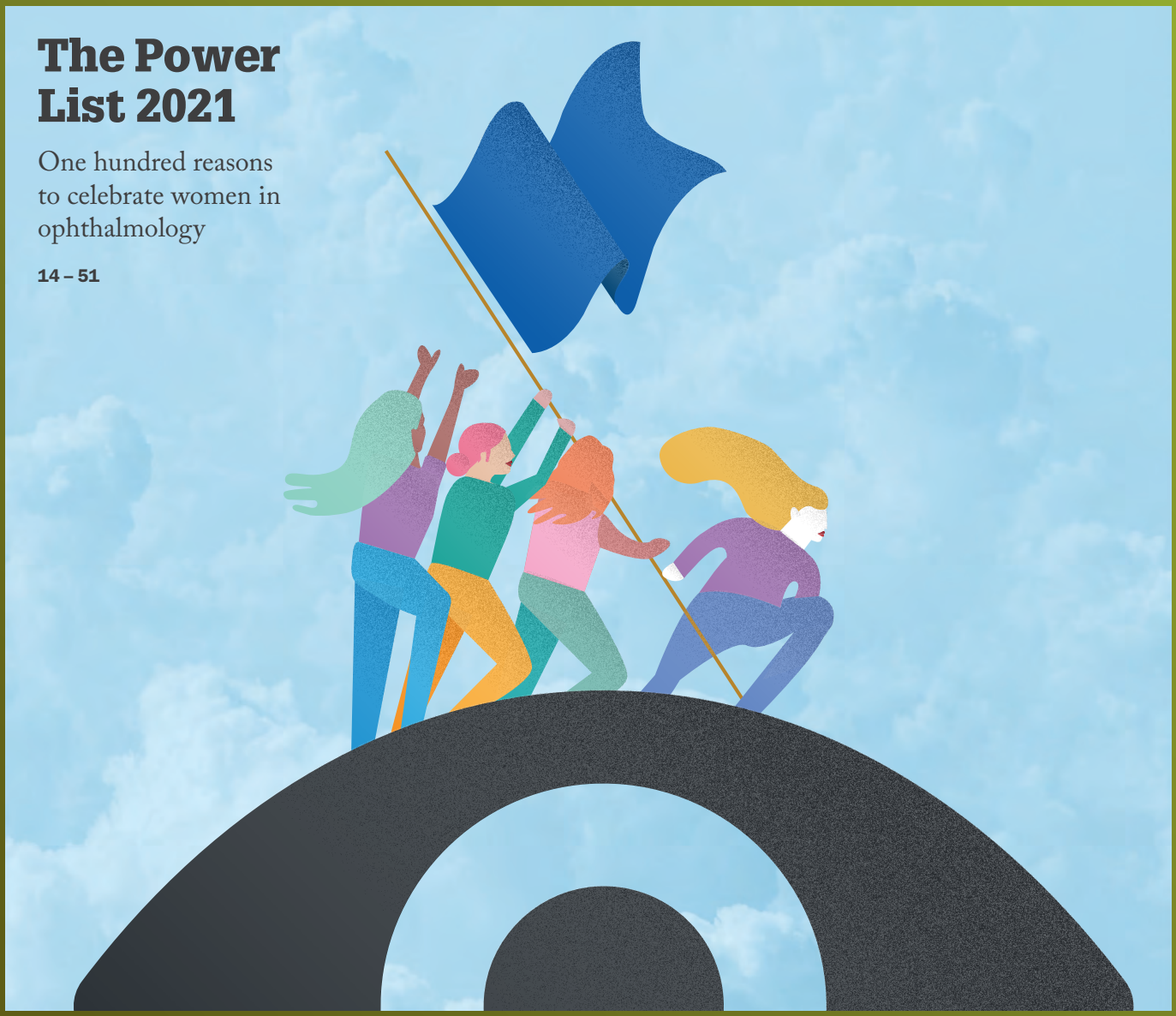
APRIL 2021 # 52

the Ophthalmologist™

The Power List 2021

One hundred reasons to celebrate women in ophthalmology



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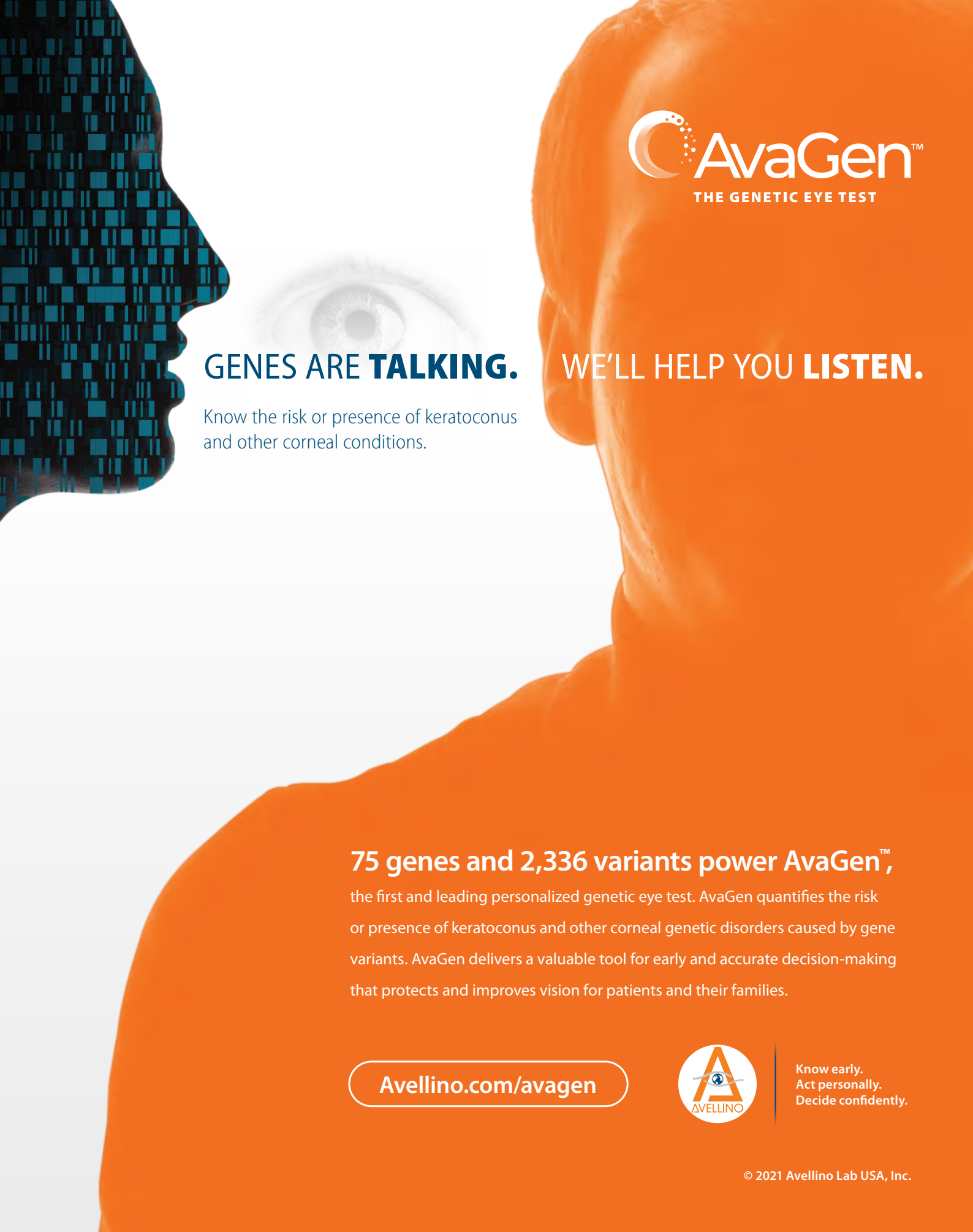
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The Power of Stick-to-itness

If women help each other on the way to the top, there are no limits to what they can achieve

When I entered ophthalmology nearly 40 years ago, I had one goal: to be good at what I chose to be my life's work – practicing medicine. I had no desire to be a huge leader, top ocular oncologist, or number one on a power list. It just shows that "stick-to-itness" (or finding and defining your goals and staying true to them, no matter what) – in my case, helping patients – can come with personal rewards.

When I first started at Wills Eye Hospital, 98-99 percent of specialists were male, and when I entered ocular oncology there were maybe three of four other women in this field. It took me a while to build my practice, but it didn't deter me; I wouldn't let gender inequality get me down, even though I saw men get leadership roles much easier than women. Thankfully, I now see it balancing out: at our recent Macula Society Meeting, the three most important people – the Program Chair (Anita Agarwal), the COO (Stacey Singerman), and the Society President (myself) – were women, and it was a smashing success. It was also a far cry from retina meetings from the past, where out of 500 people, five would be women.

Achieving equality is a slow process that starts in medical schools and gradually filters up the ranks, all the way to leadership positions. These positions still belong predominantly to men, but there are more and more female chiefs and chairs of departments. Right now, on the East Coast of the US, from Boston to Philadelphia, we have strong women leading the biggest ophthalmic departments: Massachusetts Eye and Ear, NYU Langone Health, Penn Medicine, and Wills Eye Hospital. And I think this reflects the general trend in society, with more women taking political positions and business leadership roles.

Nothing happens on its own – we have to help women advance. As I have looked after the financial side of our practice, I have made sure that men and women are paid equally. I belong to professional organizations designed to help support women, such as Women in Ophthalmology and Women in Retina. At Wills Eye, we now have many women in all services who are stellar performers at the very top of their game, and I see them mentoring students and residents who come to Wills Eye knowing they will get the education and support they need.

I'm not one to speak about gender equality often, but I appreciate the progress that I've seen in this area throughout my career. I trust that things will keep going in the right direction, if good people put in good work to take care of our patients. In the end, that's all that counts.

Carol Shields

Carol L. Shields
Director, Ocular Oncology Service, Wills Eye Hospital and Thomas Jefferson University, Philadelphia, Pennsylvania, USA

EYLEA®
(aflibercept) Injection
For Intravitreal Injection

START EARLIER WITH EYLEA IN DR

SIGNIFICANT REDUCTION IN DR SEVERITY IN PANORAMA[1,2]

PANORAMA is the first phase 3 anti-VEGF trial specifically designed to study patients with moderately severe to severe NPDR without DME.

PANORAMA study design: Multicenter, double-masked, controlled clinical study in which patients with moderately severe to severe NPDR (ETDRS-DRSS: 47 or 53) without CI-DME (N=402; age range: 25-85 years, with a mean of 56 years) were randomized to receive 1 of 2 EYLEA dosing regimens or sham. Protocol-specified visits occurred every 28±7 days for the first 5 visits, then every 8 weeks (56±7 days). Between week 52 and week 96, patients randomized to one of the EYLEA arms received a different dosing regimen.[2]

IMPORTANT SAFETY INFORMATION AND INDICATIONS

CONTRAINDICATIONS

- EYLEA is contraindicated in patients with ocular or periocular infections, active intraocular inflammation, or known hypersensitivity to aflibercept or to any of the excipients in EYLEA.

WARNINGS AND PRECAUTIONS

- Intravitreal injections, including those with EYLEA, have been associated with endophthalmitis and retinal detachments. Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately. Intraocular inflammation has been reported with the use of EYLEA.
- Acute increases in intraocular pressure have been seen within 60 minutes of intravitreal injection, including with EYLEA. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with VEGF inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately.

REGENERON

777 Old Saw Mill River Road, Tarrytown, NY 10591

MORE PATIENTS ACHIEVED A ≥2-STEP IMPROVEMENT IN ETDRS-DRSS WITH EYLEA VS SHAM[1]

Proportion of Patients Achieving a ≥2-Step Improvement in ETDRS-DRSS* Score From Baseline[1,2,†]

Primary Endpoint			Exploratory Endpoint‡
Week 24	Week 52		Week 100
EYLEA Q8 and Q16 (n=269)	EYLEA Q8 (n=134)	EYLEA Q16 (n=135)	EYLEA Q16 (n=135)
58%	**80%**	**65%**	**62%**
vs 6% in the sham group (n=133)	vs 15% in the sham group (n=133)	vs 15% in the sham group (n=133)	vs 13% in the sham group (n=133)

P<0.01 vs sham at Week 24 and Week 52. Nominal *P*<0.01 vs sham at Week 100.

*Early Treatment Diabetic Retinopathy Study–Diabetic Retinopathy Severity Scale (ETDRS-DRSS): an established grading scale for measuring the severity of DR.

†Full analysis set.

‡The results of these exploratory endpoints require cautious interpretation, as a multiplicity adjustment has not been applied. Results are descriptive only.

anti-VEGF = anti–vascular endothelial growth factor; CI-DME = central-involved DME; DME = Diabetic Macular Edema; DR = Diabetic Retinopathy; DRSS = Diabetic Retinopathy Severity Scale; NPDR = nonproliferative diabetic retinopathy; Q8 = every 8 weeks; Q16 = every 16 weeks.

SEE MORE DATA TODAY AT HCP.EYLEA.US

WARNINGS AND PRECAUTIONS (cont'd)

- There is a potential risk of arterial thromboembolic events (ATEs) following intravitreal use of VEGF inhibitors, including EYLEA. ATEs are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The incidence of reported thromboembolic events in wet AMD studies during the first year was 1.8% (32 out of 1824) in the combined group of patients treated with EYLEA compared with 1.5% (9 out of 595) in patients treated with ranibizumab; through 96 weeks, the incidence was 3.3% (60 out of 1824) in the EYLEA group compared with 3.2% (19 out of 595) in the ranibizumab group. The incidence in the DME studies from baseline to week 52 was 3.3% (19 out of 578) in the combined group of patients treated with EYLEA compared with 2.8% (8 out of 287) in the control group; from baseline to week 100, the incidence was 6.4% (37 out of 578) in the combined group of patients treated with EYLEA compared with 4.2% (12 out of 287) in the control group. There were no reported thromboembolic events in the patients treated with EYLEA in the first six months of the RVO studies.

ADVERSE REACTIONS

- Serious adverse reactions related to the injection procedure have occurred in <0.1% of intravitreal injections with EYLEA including endophthalmitis and retinal detachment.
- The most common adverse reactions (≥5%) reported in patients receiving EYLEA were conjunctival hemorrhage, eye pain, cataract, vitreous detachment, vitreous floaters, and intraocular pressure increased.

INDICATIONS

EYLEA® (aflibercept) Injection 2 mg (0.05 mL) is indicated for the treatment of patients with Neovascular (Wet) Age-related Macular Degeneration (AMD), Macular Edema following Retinal Vein Occlusion (RVO), Diabetic Macular Edema (DME), and Diabetic Retinopathy (DR).

References: 1. Wykoff CC. A phase 3, double-masked, randomized study of the efficacy and safety of aflibercept in patients with moderately severe to severe NPDR: week 100 results. Data presented at: Angiogenesis, Exudation, and Degeneration Annual Meeting; February 8, 2020; Miami, FL. **2.** EYLEA® (aflibercept) Injection full U.S. Prescribing Information. Regeneron Pharmaceuticals, Inc. August 2019.

Please see Brief Summary of Prescribing Information on the following page.

10/2020
EYL20.09.0078

EYLEA®
(aflibercept) Injection
For Intravitreal Injection

BRIEF SUMMARY—Please see the EYLEA full Prescribing Information available on HCP.EYLEA.US for additional product information.

1 INDICATIONS AND USAGE
EYLEA is a vascular endothelial growth factor (VEGF) inhibitor indicated for the treatment of patients with:

Neovascular (Wet) Age-Related Macular Degeneration (AMD), Macular Edema Following Retinal Vein Occlusion (RVO), Diabetic Macular Edema (DME), Diabetic Retinopathy (DR).

4 CONTRAINDICATIONS

4.1 Ocular or Periocular Infections
EYLEA is contraindicated in patients with ocular or periocular infections.

4.2 Active Intraocular Inflammation
EYLEA is contraindicated in patients with active intraocular inflammation.

4.3 Hypersensitivity
EYLEA is contraindicated in patients with known hypersensitivity to aflibercept or any of the excipients in EYLEA. Hypersensitivity reactions may manifest as rash, pruritus, urticaria, severe anaphylactic/anaphylactoid reactions, or severe intraocular inflammation.

5 WARNINGS AND PRECAUTIONS

5.1 Endophthalmitis and Retinal Detachments
Intravitreal injections, including those with EYLEA, have been associated with endophthalmitis and retinal detachments [*see Adverse Reactions (6.1)*]. Proper aseptic injection technique must always be used when administering EYLEA. Patients should be instructed to report any symptoms suggestive of endophthalmitis or retinal detachment without delay and should be managed appropriately [*see Patient Counseling Information (17)*].

5.2 Increase in Intraocular Pressure
Acute increases in intraocular pressure have been seen within 60 minutes of intravitreal injection, including with EYLEA [*see Adverse Reactions (6.1)*]. Sustained increases in intraocular pressure have also been reported after repeated intravitreal dosing with vascular endothelial growth factor (VEGF) inhibitors. Intraocular pressure and the perfusion of the optic nerve head should be monitored and managed appropriately.

5.3 Thromboembolic Events
There is a potential risk of arterial thromboembolic events (ATEs) following intravitreal use of VEGF inhibitors, including EYLEA. ATEs are defined as nonfatal stroke, nonfatal myocardial infarction, or vascular death (including deaths of unknown cause). The incidence of reported thromboembolic events in wet AMD studies during the first year was 1.8% (32 out of 1824) in the combined group of patients treated with EYLEA compared with 1.5% (9 out of 595) in patients treated with ranibizumab; through 96 weeks, the incidence was 3.3% (60 out of 1824) in the EYLEA group compared with 3.2% (19 out of 595) in the ranibizumab group. The incidence in the DME studies from baseline to week 52 was 3.3% (19 out of 578) in the combined group of patients treated with EYLEA compared with 2.8% (8 out of 287) in the control group; from baseline to week 100, the incidence was 6.4% (37 out of 578) in the combined group of patients treated with EYLEA compared with 4.2% (12 out of 287) in the control group. There were no reported thromboembolic events in the patients treated with EYLEA in the first six months of the RVO studies.

