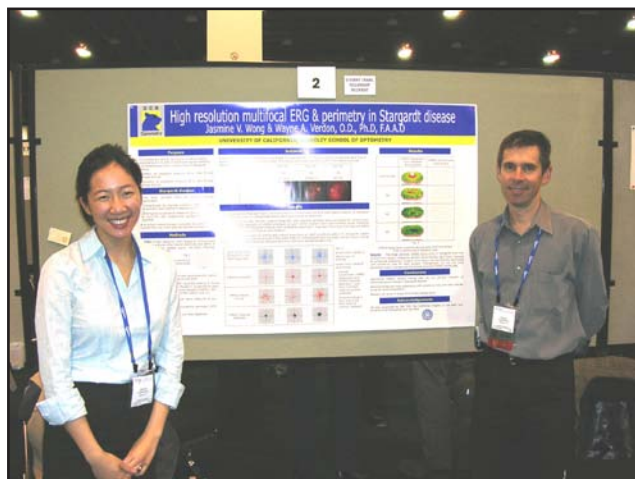


Berkeley Optometry In Perspective



Student Chapter of the American Academy of Optometry Vol.2 No.1 Winter 2006



(left) Jasmine Wong (III) and Dr. Verdon in front of their poster presentation at this year's Academy meeting. Jasmine was a recipient of the Student Travel Fellowship.
(right) Jenny Thatcher (II), Dr. Greer, and Kelly Kao (II), pose with Alcon's Optifree mascot.

Attending the Academy Meeting ■ A student's perspective on AAO's annual gathering

By Dot Nguyen (II)

Attending Academy 2005 and 2006 were unforgettable experiences that were hands-down the best experience of my optometric education thus far. It was a chance for me to get a glimpse of optometric topics that we haven't been taught yet and to see our professors "teaching" other ODs. My only regret was that I could only be in one place at one time, so I missed a lot of presentations that sounded really cool and interesting.

The highlight of Academy 2005 in San Diego, CA, was getting the chance to hear Mike May, a corneal transplant recipient and presenter at the Low Vision Symposium. In fact, Mr. May's stirring and frank discussion of his journey from totally blind to low vision inspired me not only to research possible face-recognition technology for the visually impaired but also to invite Mr. May to Berkeley to speak about

his life and the wayfinding technologies he's developed. His story really made for a great way to end our year of SAAO meetings.

The Academy is also a great way to make connections with students and faculty from other schools. We had two student-only socials, where we had the chance to meet and mingle with optometry students from across the country. This year in Denver, CO, at the Student Networking Luncheon, I got a lot of great advice on residencies from the residency program coordinators from SCCO and SUNY, and I was also able to have a long conversation with a former SUNY resident. This is a great way to learn more about the other residency programs away from Berkeley and what they're looking for, because all the program directors are there and people really want to tell you about their programs.

Saturday night every year is the Australia Party and an effort to

raise funds for Optometry Giving Sight, a not-for-profit organization that gives free eye care in undeveloped countries. It's our chance to loosen up with the docs. If you've never seen Drs. Corzine, Fong, Grisham, or Dister dance, you have to go to the Academy! That's all I'm going to say about that!

The California AAO graciously subsidized our student attendance by paying for hotel rooms for the students for the last few years. Due to their support, Berkeley had
see Academy, page 5

IN THIS ISSUE

NEI summer research.....pg 2

Dr. Whiteside revealed.....pg 3

Rotation round-up.....pg 6

Opening eyes about optometry research

■ An inside look at the NEI summer research program

by Jessica Neuville (II)

Every summer the National Eye Institute (NEI) provides grants to a select number of students to explore the research side of optometry. The NEI summer program gives students the opportunity to experience what research is really like and determine if it might be the right career path for them. The program includes a weekly seminar that focuses on different aspects of research such as study design, review committees, and ethical considerations. In addition to learning about research, students get to dive into specific aspects of vision and greatly expand their knowledge of those topics.

This past summer I was one of nine students from the class of 2009 to participant in the program. Each student was paired up with a professor, and together decided on a topic to research. There were a variety of topics selected ranging from myopia progression in chicks, to adaptive optics, to finding a mouse gene that causes degeneration in the eye. The broad range of available topics offered something for everyone. I was very interested in the diabetic retinopathy research in Dr. Adams' lab, so I was excited to join his lab to get the opportunity to learn more about the disease and new techniques to detect it.

