their careers due to the uncertainty of funding. The grants awarded by the Foundation are invaluable in helping early career scientists and clinician scientists like me to develop laboratories dedicated to vision research.

David K. Wallace, M.D., M.Ph.

Chair, Department of Ophthalmology, Marilyn K.
Glick Professor of Ophthalmology, Indiana University School of Medicine.



Newest member of the Scientific Advisory Committee

Doctor Wallace is also a Member of The Knights Templar Eye Foundation Scientific Advisory Committee, and was awarded the Knights Templar Eye Foundation 1997 Career Starter grant.

It's been a pleasure for me to join the Knights Templar Scientific Advisory Board in 2021. When asked to serve in this role, I accepted without hesitation, because I recall fondly how the Knights Templar Eye Foundation helped launch my clinical research career back in 1997. At that time, I was an Assistant Professor of Ophthalmology and Pediatrics at the University of North Carolina (UNC). We had a small group of investigators interested in studying retinopathy of prematurity (ROP), but we did not have any funding to support this work. Retinopathy of prematurity is one of the most common causes of blindness in children worldwide. With the funds from the Knights Templar Eye Foundation, we were able to collect video images of the retina of infants with ROP. We completed studies that helped us understand important risk factors for severe ROP, such as poor rate of weight gain early in life, early blood vessel changes ("pre-plus disease"), and small tufts of tissue above the retina ("popcorn").

In 2004, I had the opportunity to be a member of the committee that revised the International Classification of ROP, and to learn from some of the "giants" in our field. A few years later, I participated as an investigator, and then as an Executive Committee member, in the Early Treatment for ROP randomized trial. These experiences piqued my interest in contributing to the development of better treatments for ROP. Later I received an NIH K23 Career Development Award in Patient-Oriented Research, and I obtained a Master's in Public Health in Epidemiology, which provided a deeper understanding of research design and statistics. In 2014, I assumed the role of network chair for the Pediatric Eye Disease Investigator Group (PEDIG), an NIH-funded national clinical trials network.

ROP care has rapidly evolved. Until 5-10 years ago, most infants with severe ROP were treated using laser. Now many infants are treated with injections of drugs that reverse the sight-threatening effects of severe ROP. However, much remains unknown about which drugs are best and what dose we should use. Our PEDIG group recently completed a multi-center study that helped to establish that a much lower dose can be used, which is potentially safer for infants and better for their developing vision. Our research group is now planning 2 simultaneous multi-center randomized clinical trials to help determine the best care for premature infants with severe ROP; one will compare laser to a low-dose injection, and the other will compare 2 different doses of injections.

When I reflect back on my early career, it could have gone in any of several different directions – private practice, industry, or academic medicine with a focus on education, administration, or research. The grant I received from the Knights Templar Eye Foundation in 1997 gave our group the support we needed to study ROP, and it allowed me to begin to develop skills as a clinical researcher. Subsequently, I chose to devote a large part of my career to helping find better treatments for ROP and other pediatric eye diseases.

American Academy of Ophthalmology Awarded Two Million Dollars

The American Academy of Ophthalmology was awarded $2 million from the Knights Templar Eye Foundation, Inc. to establish a permanent research fund to advance the practice of pediatric ophthalmology. This fund will be used to support the work of researchers investigating both rare and common eye diseases affecting children and to uncover optimal, real-world approaches to prevention and treatment.

Insights for these projects will be gleaned from the Academy's IRIS Registry (Intelligent Research in Sight), the world's largest clinical specialty data registry. The Academy developed the IRIS Registry to provide insights on eye disease, and to empower ophthalmologists to effectively improve their practices and their patients' lives. Having amassed data on 50 million patients in just four years, this data-rich resource has already improved the quality of eye care for adult patients.

The fund will enable the Academy's IRIS Registry team to enhance the capture of data collected on pediatric patients to reveal patient characteristics associated with disease and better approaches to their prevention and treatment. The IRIS Registry team will also focus on attracting more pediatric ophthalmologists to contribute to the database, further enhancing the power of its data-driven insights.

The IRIS Registry will also be used to drive individualized learning for pediatric ophthalmologists, providing them with information on their performance, outcomes of treatment, and adherence to best practices. It will also connect ophthalmologists to an online tool offering the best educational resources in pediatric ophthalmology.

"This grant is an extraordinary gift for ophthalmology," said David W. Parke II, MD, CEO for the American Academy of Ophthalmology. "It will build upon the strengths of the world's largest clinical data registry to drive insights on children's eye health. I have no doubt that it will improve the care of individual children. The Knights Templar Eye Foundation is a tremendous partner for our profession and our patients."

KNIGHTS TEMPLAR EYE FOUNDATION, INC. AWARDS TWO MILLION DOLLARS TO CEF OF AAPOS ALL CHILDREN SEE

WHAT

All Children See, a program of the Children's Eye Foundation of the American Association for Pediatric Ophthalmology and Strabismus (CEF of AAPOS), provides an eye exam and a year of follow up care at no cost to children who qualify nationwide.