6 ADVERSE REACTIONS
The following potentially serious adverse reactions are described elsewhere in the labeling:
- Hypersensitivity [*see Contraindications (4.3)*]
- Endophthalmitis and retinal detachments [*see Warnings and Precautions (5.1)*]
- Increase in intraocular pressure [*see Warnings and Precautions (5.2)*]
- Thromboembolic events [*see Warnings and Precautions (5.3)*]

6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in other clinical trials of the same or another drug and may not reflect the rates observed in practice.
A total of 2980 patients treated with EYLEA constituted the safety population in eight phase 3 studies. Among those, 2379 patients were treated with the recommended dose of 2 mg. Serious adverse reactions related to the injection procedure have occurred in <0.1% of intravitreal injections with EYLEA including endophthalmitis and retinal detachment. The most common adverse reactions (≥5%) reported in patients receiving EYLEA were conjunctival hemorrhage, eye pain, cataract, vitreous detachment, vitreous floaters, and intraocular pressure increased.

Neovascular (Wet) Age-Related Macular Degeneration (AMD). The data described below reflect exposure to EYLEA in 1824 patients with wet AMD, including 1223 patients treated with the 2-mg dose, in 2 double-masked, controlled clinical studies (VIEW1 and VIEW2) for 24 months (with active control in year 1).
Safety data observed in the EYLEA group in a 52-week, double-masked, Phase 2 study were consistent with these results.

Table 1: Most Common Adverse Reactions (≥1%) in Wet AMD Studies

	Baseline to Week 52		Baseline to Week 96	
Adverse Reactions	EYLEA (N=1824)	Active Control (ranibizumab) (N=595)	EYLEA (N=1824)	Control (ranibizumab) (N=595)
Conjunctival hemorrhage	25%	28%	27%	30%
Eye pain	9%	9%	10%	10%
Cataract	7%	7%	13%	10%
Vitreous detachment	6%	6%	8%	8%
Vitreous floaters	6%	7%	8%	10%
Intraocular pressure increased	5%	7%	7%	11%
Ocular hyperemia	4%	8%	5%	10%
Corneal epithelium defect	4%	5%	5%	6%
Detachment of the retinal pigment epithelium	3%	3%	5%	5%
Injection site pain	3%	3%	3%	4%
Foreign body sensation in eyes	3%	4%	4%	4%
Lacrimation increased	3%	1%	4%	2%
Vision blurred	2%	2%	4%	3%
Intraocular inflammation	2%	3%	3%	4%
Retinal pigment epithelium tear	2%	1%	2%	2%
Injection site hemorrhage	1%	2%	2%	2%
Eyelid edema	1%	2%	2%	3%
Corneal edema	1%	1%	1%	1%
Retinal detachment	<1%	<1%	1%	1%

Less common serious adverse reactions reported in <1% of the patients treated with EYLEA were hypersensitivity, retinal tear, and endophthalmitis.

Macular Edema Following Retinal Vein Occlusion (RVO). The data described below reflect 6 months exposure to EYLEA with a monthly 2 mg dose in 218 patients following central retinal vein occlusion (CRVO) in 2 clinical studies (COPERNICUS and GALILEO) and 91 patients following branch retinal vein occlusion (BRVO) in one clinical study (VIBRANT).

Table 2: Most Common Adverse Reactions (≥1%) in RVO Studies

	CRVO		BRVO	
Adverse Reactions	EYLEA (N=218)	Control (N=142)	EYLEA (N=91)	Control (N=92)
Eye pain	13%	5%	4%	5%
Conjunctival hemorrhage	12%	11%	20%	4%
Intraocular pressure increased	8%	6%	2%	0%
Corneal epithelium defect	5%	4%	2%	0%
Vitreous floaters	5%	1%	1%	0%
Ocular hyperemia	5%	3%	2%	2%
Foreign body sensation in eyes	3%	5%	3%	0%
Vitreous detachment	3%	4%	2%	0%
Lacrimation increased	3%	4%	3%	0%
Injection site pain	3%	1%	1%	0%
Vision blurred	1%	<1%	1%	1%
Intraocular inflammation	1%	1%	0%	0%
Cataract	<1%	1%	5%	0%
Eyelid edema	<1%	1%	1%	0%

Less common adverse reactions reported in <1% of the patients treated with EYLEA in the CRVO studies were corneal edema, retinal tear, hypersensitivity, and endophthalmitis.

Diabetic Macular Edema (DME) and Diabetic Retinopathy (DR). The data described below reflect exposure to EYLEA in 578 patients with DME treated with the 2-mg dose in 2 double-masked, controlled clinical studies (VIVID and VISTA) from baseline to week 52 and from baseline to week 100.

Table 3: Most Common Adverse Reactions (≥1%) in DME Studies

	Baseline to Week 52		Baseline to Week 100	
Adverse Reactions	EYLEA (N=578)	Control (N=287)	EYLEA (N=578)	Control (N=287)
Conjunctival hemorrhage	28%	17%	31%	21%
Eye pain	9%	6%	11%	9%
Cataract	8%	9%	19%	17%
Vitreous floaters	6%	3%	8%	6%
Corneal epithelium defect	5%	3%	7%	5%
Intraocular pressure increased	5%	3%	9%	5%
Ocular hyperemia	5%	6%	5%	6%
Vitreous detachment	3%	3%	8%	6%
Foreign body sensation in eyes	3%	3%	3%	3%
Lacrimation increased	3%	2%	4%	2%
Vision blurred	2%	2%	3%	4%
Intraocular inflammation	2%	<1%	3%	1%
Injection site pain	2%	<1%	2%	<1%
Eyelid edema	<1%	1%	2%	1%

Less common adverse reactions reported in <1% of the patients treated with EYLEA were hypersensitivity, retinal detachment, retinal tear, corneal edema, and injection site hemorrhage.
Safety data observed in 269 patients with nonproliferative diabetic retinopathy (NPDR) through week 52 in the PANORAMA trial were consistent with those seen in the phase 3 VIVID and VISTA trials (see Table 3 above).

6.2 Immunogenicity
As with all therapeutic proteins, there is a potential for an immune response in patients treated with EYLEA. The immunogenicity of EYLEA was evaluated in serum samples. The immunogenicity data reflect the percentage of patients whose test results were considered positive for antibodies to EYLEA in immunoassays. The detection of an immune response is highly dependent on the sensitivity and specificity of the assays used, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to EYLEA with the incidence of antibodies to other products may be misleading.
In the wet AMD, RVO, and DME studies, the pre-treatment incidence of immunoreactivity to EYLEA was approximately 1% to 3% across treatment groups. After dosing with EYLEA for 24-100 weeks, antibodies to EYLEA were detected in a similar percentage range of patients. There were no differences in efficacy or safety between patients with or without immunoreactivity.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy
Risk Summary
Adequate and well-controlled studies with EYLEA have not been conducted in pregnant women. Aflibercept produced adverse embryofetal effects in rabbits, including external, visceral, and skeletal malformations. A fetal No Observed Adverse Effect Level (NOAEL) was not identified. At the lowest dose shown to produce adverse embryofetal effects, systemic exposures (based on AUC for free aflibercept) were approximately 6 times higher than AUC values observed in humans after a single intravitreal treatment at the recommended clinical dose [*see Animal Data*].
Animal reproduction studies are not always predictive of human response, and it is not known whether EYLEA can cause fetal harm when administered to a pregnant woman. Based on the anti-VEGF mechanism of action for aflibercept, treatment with EYLEA may pose a risk to human embryofetal development. EYLEA should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.
All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. The background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

Data
Animal Data
In two embryofetal development studies, aflibercept produced adverse embryofetal effects when administered every three days during organogenesis to pregnant rabbits at intravenous doses ≥3 mg per kg, or every six days during organogenesis at subcutaneous doses ≥0.1 mg per kg.
Adverse embryofetal effects included increased incidences of postimplantation loss and fetal malformations, including anasarca, umbilical hernia, diaphragmatic hernia, gastroschisis, cleft palate, ectrodactyly, intestinal atresia, spina bifida, encephalomeningocele, heart and major vessel defects, and skeletal malformations (fused vertebrae, sternebrae, and ribs; supernumerary vertebral arches and ribs; and incomplete ossification). The maternal No Observed Adverse Effect Level (NOAEL) in these studies was 3 mg per kg. Aflibercept produced fetal malformations at all doses assessed in rabbits and the fetal NOAEL was not identified. At the lowest dose shown to produce adverse embryofetal effects in rabbits (0.1 mg per kg), systemic exposure (AUC) of free aflibercept was approximately 6 times higher than systemic exposure (AUC) observed in humans after a single intravitreal dose of 2 mg.

8.2 Lactation
Risk Summary
There is no information regarding the presence of aflibercept in human milk, the effects of the drug on the breastfed infant, or the effects of the drug on milk production/excretion. Because many drugs are excreted in human milk, and because the potential for absorption and harm to infant growth and development exists, EYLEA is not recommended during breastfeeding.
The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for EYLEA and any potential adverse effects on the breastfed child from EYLEA.

8.3 Females and Males of Reproductive Potential
Contraception
Females of reproductive potential are advised to use effective contraception prior to the initial dose, during treatment, and for at least 3 months after the last intravitreal injection of EYLEA.

Infertility
There are no data regarding the effects of EYLEA on human fertility. Aflibercept adversely affected female and male reproductive systems in cynomolgus monkeys when administered by intravenous injection at a dose approximately 1500 times higher than the systemic level observed humans with an intravitreal dose of 2 mg. A No Observed Adverse Effect Level (NOAEL) was not identified. These findings were reversible within 20 weeks after cessation of treatment.

8.4 Pediatric Use
The safety and effectiveness of EYLEA in pediatric patients have not been established.

8.5 Geriatric Use
In the clinical studies, approximately 76% (2049/2701) of patients randomized to treatment with EYLEA were ≥65 years of age and approximately 46% (1250/2701) were ≥75 years of age. No significant differences in efficacy or safety were seen with increasing age in these studies.

17 PATIENT COUNSELING INFORMATION
In the days following EYLEA administration, patients are at risk of developing endophthalmitis or retinal detachment. If the eye becomes red, sensitive to light, painful, or develops a change in vision, advise patients to seek immediate care from an ophthalmologist [*see Warnings and Precautions (5.1)*].
Patients may experience temporary visual disturbances after an intravitreal injection with EYLEA and the associated eye examinations [*see Adverse Reactions (6)*]. Advise patients not to drive or use machinery until visual function has recovered sufficiently.

REGENERON

Manufactured by:
Regeneron Pharmaceuticals, Inc.
777 Old Saw Mill River Road
Tarrytown, NY 10591

Issue Date: 08/2019
Initial U.S. Approval: 2011

Based on the August 2019
EYLEA® (aflibercept) Injection full
Prescribing Information.

EYL.20.09.0052

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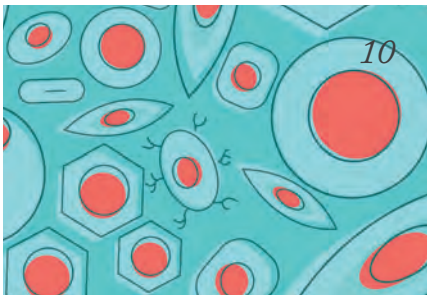

On The Cover

Meet the most powerful women in ophthalmology today

the Ophthalmologist

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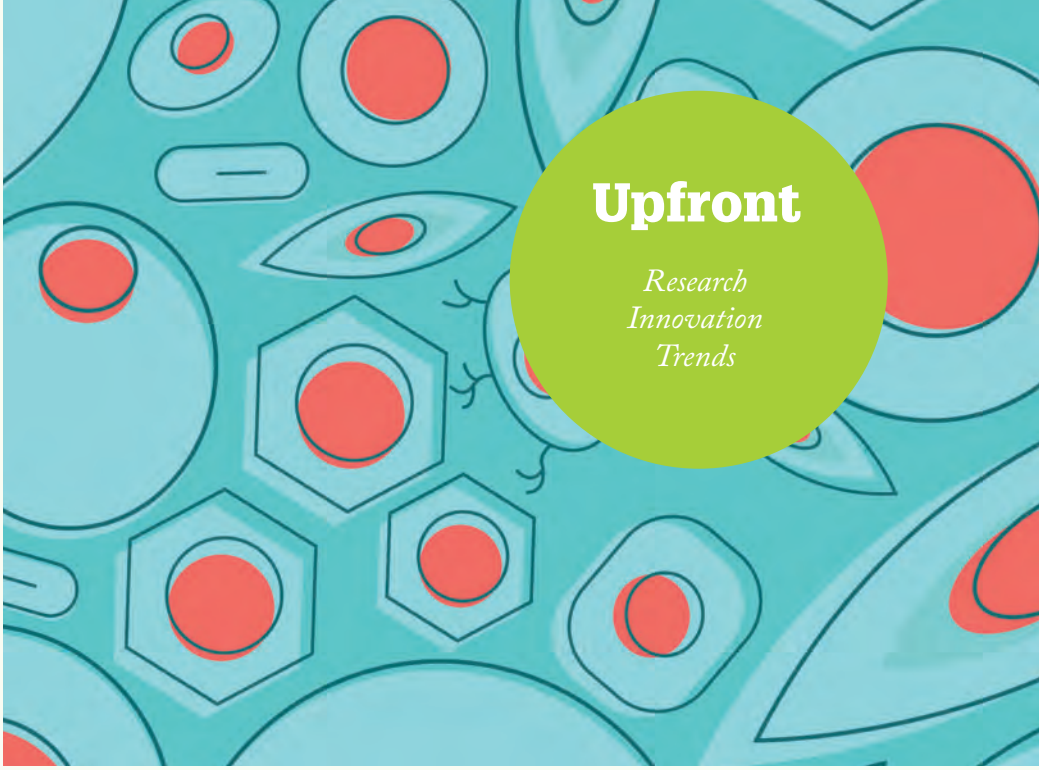


Exosomes and "Stemness"

Can stem cell secretions prevent glaucoma-related sight loss?

Fight for Sight, Glaucoma UK, and Health and Care Research Wales are funding the work of researchers at Cardiff University, Wales, who demonstrated that bone marrow stem cells can prevent the death of retinal ganglion cells in animal models of glaucoma (1). Now, the researchers want to focus on stem-cell derived exosomes (the extracellular vesicles that transport proteins and genetic information between cells) to replicate the same benefits – while avoiding the risks of injecting cells into the eye. We speak to Ben Mead, Assistant Professor at the School of Optometry and Vision Sciences, Cardiff, Wales, to find out more.

What makes bone marrow cells suitable for a potential therapeutic – and are there any drawbacks?

Around 10 years ago, I was investigating stem cell therapies and was fascinated by their ability to promote repair of damaged tissues without replacing lost cells. I found that, despite the name stem cell, it is not their "stemness" that is responsible for their effectiveness, but rather their ability to release a large amount of positive therapeutic factors.

These cells are naturally pro-regenerative and are involved in many repair-related roles in the body. They secrete a steady supply of therapeutic factors – essentially acting as "mini-factories" that pump out a cocktail of positive compounds as well as a substantial number of exosomes. Notably, exosomes appear to mediate much of the therapeutic effects of stem cells.

Another benefit of using adult stem cells is that they are free of much of the ethics associated with stem cells.

The main downside is that they are a dividing cell, which, when injected in the eye, could continue dividing. And that's why we have adopted a cell-free approach, harvesting and then purifying the positive secretions of the stem cells before delivery into the eye.

What are the next steps for your research – and what are your expectations for the future?

The next steps are to test different types of stem cells/stem cell-derived exosomes, including those derived from adipose tissue, umbilical cord blood, and wisdom teeth. We aim to find the most therapeutically efficacious formulation to take forward into clinical testing.

Reference

1. *Fight for Sight (2021). Available at: https://bit.ly/3ltMHr4*

INFOGRAPHIC

The 2021 Power List in Numbers

We break down this year's frontrunners by location and expertise

Where do the Power Listers practice?

USA	61	Singapore	2
UK	16	Australia	1
India	5	Denmark	1
Bangladesh	2	Egypt	1
Belgium	2	France	1
Canada	2	Germany	1

BUSINESS IN BRIEF

The latest news from the industry – in under 60 words

- OPHTEC has integrated a laser-marked micro ID matrix code (see picture) into the loop junctions of its premium cataract IOLs, aiding identification during the manufacturing process and making production faster and more secure.

- Re-Vana Therapeutics has appointed Michael Nash as Chief Commercial Officer and David Shima as Vice President of Research and Development. They will help lead the company in the development of new sustained-release therapies for conditions including wet AMD, diabetic retinopathy, and glaucoma.
- Samsara Vision will partner with Medevise Consulting to support the development of the next-generation Tsert SI Implantable Miniature Telescope by Isaac Lipshitz, which received its CE Mark in May 2020. The telescope's foldable haptics allow it to fit into an injector for delivery through a small incision, simplifying the surgical procedure, reducing risk, and halving surgery time.
- Sight Sciences has received FDA clearance for an expanded indication of the OMNI Surgical System: ab-interno canaloplasty followed by trabeculotomy across the spectrum of primary open-angle glaucoma patients.
- The FDA has accepted Visus Therapeutics' IND to proceed with clinical development of Brimochol, designed as a once-daily drop to correct loss of vision associated with presbyopia. Visus is now initiating its planned phase II clinical trials in the US.
- LENSAR has released financial results from 2020, which saw the company complete its spinoff from PDL BioPharma, grow its laser system base by 10 percent, and continue developing its FLACS solutions. Following a decline in elective surgical procedures in the first half of last year, procedure activity rebounded in the later months, with numbers surpassing the second half of 2019.

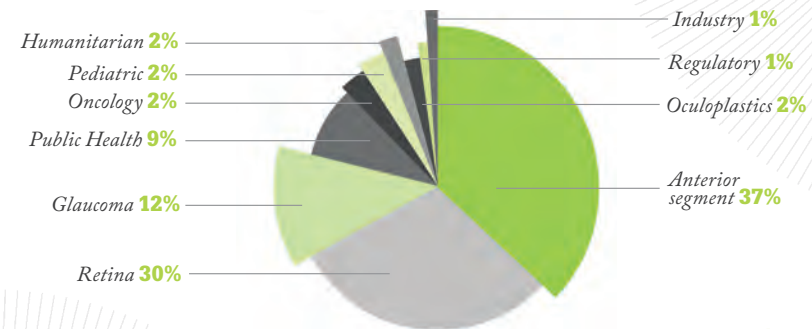
Baby One More Time

Could a better understanding of HSV triggers prevent future outbreaks?

