Massachusetts Lions Eye Research Fund, Inc.

EYE CATCHER

Winter/Spring 2025 Volume 55 No. 2

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Spring message
MLERF president,
Bev Dillon of the
Bridgewater Lions Club
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MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND
www.mlerfi.com

Meet the Officers and
Directors of MLERF
and see the Committees
they volunteer on
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See what the Lions of Massachusetts have been doing to support cutting-edge vision research.
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Happy Spring to the Board of Directors, Lions, and Friends,

I can't thank you enough for all your support this year. Your donations, sharing our message with clubs and the public, actively participating in meetings and hospital visitations, attending fundraisers, and sharing your advice and experiences with me, have made this year .

The various Committees have met throughout the year. Thank you to all those who participated in assisting with the business of our corporation. You have been instrumental in ensuring that our mission is successfully carried out. You are truly "Knights of the Blind".

At a recent hospital visitation to Boston Children's Hospital we realized our foundation has come full circle. The first grant from Mass Lions Eye Research Fund was awarded to a professor from Harvard to find a cure for Retinopathy of Prematurity. He discovered the problem was caused by too much oxygen flowing into the incubators housing premature babies. He developed a valve to regulate the flow and eliminated the problem. More than 150,000 individuals have their eyesight due to this discovery. The problem of Retinopathy of Prematurity has arisen again due to advances in medicine allowing infants to survive with much shorter gestational periods. Retinal synapses are small gap structures connecting neuronal terminals to relay visual signals. Since these are only formed in utero once the baby is born they do not continue to form. This can lead to blindness or poor vision. The current treatment involves injections that can only be administered by highly trained professionals and can cause complications. Using funds from the 2024-2025 grant award from Mass Lions Eye Research Fund Principle Investigator Lois Smith, MD, PhD is working on a project utilizing Glucocorticoids such as dexamethasone drops which are immunosuppressant agents that modulate metabolism. Topical administration using eye drops is advantageous in that not only does it reduce the adverse effect of treatment but avoids other complications associated with Intravitreal injection. As a result of the ease of treatment more individuals would be able to administer the drops. This would be especially helpful to underdeveloped areas. Developments like this are what make your hard work worthwhile.

I look forward to finishing the year strong with your continued support.

~ Bev

LIONS SEESIDE WALKFEST

Improving sight one step at a time

September 27, 2025
10am – 5pm
Buzzards Bay Park
90 MainStreet, Bourne MA

Public Welcome!
Live Music - Food Trucks
All Ages

MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND

Proceeds to benefit Mass Lions Eye Research

Ways You Can Support MLERF

MLERF is a 501(c)3 tax exempt corporation. You can donate directly to MLERF by visiting our website at www.mlerfi.com and click on the donation link in the upper right corner, or the How to Help link at the top. A check may be made payable to Mass Lions Eye Research Fund, Inc., c/o Treas. Dr. James Roth, 43 Stewart Terrace, Belmont, MA 02478. A donation can also be made to your local Lion's club, earmarked for MLERF, and have them forward the donation to the above address. Additionally, we have memorial/honorarium envelopes if you wish to honor someone special. See your district MLERF Director or officer for an envelope.

President's Circle Pin $20.00

Please consider joining the President's Circle and show your pride and support of MLERF with this beautiful President's Circle lapel pin. If 2000 Lions/Leos of Massachusetts purchase this pin that would be $40,000 raised to help fight blindness. Can we afford not to purchase this pin? This small donation will help fund our annual grant goal of $1,000,000.00 for our research institutions, who are looking to find cures for all blindness and vision-related diseases.

IGive.com

IGive.com is an easy fundraiser, which is similar to Amazon Smile. You create an account and choose MLERF as the non-profit you want to help, and IGive will donate a percentage of your total to MLERF.

Journey for Sight - Pennies for Sight

Another great way for our Lions/Leos to help support MLERF, is to place penny canisters in their communities or in their homes. The change you get back from your daily cup of coffee or that sandwich you buy at lunch, can change the vision of someone in need. These canisters are also a great way for our communities to learn about Lions, Leos and MLERF. Ask any MLERF Director about the canister program and they will get you everything you need.

MLERF DONATION "QR-CODE"

The MLERF QR code can be used on all fundraising materials to help educate others and raise funds for MLERF. Just snap a picture of this QR Code with any cell phone that is connected to the internet, and you will be directed to the MLERF website. The website will provide more information about MLERF and how to make a donation to MLERF.

MLERF Treasury Changes starting July 1, 2025

Effective July 1, 2025, the official address of MLERFi will change to

Mass Lions Eye Research Fund Inc.
PDG Debbie Hayes, Treasurer
37 Island Road
Millis, MA 02054

All donations made after July 1 should be sent to this new address

All *In Memory of* & *In Honor of* donations should be sent to

PDG Marianna Riemer, Asst. Treas.
2 Brian Circle
Grafton, MA 01519

If you have any old MLERF envelopes please make sure to change the address on the front of the envelope after July 1.

All donations made through JUNE 30, 2025 should go to the current address

2025 – 2026 Calendar of Events

MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND
www.mlerfi.com

2025

April 22 E-Board – Zoom 6:30 pm

April 24 Full Board Meeting In-Person 6:30pm
Restaurant 45
45 Milford Street, Medway, MA

May 22 Full Board Meeting In-Person 6:30pm
Restaurant 45
45 Milford Street, Medway, MA

June 5 Joslin Visitation

June 26 Full Board Meeting – In-person 6:30 pm
Restaurant 45
45 Milford Street, Medway, MA

July 13-17 International Convention
Orlando, FL

July 26 Full Board Meeting **in-person**
10am – 2pm
Grafton Lions Pavillion
86 Brigham Hill Rd, Grafton, MA

August 2 MLERF Club Appreciation & Awards
Banquet Luncheon
Milford Doubletree Hotel
11 Beaver St, Milford, MA

August 9 District A "Ride for a Cause"
Bike Run for MLERF

August 14 Eboard **Zoom** Meeting 6:30pm

August 23 Full Board Meeting **in-person**
10 am-2 pm
Grafton Lions Pavillion
86 Brigham Hill Rd, Grafton, MA

September 4 Eboard **Zoom** Meeting 6:30pm

September 20 Full Board Meeting **in-person**
10am -2pm
Grafton Lions Pavillion
86 Brigham Hill Rd, Grafton, MA

September 27 **District S "Walk for Sight"**

October 9 Eboard **Zoom** Meeting 6:30pm

October 23 Full Board Meeting, in-person 6:30pm
Restaurant 45,
45 Milford St, Medway 02053

November 20 Full Board Meeting Zoom 6:30pm

December 1 Grant Proposals are Due

December 4 Full Board Zoom Meeting 6:30pm

December 21 Lions Day at the Hanover Theatre
Week of 14-21 **"A Christmas Carol"** fundraiser
Hanover Theatre
2 Southbridge St., Worcester, MA

2026

January 16-18 District S Midwinter
Doubletree Hilton Hyannis
287 Iyannough Rd, Hyannis

January 30 – Feb 1 District Y Midwinter
Springfield Sheraton
1 Monarch Place, Springfield

February 13-15 District K Midwinter
Dedham Hilton, 25 Allied Dr, Dedham

February 20-22 District A Midwinter
Wellsworth Hotel
14 Mechanic St, Southbridge

March 5 Eboard Zoom meeting 6:30

March 19 General Board Meeting Zoom

March 27- 29 State Convention

April 7 Eboard Zoom meeting 6:30

April 16 General Board Meeting – in-person TBD

May 14 General Board Meeting – in person TBD

June 18 General Board Meeting-in person TBD

Board of Directors

Corporate Officers/Executive Committee

PDG Beverly Dillon	**33S**	**President**
PDG Patricia Kalicki	33K	1st Vice President
PRC Brenda McPherson	33N	2nd Vice President
PRC Robert Grover	33A	Secretary
PDG Dr. James Roth	33K	Treasurer
PCS John Riemer*	33A	Immediate Past President
PDG Kathy Salem	33S	Executive Director

Assistant Treasurer (Non-Voting)
Marianna Riemer, PDG, 33A

Directors
District Governors
Thom Swift, 33Y
Denise Andrews 33A
Mark Alexander, 33N
Diana Faust, 33K
Michael Middleton, 33S

1st Vice District Governor
Mary Swift, 33Y
Vacant, 33A
Vacant, 33N
Anthony Baliola, 33K
Steve Garran, 33S

2nd Vice District Governors (Non-Voting)
Vacant, 33Y
Mark Bucchino 33A
Laura Ward, 33N
Kristine Shanahan, 33K
Jesse Armell, 33S

Directors - 2025
Jim Allen, PCST 33Y
Lionel Carbonneau, PCST 33A
Beth Piocos, PhD, 33N
Irza Almonor, 33K
Martin Middleton, PDG 33S

Directors - 2026
Maryann Bankman, PZC 33Y
Barry Alman, PZC 33A
Jeralyn O'Connor, PCST 33N
Debbie Hayes, PGD 33K
Patricia Salvas, PCST 33S

Directors - 2027
Kellie Hastedt, 33Y
Maureen Wojnar, 33A
Alice Gaudet, PCST 33N
Tim Munn, PCS 33K
Kathy Salem, PDG 33S

Directors - 2028
Jeffery Turner, IPDG 33Y
Marianna Riemer, PDG, 33A
Linda Erwich 33N
Dr. Deb Wayne, PDG 33K
Deb Howland, PCST 33S

Parliamentarians
PID, PP Charles Kostro
PDG, PP Wayne Smith, Chairperson

Eye Catcher Reporters
Debbie Hayes, PDG 33K, Editor/Publisher
Maryann Bankman, 33Y
Denise Andrews, PDG2 33A
Beth Piocos, PhD 33N
Debbie Hayes,PDG 33K
Wayne Smith, PDG 33S