WHY

Vision impairment is common among young children. More than 2% of children under age 18 years are blind or visually impaired and up to 5% of young children are at risk for permanent vision loss from conditions such as amblyopia (also known as "lazy eye") and strabismus.

Uncorrected significant need for glasses (nearsightedness, farsightedness and astigmatism) are the most common vision disorders in children. 5-10% of preschoolers and 25% of school age children have vision problems that affect their learning and quality of life. Because 80% of learning is visual, vision plays a critical role in the cognitive, physical and social development of a young child. Vision is a strong predictor of school readiness and academic success.

We cannot afford to allow our children to forego care. The consequences of delaying treatment for children with visual impairment can be life-long—and include blindness.

WHO

To qualify as an All Children See patient, a child must be:

- under the age of 18
- a legal citizen or resident of the United States
- uninsured or under-insured
- financially unable to provide their physician with a co-pay

HOW

Visit *allchildrensee.org* for more information or to see if a child qualifies for a referral to one of All Children See's volunteer ophthalmologists nationwide.

EXCLUDED

Eyeglasses, prescription drugs, hospital services, and fees of other medical professionals. Information about how to access these resources are available on the allchildrensee.org website and the patient's physician may be able to help navigate a pathway to ensuring the child has the care he/she needs.

CONTACTS

Mona Panchal | Mpanchal@aao.org | Visit: allchildrensee.org

Video Clips

Available for viewing and can be downloaded from the
Knights Templar Eye Foundation webpage

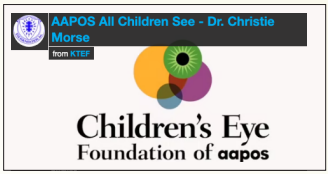
www.ktef.org/videos

Dr. John S. Penn
Vanderbilt University
Vice Chair of the Dept of Ophthalmology and Visual Sciences

Dr. Thomas Lee
Division Head – The Vision Center
Children's Hospital Los Angeles
Member of the KTEF Scientific Advisory Committee

Dr. Jill Bolstad
Specializes in pediatric medicine

ONE Network
The Ophthalmic News & Education Network
Dr. Christie L. Morse
Chair, American Academy of Ophthalmology Foundation Advisory Board

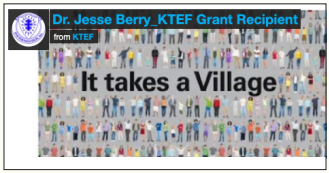


EyeCare America
Co-sponsored by the Knights Templar Eye Foundation

Seen Through Doctors' and Patients' Eyes

American Academy of Ophthalmology
Intelligent Research in Sight (RIS) Registry

Dr. Jesse Berry
KTEF Grant Recipient

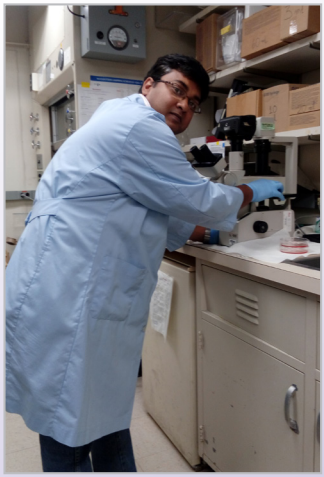


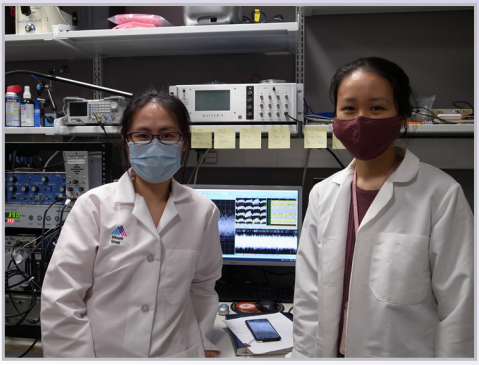
The 2021 – 2022 Knights Templar Eye Foundation, Inc. Research Grant Recipients

Dr. Sandip K. Basu from the University of Tennessee Health Sciences Center was awarded a $70,000 grant titled: ***A novel anti-ceramide gene therapy for retinitis pigmentosa***

Retinitis Pigmentosa (RP) is an inherited disease that starts in childhood with night blindness and peripheral vision loss. The disease progresses with age and the affected individual completely loses vision by 40-50 years of age. The vision loss happens due to progressive death of the light sensing cells of the retina, called photoreceptors, due to mutation in more than 100 different genes essential for proper vision. Gene therapy is a very promising strategy to cure hereditary diseases, but the high heterogeneity of mutations that cause RP makes it difficult to develop a common therapy that could help affected people with different underlying mutations. Since the ultimate effect of all the different mutations is death of the photoreceptors, targeting a common factor of photoreceptor death could be beneficial for a diverse group of RP patients with different mutations.