Herpes simplex virus (HSV) is not a "one and done" disease. It hides in the body, waiting to strike again. This process is known as reactivation – typically associated with periods of stress, illness, or sunburn – and, left untreated, can result in blindness. But what exactly causes this reactivation? The answer: neuronal hyperexcitation. Researchers at the University of Virginia School of Medicine have discovered that the virus hijacks an important immune response: when exposed to prolonged periods of inflammation or stress, the immune system releases interleukin 1 beta (IL-1β), a cytokine present in epithelial cells of the skin and eye and released when those cells are damaged by ultraviolet light. IL-1β increases affected neurons' excitability, setting the stage for HSV reactivation. Though further studies are needed to fully understand these factors – and establish how they can be used to develop potential therapeutics – the team hope their insights will shed new light on the immune system and, ultimately, help prevent HSV outbreaks.

Israel	1
Netherlands	1
New Zealand	1
Rwanda	1
Sweden	1

What is their main field of expertise?



In My View

Experts from across the world share a single strongly held opinion or key idea.

More Harm Than Good?

What purpose do hierarchical and competitive lists serve – apart from highlighting success as being far from the norm and unachievable for most?

By Lucy Mathen, ophthalmologist and writer

Never was there a better time to debunk myths. The assumptions of our rather complacent anthropogenic age have been thrown into disarray by an invisible virus. Humans in all sectors of society are exercising some form of introspection. Time to think anew about a more equitable world – in every respect.

For 2021, The Ophthalmologist decided to "readdress the gender imbalance" and to highlight the achievements of women in the field with an all-women Power List. I'd like to analyze this.

The Power List concept is a media construct. In the Forbes' magazine list, slots are allocated based on "the amount of human and financial resources" that a person controls, as well as their influence over world events. As the list can include autocratic leaders responsible for pretty nasty events for humankind, it is generally accepted that "power" is not unambiguously good.

Then, the interpretation of "power" was played with as different media outlets wanted to list and rank people they felt were the most famous in their field. More and more people got sucked into the belief that such lists were in some way important, informative, or even inspirational.

Power Lists, however, are full of pitfalls, and they tend to follow the same predictable path. They always start out all male – or predominantly male – and stubbornly remain so. Then, following criticism, and to "readdress the imbalance," the relevant media outlet decides to compile a "women only" version. Inevitably, this, too, causes problems, as those who do the choosing normally come from a privileged background themselves and rank others accordingly. Then efforts are made to focus on "diversity," and people coming from ethnic minorities are included. But these are, inevitably, men and women who are already in the media spotlight. The end result? A Power List with a split personality – like the BBC's Woman's Hour list – ranking the Queen, with her inherited power, alongside Doreen Lawrence, who continues to fight a prolonged battle to get justice over the murder of her son.

What is the point of placing anyone in such a hierarchical, competitive, and ultimately misleading category? What purpose does it serve?

In The Ophthalmologist's Top 100 Women Power List, nominees are described as "world-class," "leading authorities," "superstars," and "experts." Most are associated with well-known hospitals or institutions. So, in essence, far from being truly inclusive or diverse, it simply replaces one exclusive list with another. And, here lies the rub, in "honoring" women for rising to prominent positions in this way, we achieve the exact opposite: it highlights just how aberrant this success is – so outside the norm that these people need a special list. To quote Richard Ditizio of the Milken Institute: "Each time we offer or accept an accolade based on gender, race or sexual orientation, we are feeding into the troublesome way of thinking that landed us with such inequality in the first place."

In ophthalmology, as in medicine generally, women are present in large numbers. And yet they face double standards at every stage of their careers, which result in lower salaries, less recognition for their work, and the persistence of stereotypes. Elevating a few on the pedestal of a Power List achieves little. It is too much like hand clapping in support of hard-working frontline nurses in the pandemic, but never campaigning to get them better working conditions.

In 1976, I became the first female British Asian news reporter on BBC TV. For 10-year-old Samira Ahmed, who had already decided that she, too, was going to be a broadcaster, my appearances reaffirmed her goal. Forty years later, and despite being a well-known broadcaster, she had to take the BBC to court to get equal pay. She won.

WHEN THEY WIN, WE ALL WIN.

Three of this year's Top 100 Women in Ophthalmology are on the John A. Moran Eye Center team.

We congratulate them and all women pushing the field forward to ensure no patient is without hope, understanding, or treatment.

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MORAN
EYE CENTER

the Ophthalmologist

POWER LIST

One hundred reasons to celebrate women in ophthalmology

This year's Power List proved to be extremely popular with our readers, bringing in close to 1,200 nominations for 300 individuals.

We are proud to present you with the most influential female figures in ophthalmology – as whittled down by our international panel of judges to the final 100.

To read the full responses of our Power Listers, including insights into their lives outside of ophthalmology, please visit: *theophthalmologist.com/power-list*

ADRIENNE GRAVES

FORMER PRESIDENT AND CEO, SANTEN INC; BOARD OF DIRECTORS: IVERIC BIO, NICOX, OXURION, SURFACE OPHTHALMICS, THEROPTIX, QLARIS BIO, GREENBROOK TMS, BASED IN NORTH CAROLINA, USA

What can be done to make the field more diverse?
This sounds simple, but I think the key is to very consciously keep diversity top of mind in decision-making. As a former CEO, I know it is tempting to repeatedly turn to those who have performed in the past for key roles, such as Scientific Advisory Boards, named lectures, panel discussions.

ADRIENNE WILLIAMS SCOTT

CHIEF, WILMER EYE INSTITUTE – BEL AIR ASSOCIATE PROFESSOR OF OPHTHALMOLOGY, JOHNS HOPKINS MEDICINE, BALTIMORE, MARYLAND, USA

In the words of her nominator:
"Scott is an accomplished leader in ophthalmology and a role model for many aspiring women and minorities in ophthalmology. She is an impactful educator and influential mentor. Her research is innovative and multidisciplinary, focusing on improved access to care for the underserved through screening for disease such as sickle cell retinopathy, where she is an internationally-recognized leader in the field."

ALANA L. GRAJEWSKI

PROFESSOR OF CLINICAL OPHTHALMOLOGY, DIRECTOR OF THE SAMUEL & ETHEL BALKAN INTERNATIONAL PEDIATRIC GLAUCOMA CENTER, BASCOM PALMER EYE INSTITUTE, UNIVERSITY OF MIAMI, FLORIDA, USA

Why is it important to celebrate women in the field?
I think the first thing that comes to mind is something that Sheryl Sandberg said, "In the future, there will be no female leaders. There will just be leaders." Unfortunately, at this moment in time, we are not there yet – if we do not take special note of women considered to be the thought leaders in their field – experience tells us: no one will.

ALICE T. EPITROPOULOS

CO-FOUNDER, THE EYE CENTER OF COLUMBUS, PARTNER, OPHTHALMIC SURGEONS & CONSULTANTS OF OHIO; CLINICAL ASSISTANT PROFESSOR, THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, COLUMBUS, OHIO, USA

Why is it important to celebrate women with this list?
We should be proud of how far women have come in medicine. Women have made significant advances in the field of ophthalmology and have gained more opportunities to serve as thought leaders, speak from the podium, and become involved in clinical research. We are also seeing more women assume leadership positions within national organizations. Female physicians and surgeons are genuinely more respected today compared to previous generations.

AMEENAT LOLA SOLEBO

NIHR CLINICIAN SCIENTIST (ASSOCIATE PROFESSOR) AND HONORARY CONSULTANT PAEDIATRIC OPHTHALMOLOGIST AT THE UCL GREAT ORMOND STREET INSTITUTE OF CHILD HEALTH, LONDON, UK

Outside of ophthalmology, what makes you happy?
The thing that makes me happiest is putting on shows with my ridiculous daughters for my very tolerant husband. Our last extravaganza was "Indigenous people of magic land," which involved face masks and a song composed by our seven-year-old, which was high-pitched, loud, and long. So long.

ANAT GALOR

STAFF PHYSICIAN, MIAMI VA; ASSOCIATE PROFESSOR OF OPHTHALMOLOGY, BASCOM PALMER EYE INSTITUTE, UNIVERSITY OF MIAMI, FLORIDA, USA

What can be done to make the field more diverse?

Recognize the various contributions from diverse members of the community. Different members contribute to different aspects of ophthalmology – education, community outreach, research, patient care – and these are all important.

ANAT LOEWENSTEIN

CHAIR, DIVISION OF OPHTHALMOLOGY, TEL AVIV MEDICAL CENTER; VICE DEAN, SACKLER FACULTY OF MEDICINE, TEL AVIV UNIVERSITY, TEL AVIV, ISRAEL

Why is it important to celebrate women in the field?

Although we have seen significant progress in gender representation, women are still under-represented in senior leadership positions across the industry. Highlighting women and their achievements can help promote gender parity and it's a step in the removal of some of the barriers that women face. This is especially important today, with the COVID-19 crisis that has negatively impacted women in the workplace.

ANNE L. COLEMAN

THE FRAN AND RAY STARK FOUNDATION, PROFESSOR OF OPHTHALMOLOGY, DAVID GEFFEN, SCHOOL OF MEDICINE AT UCLA, PROFESSOR OF EPIDEMIOLOGY, JONATHAN AND KARIN FIELDING SCHOOL OF PUBLIC HEALTH AT UCLA, PAST PRESIDENT, AMERICAN ACADEMY OF OPHTHALMOLOGY, BASED IN LOS ANGELES, CALIFORNIA, USA

Why is it important to celebrate women in the field?

What a great opportunity to promote and honor women who have been fearless in their achievements and have worked hard to make changes and to improve our field! I also want to recognize all of the women who are not on the list but who have also been fearless in taking care of their patients and families, pushing themselves to be their best selves, and contributing to our profession and the community.

ANTONIA M. JOUSSEN

PROFESSOR AND CHAIR DEPARTMENT OF OPHTHALMOLOGY, CHARITÉ UNIVERSITY MEDICINE BERLIN AND BERLIN INSTITUTE OF HEALTH, BERLIN, GERMANY

What is your proudest professional achievement?

Being introduced to angiogenesis as a research fellow in Judah Folkmann's lab and having the chance to observe the translation of molecular insights into the clinics.

Outside of work, what makes you happy?

Playing piano and organizing my foundation for musicians.

ASHIYANA NARIANI

ASSISTANT PROFESSOR, KING EDWARD MEMORIAL HOSPITAL, MUMBAI, INDIA

Why is it important to celebrate women in ophthalmology?

Women take action and can move mountains. Yet, it is in their humility and compassion wherein lies the secret to peace and to building bridges of love in this world.

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References: 1. Medeiros FA, Meira-Freitas D, Lisboa R, Kuang TM, Zangwill LM, Weinreb RN. Corneal hysteresis as a risk factor for glaucoma progression: a prospective longitudinal study. Ophthalmology. 2013 Aug;120(8):1533-40. 2. De Moraes CV, Hill V, Tello C, Liebmann JM, Ritch R. Lower corneal hysteresis is associated with more rapid glaucomatous visual field progression. J Glaucoma. 2012 Apr-May;21(4):209-13. 3. Susanna CN, Diniz-Filho A, Daga FB, Susanna BN, Zhu F, Ogata NG, Medeiros FA. Am J Ophthalmol. A Prospective Longitudinal Study to Investigate Corneal Hysteresis as a Risk Factor for Predicting Development of Glaucoma. 2018 Mar;187:148-152. doi: 10.1016/j.ajo.2017.12.018. 4. Felipe A. Medeiros, MD and Robert N. Weinreb, MD. Evaluation of the Influence of Corneal Biomechanical Properties on Intraocular Pressure Measurements Using the Ocular Response Analyzer. J Glaucoma 2006;15:364–370.

AUDINA M. BERROCAL

PROFESSOR OF CLINICAL OPHTHALMOLOGY, MEDICAL DIRECTOR OF PEDIATRIC RETINA AND RETINOPATHY OF PREMATURITY, VITREORETINAL FELLOWSHIP DIRECTOR, BASCOM PALMER EYE INSTITUTE, UNIVERSITY OF MIAMI, MILLER SCHOOL OF MEDICINE, MIAMI, FLORIDA, USA

What is your proudest professional achievement?

Having developed a pediatric retina surgical practice and being able to mentor young surgeons in this field. There is nothing better than to see someone I trained want to follow in my footsteps.

Outside of ophthalmology, what makes you happy?

I love to travel and spend time with my family, my kids and my friends. I have an amazing sister and a group of five friends. These five women have been in my life since elementary/middle school: the lawyer, the model, the professor, the businesswoman and the mom. Nothing compares to having these accomplished women in my life.

AUDREY TALLEY ROSTOV

AUDREY TALLEY ROSTOV DIRECTOR OF CORNEA, CATARACT AND REFRACTIVE SURGERY, NORTHWEST EYE SURGEONS IN SEATTLE, SIGHTLIFE GLOBAL MEDICAL LIAISON; SEATTLE, WASHINGTON, USA

What can be done to make the field more diverse?

The first thing we need to do to improve diversity, equity and inclusion in ophthalmology is to raise awareness of the importance of this issue.

AVA HOSSAIN

DIRECTOR CUM CHIEF CONSULTANT, OSB EYE HOSPITAL, MIRPUR, DHAKA, BANGLADESH

What can be done to make the field more diverse?

I believe we are fortunate to be living in a time where social stigma and restrictions are being challenged every day. Movements such as #MeToo and #BlackLivesMatter have transcended geographical borders and challenged the status quo around the world. I think as professionals, we have a moral responsibility to raise our voice against inequality and social injustice in getting access to quality ophthalmic services.

What is your proudest professional achievement?

From being the first ever woman ophthalmologist fellow in Bangladesh to becoming the first woman President Elect of APAO, I had many proud moments in my career. But if I have to choose, I will have to mention these two "firsts."

BÉATRICE COCHENER-LAMARD

HEAD OPHTHALMOLOGY DEPARTMENT, BREST UNIVERSITY HOSPITAL, BREST, FRANCE

As one of her nominators put it:

"Her well-known work in multifocal IOL comparison is unparalleled."

BONNIE AN HENDERSON

CLINICAL PROFESSOR, TUFTS UNIVERSITY SCHOOL OF MEDICINE, BOSTON, MASSACHUSETTS, USA

Why is it important we celebrate women in the field?

Some people believe that there is no gender inequality. They believe that because it is 2021, men and women are treated equally and fairly. Unfortunately, this is not true. Women's wages are still a fraction of men's for the same work. Women are not promoted to the leadership positions as often as men with all other factors being equal. It is important to highlight the successes of women around the globe in order to increase awareness and to inspire younger physicians that there is no limit to professional achievements based on gender.

BONNIELIN SWENOR

ASSOCIATE PROFESSOR AT THE JOHNS HOPKINS WILMER EYE INSTITUTE AND DIRECTOR OF THE JOHNS HOPKINS DISABILITY HEALTH RESEARCH CENTER, BALTIMORE, MARYLAND, USA

What can be done to make the field more diverse?

As Ruth Bader Ginsburg stated, "Women belong in all places where decisions are being made." Women must be included and valued across career pathways, from trainees to leaders. It is all of our responsibility to ensure diverse perspectives are "at the table" where decisions are being made, and everyday actions are the starting point towards achieving true equity and inclusion.

CAROL KARP

TENURED PROFESSOR OF OPHTHALMOLOGY, RICHARD K. FORSTER CHAIR IN OPHTHALMOLOGY, BASCOM PALMER EYE INSTITUTE, UNIVERSITY OF MIAMI SCHOOL OF MEDICINE, FLORIDA, USA

As one of her nominators commented:

"Carol Karp is expert in the management of ocular surface tumors and anterior segment surgery. In the late 1990s, she pioneered the use of interferon for the treatment of ocular surface squamous neoplasia. She designed protocols to study the drug in patients with ocular surface tumors curing them of their cancer without surgery. She has continued to explore novel methods to treat surface cancers."

CAROL L. SHIELDS

DIRECTOR, OCULAR ONCOLOGY SERVICE, WILLS EYE HOSPITAL, PROFESSOR OF OPHTHALMOLOGY, THOMAS JEFFERSON UNIVERSITY, PHILADELPHIA, PENNSYLVANIA, USA

What is your proudest professional achievement?

Each week I get a chance to visit my proudest professional achievement through the eyes of every child with retinoblastoma that I have treated. Whether we have to save their eye (and life) with chemotherapy or have to remove the eye to save their life, their innocent smile, as they hug their parents and gaze at me, makes me most proud.

CAROLINE R. BAUMAL

PROFESSOR OF OPHTHALMOLOGY, TUFTS UNIVERSITY SCHOOL OF MEDICINE, RETINAL SURGERY, NEW ENGLAND EYE CENTER, BOSTON, MASSACHUSETTS, USA

What is your proudest professional achievement?

Mentoring students and teaching ophthalmology residents and vitreoretinal fellows in our academic setting has been very important to me. I am always proud of the careers of our students and I was very honored to receive the Crystal Apple award in 2020 from the American Society of Retinal Surgeons after being nominated by past students.

CATHLEEN MCCABE

CHIEF MEDICAL OFFICER, EYE HEALTH AMERICA, SOUTH CAROLINA, USA

What can be done to make the field more diverse?

It is our obligation as leaders and practitioners to help support and mentor a diverse group of people early in their careers with the goal of attracting eye care providers as varied as the patients we serve.

What is your proudest professional achievement?

Making a meaningful impact through missions and introducing people to their life-changing benefits.

CHELVIN SNG

ASSOCIATE PROFESSOR, NATIONAL UNIVERSITY OF SINGAPORE, SENIOR CONSULTANT, NATIONAL UNIVERSITY HOSPITAL, SINGAPORE

What can be done to make the field more diverse?

Recognizing the lack of diversity in ophthalmology is the first step in addressing this imbalance. This year's inaugural Top 100 Women in Ophthalmology Power List will certainly ignite this conversation! What we hope to achieve is a deliberate and united effort by the global ophthalmology community to be more inclusive, and to celebrate talented women. I hope that one day in the near future, "manels" will be a relic of the past!