* Passed away 8/26/24

2024 - 2025 Committees

AWARDS - MLERF

Y James Allen, PCST
Y Maryann Bankman, PZC
A Marianna Riemer, PDG, (Chairperson)
A Maureen Wojnar
N Jeralyn O'Connor, PCST
N Alice Gaudet, PCST
K Debbie Hayes, PDG
S Kathy Salem, PDG
S Pat Salvas, PCST

AWARDS BANQUET

A Barry Alman
N Vacant, 1VDG
K Debbie Hayes, PDG
S Kathy Salem, PDG, (Chairperson)
S Pat Salvas, PCST

Hospitality Room - Paula Lehtola, Bridgewater Academy & Bridgewater Lions Club

CLUB COORDINATION

Y Jeff Turner, PDG
Y James Allen, PCST
Y Mary Swift, 1VDG
A Marianna Riemer, PDG
A Barry Alman
A Mark Bucchino 2VDG
N Laura Ward, 2VDG
N Beth Piocas
K Tim Munn
K Anthony Baliola 1VDG
K Kristine Shanahan, 2VDG
K Irza Almonor
S Steve Garran, 1VDG, (Chairperson)
S Jesse Armell, 2VDG
S Pat Salvas, PCST
S Deb Howland, PCST

GRANTS

A Bill Johnson
N Brenda MacPherson (Co-Chair)
N Linda Erwich
N Beth Piocos, PhD
K Dr. James Roth, PDG, PP** (Ex-officio)
K Dr. Deborah "Deb" Wayne, PDG
S Kathy Salem, PDG, (Co-Chair)
S Martin Middleton, PDG
S Deb Howland, PCST

LONG RANGE PLANNING

Y Jean Wilder, PCC,PDG PP, (Co-Chair)
A Lionel Carbonneau
A Marianna Riemer, PDG
A Bill Johnson
N Linda Erwich
K Tim Munn, PCS
S Kathy Salem, PDG
All Past Presidents

NOMINATING

Y Jean Wilder, PCC,PDG PP, (Co-Chair)
Y Mary Swift, 1VDG
K Anthony Baliola 1VDG
S Steve Garran, 1VDG

PUBLIC RELATIONS

Y Jeff Turner, PDG
Y Kellie Hastedt
A Mark Bucchino
A Barry Alman
N Laura Ward, 2VDG
K Debbie Hayes, PDG
K Kristine Shanahan, 2VDG
K Tim Munn, PCS
K Irza Almonor
S Jesse Armell, 2VDG
S Lorraine Thompson, PCST

2024 - 2025 Committees

TRUST & ENDOWMENT

Officers

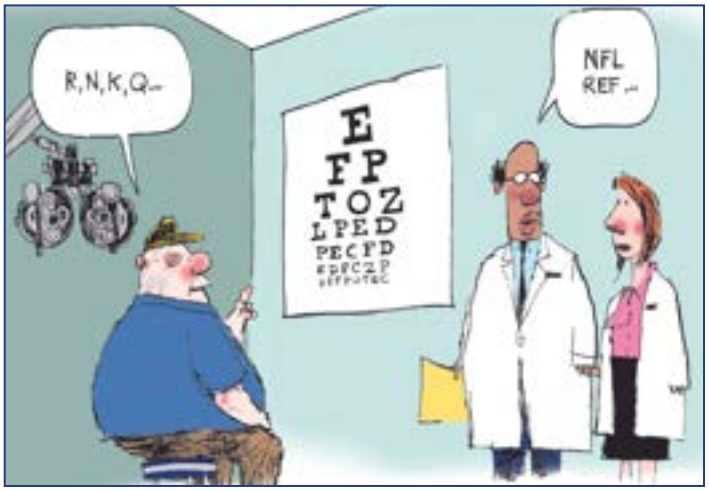
President Bev Dillon, PDG
Ex Officio - Treas. Dr. James Roth, PDG, PP**
Ex Officio - Asst. Treas. Jeanne Farrow, PDG, PP**

Term Expires June 2025

A Lionel Carbonneau, PCST
N Brenda MacPherson, PRC (Clerk)
K Ivette Mesmar, IPDG
S Steve Garran, 2VDG

Term Expires June 2026

Y Jeffrey Turner
K Tim Munn, PCS
S Wayne Smith, PDG, PP (Chairperson)



MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND
www.mlerfi.com

Seeking 2nd Medical Opinions Through our MLERF Institutional Partners

• Targets for help

- For matters related to children
  Boston Children's Hospital
- For matters related to diabetes
  Joslin Diabetes Center
- For matters related to vision and hearing
  1. Massachusetts Eye & Ear
  2. Boston Medical Center
  3. Tufts Medical Center

• Information required from patient

- Name, address, and mobile phone number
- Date of birth
- Insurance plan and policy number
- Description of medical issue

All information should be passed on to your District rep

• MD33 District representatives

- **District Y** – PDG Jean Wilder – **jwmartinhl@yahoo.com**
- **District A** – PDG Dick Ferrucci – **dick@wmrcradio.com**
- **District N** – PDG Jeanne Farrow – **lionjeanne33n@gmail.com**
- **District K** – PDG Dr. Deborah Wayne – **doctoradeb@comcast.net**
- **District S** – PDG Kathy Salem – **kathrynsalem@gmail.com**

• Process to schedule appointment

- District rep will pass on patient information above to MLERF President John Riemer or Dr. Jim Roth to determine the right place to seek a 2nd opinion appointment
- They will schedule an appointment with the hospital
- Hospital will communicate the specifics (date, time place, Doctor's Name) of the appointment to the patient

Researcher Spotlight

Meet Dr. Lois Smith
Boston Children's Hospital and Harvard University

By Beth Piocos, PhD, MLERF Director 2024-25

MLERF has been funding clinician researchers for nearly 75 years, and we have been told about the impact of these funding not only to their research but also to patients around the world. The interview below with Dr. Lois Smith, MD, PhD, Professor of Ophthalmology, Harvard Medical School and Boston Children's Hospital, captures all these impacts having been a recipient of MLERF grants multiple times. It is also an inspiring story of a fascinating and admirable person.

Learn more about Dr. Smith's research at https://www.childrenshospital.org/directory/lois-smith. In future Eye Catcher editions, we will feature more researchers from the different institutions that MLERF funds.

What 5 words describe you and why?

Clinician/scientist. I first completed a PhD in chemistry, then went to medical school so I could study the basis of eye disease but also translate these finding to clinical practice.

Mentor. I have trained 2 generations of translational scientists and clinicians worldwide (Japan, China, Sweden, Canada, France, Denmark, Germany, Chile). I also set up a program in my lab to train recent graduates from college to get them into medical school and also teach them how to do science. There are over 60 now in ophthalmology and other specialties in the US.

Environmentalist. For many decades I have been involved with and then led an international foundation that gives grants to limit environmental destruction as we live in an ecosystem that must be protected.

Mother, grandmother. I get great joy from my two children and two grandchildren. Grandchildren are the best antidote to any tendency towards excessive self-regard. They keep life real, in the moment and fun and they keep you humble.

Humanitarian. I truly believe that we need to take care of all patients and consider all people fairly. We need to provide compassionate care for every person we encounter.

Why did you get into medicine and research? How did you choose your area of specialty?

I specialized in ophthalmology after medical school because vision is so critical. It is part of the brain, and we can learn so much about both visual function and brain function by studying the eye and the retina. When I started my career as an ophthalmologist there was no treatment for age-related macular degeneration and the only treatment for diabetic retinopathy and retinopathy of prematurity was destruction of most of the retina with laser. So I wanted a more

rational approach. I set up a mouse model of retinopathy allowing me to work on the biochemical pathways involved in the disease processes. I found many pathways we could manipulate to prevent or treat disease and found interventions that went through clinical trials and/or are now in clinical use including anti-VEGF, IGF-1 and approaches to improve mitochondrial function in the retina during disease.

When did you first receive an MLERF grant and what was it for?

When I started as a new faculty member at Boston Children's Hospital and Harvard Medical School in 1983, I had no research funds from the hospital or from NIH. I received in the 1980's a grant from MLERF which was invaluable to help me start; first to establish a mouse model of retinopathy, then so I could study disease pathways.

What would be the biggest impact(s) of the research you have done through the years?

Change in the way we treat retinopathy: anti-VEGF, IGF-1 and now topical steroids and compounds taken orally to promote mitochondrial function. The mouse model I developed has been the most widely used model for studies worldwide in retinopathy. There are over 35,000 citations of this work in other scientists' publications.

What are the top 3 advice you would give a young doctor and researcher? Why?

1) Look at major gaps in our understanding of disease and study how to fill those gaps: understand fundamental mechanisms and translate them into clinical care.

2) Make time for your family and friends and give generously to the younger generation, your own children, your scientific children and others.

3) Collaborate widely with other clinicians and scientists to multiply the benefits of the work- make friends for life and share the fun of discovery and make a difference in the lives of patients.

News From the Districts

District 33Y

Maryann Bankman PZC
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Holyoke MA 01040
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mtmnovajo@aol.com

Best Wishes to all Lions for a Very Happy Spring. Although the weather doesn't really indicate Spring has truly arrived. We had a little snow last night! I do hope your eyes will soon be catching sights of daffodils and tulips popping up from the hard winter's ground. I salute all State Lions who braved participating in the recent Polar Plunges to raise money for MLERF. You are fearless dedicated Lions. Now for some very positive news for you participants. Recent research at the Washington University School of Medicine in St. Louis found that immersion in cold water may increase your life span. The jolt the body experiences when hit by a blast of icy water triggers positive hormetic stress. Immersion in cold water or showering with cold water have also been shown to decrease inflammation and improve circulation. Another study at the Virginia Commonwealth of Medicine found cold plunges or showers can reduce depression. So in addition to raising money for a great cause you just may have acquired a few good health benefits for yourself.