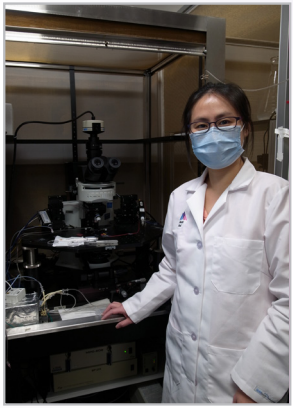
In this proposal Dr. Basu intends to target one such common denominator of photoreceptor death by gene therapy in cultured cells and mouse model of RP. Ceramide is a bioactive lipid whose levels are shown to increase when photoreceptors die in many different models and reducing its levels can prevent their death. They will use an enzyme that converts ceramide to a non-toxic form and lower its levels. We believe that reducing ceramide levels will protect the photoreceptors from dying and restore the visual functions. This study will establish ceramide as a potentially important therapeutic target for RP and ways to lower ceramide levels as a possible therapeutic strategy for other retinal diseases.





Dr. Ting-Jiun Chen from the Friedman Brain Institute Icahn School of Medicine at Mount Sinai was awarded a $70,000 grant titled: ***Discover novel neuromodulatory therapeutic target for recovery from Amblyopia***

Amblyopia is a widespread form of visual impairment, affecting about 1–5% of the human population. It is caused by abnormal visual experience in childhood. Amblyopia can be cured if the treatment is initiated early in life. However, visual dysfunction is hardly detectable in children and it results in visual impairment permanently. The long-term goal of this proposal is to discover new regulatory mechanisms to provide therapeutic targets and drugs in the adult brain for recovery from Amblyopia.



In Dr. Chen's preliminary study, she has found that two positive allosteric modulators (PAMs) of nicotinic acetylcholine receptors (nAChRs) which enhanced acetylcholine (ACh)-evoked responses in the subpopulation of Somatostatin (SST) interneurons expressing α2 subunit of nAChRs. Interestingly, she also found that one of the PAMs restored the visual cortex plasticity in adult mice. The study will test the hypothesis that nAChRα2 in SST interneurons is the potential therapeutical target to induce recovery from amblyopia in adulthood. The proposed project would be helpful to discover new therapeutic targets for amblyopia treatment.

Dr. Jefferson J. Doyle from the Wilmer Eye Institute, Johns Hopkins University School of Medicine was awarded a $70,000 grant titled: ***Evaluating the efficacy and mechanism of a atropine rescue in a mouse model of genetically-induced high myopia***

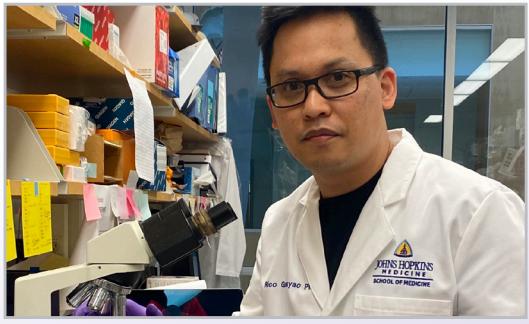
Severe near-sightedness is common and often results in sight-threatening complications in many genetic disorders, such as Marfan syndrome. Mouse models exist for many of these genetic disorders, yet virtually none have been evaluated for the existence of severe near-sightedness, the mechanism causing it, and/or

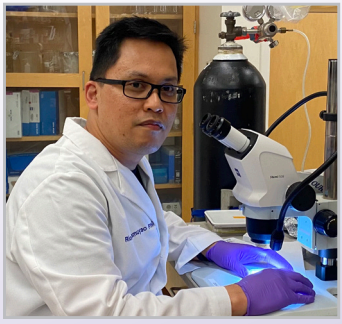
treatments that might prevent it. Atropine eye drops slow progression of 'typical' near-sightedness in humans, yet its effect on genetically-induced severe near-sightedness remains unknown in humans or mice.

Preliminary data shows that Marfan mice develop longer eyes and severe near-sightedness compared with control mice, and that the eyes of Marfan mice display increased TGFβ signaling compared to those of control mice, the eye growth in Marfan and control mice is significantly reduced by daily 1% atropine eye drop treatment. Dr. Doyle's hypothesis is that atropine will reduce eye growth and TGFβ signaling in Marfan mice in a dose-dependent manner, providing evidence for the benefit of this clinically-available and safe therapeutic agent in a mouse model of Marfan syndrome, and to evaluate atropine's effect on TGFβ signaling as a possible mechanism of action.

The broader goal of this work is to highlight the utility of mouse models of genetically-induced severe near-sightedness to provide significant mechanistic and therapeutic insight for this important pediatric ocular indication where human clinical trials are challenging to perform, due to how rare these conditions are in the general population, how variable the severity of their manifestations can be, and the effect of co-existing eye issues and/or prior surgery.