In the United States, diabetic retinopathy is the leading cause of blindness among people of working age (25-74). Retinal complications of diabetes include hemorrhages, microaneurysms, macular edema, hard exudates and cotton wool-spots. The majority of diabetics will show signs of retinopathy by 10 to 15 years after being diagnosed. Unfortunately the treatment options presently available are limited. Thus, the best way to manage diabetic retinopathy is early detection and intervention.



Jessica Neuville (II) spent her summer doing research on adolescent with diabetes. Along the way, she mastered the use of the OCT.

Dr. Adams' lab has been conducting research on diabetes at UCBSO since 1978. Electroretinography (ERG) and optical coherence tomography (OCT) are used to detect retinal changes in the early stages of diabetic retinopathy. The project I became involved with focused on adolescents with diabetes. The question that I sought to answer was how retinal thickness differs in adolescents with diabetes compared to adolescents without diabetes. I worked with others members of the lab to gather data that might answer this question. Would we find that retinal thickness is greater in diabetics because of leakage from damaged blood vessels? Would it be thinner because of dehydration caused by hyperosmolarity, or is retinal thickness unreliable in detecting early changes in diabetic retinopathy?

To attempt to answer this question I used OCT to measure the retinal thickness of diabetics and normal controls. Optical coherence tomography is a non-invasive imaging technique. A beam of light is

flashed into the eye and reflected light is compared to reference light to determine the amount of interference. The amount of interference at each point along the scan corresponds to the thickness at that point. Subjects between the ages of 13 and 21 were recruited to participate. For our study we used 12 radial scans of the central 20 degrees of the retina to gather data for thousands of points within the area most commonly effected in diabetes. I was then able to generate three dimensional representations of each eye using the MATLab software program.

The project is still on-going as we continue to recruit more subjects to participate. Once all the data has been collected we will use the MATLab program to compare the average retinal thickness between diabetics and controls. We will also compute standard deviation to determine normal variation in retinal thickness. Moreover, we will be able to compare individual eyes to an normal retina to see if any certain

see NEI, page 5

Getting to Know ... Dr. Whiteside

▪ Dr. Whiteside's thoughts on teaching, residencies, and motorcycles

by Way Yu (II)

WY: Let's get the easy stuff out of the way. What's your position at UC Berkeley?

MW: I'm an assistant clinical professor.

WY: Does that mean you teach classes to first years and also in the clinic?

MW: It doesn't really define what you do, but right now I help teach the first year's lab course, and then I see you guys again in the third year second semester for the advanced procedures course. I also work with the third and fourth years for primary care and geriatric optometry.

WY: Do you have any particular favorite memories or funny stories of optometry school that you want to share with all of us?

MW: That's a hard one! I think every one will agree that the first year or two is hard because you can't exactly see how it all fits together. I remember my first patient...I was so nervous and thinking so hard! The first patient that I saw was a woman who I did a refraction on and I'm sure that it took me some ridiculous amount of time... like half an hour to get through the refraction. At the end I was like, "Guess what? You're going to have the same prescription as your last glasses!" Imagine having some student spin the dials in front of you for half an hour only to find out that there was no change. She was incredibly patient. Although it took a lot of energy, clinic was the best part of school. In the beginning it was really hard, but it definitely was the pay off for two years of hard work.



We caught up with Dr. Whiteside just as she was about to head home on her motorcycle.

WY: Let's talk about your residency. What did you do it in?

MW: I did it in primary care, which means it's whatever you make it. I

in Sacramento.

WY: Were you born in Davis?

MW: I'm a local girl. I was born and raised in Oakland. This was in the 70s and the schools weren't very good so when I was in 5th or 6th grade we moved up to Santa Rosa. I went to school there and finished up high school then went to school in Davis. Then came back down here. Graduated from Cal, and decided to do a residency.

WY: Is that how you wound up teaching?