Our MLERF year is going by at Mach Speed. We have about 11 weeks to achieve our goal of one million dollars. At the State Lions Convention held in Falmouth on April 4- 6, MLERF President Bev Dillon told attendees she would like to "Be a Million Dollar Lady." So we still have some serious fundraising work to do in this time frame. Please keep in mind we cannot accomplish this goal without your awesome help. We are so grateful for all the amazing fundraising events that you hold to support us. Your hard work and efforts are the reason we are able to support the research for six very deserving institutes in Boston(Mass Eye & Ear, Scheppins, Boston Children's Hospital, Boston University, Joslin and Tufts University). Each Grant request basically has two or three separate projects. A sample request submitted this year by David G. Hunter MD, PhD at Boston Children's Hospital includes 3 investigative areas. In laymans terms this looks like: 1. A potential new treatment for Age Related Macular Degeneration 2. A new method to prevent or treat nystagmus. 3. Complete a process to develop a mouse model for future research to treat cerebral visual impairment, the most common cause of visual disability in children in developed countries. Many of you have met Dr. Hunter as he has come to our District Advisory, Midwinter and Award meetings. The research description of these three investigative projects are: 1. Targeting Inflammasones through GSDMD for Age Related Macular Degeneration. (GSDMD is a protein which is involved with cell death). 2. The Role of VEGF in Intraocular muscles in development of nystagmus. (VEGF is a vascular endothelial growth factor) 3. Modeling Brain based visual impairment.

The Northampton Lions Club made a $5000 donation to MLERF at the State convention meeting. PCSTJim Allen of the Pelham Lions club made a personal donation of change he saved in the amount of $26. Every penny counts. If you haven't made your donation yet please try to submit by mid June.That will make it much easier for Treasurer Jim Roth to close the books at the end of the month and it will let us know if we met our goal. Be sure to try to attend the MLERF Awards Dinner on Saturday August 2nd, 12-4 at the Doubletree Hilton in Milford. You could have a wonderful opportunity to talk with some of the researchers.

We congratulate Peter Tomyl ZC from the Adams Lions Club on receiving the Presidential Award at the District Governor's Banquet on Saturday evening. We congratulate 1st VDG Mary Swift for being voted in as DG for the 25-26 year and we congratulate CST Jean Sherman voted in as 1st VDG on Sunday.

Lionel Charbonneau, PCST and his committee did a great job this year of revising and updating the MLERF organizational chart and By Laws. There were a number of changes. Two of them are described here. The positions of 3rd Vice President and Executive Director are eliminated effective July 1, 2025. The President is required to appoint a director from any district that is not represented on the Executive Board. I currently represent D33Y on this

News From the Districts

District 33A

1VDG, Denise Andrews
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Lions of the Awesome District,

Happy Spring! It's that beautiful time of year when everything seems to come back to life. The days are longer, the weather is warming, and green is peeking through once again. Of course, for us Lions, the season doesn't matter—we stay busy year-round, living our motto "We Serve." After all, need never takes a vacation.

A Huge Thank You for an Incredible Mid-Winter Conference! District 33A clubs came together with generous hearts and donated an outstanding $19,800 to the Massachusetts Lions Eye Research Fund (MLERF)—with more contributions expected this spring and summer. Way to go, Lions! Give yourselves a big round of applause!

Congratulations to PCST Lionel Carbonneau and MLERF Secretary Bob Grover on receiving the MLERF President's Award in recognition of their outstanding dedication to our shared mission. These two Lions truly embody what service and leadership are all about—thank you both!

Where Your Donations Go
Each year, hospitals and research institutions apply for MLERF grants. These grants fund cutting-edge research, and the MLERF Board goes through a thorough selection process to award funds wisely. Many of these projects are seen as "seed money" that may attract larger funding from national organizations like the NIH.

Our partnerships go beyond funding. Institutions host visitation days so we can witness firsthand how your generosity is making a difference. Special thanks to District 33A Leo Advisor Peter Cardoza for organizing a powerful Leo visit to Tufts Medical Center. On March 11, 28 Leos and 4 advisors from Blackstone Valley Tech, Gardner HS, Monty Tech, and Notre Dame Academy toured the New England Eye Center, met researchers, and heard from PhD candidates. What an amazing experience!

Spreading the MLERF Message
District Directors Barry Alman, Lionel Carbonneau, Bob Grover, and Marianna Riemer have been busy visiting clubs to share MLERF updates and success stories. If you'd like a speaker at your next meeting, just reach out—we're always happy to spread the word.

MLERF Fundraisers in District 33A

May 17 – Mendon Lions "Toll Road for Sight" (Rt. 16 & North Ave/Main St., 9 AM – 12 PM)

August 9 – Motorcycle Ride for Sight in memory of MLERF Past President John Riemer. Starts in Monson and ends at the Grafton Lions Clubhouse. For info: Lionsride4eyeresearch@gmail.com

Several MLERF directors are also supporting **Audio Journal's "Random Acts of Music"** fundraiser on May 31 at Holy Cross. A wonderful cause—come join us!

Other Ways to Give
Consider donating through Celebration of Life Gift Envelopes to honor loved ones or mark special occasions. These are available from your MLERF directors.

Learn More
Please visit the MLERF website for short videos, impact stories, and more about how you can help. You'll be proud to be a Lion when you see the lives you've helped change: www.mlerfi.com

Thank you, as always, for your continued support, generosity, and service. Keep up the amazing work—it is truly appreciated.

With appreciation,
DG Denise Andrews

District 33K

PDG Deb Hayes
37 Island Road
Millis, MA 02054
Phone: 508-816-6732
Email:
debbieh1212@hushmail.com

Happy Spring Lions of 33K! It was a very long and cold winter, but my heart was warmed when I heard about the amazing donations made to Mass Lions Eye Research (as well as our other charities)by the wonderful Clubs of 33K - We truly are SPECIAL!

As a Lion in District 33K, I'm sure that at some point or another you've heard of **MLERF or the Massachusetts Lions Eye Research Fund, Inc.** And perhaps you've taken that knowledge and filed it in the back of your mind as just *"another fundraiser"* you're being asked to contribute to - ***but MLERF is not "just another fundraiser."***

Did You Know?
MLERF was founded in 1952 to bring attention to the fact that research needed to be done – ***to be FUNDED*** - to find a way to prevent premature infants from going blind very soon after birth. They were not born blind.
As just about all premature infants are, babies in the 1950s and before, were put in incubators saturated with 100% oxygen to help them breathe, as their lungs are not developed to the point they can effectively move oxygen through their tiny bodies. But soon after being placed in these incubators, babies started to go blind. For years and years, this was being blamed on the prematurity of the infant, but thanks to a $5,000 grant from MLERF, Dr. Theodore H. Ingalls, was able to confirm the reason for this ***"baby blindness"*** and stop it. Oxygen - too much oxygen saturation in incubators was drying out the very tiny retinas in the eyes of these infants, and destroying it. He developed and implemented a new oxygen flow valve at a cost of five cents, and babies stopped going blind due to over oxygenation.

So, what does that mean for you, a grown adult in 2025? That first succesful experiment funded by MLERF over 70 years ago, led to hundreds of experiments that led to dozens and dozens of new technologies, drugs and cures, and opened doors to tens of thousands with vision impairment.

You see (pun intended), **MLERF funds ideas - yes, even the most far-fetched ideas.** Ideas that started in the brains of the brightest high school students, that then turned into actual data-driven concepts by the time they graduated from college, which were repeated over and over again in the labs of our world renowned academic and medical institutions and proven to work – all thanks to the money that **you donate to MLERF**. These researchers, having dedicated their lives to ending vision issues and blindness - are then able to go to the NIH (National Institute of Health) for larger grants that turn these once pipe dreams - into life-changing realities.

Science Fiction Coming to Fruition.
So many of us grew up in the days of black and white movies with rockets going to the moon, androids and robots, flying cars and the bionic man. Could you have imagined when you were growing up, that we would go to the moon and actually walk on it? That rockets would journey to the far corners of the universe - without Captain James T. Kirk? What about heart surgery being done by using a small catheter or that titanium would be able to replace almost every joint in the human body?

We, the Lions of Massachusetts, are making science fiction science fact. Your donations are responsible for bringing the dreams of those brilliant minds to fruition.

Cutting a tiny slit in the cornea of your eyeball, removing the lens and replacing it?? That was crazy talk not too long ago. Using a sci-fi alien-like laser on your eye's cornea to improve your vision? A laser beam in your eye?!?! Can you imagine how that conversation went over a bowl of Corn Flakes® one morning in 1990-something?

"Dad, one day I am going to use a laser to restore your vison to 20/20 so you don't need glasses to read the newspaper."

"That sound great son." Dad looking up over his glasses, "Marge, I think junior is doing drugs."

And it wasn't very long ago that another brilliant mind figured out a way to isolate stem cells from bone marrow and actually make new tissue, nerves, muscles - and even bodily organs.

Stem cells are special cells in the body that have the ability to develop into many different **types** of cells, such as blood, muscle, and nerve cells. They can also divide and renew themselves, making them essential for growth, repair, and maintenance of tissues. They are found in many areas of the body, but bone marrow and umbilical cords of newborns are where they are most prevalent.

continued on page 17

News From the Districts

District 33S

PDG Wayne Smith
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subwps@aol.com

There are so many special fund raisers for Massachusetts Eye Research Foundation (MLERF) every year and this year is no exception. At our Mid - Winter Convention the Belly Flop Contest raised $1,980 and $110,000 was received from our Lion Clubs for MLERF. Governor Michael Middleton was pleased with the efforts of our Lions and looks forward to surpassing our fund raising goals. Please remember that the final donations have to be received before the end of our fiscal year, June 30, by our Treasurer, to be credited to this year. Not our rules but that of our Auditing Firm and the U S Government.