CHRISTINA LINDÉN

PROFESSOR AND SENIOR CONSULTANT AT DEPARTMENT OF CLINICAL SCIENCES, OPHTHALMOLOGY, UMEÅ UNIVERSITY, SWEDEN

As her nominator commented:

"Professor Lindén does not put herself first, but knows how to lead the next generation forward in an unusually selfless way. She has a solid scientific background. I see her as a role model and believe that she should be recognized with a place on the Power List."

CHRISTINA Y. WENG

ASSOCIATE PROFESSOR OF OPHTHALMOLOGY, FELLOWSHIP PROGRAM DIRECTOR, VITREORETINAL DISEASES & SURGERY, DIRECTOR, MEDICAL STUDENT CLINICAL ELECTIVE-BTGH BAYLOR COLLEGE OF MEDICINE, HOUSTON, TEXAS, USA

What can be done to make the field more diverse?

If I had to answer this in one word, I'd pick the word "intention." I find it empowering to know that we have the ability to drive change and shift culture through intentional actions, big or small. While large-scale and widely-visible efforts to promote diversity (like this special edition of the 2021 Power List) definitely bring attention to the accomplishments of a certain group, common everyday behaviors can also do the same. It can be something as simple as intentionally including underrepresented groups on a committee that you lead or speaking up against something that is inequitable or unjust.

CHRISTINE A. CURCIO

WHITE-MCKEE ENDOWED PROFESSOR IN OPHTHALMOLOGY, DIRECTOR OF THE AMD HISTOPATHOLOGY LAB, DEPARTMENT OF OPHTHALMOLOGY AND VISUAL SCIENCES, UNIVERSITY OF ALABAMA, BIRMINGHAM, ALABAMA, USA

What can be done to make the field more diverse?

People can commit to changing one or two things. For me as an editorial board member, it's making sure that women (and non-US professionals) are among the reviewers that I invite for any manuscript. Judy Kim had a brilliant solution for the Macula Society: a woman and a man as co-moderators for all scientific sessions at their annual meetings. This helps younger women see this recognition, and also provides role models.

CIKU (WANJIKU) MATHENGE

CONSULTANT OPHTHALMOLOGIST AND DIRECTOR OF TRAINING AT THE RWANDA INTERNATIONAL INSTITUTE OF OPHTHALMOLOGY, AND PROFESSOR OF OPHTHALMOLOGY AT THE UNIVERSITY OF RWANDA, RWANDA

What is your proudest professional achievement?

It's hard to pick one, but let me say that as a medical retina specialist, I did not expect to ever be asked to come up with a primary eye care curriculum. When WHO released the algorithm-based curriculum that I had developed for the Africa region, I felt really pleased. But I felt even prouder when I visited a health center in the depths of Rwanda a year later, and found three nurses whose only ophthalmic knowledge came from this curriculum, and who were able to efficiently, correctly, and proudly manage a clinic of 40 patients with different eye complaints.

CLARA C. CHAN

ASSISTANT PROFESSOR, UNIVERSITY OF TORONTO, MEDICAL DIRECTOR, THE EYE BANK OF CANADA, PRESIDENT, CANADIAN CEDRS SOCIETY, TORONTO, CANADA

Why is it important to celebrate women in the field with this list?

For those who are early on in their career or even mid-career, seeing this group of 100 women as role models could be the motivation they need to strive for the goals that they set for themselves.

CLARE GILBERT

PROFESSOR OF INTERNATIONAL EYE HEALTH, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (LSHTM), UNIVERSITY OF LONDON, UK

What can be done to make the field more diverse?

Anonymous shortlisting so the focus is on competencies and experience; enabling and supporting women in leadership development; better mentoring and creating more job-sharing positions.

CONSTANCE OKEKE

LEAD GLAUCOMA SPECIALIST & CATARACT SURGEON, CVP, VIRGINIA EYE CONSULTANTS, ASSISTANT PROFESSOR OF OPHTHALMOLOGY, EASTERN VIRGINIA MEDICAL SCHOOL, NORFOLK, VIRGINIA, USA

What is your proudest professional achievement?

By far my proudest professional achievement is the creation of my iGlaucoma YouTube channel. It was developed at a time when I felt that I was not able to contribute as much to the field like I had before. As a young mother I prioritized my attention on family, which meant not being able to travel to academic meetings and declining opportunities to speak. I wanted to stay relevant and share the knowledge that I was finding fascinating in the area of MIGS. I turned to learning video creation and the YouTube channel, and thus the iGlaucoma brainchild was born. The channel now has over 80,000 minutes of watch time.

COVADONGA BASCARAN

CLINICAL RESEARCH FELLOW, INTERNATIONAL CENTRE FOR EYE HEALTH, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, LONDON, UK

What can be done to make the field more diverse?

A recent paper published in Eye conducted as part of the Lancet Commission on Global Eye Health (2021), examined equity and diversity in global eye health leadership and highlighted the lack of gender parity and ethnic diversity among leaders of the 150 eye health organizations. In particular, there is poor representation at the higher levels of leadership for ethnic minority women. Global Eye Health is doing worse in gender parity than the broader health and development sector. Organizations need to actively include, support and monitor diversity goals in leadership in order to reverse this trend.

CYNTHIA MATOSSIAN

MEDICAL DIRECTOR, MATOSSIAN EYE ASSOCIATES, AN AFFILIATE OF PRISM VISION GROUP, NEW HOPE, PENNSYLVANIA, USA

What is your proudest professional achievement?

It is the large, multi-specialty, integrated ophthalmology/optometry practice I built from the humble start of one exam room, one technician, one receptionist, and a bank loan. Laser-focused on patient centricity and cutting-edge technology, I am very proud of the reputation of the practice.

Why is it important to celebrate women in ophthalmology with the 2021 Power List?

Women in ophthalmology have made monumental strides and are continuing to climb the ophthalmology ladder. It's been a pleasure being part of this tide since the completion of my training.

At podiums, both real and virtual, women are visible as moderators, inventors, authors, departments chairs, researchers, CEOs, and business leaders. The 2021 Power List is a reaffirmation of their hard work and a celebration of their achievements.

CYNTHIA J. ROBERTS

PROFESSOR OF OPHTHALMOLOGY & VISUAL SCIENCES; AND BIOMEDICAL ENGINEERING, MARTHA G. AND MILTON STAUB CHAIR FOR RESEARCH IN OPHTHALMOLOGY, OHIO STATE UNIVERSITY, COLUMBUS, OHIO, USA

Why is it important to celebrate women in ophthalmology with the 2021 Power List?
It's always important to celebrate women!
What can be done to make the field more diverse?
We need to connect broadly with our youth to open minds at an early age.

CYNTHIA ANN TOTH

JOSEPH A.C. WADSWORTH DISTINGUISHED PROFESSOR OF OPHTHALMOLOGY, PROFESSOR OF BIOMEDICAL ENGINEERING, DUKE OPHTHALMOLOGY, DUKE UNIVERSITY SCHOOL OF MEDICINE, DURHAM, NORTH CAROLINA, USA

In the words of her nominator:
"No top ophthalmologist list would be complete without Cindy Toth. A pioneer in the use of handheld OCT to image babies in the NICU to better understand the development of the retina and the brain, as well as intraoperative OCT guided ophthalmic surgery.

DAWN SIM

CONSULTANT OPHTHALMOLOGIST, DIRECTOR OF TELEMEDICINE, ASSOCIATE PROFESSOR, MOORFIELDS EYE HOSPITAL, UCL, INSTITUTE OF OPHTHALMOLOGY, LONDON, UK

Why is it important to we celebrate women in the field in this way?
I think as women, we may have a tendency to unconsciously limit ourselves to certain roles in our field. Visibility and celebration of women in diverse roles and leadership positions have certainly inspired me in my choices. I hope to pay it forwards in the generations that follow.

DENISE M. VISCO

PRESIDENT AND MEDICAL DIRECTOR, EYES OF YORK, VICE PRESIDENT, CEDARS/ASPENS, IMMEDIATE PAST PRESIDENT, AMERICAN COLLEGE OF EYE SURGEONS, YORK, PENNSYLVANIA, USA

Why is it important to celebrate women in ophthalmology?

When we reflect on the progress women have made, we celebrate their acts of courage and determination and create a new paradigm where women have identified role models and mentors in historically male roles.

DOROTHY THOMPSON

CONSULTANT CLINICAL SCIENTIST, CLINICAL AND ACADEMIC DEPARTMENT OF OPHTHALMOLOGY, GREAT ORMOND STREET HOSPITAL FOR CHILDREN NHS TRUST, LONDON, UK

What can be done to make the field more diverse?

Talk! Tell others what we love about our jobs, the successes that make the challenges worthwhile, and the support that lets us do more.

Outside of work, what makes you happy?

Sunshine, the sea, trees, and my family.

What is your proudest professional achievement?

Nurturing a culture of curiosity and learning in clinical vision science where everyone has a chance to achieve.

DIANA V. DO

VICE CHAIR FOR CLINICAL AFFAIRS, PROFESSOR OF OPHTHALMOLOGY, BYERS EYE INSTITUTE, STANFORD UNIVERSITY SCHOOL OF MEDICINE, STANFORD, CALIFORNIA, USA

What can be done to make the field more diverse?

Diversity is important for ophthalmology and medicine. By promoting diversity and inclusion, we are ensuring success for future generations of ophthalmologists and better care for our ethnically diverse patients. In addition, greater creativity and problem solving can be achieved with collaboration from a diverse team of professionals. Let's work together to be inclusive.

ELIZABETH YEU

ASSISTANT PROFESSOR OF OPHTHALMOLOGY, EASTERN VIRGINIA MEDICAL SCHOOL, CORNEA, CATARACT, EXTERNAL DISEASE, REFRACTIVE SURGERY, VIRGINIA EYE CONSULTANTS, MEDICAL DIRECTOR, CVP MID-ATLANTIC, NORFOLK, VIRGINIA, USA

What can be done to make the field more diverse?

In this time of increasing societal appreciation for cultural, gender, age, and social diversity, this awareness must be embraced professionally as well. Our field has an almost equally proportional number of young men and women entering the profession, and significant contributions in innovation, education, research, and clinical medicine are being made by those with varying backgrounds.

EMILY CHEW

DIRECTOR OF THE DIVISION OF EPIDEMIOLOGY AND CLINICAL APPLICATIONS, NATIONAL EYE INSTITUTE, NATIONAL INSTITUTES OF HEALTH, BETHESDA, USA

Outside of work, what makes you happy?

I am very happy to create culinary occasions because that often means the gathering of friends and family to share in joy and laughter. Such events will also facilitate the camaraderie among our colleagues and to better understand each other for more fruitful collaborations.

What is your proudest professional achievement?

Seeing our mentees excel and contribute in meaningful ways to science and to society in general.

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LIGHT ADJUSTABLE LENS

INDICATIONS FOR USE AND IMPORTANT SAFETY INFORMATION

INDICATIONS: The Light Adjustable Lens and Light Delivery Device system is indicated for the reduction of residual astigmatism to improve uncorrected visual acuity after removal of the cataractous natural lens by phacoemulsification and implantation of the intraocular lens in the capsular bag in adult patients with preexisting corneal astigmatism of ≥ 0.75 diopters and without preexisting macular disease. The system also reduces the likelihood of clinically significant residual spherical refractive errors.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS: The Light Adjustable Lens is contraindicated in patients who are taking systemic medication that may increase sensitivity to ultraviolet (UV) light as the Light Delivery Device (LDD) treatment may lead to irreversible phototoxic damage to the eye; patients who are taking a systemic medication that is considered toxic to the retina (e.g., tamoxifen) as they may be at increased risk of retinal damage during LDD treatment; patients with a history of ocular herpes simplex virus due to the potential for reactivation from exposure to UV light; patients with nystagmus as they may not be able to maintain steady fixation during LDD treatment; and patients who are unwilling to comply with the postoperative regimen for adjustment and lock-in treatments and wearing of UV protective eyewear. **WARNINGS:** Careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the risk/benefit ratio before implanting an IOL in a patient with any of the conditions described in the Light Adjustable Lens and LDD Professional Use Information brochure. Caution should be used in patients with eyes unable to dilate to a pupil diameter of ≥ 7 mm to ensure that the edge of the Light Adjustable Lens can be visualized during LDD light treatments; patients who the doctor believes will be unable to maintain steady fixation that is necessary for centration of the LDD light treatment; and patients with sufficiently dense cataracts that preclude examination of the macula as patients with preexisting macular disease may be at increased risk for macular disease progression. **PRECAUTIONS:** The long-term effect on vision due to exposure to UV light that causes erythropsia (after LDD treatment) has not been determined. The implanted Light Adjustable Lens MUST undergo a minimum of 2 LDD treatments (1 adjustment procedure plus 1 lock-in treatment) beginning at least 17-21 days post-implantation. All clinical study outcomes were obtained using LDD power adjustments targeted to emmetropia post LDD treatments. The safety and performance of targeting to myopic or hyperopic outcomes have not been evaluated. The safety and effectiveness of the Light Adjustable Lens and LDD have not been substantiated in patients with preexisting ocular conditions and intraoperative complications. Patients must be instructed to wear the RxSight-specified UV protective eyewear during all waking hours after Light Adjustable Lens implantation until 24 hours post final lock-in treatment. Unprotected exposure to UV light during this period can result in unpredictable changes to the Light Adjustable Lens, causing aberrated optics and blurred vision, which might necessitate explantation of the Light Adjustable Lens. **ADVERSE EVENTS:** The most common adverse events (AEs) reported in the randomized pivotal trial included cystoid macular edema (3 eyes, 0.7%), hypopyon (1 eye, 0.2%), and endophthalmitis (1 eye, 0.2%). The rates of AEs did not exceed the rates in the ISO historical control except for the category of secondary surgical interventions (SSI); 1.7% of eyes (7/410) in the Light Adjustable Lens group had an SSI ($p < .05$). AEs related to the UV light from the LDD include phototoxic retinal damage causing temporary loss of best spectacle corrected visual acuity (1 eye, 0.2%), persistent induced tritan color vision anomaly (2 eyes, 0.5%), persistent induced erythropsia (1 eye, 0.3%), reactivation of ocular herpes simplex Infection (1 eye, 0.3%), and persistent unanticipated significant increase in manifest refraction error (≥ 1.0 D cylinder or MRSE) (5 eyes, 1.3%). **CAUTION:** Federal law restricts this device to sale by or on the order of a physician. **Please see the Professional Use Information Brochure for a complete list of contraindications, warnings, precautions, and adverse events.**

Leading the Way

The Ophthalmologist Power List 2021 celebrates the outstanding female figures, recognized by their peers as leaders in the field of ophthalmology. Here, our industry sponsors tell us about their commitment to eye care, the importance of equal representation, and ensuring fair opportunities at all levels.

Anita Burton, Head of Human Resources, Erin Powers, Head of Medical Affairs & Professional Education, and Laurie Ferguson, Head of Global Communications, *Carl Zeiss Meditec Group, Ophthalmic Devices*



Why is diversity so important in the medical technology industry?

Diversity boosts a company's capacity for innovation – no matter what the industry. Diverse teams learn from each other and encourage one another to think outside their own cultural boundaries. At the same time, diversity in its various forms at an international company, like Carl Zeiss Meditec Group, is also the key to global success, because employees in different regions know their markets, understand customers' different needs, and know how to respond to business partners' cultural practices and customs. This greatly contributes to local acceptance and trust in the company.

What place does diversity have at Carl Zeiss Meditec Group?

ZEISS is one of the world's leading innovators in the design and development of medical devices. We create and supply cutting-edge technologies and application-oriented solutions for ophthalmology, and we couldn't do this without a diverse team of people. With more than 3,200 employees at the Carl Zeiss Medical Group alone from all around the world, diversity is a major driver of everyday life at ZEISS. The company is shaped by a diverse array of skills, mentalities, leadership and work styles, cultural backgrounds, and lifestyles. Diverse teams are more creative and solution-oriented, which helps them innovate – and that's a great advantage.

For example, the three of us, hailing from different backgrounds, with diverse views and experiences, work together every day to further ZEISS innovation in the ophthalmic devices industry, collaborating and aiming to influence the way customers, partners, and employees see ZEISS, further positioning the company as a market leader.

How will ZEISS continue to advocate for diversity in ophthalmology in the next five years?

When ZEISS started 175 years ago, we and our customers were inspired by curiosity, passion, and precision – new perspectives that shaped how we looked at the world; to discover major challenges and turn them into great opportunities. Despite the many ways the world has changed over the past 175 years, one thing remains the same: together we challenge the limits of imagination.

We plan to continue this journey of innovation together over the next five years and beyond, giving employees the opportunity to expand their professional and personal horizon, and promoting diversity in all its forms.

ZEISS

Andrew Stewart
General Manager, GMCO, Eyecare, Allergan, an AbbVie company

What path has led you to ophthalmology?

I have always been interested in how advances in science lead to the development of new medicines that improve treatments and ultimately drive patient benefits. This led me to research and development before moving into commercial manufacturing roles.

My first role at Allergan, an AbbVie company, was in business development, working with the commercial and R&D teams to develop our strategic approach to the future of our franchise. This position gave me a broad-based understanding of the eye care therapeutic landscape and a deep appreciation of what fits our eye care strategy and, perhaps more importantly, what doesn't. Working closely with the commercial team allowed me to learn what I believe is the fundamental differentiator for Allergan: a strong history of focusing on our customers' needs and our unwavering commitment to patient centricity.

Once I started working in eye care, I was hooked. This passion led me to a commercial leadership role for our US Retina team and, most recently, as the General Manager with responsibility for our Global Eye Care function at AbbVie.

How does Allergan promote gender equality at all levels?

At Allergan, we know we're at our best when all voices are heard and valued, and when employees can contribute fully. Gender equality – along with embracing diversity and inclusion – is embodied into the principles of how all employees work on a day-to-day basis. In practice this means instilling an inclusive mindset in all levels of employees, proactively bringing in the right talent, and bringing people together to promote inclusion. When I look at successful teams, greater success can be directly attributed to the diversity of the team with respect to gender, ethnicity, age, and experience.

What can we expect from Allergan in the next five years?