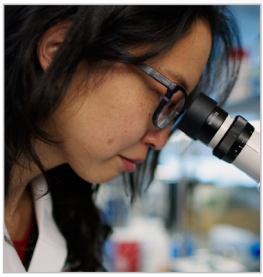
Dr. Rico Gamuyao from The Wilmer Eye Institute, Johns Hopkins University School of Medicinewas awarded a $70,000 grant for his research titled: ***Role and mechanism of ANXA3 in retinopathy of prematurity***

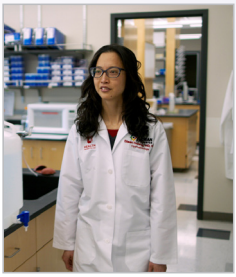




Global statistics shows that ROP continues as the leading cause of childhood blindness. The formation of pathologic retinal blood vessels, a hallmark of ROP, may lead to vision loss in infants. Hence, it is critical to identify and understand how the additional factors that regulate vascular disease progression can be controlled for human ROP treatment.

Dr. Gamuyao is researching the ANXA3 protein is a novel regulator of abnormal pathologic blood vessels in the retina and is a promising target for ROP treatment. Despite its emerging importance, the information on the role and mechanism of ANXA3 in ROP is still inadequate. The ANXA3, which is highly expressed during the peak of abnormal blood vessel formation, when targeted by a neutralizing antibody strongly inhibited the development of disease-associated blood vessels. As ANXA3 is exclusively produced in retinal endothelial cells and myeloid cells, administration of ANXA3 neutralizing antibody promoted gene expression changes specifically in those cell types.





Dr. Eileen Hwang from the John A. Moran Eye Center, Salt Lake City, Utah was awarded a $69,961 grant for her research entitled: ***A study on quantitative measures of vitreous microstructure and mechanical function to gain insight into Stickler syndrome***

Stickler syndrome is passed down through families and causes children to go blind even when they receive the most advanced care. These children develop retinal detachment, which is when the retina, the light-sensitive lining of the eye, peels away from the wall of the eye.

The purpose of our research is to learn more about what causes retinal detachment in Stickler syndrome. In Stickler syndrome, the vitreous gel that fills the back of the eye is abnormal, and in healthy adults, the vitreous gel causes retinal detachment by pulling on the retina. Because the vitreous gel in children with Stickler syndrome looks somewhat similar to vitreous gel from elderly people without Stickler syndrome, Dr. Hwang is researching the connection of premature aging of the vitreous gel in Stickler syndrome during childhood might cause retinal detachment. Because testing cannot be done on the vitreous gel in detail in live humans, we will use mice with Stickler syndrome to measure aspects of the vitreous gel that are likely to affect the retina. Testing will also be done to determine whether mice are similar to humans in the way their vitreous gel changes between childhood and adulthood. Dr. Hwang hopes that our research will lead to new ways to prevent childhood blindness in Stickler syndrome.

Dr. Daniel Joyce from the University of Reno, Reno, Nevada was awarded a grant for $69,547 for research entitled: ***Circadian light-sensing dysfunction in juvenile myopia***

Myopia is an elongation of the eyeball where light focuses in front of the eye's retina rather than on the retina itself. It results in blurring of far objects in the visual scene and it is the most common visual disability in school-aged children. Half of these children will experience worsening symptoms into adulthood and can progress to blindness, glaucoma, retinal detachment or cataracts.

The incidence of myopia has ballooned in recent years with converging evidence suggesting that light-sensing for so-called non-image function (NIF; e.g. setting physiological states in the brain) becomes dysfunctional to cause juvenile myopia and this is further compounded by our modern lifestyle where we spend our lives indoors under artificial lights, view light at night, and don't wake up or go to bed with dawn/dusk.

Dr Joyce's training in vision science and circadian rhythms to identify, for the first time, which specific parts of the NIF light-sensing circuitry are dysfunctional. Dr. Joyce can measure the propagation of this dysfunction through important biological pathways, and how this dysfunction results in damaged real-world behaviors such as sleep/wake rhythms to further exacerbate juvenile myopia.

Understanding this causal sequence is critical to developing treatments that address the cause(s) of juvenile myopia, not just the symptoms as current treatments do. This is extremely important because myopia is estimated to affect 30% of the world's population already (the cost in the US alone being $4 billion a year) and will affect 50% of the world's population by 2050.

Dr. Ramesh Kasetti from North Texas Eye Research Institute, University of North Texas Health Science Center, Fort Worth, Texas was awarded a $68,892 grant entitled: ***Impaired Mitochondrial Proteostasis in Myocilin Associated Glaucoma***

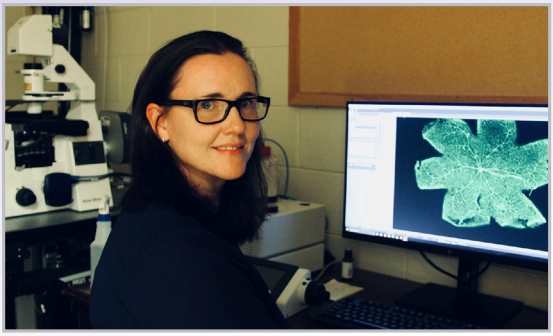
Primary open angle glaucoma (POAG) is the most common form of glaucoma. Juvenile onset open angle glaucoma (JOAG) is a subset of POAG, commonly diagnosed in individuals between 4 and 35 years old. An elevation of intraocular pressure (IOP) is a main risk factor in JOAG. Mutations in the myocilin gene are generally known to cause JOAG. Functional loss of trabecular meshwork (TM), a tissue that regulates IOP in the eye, is thought to be responsible for myocilin associated glaucoma. However, the mechanisms by which myocilin mutations cause TM dysfunction are not clearly understood.