A new fund raiser by Bridgewater Academy Lions Club to benefit MLERF this year was Matt Roberts "Clean Comedy" Magic Show, April 26, 2025 for family and friends to fill up the 250 seat capacity hall.

A Calendar Raffle was held by West Bridgewater, Bridgewater, Bridgewater Academy, Bridgewater Community, East Bridgewater and Brockton Lions Clubs. Do you know what town they all were at one time? This ran for a few months and dinners at various restaurants were the prizes. Nice when Clubs get together for a fund raiser.

South Attleboro Lions held their Dinner in the Dark. There are so many ways to excite the community and energize our Lions.

Not to mention our MLERF President Bev Dillon braving the frigid waters in the Polar Plunge in Wrentham, District 33N, on March 29, raising personally over $1,000. Bev has the goal of reaching over one million dollars for MLERF this year. She sets the example and let us, do all we can, to reach this obtainable goal.

This brings us to the successful change of venue we wrote about in last Fall's Eye Catcher. Vice District Governor Steve Garran, Chair of the 33S Walk Festival moved it from the end of the Cape Cod Canal to Buzzards Bay Park. This was a re-imagined event with incredible music, great food, service projects, speakers, and great community connections. And a chance to get some fresh air walking and raising funds.

This year our Vice District Governor Jesse Armell III will be chairing the newly named Seeside Walk to be held on September 27, 2025. For those of you that were not there last year the park is a beautiful oval shaped park overlooking the Cape Cod Canal and the Railroad Bridge in Bourne.

Jesse will be inviting all District 33 Multiple District Lions and friends, to enjoy the day, and participating with us to raise over $50,000 for MLERF. The enjoyment will run from 10 AM to 5 PM. Come for the whole day or for a portion of the day.

This is a family friendly event for all ages and the public is welcomed and encouraged to attend. There will be live music, food trucks, guest speakers along with service projects. We are looking for corporate sponsors for the walk and various levels of sponsorship, along with the walkers themselves.

There will be a large collection of food for various food pantries on Cape Cod. Lion Pat Salvas will be obtaining a 200 bag homeless project also. There will be plenty of signage in the area to welcome the local community.

For additional information please call VDG Jesse Armell, III. His enthusiasm with this project and Lion members help will reach our goal.

At our Mid Winter Convention Past International Director L. Doug Sime Awards for the highest "per ca-pita" donations to MLERF based on the Lion Clubs donation to the fund during the past fiscal year and the clubs membership count on June 30th of that year were presented. Category 1 (1 to 15 members) Dennis Harwich, $4,315 ($332 per member), Category 2 (16 to 35) Abington $21,136 ($881

District 33Y Continued

Board. The number of representatives on the Board of Directors from each district have been reduced from 5 to 4. Being on the MLERF Board has been a very rewarding experience for me. It is wonderful to work with such a dedicated team devoted to help fight against preventable blindness and to support critical ongoing research that will lead to new improved diagnostics and treatments. It is exciting to meet the researchers and to visit the labs to observe how the research is conducted. I encourage you to think about volunteering to represent D33Y in the future.

The District 33Y Midwinter Committee thanks President Bev Dillon, Ben Ellis and others for manning the MLERF table at the Conference.

District 33Y currently has 29 clubs and 745 members. DG Thom Swift says that although we have smaller numbers than in the past, it is impressive what some of the clubs are able to do. But Thom says the goal must be to increase clubs, membership, fundraising and leadership. We had seventeen members from our district attend the State Convention. It would be great if we could increase the attendance. The meetings are informative and fun. There is good opportunity for networking and finding out what other clubs are doing for fundraising and service projects. DG Thom says a committee is looking into some possible changes that
may be made to encourage attendance at the Midwinter and State conventions.

The Youth Speech Contest is always inspiring to hear. The theme for this year was "The best advice I ever received was..."

We missed seeing the Lions All State Band and PDG Greg Prentice of the Cummington Lions at the convention. We were very saddened to hear of his unexpected passing due to a massive heart attack on March 23rd. RIP Greg. We won't forget your wonderful service for the Lions.

The Lions All State Band is scheduled to play on Saturday April 26th at the South Community High School, 170 Apricot Street in Worcester. Doors open at 2pm. Tickets are $10. Please try to attend. Their performances are truly amazing.

A 33Y District Advisory meeting was held at the Summit View in Holyoke on March 17th. Fifty five attendees represented 14 clubs. Many thanks to the Southampton Lions for hosting this event. Some members celebrated the day with wearing green. PCC Dennis Fountain gave an informative and interesting update on LCIF. One more Advisory meeting will be held on Wednesday, June 11th, 6pm at Tony and Penny's in Ludlow. Please try to attend and find out what Lion activities will be happening in our district during the summer months. Lets thank DG Thom Swift, 1st VDG Mary Swift and CST Jean Sherman for the wonderful job they have done serving as officers for our district.

I wish all clubs a fun successful summer with fundraising and service projects. Let our district officers know what you have planned: marathons, walkathons, golf tournaments, raffles, auctions, tag sales, bake sales, plant sales, pancake breakfasts, food booths at community events, ice cream socials, car shows, concerts, etc. Some upcoming events that I know include the Northampton Lions Fantastic French Fry Booth at the Look Park Family 4th Celebration on Saturday June 21st and the Southampton Lions Chicken Barbeque in August. Don't forget to stop by the Agawam and West Springfield Lion food booths at the Big E in September.

Wishing you a Healthy, Safe and Happy Summer!
Many thanks again for all you do!

Lion Maryann

District 33S Continued

per member), Category 3 (36 to 59) Acushnet $28,255 ($577per member), Category 4 (60 plus) Somerset $29,100 ($359 per member). Quite the accomplishment. The West Bridgewater LEO'S Club was honored with a total donation of $812.74.

Our "Referral Program" for citizens in need of a second opinion from our research institutions is being appreciated by all that have requested help. PDG Kathy Salem is our contact for our District. She is very accessible, efficient and caring.

Remember, if you would like to attend one of our visitations to our research facilities please get in touch with one of our directors so that you may attend. These are scheduled throughout the year and are extremely informative and our researchers show their appreciation to the Lions that help make this research possible.

Let us each do what we can to reach our one million dollar goal this year. We have an organization that needs all of us to help each other.

My Best,

Wayne

District 33K Continued

Funding the future - A call to action!

What was once science fiction is now a reality. Technology has advanced faster in the last 50 years than in the first 1000 years.

Imagine was the next 30 years will bring.

Chances are, you know at least one person who suffers with vision issues. Perhaps it's a child who was born blind or lost their sight to an accident, or an older friend who has developed diabetic retinopathy or who has glaucoma. There are so many conditions, medications and injuries that are compromising our sight.

But there is hope. You are the hope.

MLERF is one of the largest funding arms of conceptual vision-related research in Massachusetts and your donation to MLERF will fund cutting-edge vision research now and in the future. Right now there is a brilliant high school kid sitting at the kitchen table telling mom or dad that they are going to change the world by curing blindness.

Wouldn't it be great if your donations funded that dream - that reality?

How You Can Help

There are so many ways that you can help MLERF reach it's annual goal of $1 million. Save your loose change and donate it at the end of each year. Remember those you have passed away by making a donation in their name to MLERF. Work with your club to hold a fundraiser. Talk to your family, friends and co-workers and let them know that you are a member of the amazing Lions and that you are a part of a special group of people that are dedicated to eradicating blindness and ask them to support our mission.

Consider becoming a ***Knight of the Blind*** and receive the ***Visionary Award*** for a personal donation fo $250. This is not a club award, but a calling to all individual Lions in all of the clubs across the state. You will receive a beautiful pin and special card to keep in your wallet.

As we come to the end of the 2024-2025 Lions year, I am asking all of our clubs to consider making a donation. It would be wonderful for District 33K to have 100% club participation. If your club is celebrating a special anniversary, consider making an extra $1,000 donation in recognition of that anniversary and give a sight award to a worthy recipient.

The Lions Clubs of District 33K - Special K, have always gone above and beyond with their commitment to supporting Massachusetts Lions Eye Research Fund, Inc. and the officers and directors of MLERF thank you for your dedication to our mission.

If you have any questions regarding MLERF or the Visionary Award, or you'd like to have a director come to your club to speak, please feel free to contact me.

Yours in Lionism,
PDG Deb Hayes
508-816-6732 (call or text)

9th Annual Polar Plunge

Lions Clubs held another fun and successful **Polar Plunge** on March 29 at Lake Pearl in Wrentham to benefit Massachusetts Lions Eye Research Fund (MLERF). Almost 75 people – Lions and others – braved the 38-degree water to raise **$40,000 for vital eye research** that can one day help you or a loved one. Many plungers wore creative and colorful costumes representative of the colorful atmosphere of the day.

Lions are known for working with sight-related issues and visually impaired or blind people. There are over 240 Lions Clubs throughout Massachusetts and together they operate and manage MLERF, which is dedicated to providing seed funding for cutting edge research projects and has a goal of trying to eradicate preventable blindness. Since 1952, MLERF has donated more than 41 million dollars in eye research grants. MLERF research grants have been absolutely vital in allowing local scientists to continue pioneering research and are paving the way to fight and win the battle against eye diseases and preventable blindness.

Lions Polar Plunge Committee

9th Annual Polar Plunge

Super Woman - MLERF President Bev Dillon

News & Events Around the State

On Tuesday **March 11**, 28 Leos and 4 advisors from 4 high schools in **District 33A** visited the **New England Eye Center at Tufts Medical Center** in Boston. The students from **Blackstone Valley Tech, Gardner High School, Monty Tech and Notre Dame Academy** were treated to a tour of the Ophthalmology Lab by **Director of Research D. Pablo Argueso and PhD candidate Jennifer Judge**.