We are working on many exciting projects across our therapy areas and supporting ophthalmologists in an increasingly digital world. There's a lot of excitement in the field of glaucoma with advances in diagnostic techniques that further our understanding of its pathophysiology, better patient evaluation and monitoring, as well as new treatment options that look to address key unmet needs, including early diagnosis and compliance.

Allergan has a strong presence and heritage in eyecare and bringing innovative advances in treatment to the market. We are currently focusing on sustained delivery devices, which could be one way to address the problems and risks associated with nonadherence to eye treatments. The impact of this type of approach for patients could be profound.

Allergan

www.allergan.com

Shervin Korangy
President and Chief Executive Officer,
BVI

What led you to ophthalmology?
When I graduated 25 years ago and started in financial services, I couldn't have imagined the path my career would have taken. Surrounded by a family of doctors, I should have known that medicine would somehow play a role in my professional life. More than a decade ago, I had the opportunity to jump into healthcare and join Novartis Group in Switzerland. We acquired Alcon, where I oversaw the global integration into Novartis – and thus became introduced to ophthalmology. I remember spending weeks with the R&D and clinical teams to learn about our products. I also met with several surgeons who were instrumental to my learning, allowing me to spend time in their offices and operating rooms. It was important to understand how a product worked, why it was critical in an ophthalmic procedure, and why it brought value to physicians and hospitals. Similar to when I was a 16-year-old working the reception desk at my father's clinic during summer vacation, I considered it an intellectual challenge to understand the pre-, during, and post-surgical procedure efforts. We at BVI have learned that listening to the surgeons' and hospitals' needs are the most informative lessons. It is fascinating that the eye, such a small organ, can be so intricate and so complex… very much like the industry of ophthalmology.

How does your company promote gender equality at all levels?
At BVI, we don't rely on initiatives to drive an effort internally. Instead, we implement measures to build a positive climate throughout the company and, over time, integrate that into our DNA. An initiative may bring attention to a matter, but it will not be sustainable long-term. It is imperative that our associates stay blind to gender, as well as race, religion, ethnicity or sexual orientation when looking at our talent or new hires. We seek out people who think in this way and avoid bias altogether. By doing this, we cultivate an environment that doesn't stand for anything less than equality. Our organization is 51 percent female, 49 percent male. By focusing on who is the best person for the role, we are able to organically keep this balance within the company. BVI is currently formalizing a broader Mentorship program, built by our associates, to be launched in 2021. As a newer company, BVI is unburdened by a legacy, which means we are free to build the organization the way our associates and customers want us to. And that is quite liberating!

What can we expect from BVI in the next five years?
The pandemic saw many companies retrenching and laying off employees to protect profits, while BVI continued to expand. We are humbled to see the care shown by our employees during this time. As an industry, we have not yet recovered from the disruption in ophthalmic procedures, but with long-term resolve, BVI will continue to deliver for its surgeons and patients, now and in years to come.

BVI

www.bvimedical.com

Nancy Lurker
President and CEO,
EyePoint Pharmaceuticals

What was your path to ophthalmology?
I have spent 30 years in the pharmaceutical industry, working in almost every therapeutic area from oncology to women's health – but, since joining EyePoint in 2016, I have become fascinated with ophthalmology. I have come to appreciate its unique ecosystem, with physicians, regulatory authorities, and industry all collaborating for the patients' benefit. This collective movement fosters innovation and is really refreshing. Ophthalmology is a tremendous field of medicine and I value the collaborations that I have made over the years, particularly with physicians and other industry executives. I am also incredibly appreciative of the way the US Food and Drug Administration works with industry to find solutions. We have made some exciting advancements together!

How does EyePoint promote women in industry?
EyePoint has made a real effort to promote women. I take a keen interest in hiring women at all levels, but particularly into leadership roles. Ensuring that we have women on the board is one of my priorities; until recently, we had three female board directors, which is a great result for a US-based company. Although we have made great progress, I still need to do a better job of hiring women as direct reports – that is the next task on my list.

How can we address gender inequality across the industry?
When I first moved into ophthalmology, I was surprised – and disappointed – to find fewer women in senior roles than I had seen in other therapeutic areas. Since then, I have witnessed a big push for change. As an industry, we need to ensure that we have female physicians on our advisory boards and running our clinical trials. Why is it so important to have women investigators? Because when you run a clinical study, your name features prominently on a paper, which means you have an active role in presenting data. If you are not in the mix to begin with, it is a lot harder to get your name out there. It is vitally important that the industry works with the physician community to actively promote female ophthalmologists.

What projects are you working on right now?
Despite the difficulties of the pandemic, we have had a phenomenal last six months, with two successful commercial products: YUTIQ for treatment of uveitis affecting the posterior segment and DEXYCU for post-ocular surgery inflammation. But the pivotal moment for us was getting EYP-1901 – our extended-delivery drug for wet AMD – into human clinical trials. The mix of researching new indications, running clinical trials, and promoting our existing products makes me really excited for the future.

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Arianna Schoess Vargas
Managing Director,
Heidelberg Engineering

What path led you to ophthalmology?
With my father, Christoph Schoess, being one of the founders of Heidelberg Engineering, I was simply born into it. However, until my late 20s I refused to follow in his footsteps. I completely changed my mind when I attended my first Heidelberg Engineering International SPECTRALIS Symposium. Once I got to experience the passion that both researchers and staff had for improving patient care, I knew I wanted to be part of it.

How does Heidelberg Engineering promote gender equality at all levels?
By making it visible and a topic of discussion. There is no reason for our company not to reflect the gender and ethnicity distribution of the general population. Last year, we made embracing diversity a higher priority within our organization. We issued our first Diversity Report and, though we are not reflecting the general population yet, women at Heidelberg Engineering are strongly represented in traditionally male-dominated areas, such as technology and management. We also regularly invite girls to visit our company and learn about possible careers in STEM professions. We encourage their interaction with our female developers and women in top leadership positions to show them what their professional life might look like in the future.

We actually have a higher percentage of women in top management positions than in the company overall. Being a young mother at the company's helm, I get a lot of feedback from parents who don't feel like they have to give up their career. We need to do our part in supporting the balance of work and family life for everyone. This encourages parents to find new models for the distribution of tasks and makes it easier for employees to return to work after parental leave.

I believe in making imbalances visible. Promoting role models is another important element; it reduces potential prejudices and makes it more normal for women to have a seat at the table. Therefore, I appreciate the gesture of The Ophthalmologist with this year's Power List.

What's the most exciting project you're working on?
One of the most exciting projects that I'm working on is the establishment of a Glaucoma Research Consortium. The primary goal is to improve the detection and staging of glaucoma and its progression in non-myopic and myopic eyes. We see this as an opportunity to foster collaboration among our clinical investigators, collect data for research and standardize the structural definitions for glaucoma. A further goal is to visually integrate ONH, pp-RNFL and macula OCT imaging data within clinically intuitive dashboards. To facilitate this Consortium, we have drawn on all our core technologies from cSLO imaging, OCT, real-time processing and healthcare IT technologies. We have developed a scalable imaging and data-management solution to foster exchange. The Consortium is intended to advance scientific knowledge, while accelerating the introduction of clinically-relevant, innovative products to the market.

HEIDELBERG ENGINEERING

www.heidelbergengineering.com

Nikki Sidi
Vice President, Global Strategic Marketing, Surgical at Johnson & Johnson Vision

What led you to ophthalmology?
The sense of sight is one of the most precious gifts we have. Working in ophthalmology allows you to make a meaningful impact in the quality of peoples' lives; knowing that J&J Vision's products can contribute to that transformation is what inspires me every day. When surgeons tell me they've seen tears in their patients' eyes after they are able to see clearly again, I know that my life's work is making a difference.

How can wider gender imbalance in the ophthalmic industry be addressed?
It starts with us – with every industry leader, every educator, every surgeon. In industry, we should be intentionally recruiting and hiring diverse representation of all kinds – from those of all genders to open and out members of the LGBTQIA+, to members of the Black, Hispanic American, and Asian American communities to lead and serve as part of a diverse workforce for now and the future. Some initiatives underway at J&J Vision include expanding diverse talent networks and ensuring diverse slates to create equity in hiring. We should also be elevating women in ophthalmology, whether that's through sponsorships, speaking engagements, clinical studies, R&D engagement, or seed investments. In education, it starts with encouraging girls from the youngest ages to explore careers in STEM, then cultivating that interest as they move into secondary education and college. But the bigger challenge may be supporting women early in the residency and fellowship programs. Nearly half of ophthalmology students are female, but represent only 20-30 percent of the field, and are somehow absent from key leadership roles. In the medical field, mentorships are key. Groups like OWL (Ophthalmic World Leaders) and WIO (Women in Ophthalmology) are curating conversations on how we decrease the gender imbalance, and work in spite of it to create a more diverse industry and world for the future. We should be part of those conversations, sharing best practices across corporations, and teaching institutions and practices. We must all ensure women aren't left behind.

What can we expect from your company in the next five years?
It's clear that 2020 was an unprecedented year. And for J&J Vision it was also a transformative one. We came through it stronger and better than ever – and we are ready to lead. This year, we're celebrating the 20th anniversary of our legacy TECNIS platform, relaunching the TECNIS Masterbrand and introducing a series of new products that will give J&J Vision the broadest IOL portfolio available. We'll also be introducing our first equipment launch with the VERITAS Vision System, which was recently approved in the US and Europe. The next five years are about delivering on our commitment to product quality and thought leadership, bringing innovation to the industry, and ultimately, changing the trajectory of eye health across the world. J&J Vision has a deep commitment to ophthalmology and big aspirations for the future.

Johnson & Johnson VISION

www.jjvision.com

AnnMarie Hipsley
Founder and CEO,
Ace Vision Group, Inc.

What path has led you to ophthalmology?
My journey to ophthalmology began with entertaining the challenge of solving a 100-year-old paradox related to the loss of accommodation which occurs with age. My background and expertise in biomechanics and rehabilitation led me to believe that the ciliary muscle behaves both statically and dynamically like all other muscles in the body. A therapeutic restorative solution was clearly applicable to the accommodation mechanism and ignited my passion for discovering a restorative approach to age-related dysfunctions in the eye. Laser Scleral Microporation (LSM) became my brain child and spawned my published manuscript: VisioDynamics Theory: A Biomechanical Model for the Aging Eye.

How does Ace Vision promote gender equality at all levels?
Our company culture is designed to promote value contribution, personal and professional growth, and leadership assets. It is not based on gender or social bias; we are solely driven to promote intrapreneurship on every level based on talent matched to roles and goals.

How do you ensure equal representation in leadership positions?
The simplicity of our organization means that we are talent, moral, and purpose driven. This alleviates many social obstacles by choosing the best cultural and professional fit for each position. Our leadership positions all require mentoring and success driven platforms that measure not only value creation, but cross level appreciation and coaching. Every associate's success is given a high level of investment priority so that the team benefits from each individual's progress.

How can wider gender imbalance in the ophthalmic industry be addressed?
A paradigm shift to promoting more leadership, faculty and panel roles for women in ophthalmic conferences and industry programs are emerging. If specific rubrics are utilized, including gender, cultural and ethnic diversity, globally there are more opportunities for those who would otherwise be eliminated through bias. I also believe having special interest organizations such as WIO, supporting female accomplishments and advancing women in leadership roles are important to give equal opportunities for women to impact on our profession. These organizations are pivotal in promoting ophthalmic equity in contributions to the field.

What's the most exciting project you're working on?
Ace Vision Group is working on the world's first therapeutic Laser Microporation Technology that addresses dysfunctions in the eye such as age-related loss of visual accommodation, AMD, glaucoma, and dry eye. AVG's technology is the first of its kind with hopes to unveil a new rehabilitation and therapeutic genre of ophthalmic Microporation treatments. The most exciting element of our project is the revolutionary AI-integrated platform, allowing our procedures to be performed virtually, which is extremely relevant in the post-COVID-19 era and in the future.

AceVision
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www.acevisiongroup.com

Jeannette Bankes

President and GM, Global Surgical Franchise, Alcon

What path has led you to ophthalmology?

I have had the pleasure of holding various leadership positions in the healthcare space, both in the medtech and pharmaceutical industries. I enjoy leading innovation and device development, so I was thrilled to join Alcon in 2019. What attracted me to ophthalmology was both the company and the people. Ophthalmology is very special: there is a sense of camaraderie in the ophthalmic space – something that was even more noticeable as we navigated a pandemic this past year. People care about one another and about the future of this industry.

You get close to your partners, both industry peers and customers, as you develop the science and innovations in a collaborative way to ultimately help people see brilliantly.

How does Alcon promote gender equality, and how can wider industry gender imbalance be addressed?

Alcon is dedicated to promoting equality and inclusion as well as having diverse talent at all levels. We promote gender equality through our employee resource groups (ERGs), which provide strong development opportunities for our associates. One ERG called WIN – Women Innovating Now – supports the future generation of female leaders through professional development and mentorship opportunities.

At the beginning of 2021, we embarked on a global assessment of Diversity & Inclusion at Alcon because it's important for us to take a data-driven approach to understanding our current practices and metrics relating to gender globally and protected classes in the US. The results of this assessment will inform our future strategy to ensure we are taking action to deliver gender equality at all levels of our business over time.

Having honest conversations around topics like inequality and openly discussing industry challenges helps move that needle in the right direction. Two leading retina specialists in the US, Christina Weng and Audina Berrocal, recently wrote about Women in Ophthalmology. I had a chance to interview them about the book during Women's History Month in March, and they addressed important topics like work-life balance and seeking out leadership opportunities. For these two career-driven, respected women to be so candid about their own experiences is inspiring for other women, industry peers, and future leaders.

What can we expect from your company in the next five years?

It's an exciting time for Alcon! We are proud of our diverse portfolio of products, our new product launches, and our truly global footprint in implantables, consumables, and equipment. If we look at innovation alone, we have launched more than 26 products in the past three years in cataract, vitreoretinal and refractive.

As we think about the near term, our two big areas of focus are presbyopia-correcting IOLs, which include our PanOptix and Vivity IOLs, as well as our Alcon equipment ecosystem for cataract, retina, and refractive surgery. We are focused on bringing our expertise to every step of the procedure – end-to-end.

Alcon

www.alcon.com

Tanja Powers
Vice President, Ophthalmology Sales & Marketing, Genentech

How does Genentech promote gender equality at all levels?

In 2007, our former CEO Ian Clark challenged us to address the shortfall of women moving into leadership at Genentech, and we've made it a priority ever since. We set a 10-year strategic imperative to identify and remove barriers to the advancement of women in senior leadership positions and, in doing so, increase the pool of women qualified for these positions by 50 percent. We have accomplished this goal at all levels.

The Gender Diversity Strategy we designed was a multi-faceted, multi-year effort based on best practices detailed in research conducted by the Healthcare Businesswomen's Association (HBA), which included Visible Leadership Support, Metrics and Accountability, and Work and Career Flexibility.

How do you ensure equal representation in leadership positions?

Our Genentech Executive Committee has set an enterprise-wide goal to increase the gender diversity of our leadership pipeline. Our resulting strategy to help ensure representation includes a number of key components – including efforts by leadership to communicate our goal and increase awareness or our Action Plan, through blogs, town halls, departmental meetings, and other touchpoints.

We established inclusive interviewing criteria that ensure female applicants are considered for new opportunities. We also targeted efforts to recognize high-potential women, reducing their years-to-readiness as successor candidates by ensuring clear development plans with stretch assignments. We are making sure that managers know the career aspirations of these high-potential women and provide them with senior mentor relationships. We have also created opportunities for them in high-visibility projects and job rotations.

What's the most exciting project you're working on? What can we expect from your company in the next five years?

It's a really exciting year ahead of us for Genentech/Roche in ophthalmology, as we continue to focus on the discovery and development of therapies for patients with potentially blinding retinal diseases, including DME and AMD.

We have two late-stage treatments in development designed to offer potential lasting vision improvements for both DME and wet AMD, while also reducing treatment burden. Our Port Delivery System with ranibizumab (PDS) is a permanent refillable eye implant, approximately the size of a grain of rice. It is designed to continuously release a customized formulation of ranibizumab into the eye over time. And faricimab, the first investigational bispecific antibody designed for the eye, targets two distinct pathways that drive a number of retinal conditions.

Also, as part of our portfolio of digital ophthalmic solutions to improve patient care, we've recently launched a pilot program of Home Vision Monitor®, an easy-to-use app for remote patient monitoring, which is designed to detect early vision changes in patients with retinal diseases.

Genentech
A Member of the Roche Group

www.gene.com/ophthalmology

ERIN M. SHRIVER

CLINICAL PROFESSOR, JIM O'BRIEN GROSS AND DONNITA GROSS CHAIR IN OPHTHALMOLOGY DEPARTMENT OF OPHTHALMOLOGY & VISUAL SCIENCES, OCULOPLASTIC, ORBITAL AND ONCOLOGY SERVICE, UNIVERSITY OF IOWA HOSPITALS AND CLINICS, IOWA CITY, IOWA, USA

What is your proudest professional achievement?
I am incredibly proud of my work advocating for women as patients and within our field of ophthalmology. Our team has written extensively on ocular and orbital injuries in women associated with intimate partner violence.

ESEN KARAMURSEL AKPEK

PROFESSOR OF OPHTHALMOLOGY AND RHEUMATOLOGY, DIRECTOR, OCULAR SURFACE DISEASE CLINIC
THE WILMER EYE INSTITUTE, JOHNS HOPKINS SCHOOL OF MEDICINE, BALTIMORE, MARYLAND, USA

What can be done to make the field more diverse?
As Audre Lorde said, "There is no such thing as a single-issue struggle because we do not live single-issue lives." Intentional efforts to increase diversity beyond gender are necessary for fostering innovation in medical and scientific advancements. Creating opportunities to connect and network with senior women leaders from diverse backgrounds is essential to attract young women ophthalmologists who identify as underrepresented minorities.