The research aims to determine the underlying mechanisms of TM dysfunction in myocilin associated glaucoma. The preliminary studies using cell culture and mice models of myocilin associated glaucoma clearly demonstrated that mutant myocilin impairs mitochondrial proteostasis, crucial to the maintenance of mitochondria (power house of the cell) function, and is associated with TM dysfunction.

The research will determine the role of abnormal mitochondrial proteostasis in the pathogenesis of myocilin glaucoma. Dr. Kasetti will also determine whether correcting abnormal mitochondrial proteostasis rescues myocilin associated glaucoma by improving mitochondrial function. The successful completion of this study will provide novel therapeutic targets for myocilin associated glaucoma.

Dr. Heike Kroeger from the University of Georgia, Athens, Georgia was awarded a $70,000 grant for the research proposal entitled: ***ATF6-dependent Regulation of Mesodermal Differentiation in Retinal Vascular Network Development***

Retinopathy of prematurity (ROP) is one of the leading causes of blindness in children, caused by the growth of unwanted blood vessels in the developing light sensitive retina. Uncontrolled blood vessel growth into the retinal space leads to loss of retinal integrity and blindness.



Treatment options for ROP are either invasive surgeries in babies, of which 25% still result in the loss of some or all vision, additionally the long-term pathological outcomes post-surgery are unknown. Alternatively, anti-VEGF treatment is performed to block unwanted blood vessel growth. However, it is suggested that anti-VEGF agents that enter the blood stream may also affect other developing tissues like the brain.

Dr. Kroeger's previous studies have identified the activating transcription factor 6 (ATF6) as an understudied, critical regulator of blood vessel development in the eye.

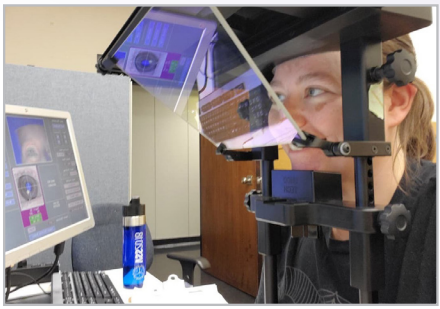
Her studies demonstrate that ATF6 is critical for the de novo development as well as the maintenance of blood vessels. She will employ a stem cell-based approach to study how ATF6 regulates stem cell development events to generate endothelial cells that are critical for the formation of blood vessels. Additionally, she will use ATF6 activators and inhibitors to manipulate blood vessel growth.

The proposed study presents a unique opportunity to gain new insights into the establishment of a functional retinal network but also identify new regulatory signaling events allowing us to modulate blood vessel growth essential for alternative therapies such as ROP. 3

Dr. Kimberly Meier from the University of Washington, Seattle, Washington was awarded a $65,000 grant for the research entitled: ***Neural bases of binocular contrast integration in children with amblyopia***

Poor vision in one eye (for example, blurry vision or an eye turn) for a long period of time during early childhood often results in amblyopia (also known as lazy eye). The brain learns to ignore the input of one eye, so the child continues to have poor vision in that eye, even after the initial cause of poor vision is fixed.

Amblyopia is treated by having the child wear a patch over the good eye for about two hours per day– forcing the brain to use the poor eye. However, children universally dislike wearing a patch, treatment for amblyopia does not work for all children, and vision often slowly deteriorates once treatment has ended. New treatments for amblyopia have recently been developed that involve playing specialized video games, but like traditional patching, these treatments only work for some children. One possible reason for this variety of outcomes is that multiple different neural deficits contribute to the poor vision of amblyopia, and these can differ across children.

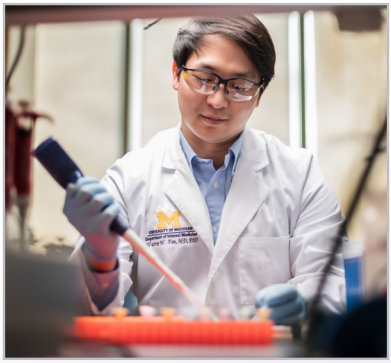


Over the last year, Dr. Meier has successfully developed a way of quickly measuring the specific neural deficits that underlies an individual's poor vision. She plans to use this same task in children, while recording brain responses over time. Her long-term aim is to develop a way of measuring brain responses in young pre-verbal children. Once they know a child's specific neural deficits, clinicians can generate individualized treatments that target his or her specific pattern of neural abnormalities – resulting in faster and better treatment.

Dr. Warren Pan from W.K. Kellogg Eye Center, Ann Arbor, Wisconsin was awarded a $70,000 grant to study: ***Pharmacologic activation of PKM2 for photoreceptor neuroprotection in inherited retinal diseases***

A leading cause of childhood blindness is due to a collection of over 280 inherited mutations that disrupt the photoreceptor cells of the eyes from converting light to vision. These photoreceptor cells are very active and require significant energy to perform their functions. They will examine PKM2, an enzyme important in energy production that is also linked to a gene mutation that results in childhood blindness.