After visiting the lab, Dr. Argueso did a presentation about eye diseases and the work they do at Tufts. He also discussed the importance of MLERF grants in the research process. Ms. Judge also gave a presentation on the potential immunogenicity of certain sugar moieties on limbal progenitor cells, a tissue stem cell population vital for maintenance of ocular homeostasis and preserving vision.

After the presentations Ms. Judge and Dr. Argueso joined the Leos for lunch and continued to answer questions and share their experiences. Thank you MLERF, for making this opportunity possible.

Together, BVT and Monty Tech run the Walk for Sight fundraiser, which raised over $1,500 in 2024 for MLERF.

BACK BY POPULAR DEMAND

Rock N Roll

Woburn Middlesex Lions Club

FUNDRAISER

Party

Dj Chris Fiore

Spinning All Your Favorite Music and Artist Live On Video

The American Legion Post #101
194 Lexington Street Woburn MA

SAT. MAY 3RD | 7PM to 11PM | Admission $20

BRING YOUR OWN FOOD & SNACKS!

CASH ONLY BAR -ABSOLUTELY NO OUTSIDE BEVERAGES "INCLUDING WATER"

LOTTERY TICKETS - RAFFLES - 50/50
EDDIE V's $100 Certificate & More!

NO TICKETS SOLD AT THE DOOR - CALL For Tickets & Reservations

(781-938-9043 or 781-266-8715

ALL PROCEEDS TO BENEFIT LIONS EYE RESEARCH

Bridgewater Academy Lions Club

Is proud to present

MAGICIAN MATT ROBERTS

Performing his

"CLEAN COMEDY MAGIC"SHOW

Saturday, April 26, 2025

Bridgewater Vets Club

85 Cottage St., Bridgewater

Doors open 6:30PM Show starts 7:30PM

Cash Bar/Light Snacks

Matt says: "I perform my 80-minute, engaging, funny, WOW-factor show full of magic, clean comedy, mentalism & illusion for the whole group at once... and more.

"My clients include Google, GE, Pepperidge Farm, Ocean Spray and a recent performance for Seth Meyers. I've had the honor of performing on Broadway, appearing in The New York Times, The Chicago Tribune and as a guest on NBC's Today Show. "

Tickets: $20.00/person Capacity: 250 seats

Net proceeds benefit Mass. Lions Eye Research Fund, Inc.

For tickets, text Paula Lehtola 781-775-8286

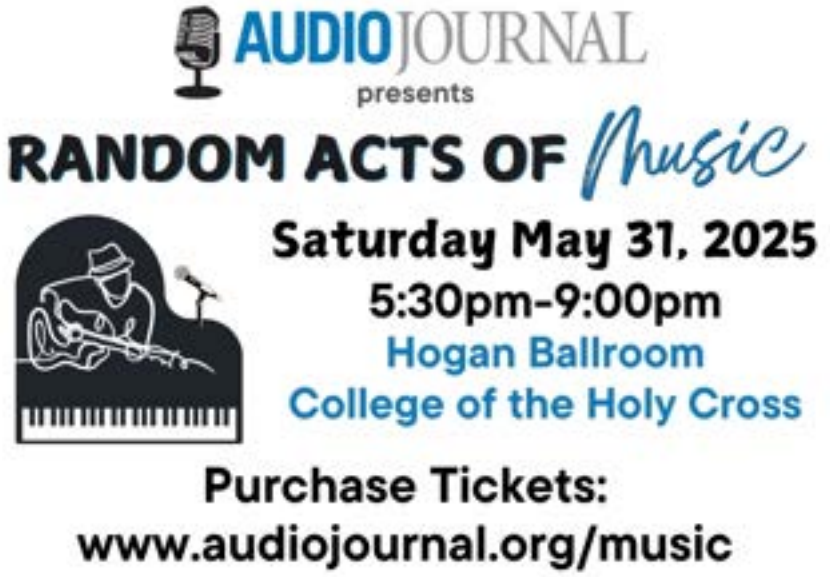
or

Mail check payable to "BALC" to
Paula Lehtola, P.O. Box 712, Bridgewater, MA 02324

For Paypal or Venmo info, text 508-577-0352 include word "Magic"

Tickets will be held in your name at the door.

Guests must be over the age of 16



Audio Journal invites you to the Hogan Campus Center at College of the Holy Cross, where supporters will enjoy a delicious meal and listen to Random Acts of Music, featuring Jazz, Classical, and Folk standards. The evening promises a memorable musical experience.

Don't miss the silent auction, raffle prizes, and the invaluable opportunity to chat with fellow supporters of Audio Journal.

Open Cash Bar with hors d'oeuvres begins at 5:30 P.M.

Dinner: Service begins at 6:30 P.M. The main dish includes poultry, two vegetables, pasta, salad, and rolls with seasoned oil for dipping. If you require a vegetarian dish, please notify Audio Journal in advance. Dessert: Coffee and petit fours (small finger cakes)

Parking
Upon arrival at the College on College Street, drive up the hill to the last gate on the left. The Hogan Campus Center is the second building on the left, with a large parking lot on the right. If you need assistance, please let Audio Journal know ahead of time. Upon entering the building, there are approximately five steps to reach the first floor. The Hogan Campus Center Ballroom is immediately to the left at the top of the stairs. If you require an elevator, a lift is located to the right of the steps.

Doors will open at 5:30 P.M. with the cash bar. Dinner will begin at 6:30 P.M., and the event will end at 9:00 P.M.

If you have any questions, please call Audio Journal at 508-797-1117 or email Director Barry Altman at dad@rj3.net

Mendon Curlers takes top spot in Petersham tournament

The Mendon team won the annual Petersham Lions Club charity curling tournament on March 22. Team members are Colleen Oncay, Karen Marzilli, Gina Marzilli Shaughnessy and Barbara Thirsk.

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PETERSHAM – The Petersham Lions Club recently held its 19th annual charity curling tournament and raffle fundraiser on March 22. The event benefits Massachusetts Lions Eye Research Fund to help in finding a cure for blindness.

This year's 14 teams were from Athol, Barre, Charlton, Hubbardston, Petersham, Mendon, Paxton, Rutland, Winchendon and Worcester. There was a new team this year comprised of members from the Massachusetts Lions Eye Research Fund, which has membership from many Massachusetts Lions Clubs.

The final playoff was between the Hubbardston Lions and the Mendon Lions, with Mendon taking the win. The Mendon Curlers were Colleen Oncay, Karen Marzilli, Gina Marzilli Shaughnessy and Barbara Thirsk. The winning team will have their name added to the tournament plaque along with the names of the teammates. The plaque goes home with the winning team to display for the year and returns for the next year's tournament.

Petersham is proud to have its own Petersham Curling Club, which has been offering an arena for the sport since 1960. The Petersham Curling Club is one of only four dedicated clubs in Massachusetts, solely for the purpose of curling. The club offers the day to the Lions for the event. This partnering allows the Lions to have this event locally and supports the Curling Club as well. The Petersham Lions tournament is always an amateur-level event, held annually in March. Experienced Petersham Curling Club members were on hand to offer lessons and advice to those who had never curled before.

Petersham Lion John Magnino kept all the teams in playing order and coordinated who was playing against whom, a job he has masterfully done since the tournament began.

The Petersham Lions will start planning the 20th tournament this fall after a short summer break. Those interested in becoming a Petersham Lion, please contact Denis Legare, the club membership chairperson at hilltopchief@gmail.com.

The Petersham Lions next big event is the Massachusetts General Hospital Bloodmobile that the Club is co-hosting with and at Monty Tech High School in Fitchburg on May 3. To sign up and reserve a donor spot, visit https://www.massgeneral.org/blood-donor/blood-drives/community-blood-drives.

M/C Ride for Sight

AUGUST 9, 2025

In Memory of Past President
John Riemer

MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND
www.mlerfi.com

Registration
$30.00 Bike
$20.00 additional rider/attendee
Includes:
Coffee & donuts at start

Refreshments in Grafton
Hamburg, Hot Dogs, Soft Drinks
Entertainment, Raffles

Ride starts
at Quaboag Riders M/C
King Ave, Monson MA
Kick Stands Up
9:30AM
https://MONSON.MONSTER

Ride ends
Grafton Lions Club
68 Brigham Hill Rd
Grafton, MA 01519
NOON
graftonlionsclub.org

For registration or sponsorship form
Please contact:
PDG Curt Jameson
Lionsride4eyeresearch@gmail.com

Lions MD33 website

Proceeds to benefit
Massachusetts Lions Eye Research Fund
MLERFI.COM

Lions helped to establish three major research centers in Boston

HoweLaboratory of Ophthalmology at Massachusetts Eye & Ear

MASSACHUSETTS EYE AND EAR

Massachusetts Lions EyeResearch Laboratory at Boston University Medical Center

Boston University
School of Medicine

Lions Laboratory for Genetic Research at Schepens Eye Research Institute

Schepens Eye Research Institute
Massachusetts Eye and Ear

OUR STORY

70+ years ago...

A $5,000 Lions donation...

Facilitated a renaissance for eye research in Massachusetts.

In the ensuing years, $38 million has been raised for eye research by the Lions of Massachusetts.

But back in 1950, the Great Depression was still a faint memory. Kids were watching "Howdy Doody" on 12-inch black-and-white TVs. The median family income was $3,300 per year, and milk was still delivered to the doorstep. The average home price was $1,940.

And babies were going blind.

During the summer of 1950, E. Daniel Johnson, then-Massachusetts District Governor of 33N, was visited by a friend who brought with him his four-year-old son, blind since birth with retrolental fibroplasia or so-called "baby blindness."

Turns out that Johnson's fellow Lion, Massachusetts 33K District Governor Harry Hartford, also had a friend with a blind baby—Al Hirshberg, a sports writer for the Boston Post and a Trustee of the Foundation for Eye Research.