EVE J. HIGGINBOTHAM

VICE DEAN FOR PENN MEDICINE OFFICE OF INCLUSION AND DIVERSITY, SENIOR FELLOW, LEONARD DAVIS, INSTITUTE FOR HEALTH ECONOMICS, PROFESSOR OF OPHTHALMOLOGY, PERELMAN SCHOOL OF MEDICINE, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PENNSYLVANIA, USA

Why is it important to celebrate women in ophthalmology with the 2021 Power List?
We need to celebrate women in ophthalmology because we are underrepresented in our discipline, are not representative of the proportion of women in our nation, and not representative of the proportion of women in medicine. A recent article in NEJM (November 2020) indicates that women in medicine in general have not progressed in either promotions and leadership in 35 years. Thus, despite our best efforts, there still remain barriers to our advancement. The COVID-19 pandemic has plunged us into a gender recession. Therefore, highlighting women remains important to let those coming behind us, "If you see us, you can be us."
Outside of work, what makes you happy?
Spending time with my husband, Frank. We will celebrate our 35th wedding anniversary this year! And golf, golf, and more golf.

FAIROOZ P. MANJANDAVIDA

DIRECTOR, HORUS SPECIALTY EYE CARE, OCULOPLASTY, ORBIT AND OCULAR ONCOLOGY, BANGALORE, INDIA

What can be done to make the field more diverse?
We lack true diversity in the field. Lack of gender diversity would mean that we are missing out on a fantastic pool of talent. Inclusion is the most important diversification strategy. Providing opportunities, and inclusion in the policy making leadership roles will pave way for diversifying the field. Acknowledgement and support irrespective of gender, race, religion or nationality at workplace makes it a more conducive working environment to excel. Lastly, strengthening the anti-discriminatory policies at the workplace to keep it equitable. The world is a better place if there is equal opportunities and inclusivity.

FERHINA S. ALI

VITREORETINAL PHYSICIAN AND SURGEON, SAN FRANCISCO, CALIFORNIA, USA

What can be done to make the field more diverse?
Research shows that diversity translates into greater productivity, creativity, and innovation. Championing diverse representation in residency and fellowship selection processes, and hiring practices, is critical to advancement and continuing to attract the best talent to our field.

GEMMY CHEUNG

ASSOCIATE PROFESSOR AND SENIOR CONSULTANT, SINGAPORE NATIONAL EYE CENTRE, DUKE-NUS MEDICAL SCHOOL AND THE NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

As a nominator described her:
"Impressive achievements and positions as, among others, the AAO Regional Advisor, Asia-Pacific Vitreoretinal Society Council Member and ARVO International Myopia Institute Taskforce Member."

HELEN DANESH-MEYER

SIR WILLIAM AND LADY STEVENSON PROFESSOR OF OPHTHALMOLOGY CHAIR AT THE NEW ZEALAND NATIONAL EYE CENTRE, UNIVERSITY OF AUCKLAND, NEW ZEALAND

In the words of one of her many nominators:
"Helen Danesh-Meyer was the first female professor of ophthalmology and the youngest professor in a surgical specialty in New Zealand. Several aspects of her clinical research have influenced and altered clinical management strategies in the international arena, in particular her work on imaging of the retinal nerve fibre layer in Alzheimer's Disease and chiasmal compression."

HELEN NIRMALA RAO

OPHTHALMOLOGIST AT THE SERANGO CHRISTIAN HOSPITAL, ODISHA, INDIA

As her nominator said:
"Does a Power List honor those who have shown remarkable capacity and ability to direct or influence the behavior of others? Then there can be no better candidate than Helen Nirmala Rao. She is the most famous Indian eye surgeon... you have never heard of. She established an eye department at The Duncan Mission Hospital in the Indo-Nepalese border town of Raxaul that became the most respected eye unit in the state. On the rare occasion when she had to leave the hospital, patients would bed down at Raxaul railway station to await her return."

HILDA CAPÓ

JOHN T. FLYNN PROFESSOR OF OPHTHALMOLOGY CHAIR, PROFESSOR OF CLINICAL OPHTHALMOLOGY, BASCOM PALMER EYE INSTITUTE, LEONARD M. MILLER SCHOOL OF MEDICINE, UNIVERSITY OF MIAMI, FLORIDA, USA

What can be done to make the field more diverse?
We first need to recognize the advantages of a diverse working group and create awareness of the disparities with regards to gender, race, ethnicity and sexual orientation. Sponsoring and mentoring minorities, as well as actively setting up representation targets by the leaders will help achieve the desired diversity.

JANET DAVIS

LEACH DISTINGUISHED PROFESSOR OF OPHTHALMOLOGY, BASCOM PALMER EYE INSTITUTE, UNIVERSITY OF MIAMI MILLER SCHOOL OF MEDICINE, MIAMI, FLORIDA, USA

What can be done to make the field more diverse?
Medicine is about our patients. Their doctors should reflect the diversity of the population. Women are half of that equation.
What is your proudest professional achievement?
I am proud to have chaired the American Board of Ophthalmology and served as president of two professional societies in the sub-specialty of uveitis.

JANEY L. WIGGS

PAUL AUSTIN CHANDLER PROFESSOR OF OPHTHALMOLOGY, MASSACHUSETTS EYE AND EAR, HARVARD MEDICAL SCHOOL, BOSTON, MASSACHUSETTS, USA

What can be done to make the field more diverse?
Encourage young promising students (women and minorities) to pursue ophthalmology and to provide mentoring, especially at key career transitions.
What is your proudest professional achievement?
Leading the NEIGHBORHOOD consortium for Primary open angle glaucoma genetics.

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JOAN MILLER

CHIEF OF OPHTHALMOLOGY, MASSACHUSETTS EYE AND EAR, CHAIR OF THE DEPARTMENT OF OPHTHALMOLOGY, DAVID GLENDENNING COGAN PROFESSOR OF OPHTHALMOLOGY, HARVARD MEDICAL SCHOOL, BOSTON, MASSACHUSETTS, USA

In the words of her nominators:
"She developed PDT and anti VEGF therapies helping millions of people, she runs one of the biggest eye departments in the world - she's an amazing person!" "She's an exemplary leader in academic medicine."

JUGNOO SANGEETA RAHI

PROFESSOR OF OPHTHALMIC EPIDEMIOLOGY AND HONORARY CONSULTANT OPHTHALMOLOGIST AT THE GOS INSTITUTE OF CHILD HEALTH UCL AND INSTITUTE OF OPHTHALMOLOGY UCL, GREAT ORMOND STREET HOSPITAL NHS FOUNDATION TRUST AND NIHR MOORFIELDS BIOMEDICAL RESEARCH CENTRE, LONDON, UK

Outside of ophthalmology, what makes you happy?
Family (first and always), friends, any opportunity to dance, a good night's sleep, and a job well done.

KATHLEEN B. DIGRE

PROFESSOR OF OPHTHALMOLOGY & VISUAL SCIENCE, AND NEUROLOGY, MORAN EYE CENTER, THE UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH, USA

As a nominator put it:
"Digre, listed in Best Doctors in America, is a brilliant specialist in neuro-ophthalmic disorders and complex visual complaints due to optic nerve or brain disease."

JUDY E. KIM

PROFESSOR OF OPHTHALMOLOGY AND VISUAL SCIENCES; PROFESSOR AT THE GRADUATE SCHOOL OF BIOMEDICAL SCIENCES; AND DIRECTOR OF TELEOPHTHALMOLOGY AND RESEARCH AT THE MEDICAL COLLEGE OF WISCONSIN, USA

Why is it important to celebrate women in ophthalmology with this list?
I believe we are all born with a purpose. These women leaders in ophthalmology gathered here found their purposes and worked hard and made many sacrifices to achieve them. By highlighting them and their myriad of vast achievements, it encourages others to achieve more, and our children to role model. Also, strong women are those who look out for others.

JULIA A. HALLER

OPHTHALMOLOGIST-IN-CHIEF AND WILLIAM TASMAN, MD ENDOWED CHAIR, AT WILLS EYE HOSPITAL, USA; AND PROFESSOR AND CHAIR OF OPHTHALMOLOGY AT THE SIDNEY KIMMEL MEDICAL COLLEGE AT THOMAS JEFFERSON UNIVERSITY, PHILADELPHIA, PENNSYLVANIA, USA

What is your proudest professional achievement?
Leading Wills Eye Hospital and working alongside my incredible colleagues – faculty, staff, Board, and inspiring patients.

KENDALL E. DONALDSON

MEDICAL DIRECTOR AND PROFESSOR OF CLINICAL OPHTHALMOLOGY, CORNEA, EXTERNAL DISEASE, CATARACT AND REFRACTIVE SURGERY AT BASCOM PALMER EYE INSTITUTE IN PLANTATION, FLORIDA, USA

Why is it important to celebrate women in the field this way?
Each of us as an individual may be working hard on a small scale to achieve our goals, however we are stronger as a group and need to come together as one unit to achieve even more.

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LAURA M. PERIMAN

FOUNDER AND DIRECTOR OF DRY EYE SERVICES AND CLINICAL RESEARCH AT THE PERIMAN EYE INSTITUTE, SEATTLE, WASHINGTON, USA

Outside of ophthalmology, what makes you happy?

I enjoy creative pursuits; I'm a published poet and I enjoy creating art. The poetry allows me to process observations and feelings. Often, the words pour out of nowhere and I have to stop everything and write it down. I love acrylic painting because the dry time is fast, so you have to work fast. This creates a truly immersive, intense creative experience for me where even my sense of time is suspended. I find it truly relaxing.

LILIANA WERNER

PROFESSOR OF OPHTHALMOLOGY AND VISUAL SCIENCES AND CO-DIRECTOR OF THE INTERMOUNTAIN OCULAR RESEARCH CENTER AT THE JOHN A. MORAN EYE CENTER, UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH, USA; AND ASSOCIATE EDITOR OF THE JOURNAL OF CATARACT & REFRACTIVE SURGERY

What is your proudest professional achievement?

A recent achievement that gives me great joy and pride is being named the US Associate Editor of the Journal of Cataract & Refractive Surgery in June 2020. I am the first woman to hold this position since the journal's creation, but hopefully, will not be the last. I truly enjoy this work, and learn from it every single day.

Why is it important to celebrate women in the field this way?

Despite the increasing numbers of women in medical schools and residency programs, we still do not see the same proportion in leadership roles, or at the podium. It is therefore important to increase awareness that there are amazingly accomplished women in ophthalmology and other medical fields.

LISA NIJM

FOUNDER OF MDNEGOTIATION.COM; CEO OF WOMEN IN OPHTHALMOLOGY; FOUNDER AND MEDICAL DIRECTOR AT WARRENVILLE EYECARE AND LASIK, USA; AND ASSISTANT CLINICAL PROFESSOR OF OPHTHALMOLOGY AT THE UNIVERSITY OF ILLINOIS EYE AND EAR INFIRMARY, USA

What is your proudest professional achievement?

My proudest professional achievement is not a single moment. but rather seeing how the pieces of my professional journey have come together to create a career "portfolio." I love being able to care for patients at my own practice, teach young ophthalmologists, create opportunities to lift other women up through my role as CEO of WIO, and utilize the full extent of my MD/JD degree to coach my fellow physicians in elevating their negotiation skills through my latest venture, MDNegotiation.com. I am most excited for the years ahead where I can use these career components to mentor more and more individuals for the betterment of our patients and the profession of ophthalmology.

Why do you think it is important that we celebrate women in the field this way?

Awards like these raise the profile of women, forge visibility, and showcase success. They provide an opportunity to show appreciation for the incredible achievements of women ophthalmologists across the globe and inspire the next generation of ophthalmic leaders-- after all, "you can't be what you can't see!"

Outside of ophthalmology, what makes you happy?

My faith, family, friends, and sandy beaches by the ocean.

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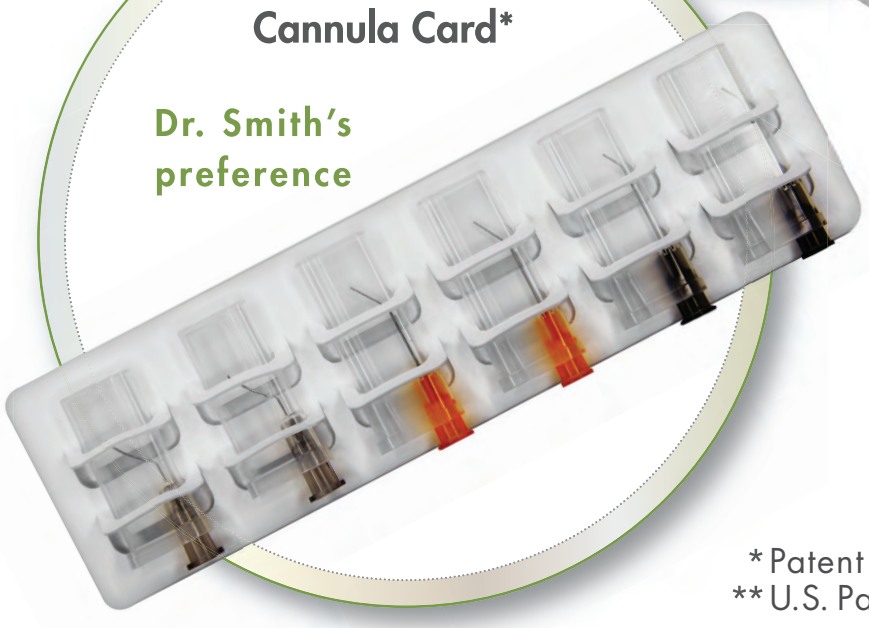

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LOIS SMITH

PROFESSOR OF OPHTHALMOLOGY, HARVARD MEDICAL SCHOOL, BOSTON CHILDREN'S HOSPITAL, BOSTON, MASSACHUSETTS, USA

Her nominator wrote this about her:
"Lois is a consummate mentor, having trained a generation of highly productive post-doctoral fellows, with her accomplishments recently recognized by the Boston Children's Hospital 2019 Post-Doctoral Association Mentoring Award. With her achievements and impact, Lois Smith has been and remains one of the most influential women in the field of ophthalmology."

LUCY MATHEN

OPHTHALMOLOGIST AND WRITER, FOUNDER OF SECOND SIGHT, UK

Lucy Mathen originally declined involvement with the 2021 Power List as the concept of the list and the nominations we normally receive – and received this year – have proven controversial to her. However, as others placed her on the list, she decided to express her views on the topic in the In My View column in this issue. She believes this enables a wider range of opinions regarding Power Lists to be aired than would otherwise be possible.

LUMINITA PARAOAN

PROFESSOR OF MOLECULAR CELL BIOLOGY AND LEADER OF THE OCULAR MOLECULAR BIOLOGY AND MECHANISMS OF DISEASE GROUP, EYE AND VISION SCIENCE, FACULTY OF HEALTH AND LIFE SCIENCES AT THE UNIVERSITY OF LIVERPOOL, UK

What can be done to make the field more diverse?
Celebrate true achievements,praise talent, teach well, and give selfless support.

LOUISA WICKHAM

MEDICAL DIRECTOR OF MOORFIELDS EYE HOSPITAL NHS FOUNDATION TRUST, LONDON, UK

What is your proudest professional achievement?
Delivering the Moorfields Cataract Drive last year, where we turned all our theaters over to complete 725 cataract procedures in a week. I led an amazing team who worked tirelessly to radically transform our patient pathways and convert our theater suite into a high-volume day care hospital. The initiative was a true collaboration between the hospital, industry, and voluntary organizations. The professionalism and dedication of all those involved was inspirational and I was proud to work with such a team.

Outside of ophthalmology, what makes you happy?
Spending time with my friends and family. The COVID-19 pandemic has been a real reminder of the importance of family and friends who are there to celebrate your career highs and support you through the tough times.

M. FRANCESCA CORDEIRO

PROFESSOR OF OPHTHALMOLOGY, IMPERIAL COLLEGE LONDON, UCL PROFESSOR GLAUCOMA & RETINAL NEURODEGENERATION, DIRECTOR ICORD CLINICAL RESEARCH FACILITY, CSO/CO-FOUNDER OF NOVAI LTD, LONDON, UK

What is your proudest professional achievement?
Successfully translating the DARC project from basic science to Phase II clinical trials.

MALVINA EYDELMAN

DIRECTOR AT THE OFFICE OF HEALTH TECHNOLOGY, OPHTHALMIC, ANESTHESIA, RESPIRATORY, ENT, & DENTAL DEVICES, OFFICE OF PRODUCT EVALUATION AND QUALITY, FOOD AND DRUG ADMINISTRATION, MARYLAND, USA

What is your proudest professional achievement?

Within the FDA, my greatest achievement is building an amazing diverse team of nearly 150 staff, where everyone feels that they belong and their differences are valued, respected and celebrated.

Outside of ophthalmology, what makes you happy?

Traveling, reading, hiking, biking, dancing, growing flowers, and painting. Whether flying in a hot air balloon over a desert, sailing past the Rock of Gibraltar, taking a long walk on a beach or painting quietly at home, it is wonderful especially when I am joined by my family and friends.

What piece of advice would you have given yourself at the start of 2020, if you knew the pandemic was going to hit?

I would have taken a long vacation with my family so we could store up happy memories – and a sleep reserve!

MARGUERITE MCDONALD

ADJUNCT CLINICAL PROFESSOR OF OPHTHALMOLOGY AT TULANE UNIVERSITY SCHOOL OF MEDICINE, AND CLINICAL PROFESSOR OF OPHTHALMOLOGY AT NEW YORK UNIVERSITY, NEW YORK, USA

What is your proudest professional achievement?

There are two. After years of research, I performed the world's first laser vision correction procedure on a sighted eye. Also, as a medical student, I developed a simple test to distinguish retinoblastoma from Coats disease, saving many babies from unnecessary enucleation.

MARIA CIRONE SCOTT

CHIEF MEDICAL OFFICER AND FOUNDING PARTNER OF VISION INNOVATION PARTNERS, MEDICAL DIRECTOR AND FOUNDING PARTNER OF CHESAPEAKE EYE CARE AND LASER CENTER AND CHESAPEAKE EYE SURGERY CENTER, SALISBURY, MARYLAND, USA

What is your proudest professional achievement?

I'm fortunate to have found my passion in ophthalmology. Bringing state-of-the-art cataract and refractive surgery to Annapolis has brought me great fulfillment.

MARIAN MACSAI

CHIEF MEDICAL OFFICER AT OYSTER POINT PHARMA INC., ILLINOIS, USA

What is your proudest professional achievement?

My proudest achievement has been contributing to the field through service to my patients, eye banking, research, and teaching the next generation of residents and colleagues. Now, by working in the pharmaceutical industry, I plan to have an even larger impact on patient care by providing new treatments for diseases of the ocular surface.