The research goal is to pharmacologically increase the activity of PKM2 to improve photoreceptor health and subsequently vision. Dr. Pan will continually treat an animal model of inherited photoreceptor degeneration with our PKM2 activator drug and evaluate visual function, photoreceptor survival, and photoreceptor metabolism over the disease time-course. By studying these changes over time with and without the drug, we will begin to understand the cellular and metabolic mechanisms responsible for this devastating group of diseases that cause childhood blindness. These studies will move us closer to developing a novel drug capable of treating vision loss in this diverse set of inherited diseases regardless of gene mutation.



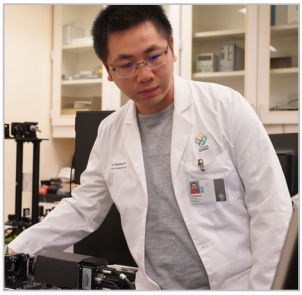
Dr. Yi-Rong Peng from the Stein Eye Institute, University of California, Los Angeles was awarded a $70,000 grant for his research entitled: ***Transcriptomic and Genetic Dissection of Foveal Formation and Malformation***

Pediatric eye diseases are complex conditions that impact visual development. In some cases, vision can be rescued through early diagnostics, preventative measures, or surgery. However, in other cases, these diseases can lead to legal blindness.

For example, Retinopathy of Prematurity (ROP) is the second leading cause of childhood blindness in the United States. ROP causes the abnormal development of

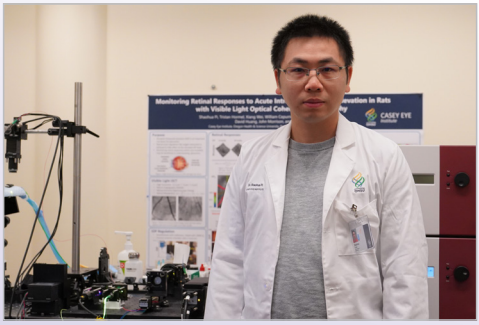
retinal vascular vessels in premature babies and affects the development of the retina. Many ROP patients develop low visual acuity and present abnormalities in their fovea. The fovea is a specialized retinal area that enables high-acuity vision, and we use it to detect fine spatial details and colors. In mammals, only humans and some primates have a fovea, but we know relatively little about how the fovea is formed.

There is a need for more knowledge about how foveal development is affected in pediatric eye conditions. This project uses cutting-edge, next-generation, sequencing methods to generate a molecular map of the developing fovea. Using big-data analysis, Dr. Peng's team will mine their datasets to identify the mechanisms associated with the malformation of the fovea and advance the future pathogenetic study of pediatric eye diseases.



Dr. Shaohua Pi from the Casey Eye Institute, Oregon Health & Science University was awarded a $68,700 grant for his research entitled: ***Imaging Retinal Vascular Pathologies in Retinopathy of Prematurity with Visible-Light Optical Coherence Tomography***

Babies born before 31 weeks of gestation or less than 3 pounds are at a great danger of a blinding disease called retinopathy of prematurity (ROP). The disease damages retina, an organ sensing the light in our eyes. Doctors know that blood vessels in diseased retinas are different than that in healthy babies. They guess the difference is because of the abnormal oxygen environment in those retinas. However, due to lack of effective device to examine the retina in infants, doctors are not quite sure about if this is true and what is actually going on in ROP eyes.

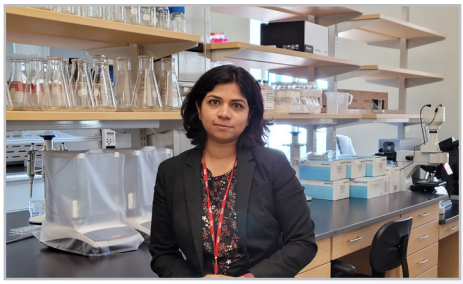


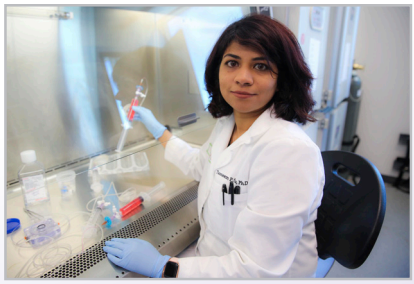
Fortunately, they have recently developed an imaging system called visible light optical coherence tomography (vis-OCT). It is able to provide high quality retinal images on the anatomy and vessels, as well as to assess retinal oxygen environment in alive animals. They have previously used it to image the eyes in healthy mice and rats, and they want to test if vis-OCT can be used to clarify the doubts mentioned above.

To do that, they need to apply for support to create mice and rats with the ROP disease. Dr. Pi will then do our regular imaging and processing procedures on these animals. He will compare the results from ROP animals with that from healthy animals to check how ROP damages the retina. They will also calculate several indicators to evaluate the degree of difference in retina. The evidences and results will cast new insight of doctors' clinic practice for ROP.