In October 1950, these men—Johnson, Hartford and Hirshberg—along with a small group of Lions, met with Dr. Edwin B. Dunphy, Professor of Ophthalmology at Harvard Medical School and Chief of Staff at the Massachusetts Eye & Ear Infirmary. Dr. Dunphy explained that there was a disease, discovered just 10 years previously by Dr. Theodore L. Terry at Boston's Lying-In Hospital (known today as Brigham & Women's Hospital), called retrolental fibroplasia (commonly known as "baby blindness") that was affecting 4

out of 5 premature babies weighing less than 4 pounds. With no known pathology and no financial resources to investigate the cause, 2,500 babies (just the US) were losing their sight every year.

What could be done?

An informal meeting in DG Harry Hartford's hotel room at the 1951 Lions Clubs International Convention in Atlanta led into the first committee appointed by the Council of Governors in October 1951, which then led to Eye Research being voted at the State convention in 1952 as the statewide official project of the Lions of Massachusetts; The Lions of Massachusetts raised a whopping $5,000, equivalent to $50,000+ in today's dollars. Soon thereafter, the first Eye Research Grant was given to Dr. Theodore H. Ingalls of Harvard Medical School, who was instrumental in confirming that baby blindness was being caused by using too much oxygen in the incubators of premature babies. Today over 150,000 adults can see because of the foresight and concern of these Lions.

Soon thereafter, the Lions supported the Ophthalmic Plastics Laboratory, operated by Dr. William Stone, Jr., which developed pure plastic corneas to be used for persons afflicted with scarred corneas.

In 1953 support was given to the Joslin Clinic under the direction of Dr. Elliot P. Joslin, an energetic man in his early nineties, concerned with the cure for diabetes, which is the leading cause of blindness in the United States. The "Lions Laser Lens" project, which can detect diabetes in the eye before any other physical signs appear, was headed by Dr. Sven Bursell. In addition, Tufts New England Medical Center's Dr. Bertram Silverstone also received grants for his work using radioactive isotopes to cure eye and brain tumors. Further, Dr. Bernard Schwartz at Tufts New England Medical Center received Lions support for his work on modern photographic techniques for damage to the optic nerve and disc in glaucoma.

By 1955, a $45,000 fellowship was award was established in honor of Dr. Edwin B. Dunphy for his contributions to eye research. The Retina Foundation (now known as The Schepens Eye Research Institute), under the direction of Dr. Charles Schepens, constructed the first upside down operating table to repair detached retinas using the Lions grant. Schepens has the longest continuous relationship with MLERF and have dedicated some of their laboratories to the Lions for their continued support of their research efforts.

In fact, there are three major laboratories dedicated to the Massachusetts Lions. The first was at the Mass. Eye & Ear Infirmary called the Howe Laboratory of Ophthalmology run by Dr. David Cogan. The Fund set aside $40,000 for a lab for young doctors being trained in eye research. The lab was actually a janitorial supply room located on the top of the building and was affectionately known as "The Lions Penthouse."

The second laboratory was established in 1969 at Boston University Medical Center, where a major commitment was made for space located on the 9th floor of the new instructional building. It was dedicated exclusively to eye research and is known as "Massachusetts Lions Eye Research Laboratory." Dr. Ephraim Friedman, the first director, and his successor, Dr. Howard Liebowitz, were instrumental in conceiving, designing and constructing one of the first photocoagulator ophthalmic laser beams, which was later used in surgery. The prototype was housed in an entire room, while today's model is the size of a small microwave oven. The world's first clinical specular microscope was also conceived and built here. In 1975 the "Elton MacNeil Memorial Unit" was dedicated in his name for his many years as chairman and president (1954–1961) of the Mass Lions Eye Research Fund, Inc. PDG MacNeil was known as "Mister Massachusetts Lions Eye Research."

The third laboratory was established in 2011 at Schepens Eye Research Institute. The Lions Laboratory for Genetic Research was established by Dr. Neena Haider to treat and prevent retinal diseases. The lab identified a genetic modifier that is able to ameliorate retinal degeneration. The lab's current research also revealed a novel role for Vitamin D metabolism in the development of Age-related Macular Degeneration (AMD) and antioxidants in neuroprotection from light-induced retinal damage. The lab has also developed unique genetic models to study the retinal and vascular observable characteristics associated with macular degeneration.

These are just a few of the major Boston research centers we have supported over the years and just a few examples of some of the basic research conducted in those early years. Today, research has moved light years ahead with the use of DNA, growing of culture cells and the separation of genes to find the genetic cause of eye diseases, but there is still so much more to be done.

The Massachusetts Lions Eye Research Fund Inc. was incorporated on January 20, 1958, and was given tax exempt status 501(c)(3) in February 1959. In 1971, a memorial fund was established to honor the memory of a loved one allowing individuals to contribute. A separate Trust and Endowment Fund was established in 1980 to perpetuate our research efforts. Today the T&E corpus is over $1,300,000. The 1998/1999 year was the first time the Fund raised over $1 million in a single year in donations from the clubs and memorials.

The first statewide project offered to the Clubs was the sale of Westinghouse "Light Bulbs." The Fund bought the bulbs wholesale, and they were then distributed to the clubs for door-to-door sale. This was a major fundraiser for many years through the late 60s and 70s. In the mid 1970s we participated in "White Cane Day" during which white cane stickers were given out for donations and later evolved to a Lions Candy Day. In April 1983 all the special fundraising projects were combined into the "Journey for Sight" project, which asked each club to have one extra project and contribute the proceeds in addition to their regular donations. It was the first time the Fund used advertising on radio, newspapers and TV along with T-Shirts, hats and aprons. The "Pennies" project was born at the same time using a 1/2 gallon milk container to collect coins in local establishments across Massachusetts. The container displayed the new "Lions Logo" and the "Journey for Sight" lettering. In June 1982 the Fund was designated as the Charity of the Senior PGA Golf Classic at Marlboro Country Club. The sponsor was Digital Equipment Corp., who donated a $25,000 computer for eye research. It was given to Joslin Clinic, and was the first computer to be used for research at that center.

David Hunter, MD, PhD. Boston Children's Hospital

In 1999 the Fund established a "Presidential Grant" in conjunction with LCIF. It is a one-time grant, separate from the normal grants, directed towards projects which do not meet the normal grant criteria but are considered worthy for the advancement of eye research. LCIF matches the MLERFi monies up to $100,000 annually. The monies from the Fund come from the interest in the T&E trust fund and uncommitted monies from the treasury. To date there have been more than 20 matching grants totaling $4,026,000.

Over the years, the Fund has given out over $42 million in research grants. We are proud of the fact that every penny donated since 1951 has been given back in grants to the Eye Re-

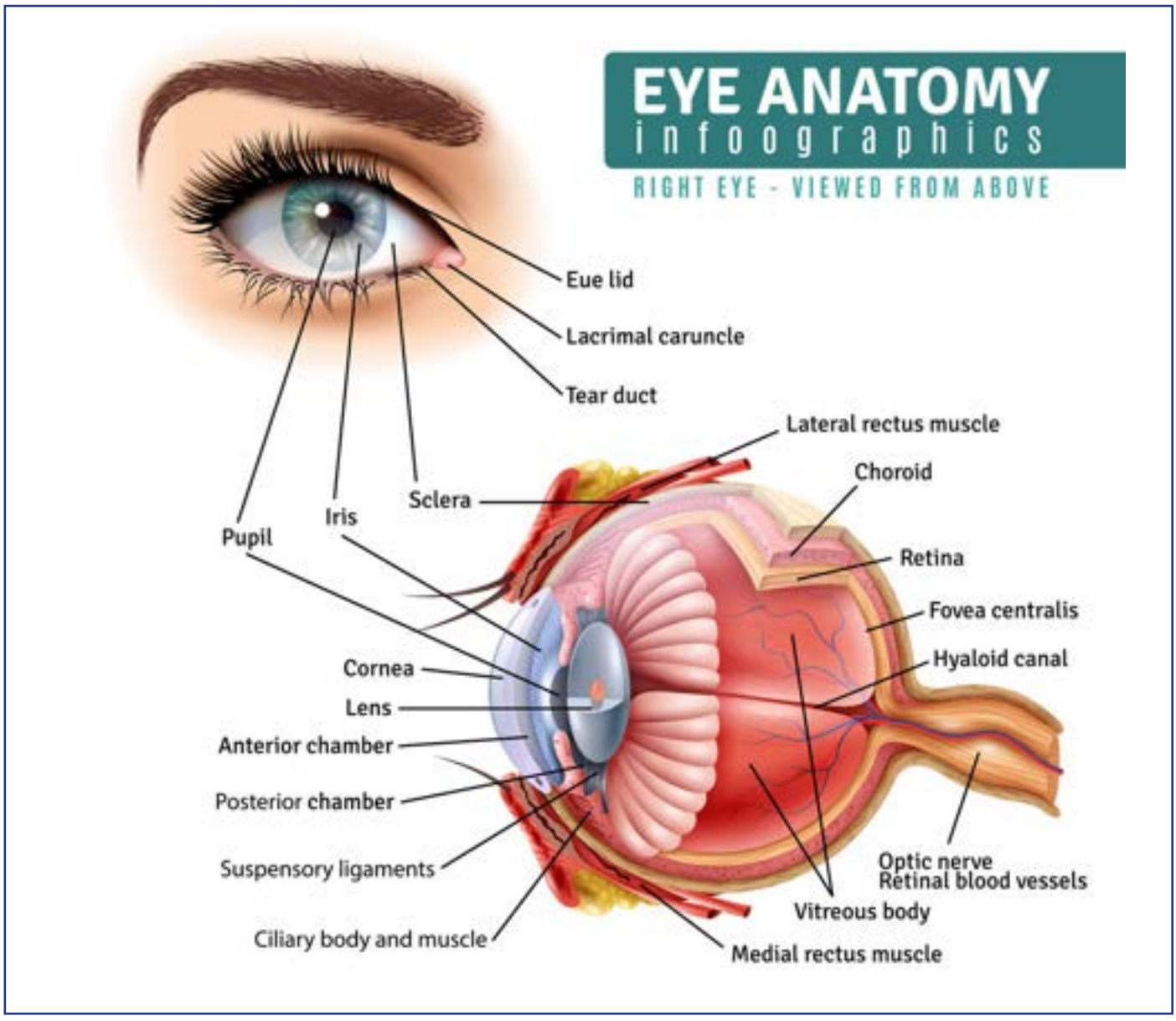
search Laboratories of Massachusetts. The grants are directed for pure research and not brick-and-mortar projects. The most important aspect of the Lions support is flexibility.