MARIE-JOSÉ TASSIGNON

PAST CHIEF AND CHAIR OF THE DEPARTMENT OF OPHTHALMOLOGY AT THE ANTWERP UNIVERSITY HOSPITAL, ANTWERP, BELGIUM

Why is it important to celebrate women this way?

I am not necessarily in favor of exclusively highlighting women in the field of medicine or more specifically, ophthalmology. However, if I can convince women to recognize, believe, and develop their talents in different fields of our profession, this would be a great achievement.

MARIYA MOOSAJEE

PROFESSOR OF MOLECULAR OPHTHALMOLOGY AT UNIVERSITY COLLEGE LONDON INSTITUTE OF OPHTHALMOLOGY; GROUP LEADER OF OCULAR GENOMICS AND THERAPEUTICS AT THE FRANCIS CRICK INSTITUTE; AND CONSULTANT OPHTHALMOLOGIST AT MOORFIELDS EYE HOSPITAL AND GREAT ORMOND STREET HOSPITAL FOR CHILDREN, LONDON, UK

What is your proudest professional achievement?

I was appointed Professor of Molecular Ophthalmology at University College London (UCL) last year. This was not something I ever considered a possibility as a trainee ophthalmologist. I love research – always have done – it excites and energizes me, and I pursued this as an escape from routine clinical service provision. It was only when I was awarded my Clinician-Scientist fellowship from the Wellcome Trust in late 2016, together with the prestigious Wellcome Beit Prize, that I realized I could tread the path to becoming a professor one day.

I love the fact that so many people have said that I break the stereotype, I am proud of all I have achieved and hope that I can be a role model for others who dare to dream of all possibilities.

MARJAN FARID

PROFESSOR OF OPHTHALMOLOGY AND DIRECTOR OF CORNEA, CATARACT, AND REFRACTIVE SURGERY AT THE GAVIN HERBERT EYE INSTITUTE, UC-IRVINE, CALIFORNIA, USA

What is your proudest professional achievement?

Thankfully I have had many proud moments caring for my patients, but my proudest have always been in teaching corneal surgery. When I am able to effectively pass on my skills and knowledge to another surgeon, who will then be able to provide care for so many, I am the proudest.

MARLENE R. MOSTER

PROFESSOR OF OPHTHALMOLOGY AT THE THOMAS JEFFERSON SCHOOL OF MEDICINE, USA, AND ATTENDING SURGEON AT WILLS EYE HOSPITAL, PHILADELPHIA, PENNSYLVANIA, USA

What is your proudest professional achievement?

Receiving the "Outstanding Educator Award" from the American Glaucoma Society; an honor given to one person each year in the field of glaucoma.

Outside of ophthalmology, what makes you happy?

I love to bake! I bring a fresh loaf to the operating room each time I go. I enjoy making people smile and say "yum!"

MARTINE J. JAGER

PROFESSOR OF OPHTHALMOLOGY AT LEIDEN UNIVERSITY MEDICAL CENTER, LEIDEN UNIVERSITY, THE NETHERLANDS

What is your proudest professional achievement?

Being named the first non-American President of ARVO. I was given the opportunity to place people on committees and decided to go for proper member representation. That meant identifying fine women and international members and convincing them to become candidates for committees. Looking back, the statistics show that from 2007 on, the committees really changed in composition. Now, it is considered completely normal to have mixed committees.

MARY ELIZABETH HARTNETT

DISTINGUISHED PROFESSOR IN OPHTHALMOLOGY AND VISUAL SCIENCES; CALVIN S. AND JENEAL N. HATCH PRESIDENTIAL ENDOWED CHAIR IN OPHTHALMOLOGY AND VISUAL SCIENCES, DIRECTOR OF PEDIATRIC RETINA, VITREORETINAL MEDICAL AND SURGICAL SERVICE; AND PRINCIPAL INVESTIGATOR RETINAL ANGIOGENESIS LABORATORY, UNIVERSITY OF UTAH, JOHN A. MORAN EYE CENTER, SALT LAKE CITY, UTAH, USA

"It's wonderful to celebrate some of the many women in science and ophthalmology."

MIRIAM KOLKO

PROFESSOR IN TRANSLATIONAL EYE RESEARCH, CHIEF PHYSICIAN, GLAUCOMA SPECIALIST, AND PRESIDENT OF THE DANISH GLAUCOMA SOCIETY; HEAD OF EYE TRANSLATIONAL RESEARCH UNIT (EYETRU); HEAD OF PERSONAL MEDICINE RESEARCH CLUSTER AT THE DEPARTMENT OF OPHTHALMOLOGY, COPENHAGEN UNIVERSITY HOSPITAL, RIGSHOSPITALET-GLOSTRUP AND DEPARTMENT OF DRUG DESIGN AND PHARMACOLOGY, UNIVERSITY OF COPENHAGEN, DENMARK

Outside of ophthalmology, what makes you happy?

Being with my kids, my husband, and the rest of my family, as well as friends.

NAMRATA SHARMA

DR RAJENDRA PRASAD CENTRE OPHTHALMIC SCIENCES, ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI, INDIA

What is your proudest professional achievement?

Becoming general secretary of All India Ophthalmological Society and regional secretary of the Asia Pacific Academy of Ophthalmology.

NEDA SHAMIE

PARTNER OF THE MALONEY-SHAMIE VISION INSTITUTE, USA, AND CLINICAL PROFESSOR OF OPHTHALMOLOGY AT THE USC KECK SCHOOL OF MEDICINE, USA

According to her nomination:

"Neda Shamie is an outstanding cataract and cornea refractive surgeon, educator, and innovator, who is committed to teaching and leadership in ophthalmology."

NICOLE R. FRAM

FOUNDER, INSTITUTO ZALDIVAR, MENDOZA, ARGENTINA

Why is it important to celebrate women in the field this way?

During my training in medical school, I knew I wanted to be a surgeon, however, there were very few women in the surgical fields at the time. I was fortunate to do an ophthalmology rotation at Wills Eye Hospital where the heads of departments were women at the top of our field. I felt all inspired by this experience. I subsequently changed my career path to ophthalmology.

NEERU GUPTA

PROFESSOR OF OPHTHALMOLOGY AND VISION SCIENCES AND PROFESSOR OF LABORATORY MEDICINE AND PATHOBIOLOGY AT TEMERTY FACULTY OF MEDICINE; PROFESSOR OF CLINICAL PUBLIC HEALTH AT THE DALLA LANA SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF TORONTO; KEENAN RESEARCH CENTRE FOR BIOMEDICAL SCIENCE, LI KA SHING KNOWLEDGE INSTITUTE, ST. MICHAEL'S HOSPITAL, UNITY HEALTH TORONTO, CANADA

What is your proudest professional achievement?

As President of the International Council of Ophthalmology, and the first woman appointed to this role, it is a privilege to be in a position to advance eye health at a global level and to promote collaborations and knowledge sharing among colleagues around the world.

NIHAL SHAKANKIRY

PROFESSOR OF PEDIATRIC OPHTHALMOLOGY AT THE UNIVERSITY OF ALEXANDRIA, EGYPT

What is your proudest professional achievement?

The construction of the pediatric ophthalmology unit in the ophthalmology department of Alexandria University in 2000. Being a pediatric cataract surgeon, I am proud to operate on more than 8,000 cases of pediatric cataracts for charities, without financial support, while teaching younger generations of ophthalmologists the skills of pediatric cataract surgery. Also, I have been previously named one of the top 10 most successful women in Egypt by the Egyptian president.

Why is it important that we celebrate women in the field this way?

Celebrating women in ophthalmology may encourage other women to achieve their goals and be eminent in the field, providing the best care to patients, and spreading their knowledge to younger generations.

Outside of ophthalmology, what makes you happy?

Giving rather than taking; helping people and making them happy.

NOEMI LOIS

CLINICAL PROFESSOR OF OPHTHALMOLOGY AT QUEENS UNIVERSITY AND AN HONORARY CONSULTANT OPHTHALMOLOGIST AND VITREORETINAL SURGEON AT THE BELFAST HEALTH AND SOCIAL CARE TRUST, BELFAST, NORTHERN IRELAND, UK

What can be done to make the field m ore diverse?

We should ensure that, from the very beginning, all children have access to high-quality free education so that they can fulfil their full potential. If everybody has the same opportunity, diversity would be the norm – as it should be. If this does not happen, it is unlikely that there would be diversity in our field or in any other.

P DEE STEPHENSON

CEO OF STEPHENSON EYE ASSOCIATES, USA, AND PRESIDENT OF THE AMERICAN BOARD OF OPHTHALMOLOGY

Her nominator commented:

"With a long ophthalmology career, Dee Stephenson has had a strong influence on education worldwide in 2020."

PREETI SHAH

OPHTHALMOLOGIST, VOLUNTEER FOR SEE INTERNATIONAL, MUMBAI, INDIA

"Preeti Shah is one of SEE's most inspiring and dedicated volunteer ophthalmologists. During her 17 years volunteering with SEE, Shah has participated in over 100 surgical missions, restoring sight to over 6,000 individuals in need. She has committed her entire life to humanitarian eyecare, traveling to countries like Peru, Brazil, Mongolia, China, Fiji, and Lebanon, as well as all over India, to give patients in underserved communities the precious gift of sight. While traveling for these programs, she attends to patients' pre- and postoperative care and performs surgeries that include cataract removal, pterygium removal, glaucoma, ptosis, and pediatric blindness blindness."

PREEYA K. GUPTA

ASSOCIATE PROFESSOR OF OPHTHALMOLOGY, CORNEA, CATARACT, AND REFRACTIVE SURGERY AT DUKE UNIVERSITY EYE CENTER, DURHAM, NORTH CAROLINA, USA

Outside of ophthalmology, what makes you happy?

I love doing new things that have nothing to do with work. In the past year or two, I rekindled my love for tennis and golf, and even started taking piano and singing lessons. Remembering to nurture our spirit and developing skills outside of work is just as important as furthering our career.

PURNIMA PATEL

ASSOCIATE PROFESSOR OF OPHTHALMOLOGY AT EMORY UNIVERSITY, USA

As her nomination said:
"Purnima is a well-respected national leader in organized ophthalmology. She has completed the AAO's leadership development program, as well as being past-chair of the AAO's Young Ophthalmology Committee and the current chair of the ONE Network Committee (AAO's online education platform). She is also on the Board of Women in Ophthalmology organization currently serving as Treasurer."

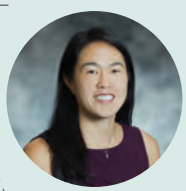
RANYA HABASH

ASSISTANT PROFESSOR OF CLINICAL OPHTHALMOLOGY AND MEDICAL DIRECTOR OF TECHNOLOGY INNOVATION AT THE BASCOM PALMER EYE INSTITUTE; FDA DIGITAL HEALTH NETWORK OF EXPERTS AND CHIEF MEDICAL OFFICER, EVERBRIDGE, MICROSOFT AI FOR HEALTH, MIAMI, FLORIDA, USA

What is your proudest professional achievement?
Creating my telemedicine company, which sparked my work in digital health technology and gave me the skills to lead our colleagues and other institutions when the pandemic hit. My experience navigated the implementation of digital health initiatives into real-world clinical use on an international scale.

S. GRACE PRAKALAPAKORN

ASSOCIATE PROFESSOR OF OPHTHALMOLOGY AND PEDIATRICS AT DUKE UNIVERSITY; AFFILIATE FACULTY AT THE DUKE GLOBAL HEALTH INSTITUTE; DIRECTOR OF INTERNATIONAL OUTREACH AT DUKE UNIVERSITY EYE CENTER, DURHAM, NORTH CAROLINA, USA



What can be done to make the field more diverse?
We should strive to expose all medical students to our field. I didn't discover the field of ophthalmology until late in medical school, and I believe that if all medical students were exposed to our specialty early on, we would be able to encourage more diversity into the field.

SARAH COUPLAND

SENIOR CONSULTANT HISTOPATHOLOGIST AT THE LIVERPOOL UNIVERSITY FOUNDATION HOSPITAL TRUSTS, AND MOLECULAR PATHOLOGY LEAD AT THE NHS NORTH WEST GENOMIC LABORATORY HUB, LIVERPOOL, UK

Why is it important to celebrate women in the field this way?
Women have been often overlooked in the recognition of various medical and scientific achievements. There are numerous examples of this, over centuries and even today in all countries – Lise Meitner, Elizabeth Blackwell, James Barry born Margaret Bulkeley, Yoshioka Yayoi, Rosalind Franklin, and Jocelyn Bell Burnell, to name but a few. Hence, by creating a list of women who have contributed significantly to ophthalmology, we are providing a record for now, as well as for future generations, and may enable other women to obtain the recognition they deserve.

SAYOKO "SY" E. MOROI

WILLIAM H. HAVENER, MD ENDOWED PROFESSOR, AND CHAIR AT THE HAVENER EYE INSTITUTE, DEPARTMENT OF OPHTHALMOLOGY AND VISUAL SCIENCES AT THE OHIO STATE MEDICAL CENTER, COLUMBUS, OHIO, USA

What is your proudest professional achievement?

I am completing training to become a certified facilitator on implicit bias. One of my core values is on "clinical social justice;" it peaked with my experience caring for patients who experienced the water crisis in Flint, Michigan. Now, with the ripple effects of the COVID-19 pandemic with respect to violence and brutality against Black and Asian people, I am compelled to take this action to become a certified implicit bias instructor.

SHERI ROWEN

DIRECTOR OF THE MERCY MEDICAL CENTER FOR EYE AND COSMETIC SURGERY; ASSISTANT CLINICAL PROFESSOR OF OPHTHALMOLOGY AT THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE; AND CLINICAL INSTRUCTOR AT JOHNS HOPKINS HOSPITAL, USA

She is described by her nominator as "a pioneer in cataract surgery, a mentor for all surgeons, and a role model for women ophthalmologists everywhere."

SONIA H. YOO

PROFESSOR, GREENTREE HICKMAN CHAIR, AND ASSOCIATE MEDICAL DIRECTOR AT BASCOM PALMER EYE INSTITUTE, FLORIDA, USA

What is your proudest achievement?

Training dozens of residents and fellows, who have gone on to become outstanding ophthalmologists and make significant contributions to our field.

SOOSAN JACOB

DIRECTOR AND CHIEF AT DR. AGARWAL'S REFRACTIVE AND CORNEA FOUNDATION, SENIOR CONSULTANT OF CATARACT AND GLAUCOMA SERVICES AT DR. AGARWAL'S GROUP OF EYE HOSPITALS, CHENNAI, INDIA

Outside of ophthalmology, what makes you happy?

Without a doubt, my family! They make my world happy and complete.

SEANG-MEI SAW

SERI PROFESSOR OF OPHTHALMOLOGY RESEARCH AT DUKE-NUS MEDICAL SCHOOL, USA AND SINGAPORE EYE RESEARCH INSTITUTE, SINGAPORE

What is your proudest professional achievement?

My research on the prevention of high myopia and associated visual complications in the population. Millions will benefit from a lower prevalence as the burden of high-myopia related visual impairment will be reduced worldwide.

SOBHA SIVAPRASAD

PROFESSOR AND CONSULTANT AT MOORFIELDS EYE HOSPITAL AND UCL, LONDON, UK

What is your proudest professional achievement?

Obtaining the UKRI GCRF ORNATE India grant to increase research capacity and capability in India and the UK for diabetic retinopathy.

STEPHANIE WATSON

HEAD OF THE CORNEAL RESEARCH GROUP AT THE UNIVERSITY OF SYDNEY, FACULTY OF MEDICINE AND HEALTH; HEAD OF THE CORNEA UNIT AT SYDNEY EYE HOSPITAL; AND CHAIR OF THE OPHTHALMIC RESEARCH INSTITUTE OF AUSTRALIA, SYDNEY, AUSTRALIA

What can be done to make the field more diverse?

Action is needed. Without it, unconscious bias will continue to inhibit.

TAMARA R. FOUNTAIN

PRESIDENT OF THE AMERICAN ACADEMY OF OPHTHALMOLOGY; AND PROFESSOR AT RUSH UNIVERSITY MEDICAL CENTER, CHICAGO, ILLINOIS, USA

Why is it important to celebrate women in the field this way?
Women have made great gains in being represented in medicine, but we are still outnumbered three-to-one by men in ophthalmology. We have not traditionally been recognized or acknowledged in the same way men have.

TARA MOORE

PROFESSOR OF PERSONALISED MEDICINE AT ULSTER UNIVERSITY, AND CHIEF OF RESEARCH AND INNOVATION AT AVELLINO USA, BELFAST, NORTHERN IRELAND, UK

What is your proudest professional achievement?
The legacy of research talent my team at Ulster University have produced over the last decade in the area of ophthalmology and genetics. One of the most rewarding aspects of my role as a researcher, teacher, and innovator toggling academia and industry is to watch the next generation of researchers and influencers really thrive in their ability.

USHA CHAKRAVARTHY

PROFESSOR OF OPHTHALMOLOGY AND VISION SCIENCE, AND CONSULTANT IN OPHTHALMOLOGY AT BELFAST HEALTH AND SOCIAL CARE TRUST, BELFAST, NORTHERN IRELAND, UK

What is your proudest professional achievement?
Being awarded the honorary fellowship of the Royal College of Ophthalmologists.

ZAIBA MALIK

MEDICAL DIRECTOR AT MEDPACE; OPHTHALMOLOGIST/CEO AT EYEMD; AND CLINICAL ASSISTANT PROFESSOR AT WRIGHT STATE UNIVERSITY, BOONSHOFT SCHOOL OF MEDICINE, DAYTON, OHIO, USA

What is your proudest professional achievement?
Establishing a portfolio career that allows me to continue to learn and be challenged daily, combining my various passions and interests to create a fulfilling career that is outside the box – but on my own terms.

Why is it important to celebrate women in the field this way?
Women are making contributions to the field of ophthalmology and bringing new ideas and innovations to the global arena. It's important to recognize achievements beyond traditional academic scholarship. Amplifying women's efforts empowers more women – and men – to envision broader possibilities and create their own legacies.