Dr. Tasneem Sharma from Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine was awarded a $70,000 grant for her research entitled: ***Neuritin 1 protects against pressure-induced retinal ganglion cell degeneration***

Childhood glaucoma is a pediatric condition leading to significant visual impairment. Juvenile-onset primary open angle glaucoma (JOAG) is a subtype of primary glaucoma, and the disease presents from four years to early adulthood. The disease is identified by increased pressure within the eye and progressive death of neurons in the back of the eye, which can eventually lead to blindness in children. The etiology of JOAG is quite complex and to date treatment options for the disease only include reducing the elevated pressure in the eye.





However, these patients are resistant to conventional drug therapies, so surgical intervention is the most common option. It is thus crucial to identify therapeutic targets and develop new treatments for JOAG that can save the visual neurons from dying. Dr. Sharma will utilize a unique Translaminar Autonomous System model to recreate the human optic nerve head environment of elevated pressure in patients with JOAG and test a new neuroprotective and regenerative gene therapy.

Using this approach, she hopes to identify human Neuritin 1 as a new therapeutic gene to save the visual neurons and develop a new treatment for JOAG. Completion of our proposed research will provide substantial progress toward validation and development of clinical trials in JOAG patients.

Dr. William Spencer from the Albert Eye Institute, Duke University Medical Center was awarded a grant for $70,000 for his research entitled: ***Understanding the roles of ectosomes and the associated microglial response in photoreceptor degeneration***

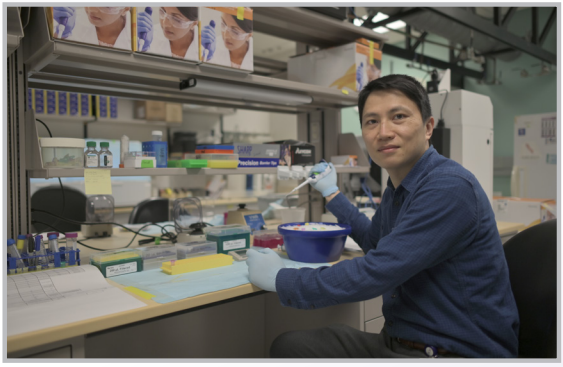
Like the pixels of a digital camera, the human retina contains millions of photoreceptor cells that individually respond to light and are essential for vision. To function, these cells rely on their light detecting antennas which contain a stack of several hundred light-sensitive disc-shaped membrane structures called “discs”.

Because discs are heavily stressed by light, the photoreceptor cell continuously renews them throughout the entire human lifetime. Unfortunately, genetically inherited mutations in the process of disc renewal cause blinding retinal diseases in pediatric patients. One such disease-linked protein is called PRCD whose mutations lead to a defect in disc formation marked by the shedding of disc fragments outside of the photoreceptor’s antenna structure. These fragments accumulate in a form of vesicles, like garbage, and recruit immune cells that migrate through the retinal tissue and attempt to clear them.

The goal of this study is to determine to what extent this extracellular vesicular material is toxic to the retina and whether the immune cells ameliorate pathology by clearing this material, or their invasion into the space occupied by photoreceptors causes collateral damage and exacerbates disease. The significance of this scientific direction is highlighted by the fact that numerous blindness-causing mutations, in addition to those in PRCD, that affect children are associated with accumulation of extracellular vesicles in the retina. Therefore, addressing the cellular and molecular mechanisms underlying their formation and clearance are key steps in developing future therapeutic strategies.

Dr. Shu Wen from Baylor College of Medicine, Houston, Texas was awarded a $70,000 grant for his research entitled: ***Combining short and long-read sequencing to detect noncoding and structural variants in cone/rod dystrophy patients***

Cone dystrophy (COD) and cone/rod dystrophy (CRD) are both inherited eye diseases. They often occur in childhood or at birth, and can significantly decrease vision, but with Sanger sequencing and capture-sequencing technology, the diagnostic tools currently used by most genetic laboratories, disease-causing variants can only be detected in about one-third of the cases.

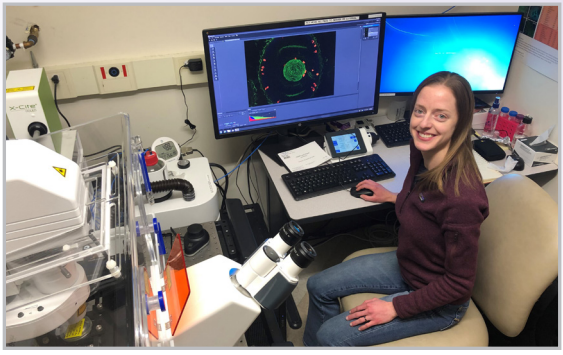


In a cohort of COD/CRD patients, they will combine the cutting-edge short and long-read wholegenome sequencing to investigate the noncoding and structural genetic variants, which are both often missed by current Sanger sequencing and capture-sequencing technologies. The genetic testing pipeline which will be built in this study may also be used to study other genetic diseases in the future.