These initial grants are the "seed money" that allow researchers to do initial trials and preliminary studies to see if further research is warranted. Once the data is confirmed then the laboratory can apply for government grants which is usually matched on a 10-to-1 basis (or more). Because of Lions support, Boston has become one of the leading eye research centers in the world.

Much has been accomplished…

but there is still much more to be achieved. ■

MLERF
MASSACHUSETTS LIONS EYE RESEARCH FUND
www.mlerfi.com



MLERF GRANT SUCCESS STORIES

These reports from the medical institutions supported by Massachusetts Lions Eye Research Fund, Inc. are testimony of the accomplishments of the researchers only made possible by the grants which are funded by the generosity of the Lions of Multiple District 33 (MD33) Massachusetts.

Massachusetts Eye and Ear/Harvard Medical School

PI Name: Milica Margeta, MD PhD, Assistant Professor of Ophthalmology at Massachusetts Eye and Ear/Harvard Medical School

Project: How does inflammation harm neurons in glaucoma?

Glaucoma is the leading cause of irreversible blindness worldwide, whose defining characteristic is the loss of neurons that connect the eye to the brain. Elevated eye pressure is the only modifiable risk factor for glaucoma; however, many patients continue to lose sight despite taking medicines and having surgeries to lower the eye pressure.

Microglia, the resident immune cells of the nervous system, have emerged as important contributors to neuronal death in glaucoma. We have found that microglia produce a molecule called CD300F that leads to neuronal death in glaucoma by promoting inflammation in the retina. In this proposal we investigated how microglial CD300F cause inflammation and neuron loss in glaucoma, using powerful technologies to investigate microglia in live animals with glaucoma and also microglia cultured in a dish.

With preliminary data obtained with these experiments, we were able to secure major funding from NIH (an R01 grant) that will allow us to investigate the role of inflammation in glaucoma further. This work may open new avenues for development of neuroprotective therapies for glaucoma (in which the retina and the optic nerve are directly protected from glaucoma damage despite eye pressure level). This kind of therapy would be both novel and transformative for the field of glaucoma.

PI Name: Joan W. Miller, MD

Project: Photodynamic Therapy of Ocular Neovascularization

Project: Hypoxia-mediated Release of Vascular Endothelial Growth Factor (VEGF) from the Retina

Age-related macular degeneration (AMD) is a leading cause of blindness in people aged 50 or older worldwide, and the third leading cause of blindness overall. There are two types of AMD—dry and wet. Dry AMD occurs when the macula (the central part of your eye that processes what you see directly in front of you) gets thinner with age and tiny clumps of protein, or drusen, form. In wet AMD, new abnormal blood vessels grow under the retina, the specialized cells at the back of the eye receive and organize visual information. These vessels may

leak blood or other fluids, causing vision loss faster than in dry AMD. It is estimated that by 2040, over 288 million people will have some form of AMD.

Historically, treatment for this blinding disease was virtually non-existent and outcomes were generally poor. While there are still no treatments for dry AMD, development of photodynamic therapy (PDT) and anti-vascular endothelial growth factor (anti-VEGF) agents have revolutionized the treatment of wet AMD and other retinal diseases. These therapies have transformed the field of ophthalmology, improving vision outcomes and quality of life for millions of people around the world.

For PDT, a dye sensitive to light (verteporfin) is administered intravenously followed by application of low power and long duration infrared laser to close the abnormal and leaky vessels under the retina. Funding from the Mass Lions for preliminary studies provided early support to determine optimal treatment parameters, safety, and efficacy, paving the way for FDA approval as the first treatment for wet AMD in 2000.

Funding from the Mass Lions for preliminary studies also helped uncover the mechanisms of ocular neovascularization, or new blood vessel formation in the eye—leading to the successful pharmacological therapies for AMD and other related conditions. These studies demonstrated that the VEGF protein was both sufficient and necessary for ocular neovascularization, creating the foundational basis for clinical trials for anti-VEGF agents to treat AMD. Approved by the FDA for use in December 2003, anti-VEGF therapy is now a mainstay of patient care for wet AMD, as well as other retinal diseases, preserving vision for millions of patients annually around the world.

MLERF final progress report for Elizabeth Rossin, M.D. Ph.D

Projects
The MLERF funded two main projects that I completed over the last 18 months:

- Development of a computational tool to find new mutations that cause inherited retinal disease (IRD)
- Identification of new genetic causes of central serous chorioretinopathy (CSR)

Project #1
With the advancement in availability of genetic testing and the lower cost of sequencing, IRD is a field with increasing promise and possibility for gene therapy interventions. However, among patients with an IRD, approximately 30% do not have a clear genetic cause, making them ineligible for this treatment. For these patients, additional tools are needed. We developed a computational tool to map patient-specific mutations onto 3D protein structure models and output a comprehensive score that summarizes the predicted effect of the mutation on structure. We showed that this tool predicts mutations causal of inherited retinal disease (IRD), including proteins such as rhodopsin, ABCA4 and bestrophin. Importantly, we applied this approach to 65 patients with an IRD but for whom no genetic cause had been identified, and we successfully identified the likely pathogenic genetic cause in 37 patients. This work resulted in the following

publication:

• Blake M. Hauser, Yuyang Luo, Anusha Nathan, Gaurav D. Gaiha, Demetrios Vavvas, Jason Comander, Eric A. Pierce, Emily M. Place, Kinga M. Bujakowska, and Elizabeth J. Rossin. "Structure-Based Network Analysis Predicts Mutations Associated with Inherited Retinal Disease." MedRxiv, January 1, 2023, 2023.07.05.23292247. https://doi.org/10.1101/2023.07.05.23292247.

Project #2

In working on the structural analysis of proteins, the need for advances in the discovery of genetic causes of other retinal diseases became apparent. Central serous chorioretinopathy (CSCR) is a disease I see commonly in clinic but that we understand very little about. It causes distorted and decreased vision in patients at a young age (typical age of onset is 40-50 years old), and there is no good treatment. Through a large international collaboration, we collected 1,100 patients with CSCR and over 500,000 healthy patients and compared their DNA. This highlighted 5 genes that are different in patients when compared to controls, and these findings pointed to the importance of the complement pathway in CSCR (an inflammatory pathway known to be modulated in other diseases like AMD) and pointed to defects in choroidal vasculature in these patients. This work resulted in the following publication:

1. Rämö JT, Abner E, Nikopensius T, Nõukas M, Marjonen H, Silander K, Jukarainen S, Kiiskinen T, Choi SH, Kajanne R, Mehtonen J, Palta P, Lubitz SA, Kaarniranta K, Sobrin L, Kurki M, Yzer S, Ellinor PT, Esko T, Daly MJ, den Hollander AI, Palotie A, Turunen JA, Boon CJF, and Rossin EJ. Overlap of Genetic Loci for Central Serous Chorioretinopathy With Age-Related Macular Degeneration. JAMA Ophthalmology. 2023. PMCID: PMC10119776.

2. Rossin, EJ, & Sobrin, L. (2023). The Pleiotropy of Complement Factor H. JAMA Ophthalmology. 2023. PMID: 37410484.

Summary

I am extremely grateful to the MLERF for funding this work, and only with this funding were we able to make the progress described.

Boston Children's Hospital

MLERF PROJECT

Our studies aim to identify new treatment that targeting the root causes of new blood vessel formation in wet age-related macular degeneration (AMD). Current treatments to block new blood vessels are only effective in ~50% of wet AMD patients. Our goal is to identify new, effective, and safe treatments to prevent and treat wet AMD utilizing a novel neuron-targeting reagent, botulinum neurotoxin A (BoNT/A) to target glial cell activation and stressed photoreceptor neurons, and choroidal neovascularization in AMD. Our proposed project will improve scientific knowledge in the field of ocular neuronal degeneration and vascular biology, especially the roles of neuronal/glial-vascular communication in the pathogenesis of ocular vascular disorders. The com-

munication among neurons, glia, and vessels as well as the release of angiogenic and neurotrophic factors play important roles in controlling CNV, however, the underlying mechanisms are not yet clear. The proposed work will help address this gap. The contribution of the proposed research is expected to conceptually advance the understanding of how modulating both photoreceptor neurons and neuronal/glial-vascular communications controls photoreceptor dysfunction and pathological blood vessel growth in AMD. This work may have broad translational importance in the treatment of AMD.

About the Researcher
Ye Sun, MD, PhD, is an Assistant Professor of Ophthalmology at Boston Children's Hospital and Harvard Medical School. Dr. Sun's research interests focus on the understanding the roles of neuroinflammation, immune-vascular crosstalk, and neurovascular interaction in the development of eye disorders (including AMD, retinopathy of prematurity, and diabetic retinopathy) using genetically modified mice combined with disease mouse models and developing effective ways to treat or prevent vision loss. Her recent research focuses on the identification of the root causes of neovascularization, aimed at developing therapeutic treatments for wet AMD.