ZAINA AL-MOHTASEB

ASSOCIATE RESIDENCY PROGRAM DIRECTOR AND ASSOCIATE PROFESSOR OF OPHTHALMOLOGY AT THE BAYLOR COLLEGE OF MEDICINE, HOUSTON, TEXAS, USA

Her nominator said:
"Al-Mohtaseb is productive clinically and surgically, winning the BCM Early Career Faculty Award for Excellence in Patient Care in 2018."

ZAREEN KHAIR

COUNTRY PROGRAM MANAGER FOR BANGLADESH AT THE FRED HOLLOWS FOUNDATION, BANGLADESH

Outside of ophthalmology, what makes you happy?
As I am basically an anthropologist, I like to travel to unique places all over the world and observe different cultures, societal norms, and interact with people from all walks of life. Every time I travel, I am able to come up with new insights and ideas, plans and strategies.

Profession

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No Woman Left Behind

Four ways to empower women in eye health

By Sumrana Yasmin

Sightsavers' Global Trachoma Advisor Dr Agatha Aboe checks a child's eyes during a trachoma screening in Zimbabwe. © *JJArts Photography / Sightsavers*

A female eye health worker conducts an eye screening in a school in Sierra Leone © *Thomas Triebel / Sightsavers*

Eye health is blighted by gender inequality – not only are women more likely to be affected by sight-related conditions, but they are also less likely to receive access to eye health services. And yet, women are still hugely underrepresented in eye health leadership and decision making, making up less than 30 percent of senior and executive management roles. This needs to change.

The problem

Of the 1.1 billion blind people in the world, 55 percent are women and girls. Women also have less access to eye health services due to various socio-economic and cultural challenges. This gender and eye health disparity is found globally, in the contexts of all treatable eye conditions. These challenges have been further aggravated by the COVID-19 pandemic, which has had a disproportionately negative impact on women and girls. For example, primary health care and local services were widely disrupted – health services that are most easily accessible for women.

The solution

Women need to be part of the conversation and play a role in making decisions that affect their health and well-being. We know that women and girls are powerful forces for change when given the opportunity. So, here's four ways eye health organizations can challenge gender bias and discrimination, promote women's empowerment and encourage more women to be leaders in eye health:

1. Start with data

Data is one of the ways we can make arguments for change; it gives us clear evidence to back up the ideas we put on the table. However, there is still a huge gap in evidence and knowledge with regards to gender equity. We know that many national health and education systems in low- and middle-income countries (LMICs) do not disaggregate data. And, even if they do, it does not often get analyzed and turned into actions. We must be able to understand what is working and what is not, track progress, and adapt as needed.

Gender-disaggregated data also helps us understand how eye health service usage and behaviors differ between women and men, and investigate what barriers people might be facing in varying contexts – from rural Pakistan to central Nairobi. Governments, national and international development partners, and the private sector must all invest more in identifying and filling the

Health worker Madhumita Das conducts an eye health awareness programme for local women on Sagar Island, in the Indian Sundarbans. © *Atul Loke / Sightsaver*

gaps in data and evidence – only then will we have first-hand knowledge of how to address challenges and leave no one behind.

2. Look at your policies and who is making them

A recent survey of International Agency for the Prevention of Blindness (IAPB) members found that only 44 percent of organizations have a public commitment to gender equity and a corporate policy in place to support this. Only 34 percent have a workplace policy on gender equity. In other words, women and gender are not being considered in decision making. A significant issue of the past year has been that women, girls, and those with disabilities have not been part of the conversation when putting policies in place to deal with the pandemic.

The problem is systemic; for example, women – and in particular ethnic-minority women – are under-represented in leadership positions in eye health. Eye health providers at the primary level are predominantly female, but leadership roles tend to be held by men. Globally, fewer than one in five chairs (17.8 percent) are women and only 34.5 percent are CEOs. Our voices, thoughts, and recommendations are missing. Action is needed to promote and support the progression of women to obtain eye health leadership positions and to have them sitting at the table when decisions are made.

However, having a seat at the table is not enough. We also need to make sure that we invest in women's empowerment by providing the right opportunities; supporting their professional development; and believing in their skills wholeheartedly so they can reach their full potential as eye health leaders. Every investment that empowers a woman sparks a ripple effect that influences not only her life, but the lives of everyone around her.

3. Encourage behaviour change

All of the above actions will be made easier if we can encourage behavior change around attitudes to women and the stigma that exists in many contexts. It's all well and good putting in policies, but you need a belief in women's abilities for those policies to succeed and barriers to be broken. Being resilient and having a strong belief in the need to change are vital qualities for everyone willing to defy existing gender norms and help shape new ones.

Key to achieving this change is making sure that structured and evidenced behavior change is part of eye health programmes. We need to i) focus on specific behaviors and target audiences; ii) use context-specific messaging; iii) engage men and boys as allies; and iv) adopt innovative ways to reach communities. All these methods are vital in challenging gender bias at all levels.

It is important that men understand what gender equity really means and why it should matter to them. We need to make sure when we are designing interventions that we use the right strategies, messages, and language that will resonate with everyone.

4. Engage, empower and lift each other

When women are left behind it affects everyone. We need men to speak up against bias and dismantle the barriers that are holding talented women back. However, at the same time, successful and empowered women also need to play their role to support women, to help realize their goals, and to promote them as leaders. As women, we are in

Laboni Singha is a community eye health worker in the Sundarbans, India. She has been trained as part of Sightsavers work tackling preventable blindness in the region by visiting people at their homes to identify people with eye conditions. By training female members of a community to be health workers, they can not only provide eye services close to where people live. but can also have access to spaces which male health workers do not, such as homes. *© Atul Loke / Sightsavers*

this together and it's time we started lifting each other.

We are resourceful innovators and change-makers. In many LMICs, women are frontline health workers and educators. To eliminate the gender inequities at grass-root levels, now is the time that we should be joining hands, mentoring young women, celebrating each other, and changing the world.

Change needs to start from our own homes, workplaces, and communities. We need to make sure that our eye health programmes and interventions are gender-responsive; the female eye health workforce is well-supported and appropriately resourced, and women are part of policy discussions and decision making.

Gender equity is essential to sustainable development. And though the world is evolving, change is not going to happen on its own. To bring about a fairer and more sustainable future, we need to make sure everyone is included. And that means looking to see where people are being left behind and putting in the work, policies, and practices to right the wrongs. We still have a long way to go, but I believe that we can do it together.

Sumrana Yasmin is Global Technical Lead for Eye Health, URE at Sightsavers, and an IAPB Gender Equity Work Group Representative.

COMING UP

READ MORE AT THEOPHTHALMOLOGIST.COM AND IN THE NEXT ISSUE

The Next Big Thing?

A new treatment puts demodex blepharitis in the spotlight

By Edward Holland

Blepharitis is a chronic, progressive condition, characterized by inflammation, ocular irritation, and erythema, predicted to effect 20 million US adults. When left untreated, it can lead to lid and lash abnormalities, blurred vision, and corneal damage. Although blepharitis primarily affects the lid margin, it can affect the eyelid skin, base of the eyelashes, eyelash follicles, and the meibomian glands and gland orifices, with patients presenting with red, irritated, or itchy eyelids, and eyelash debris. Though current treatments have some efficacy, they are often cumbersome, uncomfortable, and do not target the root cause of the condition. Tarsus Pharmaceuticals, Inc., is hoping to change that with a novel therapeutic –TP-03 – based on the drug lotilaner. The new topical drop is designed to paralyze and eradicate Demodex mites through the inhibition of parasite-specific GABA-Cl channels. The company has completed four Phase 2 clinical trials and initial results are incredibly promising, suggesting this new treatment has the potential to be a first-line therapy for all clinicians.

Women and Dry Eye

Early testing • Early diagnosis • Better quality of life

Women are disproportionately affected by Dry Eye Disease – with almost double the frequency of men.[1] InflammaDry MMP-9 Test allows for the early diagnosis and treatment of this chronic, progressive condition thus significantly improving a woman's quality of life.

Risk factors of Dry Eye Disease in women include:

- Biological and ocular physiological differences
- Hormone therapy
- Higher prevalence of autoimmune disease
- Increased contact lens use and LASIK surgery[2]

InflammaDry is the only rapid test that detects elevated levels of MMP-9, a key inflammatory marker for dry eye. The test is easy to perform, is minimally invasive, produces results in minutes and requires no additional equipment.

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1 Schaumberg DA, et al. Patient reported differences in dry eye disease between men and women: Impact, management, and patient satisfaction. PLoS One 2013;8:e76121.
2 Matossian C, et al. Dry eye disease: consideration for women's health. Journal of Women's Health. 2019.

AD10241600EN01 (08/19)

The Missing Piece of the Dry Eye Puzzle

How InflammaDry® MMP-9 testing helps assess ocular surface inflammation

Victor L. Perez is an established clinician and science investigator in the field of ocular immunology and ocular surface diseases, and Director of the Foster Center for Ocular Immunology at Duke University School of Medicine in Durham, NC, USA.

Here, Perez presents a case study – the first of a series – exploring how InflammaDry® was a key factor in diagnosing a patient's dry eye disease.

InflammaDry® is the first commercially available, rapid result, in-office test that detects elevated levels of inflammatory marker MMP-9, helping identify ocular surface inflammation without bias. For patients suffering from dry eye, the answer it provides represents the missing piece of the puzzle.

Background

The patient is a 64-year-old accountant with no relevant medical or ocular history. He presented to the clinic having experienced fluctuating ocular irritation, discomfort, and redness for over two years, with worsening symptoms during winter. He has previously tried Meibomian gland dysfunction treatments and artificial tears without successful results. He has also been experiencing occasional morning joint pain, and stiffness in his hands.

Diagnosis

We performed a range of point-of-care tests, revealing the following:

- OSDI questionnaire score: 41 (moderate)
- Osmolarity OD: 302; OS: 297 (borderline)
- Corneal staining: null (see Figure 1)
- Schirmer's testing: positive
- Minor Meibomian gland dysfunction (see Figure 2)
- Slight decrease in tear break-up time

The challenge here lies with having a patient who complains of moderate dry eye symptoms, but presents absent to mild signs of both evaporative and aqueous deficient dry eye during the exam. We therefore performed MMP-9 testing to assess the presence of inflammation on the ocular surface; the result: positive bilaterally.

Intervention and treatment

The patient was treated with cyclosporine ophthalmic emulsion (Restasis®) 0.05%, along with preservative-free artificial tears, and lid hygiene measures.

The role of MMP-9

Regardless of the initiating etiology, the consequent pathophysiology involves a cascade of inflammation that causes ocular surface damage, leading to the signs and symptoms of dry eye that the patient experienced. One of the most validated ocular surface inflammation markers is MMP-9, which can be identified by the InflammaDry® device (Quidel Corporation, San Diego, CA, USA).

The role of MMP-9 testing in this scenario is crucial; it allows the physician to objectivize the presence of an inflammatory component and to select a specific treatment. MMP-9 positivity encourages the use of anti-inflammatory therapy to regulate the ocular surface inflammatory vicious circle that causes fluctuating dry eye symptoms and signs. The positive result in this case explains why the patient's previous treatment with only artificial tears had no effect on his symptoms.

MMP-9 testing also helps skeptical patients to comprehend why anti-inflammatory medication is beneficial, and enhance compliance with medications and follow-up visits.

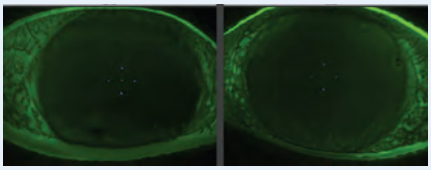


Figure 1. Corneal staining with fluorescein reveals absent epithelial lesions.

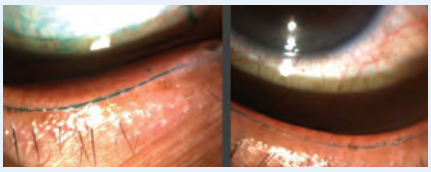


Figure 2. Mild Meibomian gland dysfunction in the right eye.

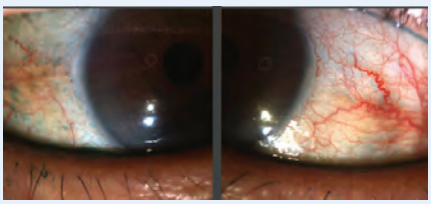


Figure 3. Mild–moderate conjunctival hyperemia.

Patient outcome

Five months after his initial visit, the patient was responding well to treatment. His OSDI questionnaire score dropped to 13, indicating dramatic symptomatic improvement. Schirmer's testing and tear break up time increased to normal/borderline values, and his other parameters were stable.

The Dream Weaver

Sitting Down With… Malvina Eydelman, Director of the Office of Health Technology 1: Ophthalmic, Anesthesia, Respiratory, ENT and Dental Devices, Office of Product Evaluation and Quality, Food and Drug Administration, Maryland, USA

From electrical engineering to ophthalmic devices at the FDA – please share your route!

First, for context, I should take you back a little earlier to my childhood. I attribute my passion for applying technological advances to solve medical problems to the influence of my father – a medical school professor of biotechnology. As a child, I spent many hours with him in his lab, where he inspired me with his vision of eradicating medical diseases by creatively applying engineering and scientific principles.

I completed an undergraduate degree in electrical engineering, with a biomedical engineering minor at the Cooper Union in New York, USA. My undergraduate internships at National Organization for Rare Disorders and NY Hospital for Joint Diseases confirmed that I needed to obtain more medical knowledge to maximize my potential impact. Harvard-MIT Health Sciences and Technology program, my next educational milestone, provided me a unique opportunity to continue my quest to combine engineering and scientific knowledge with medicine. There, I discovered my love for ophthalmology. My graduating thesis covered a new ophthalmic technology, which was awarded a US patent.

After completing my residency in ophthalmology, I was attracted to the FDA's Center for Devices and Radiological Health (CDRH), where I foresaw that serving as an ophthalmic medical officer would call on all of my skills in engineering and medicine and allow me to have a large impact on patients. As I advanced in management, my focus expanded to more areas of clinical practice and technology. Currently, as the Director of the Office of Health Technology 1: Ophthalmic, Anesthesia, Respiratory, ENT and Dental Devices, I am responsible for oversight of the total product lifecycle for the devices under my purview.

Which qualities make you good at this particular job?

I like to think of it as flying a helicopter with binoculars in my hand. While attention to detail is very important, it is imperative not to lose sight of the big picture: working to protect and promote the public health.

What's your greatest achievement?

One of my favorite quotes is by Walt Disney: "You can dream, create, design, and build the most wonderful idea in the world, but it requires people to make the dream a reality."

Within the FDA, my greatest achievement is building an amazing, diverse team of nearly 150 staff, where everyone feels that they belong and their differences are valued, respected, and celebrated.

Beyond the FDA's walls, my greatest impact has come from my collaborations with diverse stakeholders in the medical device ecosystem that created opportunities to integrate different perspectives, experiences, resources, and expertise.

What's the best part of your job – and what is the worst?

The worst part is having to deny marketing of medical devices that do not demonstrate adequate safety or efficacy after significant resource investment by the manufacturers. Finding a potential path forward for these manufacturers to market quality, safe, and effective devices is something to which I often devote my effort and experience.

What keeps you up at night?

Most of our employees have dedicated an incredible number of hours to the COVID-19 response, in addition to performing their existing responsibilities at the FDA. I fear that my team's commitment to public health might push them to put their own physical and mental health at risk. As a result, I attempt to manage individual workloads and implement team-building activities to improve work-life balance.

"My graduating thesis covered a new ophthalmic technology, which was awarded a US patent."

What excites you most about ophthalmology right now?

The data-rich and image-dependent specialty of ophthalmology has been a natural match for digital health innovations. As such, ophthalmology has been leading the development of novel medical devices that use artificial intelligence and machine learning – devices that are fundamentally transforming the delivery of healthcare.

The FDA's collaboration with diverse stakeholders is the key to achieving our goal of ensuring that patients and providers have timely and continued access to safe, effective, and high-quality medical products. To that end, I was delighted when the FDA joined the newly formed Collaborative Community on Ophthalmic Imaging (CCOI). In addition to the FDA, current members of CCOI include ophthalmic professional organizations from around the world, medical device companies, and patient advocacy groups. CCOI was formed to advance innovation of ophthalmic imaging with a focus on medical devices that use artificial intelligence.

I believe that generating worldwide consensus is essential for expediting responsible innovation of artificial intelligence devices based on ophthalmic imaging. CCOI is well positioned to do just that.

For the full version of this interview, go to top.txp.to/the/dream/weaver


Frank Bucci

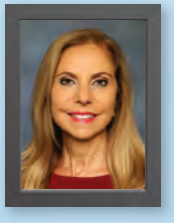

Eric Donnenfeld


John Hovanesian


Mitch Jackson


Richard Lindstrom


James Loden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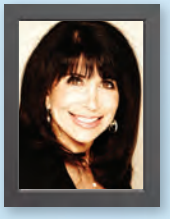
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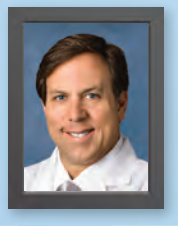
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IMPORTANT SAFETY INFORMATION

OMIDRIA must be added to irrigating solution prior to intraocular use.

OMIDRIA is contraindicated in patients with a known hypersensitivity to any of its ingredients.

Systemic exposure of phenylephrine may cause elevations in blood pressure.

Use OMIDRIA with caution in individuals who have previously exhibited sensitivities to acetylsalicylic acid, phenylacetic acid derivatives, and other nonsteroidal anti-inflammatory drugs (NSAIDs), or have a past medical history of asthma.

The most commonly reported adverse reactions at ≥2% are eye irritation, posterior capsule opacification, increased intraocular pressure, and anterior chamber inflammation.

Please see the Full Prescribing Information for OMIDRIA at www.omidria.com/prescribinginformation.

You are encouraged to report Suspected Adverse Reactions to the FDA.
Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

References: 1. Omeros survey data on file. **2.** OMIDRIA [package insert]. Seattle, WA: Omeros Corporation; 2017. **3.** Al-Hashimi S, Donaldson K, Davidson R, et al; for ASCRS Refractive Cataract Surgery Subcommittee. Medical and surgical management of the small pupil during cataract surgery. *J Cataract Refract Surg*. 2018;44:1032-1041.

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