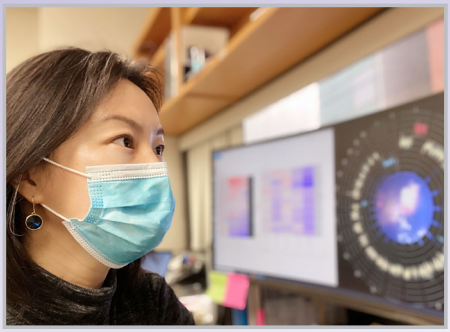
Dr. Emily Woodruff from the University of Utah was awarded a $70,000 grant for her research entitled: ***Cellular and molecular mechanisms of anterior segment morphogenesis and disruption in Axenfeld-Rieger Syndrome***

The ability to see is directly related to the proper form and function of various structures within the human eye. Two of these structures, the iris and cornea, are important for normal vision, but defects in either can cause impaired vision.

One human developmental disorder, Axenfeld-Rieger Syndrome (ARS), affects the cornea and iris in children and can cause visual impairment, however, the specific aspects of embryonic development that are mis-regulated in individuals with ARS are unknown. Zebrafish are an ideal study organism because their eyes are structurally similar to human eyes, the embryos are transparent, and they develop externally, therefore they are amenable to live-imaging. During embryonic development, different types of cells assemble into tissues that comprise the iris and the cornea. Imaging live zebrafish embryos enables us to observe development in real time, therefore, they can examine cell movements, cell organization, and changes in cell shape, responsible for building the cornea and iris in wild-type zebrafish with normal eyes, and in a zebrafish model of ARS with a mutation in pitx2.



In this study Dr. Woodruff will aim to uncover specific cellular and molecular aspects of development that lead to ARS. She will first examine normal development of the iris and cornea because without understanding how these structures develop normally, it is difficult to pinpoint anomalies during development that lead to ARS symptoms. Following this, she will determine the role of a causative gene in ARS, pitx2, in cornea and iris assembly.

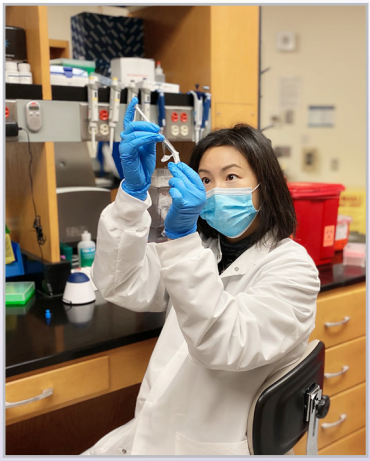


Dr. Liya Xu from Children's Hospital Los Angeles was awarded $70,000 for the research entitled: ***Single particle analysis of extracellular vesicles in the aqueous humor of retinoblastoma eyes: moving towards an integrated liquid biopsy***

Retinoblastoma (Rb) is a type of cancer that develops in the eyes of young children, most often under 2 years of age. This intraocular tumor robs the children of their sight, and in upwards of 50% cases, their eye(s).

Understanding how tumor cells communicate may help clinicians better treat them. Extracellular vesicles (EVs) are plasma membrane enclosed vesicles that are produced by all cell types and act primarily in cell-to-cell communication by delivering a cargo of functional molecules (e.g. nucleic acids, proteins) to recipient cells. EVs in the aqueous humor (AH), the fluid in the front of the eye, have been implicated to control intracellular communications in other eye diseases, however, EVs have never been studied in Rb. In Dr. Xu's preliminary studies, she has been able to show that EVs are readily detectable in unprocessed AH with a significant decrease of CD63/CD81+ EV population in treatment active Rb eyes.

This research aims to investigate the EVs in the AH on single particle level (meaning each vesicle can be studied separately) to identify the molecular and functional diversity of distinct EV subpopulations in Rb and define the correlations with clinical presentations and disease outcomes. The identification of eye cancer-specific EV subpopulation lays the groundwork for a transformed understanding of pathophysiology and treatment mechanisms in Rb. This novel biomedical research is the first step to develop disease-specific, minimally invasive methods for clinical diagnostics using EVs with improved understating of the applications of AH liquid biopsy as well as future development of new therapeutic approaches.



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All Checks are made payable to the Knights Templar Eye Foundation, Inc. which is a tax-exempt Charitable Organization under Section 501(c) 3 of the Internal Revenue Code.

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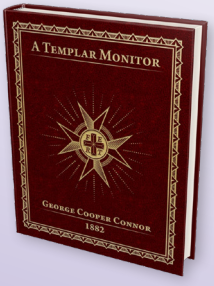

Scientific Advisory Committee 2021-2022

The Mission

The mission of the Knights Templar Eye Foundation, Inc., is "to improve vision through research, education, and supporting access to care."

To that end, the Knights Templar Eye Foundation, Inc., annually announces its call for research grant applications. The Foundation invites eligible investigators to submit applications for pediatric ophthalmology research grants for the award period which normally runs from July 1 to June 30.

From the applications received, the Scientific Advisory Committee recommends to the trustees which requests should be funded.