Personal Story
As time goes by, the relatives and friends around us are getting old, and more and more loved ones are suffering from vision loss due to AMD. They cannot read, watch TV, or drive; in the future AMD may affect my own vision as well. We have no way to stop getting old, but I hope that one day we can find a way to stop AMD. The immune system helps protect the body, but as we age, the immune system does not work as well. My lab is very appreciative of and excited to use the funds provided by Mass Lion Eye Research Fund, Inc.—to understand the neuron-vascular communications in AMD during aging and to help people with AMD. I am deeply grateful to all Mass Lion Eye Research Fund donors who so generously support the work of those trying to find cures for this disease.

Massachusetts Lions Eye Research Laboratories at the Boston University Chobanian & Avedisian School of Medicine, Department of Ophthalmology

Two research programs helped with funding from MLERF

Yuzuru Sasamoto, MD, PhD
Assistant Professor

Dr. Sasamoto's study aims to develop novel approaches to treating limbal stem cell deficiency disease. Limbal stem cell deficiency is a disease caused by the loss of limbal stem cells and is characterized by severe vision loss due to the cornea being covered by non-transparent conjunctival cells (the white part of the eye). The limbal stem cells reside in an area called the limbus, which lies between the clear cornea and the white conjunctiva. Dr. Sasamoto's current project focuses on how limbal stem cells give rise to cells that cover the cornea and remain transparent. Also, these cells contribute to the maintenance of a healthy corneal. Dr. Sasamoto hopes to develop novel approaches to treating limbal stem cell deficiency and other corneal diseases (e.g., corneal wounds and dry eye disease). Dr. Sasamoto is a new researcher and faculty member in

our department, and the support received from the Massachusetts Lions Eye Research Fund is helping Dr. Sasamoto develop the preliminary data needed for the NIH grants he has now submitted. This support makes it possible for new investigators to have a chance for success.

Haiyan Gong, MD, PhD
Professor

Reducing intraocular pressure (IOP) is the only effective treatment to prevent the progression of primary open-angle glaucoma (POAG), a leading cause of blindness worldwide. We can lower the IOP by improving fluid drainage out of the eye. Fluid flows out of the eye through two circular pathways: trabecular outflow and uveal outflow pathways. Dr. Gong's work has mainly studied the flow of fluid through the trabecular outflow pathway. Dr. Gong has made and continues to produce highly impactful contributions to understanding the pattern and mechanism of fluid flowing through the trabecular outflow pathway. Thanks to the Massachusetts Lions Eye Research Fund's support, Dr. Gong has begun a new research program on the significance of the uveal outflow pathway in glaucoma. Despite its importance, patterns of uveal outflow and the factors that regulate it remain unexplored. Dr. Gong has found that fluid flows at different rates along the circular uveal outflow pathway and is independent of the rate of fluid flowing through the trabecular outflow pathway. This MLERF-supported preliminary data helped Dr. Gong secure a $200,000 grant from the Bright Focus Foundation. This new grant allows Dr. Gong to further study the uveal outflow pathway in experimental glaucoma models, hoping to find therapies to enhance the outflow pathways to reduce IOP and protect eyes from developing glaucoma.

Tufts Medical School

Project 1: Discovery of a novel drug to promote healing of corneal wounds

Pedram Hamrah, MD
Professor of Ophthalmology

Neuropathic pain is caused by a primary lesion or dysfunction of the nervous system and can occur in the cornea. However, neuropathic corneal pain (NCP) is currently an ill-defined, yet debilitating disease. Patients suffering from with NCP are extremely challenging to manage, as the symptoms can range from dry eye-like symptoms of dryness and irritation to severe ocular pain. Currently, the field of Ophthalmology relies on slit-lamp examination to assess signs of corneal and ocular surface diseases. Unfortunately, with neuropathic pain, none to minimal signs can be observed on slit-lamp examination in patients who have been either given the rather broad diagnosis of dry eye disease or have been repeatedly dismissed by their ophthalmologists. While systemic neuropathic pain can be diagnosed by skin biopsies, many patients with NCP may not have systemic findings. In our clinical studies that were carried out using Mass Lions Research Fund's presidential grant made to the New England Eye Center/Tufts University School of Medicine, we have been able to visualize corneal nerves in patients with dry eye dis-

ease and NCP. Our data demonstrates that while both groups can show decreased density of corneal nerves, specific morphological nerve changes are present in patients with NCP. These changes are due to abnormal nerve regeneration in these patients that demonstrate damaged nerves with endbulbs that correspond to microneuromas. The studies demonstrate high specificity and sensitivity of these findings and identify patients with NCP and seem to be diagnostic. The data resulting from this support enabled us to successfully compete for two large NIH grants in both clinical research and basic research. The first was an NIH award to develop our preliminary results into a full diagnostic biomarker through analytical, biological and clinical validation through a large multi-million-dollar NIH grant. The second was the recent award of a multicenter consortium grant to develop new therapies that can develop new targets that can prevent and reverse NCP. The results of this grant would identify the pathways that result in the development of NCP through mechanism that underlie inflammation and nerve damage. These studies will result in direct improvement of patient care through accurate diagnosis and treatment of patients with NCP. In summary, the support by Mass Lions Eye Research Fund has resulted not only in direct improvement of patients care but has significantly advanced the field in neuropathic corneal pain, making it less ill-defined.

MLERF PROJECT II: Benefits of sugar modification to treat ocular disease

Pablo Argüeso, PhD
Professor of Ophthalmology

Sugars, or carbohydrates, play important functions in the human body. They are the primary source of energy for the body but also play negative effects on the body's health and overall well-being when consumed in excess. In addition to their role in energy production, sugars also coat the surface of the trillions of cells present in the human body. This coating, known as glycocalyx, is fundamental for various biological processes. It allows cells to identify and interact with each other, it can act as a shield against mechanical forces, or it can modulate the ability of cells to receive signals from their environment and initiate various cellular responses. The composition and structure of the glycocalyx can change in response to various pathological conditions and external factors, leading to disease.

MLERF funding has helped understand the composition of this important coating on the surface of the eye. In a series of cutting-edge experiments using microarray technology, we identified a series of cell surface carbohydrate signatures that are unique to the different cell types of the human cornea. These results, recently published in the scientific literature and which acknowledge MLERF support, could foster the identification of novel cornea-specific biomarkers. Importantly, preliminary data derived from these studies are uncovering the potential of modifying the ocular glycocalyx for therapeutic gain, particularly in immunological disorders affecting the cornea and a medical condition known as limbal stem cell deficiency. These pilot data will be used to compete for a large NIH grant to perform in vivo studies in animal models of ocular disease.

Joslin

MLERF PROJECT 1 Case Write-up

A 32-year-old woman with type 1 diabetes for 20 years who recently found out she was pregnant presented to the Beetham Eye Institute. She did not know that she had diabetic retinopathy but on her initial exam it was discovered that she had retinopathy of moderate severity. She was followed closely but at 12 weeks of her pregnancy it was noted that her retinopathy was worsening. Unfortunately, diabetic retinopathy can worsen very quickly during pregnancy and potentially cause loss of vision. Her retinopathy was severe enough to warrant treatment with laser photocoagulation. She was followed every 8 weeks after that. Eventually it was noted that there were abnormal vascular changes beginning to form in the peripheral retina in both eyes which were suspicious for neovascularization.

Neovascularization is the development of abnormal blood vessels which have the propensity to bleed and cause sudden and severe vision loss. General current approaches in the setting of an inconclusive exam would involve a fluorescein angiography test which requires the patient to be injected with a dye and the retina of the eyes photographed. This dye unfortunately is contraindicated in pregnancy. Fortunately, we had developed a technique using a novel device, the Optos Silverstone which was acquired through the generous donation of the Mass Lions Eye Research Fund's presidential grant. This device, in addition to being able to acquire ultrawide field images capturing approximately 85% of the total retinal area, can also acquire optical coherence tomography (OCT) scans anywhere within the visualized retina. OCT scans can identify neovascularization.

Neovascularization has a distinct appearance on OCT which can help determine whether suspicious areas were in fact abnormal blood vessels. The patient consented to being imaged using the Silverstone and a special algorithm developed by us that increased the likelihood of capturing all neovascularization in the eye. In the eye, OCT imaging confirmed the presence of neovascularization. The patient therefore received additional laser treatment which was able to control these blood vessels before the disease worsened and before there was any bleeding. This novel device and technique helped her complete her pregnancy safely without severe vision loss while also controlling her diabetic retinopathy.

MLERF PROJECT 2 Case Write-up

A 56-year-old patient presented with a sudden onset of floaters and blurred vision in the right eye. Upon examination, a retinal tear was diagnosed. This condition can arise when the gel within the eye becomes more liquid and attempts to detach from the retina, potentially exerting force on the retina and leading to a tear. Such tears can be perilous as they may allow fluid to pass through, causing the retina to detach from the back of the eye, which is deemed a medical urgency. During a regular examination, it can be challenging to detect the presence and extent of fluid, as well as to ascertain whether any active pulling exists at the tear, thereby keeping the hole open and enabling more fluid to pass through. Fortunately, we employed the novel device, the Optos Silverstone, which was acquired through the generous donation of the Mass Lions

Eye Research Fund's presidential grant. The Silverstone device, enabling us to obtain comprehensive standard and cross sectional scans of the retina, including the far periphery. This not only facilitated the visualization of the tear and the presence of fluid but also revealed some persistent tugging on the tear. Additionally, the device assisted in quantifying the fluid and guiding the treatment process.

Following the scans, it was decided to conduct laser treatment to seal the tear and prevent further spreading of the fluid. The patient expressed interest in understanding the anticipated timeline for recovery and when they could resume daily activities, given their passion for Zumba and an upcoming CPR course. The patient was advised to return for a follow-up appointment in one week. Subsequent follow-ups, two and three weeks later, indicated that the fluid had completely resolved, and the tear was securely sealed without any persistent tugging. The patient was reassured that it was safe for them to resume their regular activities.

The next Eye Catcher will be published in September of 2025. If you have a story, event or fundraiser for MLERF, please send this information to your district reporter.

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