MW: Yeah. I was originally going to be a high school biology teacher. When I was at Davis I had a very wise college advisor who said if I wanted to be a biology teacher I should intern. At the time I thought that it was pretty silly (since at 18 I thought that I had everything already figured out) so I signed up for it because I thought it would help me be more qualified when I applied for a credentialing program. It was

Dr. Meredith Whiteside, OD, FFAO Vital stats

Refractive Error: +0.75 DS

UCBSO Class of: 1997

Famous classmate: Mika Moy

Pets: One dog, Toby (a poodle mix)

Siblings: 2 older brothers

was able to pick whatever I felt that I needed more experience with. I went over to UCSF for one or two days a week and we would fit pediatric aphakes with contact lenses. The typical case was that a newborn with a congenital and the surgeons would take out the cataract and then we'd fit them with contacts as soon as we could after surgery. You'd have these little newborns who you'd have to get a huge soft contact lens on their eye! I also did low vision up

see Whiteside, page 4

Whiteside: motorcycle maven

continued from page 3

pretty funny because the class I had were total juvenile delinquents! They were all smoking cigarettes, throwing paper and everything was total chaos. I really tried to like it—in fact stuck with it for two quarters but it was a complete disaster.

WY: *Oh no!*

MW: Yeah, I know! So I went back to my advisor at Davis and said, “This is terrible. I don’t know what to do now.” I was having a career crisis and I remember her looking at my transcripts and saying, “Well, you have good grades. Why don’t you go to medical school?” I come from a non-medical family. We have engineers and computer science people and people who are also anti-medicine! I remember one of my grandparents who would say “If you go into a hospital, you’ll die!” So when my

advisor mentioned medicine, I didn’t really consider it because my view of medicine was so negative. My advisor then said, “How about dentistry?” My response was, “Does ANYONE like the drill?” That was beyond anything I would consider. What was funny was my advisor had just gotten her eyes examined that day. Her eyes were dilated, so she said “well, I went to this optometrist today and she does really interesting things. Why don’t you go talk to her?” So that’s how I ended up in optometry.

WY: *That’s such a fateful story! So then you shadowed to make sure you liked it?*

MW: Yes. And after I got into optometry school, I wanted to work in private practice but when I looked at the best optometrists around me, I noticed that the best docs had done a residency. So that’s why I did the

residency.

WY: *How did you get involved in home visits?*

MW: Part of the primary care residency was that you had to do one or two home visits. People would call clinic and ask for us to see patients that were unable to come to the clinic. One of my first home visit patients was very young, 44 year old woman who was terminally ill with metastatic cancer. She had previously worn contacts but as she grew ill, lost the dexterity to put them on or take them out. Although I didn’t realize it before the exam, the patient was a keratoconic (a condition which causes the cornea to develop irregular astigmatism)—which is why she had worn contact lenses for so long and why she didn’t have any up-to-date glasses. Al, our optician in the Eye Wear Center,

made some glasses and it ended up making a big difference in the patient’s life. Unfortunately, the patient passed away around a month after we got her glasses but her sister wrote a nice letter that said that thanks to her glasses, her sister was able to see until the end. Although people don’t think of glasses as necessarily “glamorous”— we optometrists can really have a positive impact on our patients’ lives.

WY: *Is that one of the cases that made you want to keep doing home visits?*

MW: Yes. That and our population is growing very old and there is a huge need for eye care. The home and nursing care population has been largely overlooked for eye care.

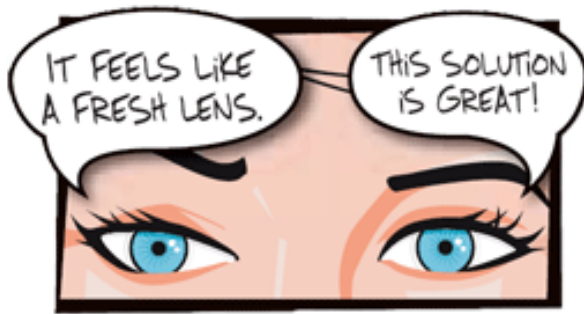
WY: *And do you bring students with you on your home visits?*

MW: Yes. Typically fourth year students. We travel together in a van.

WY: *How do you like teaching?*

MW: It’s great. I guess I like the combination of both young (students) and old (patients). A lot of students are initially hesitant about working with people who are very ill or have cognitive impairment, but I hope they see that they can make a dif-

see MMW, page 8



#1 doctor recommended solution¹

OPTI-FREE RepleniSH MPDS provides a high level of antimicrobial activity against bacteria and fungi.² And in clinical studies, OPTI-FREE RepleniSH demonstrated minimal corneal staining, helping to maintain corneal barrier integrity.^{3,4}



It’s that good.™

References:

1. Survey of 300 optometrists. Harris Interactive. June 2006.
2. Rosenthal RA, Bell WM, Schlech BA. Evaluation of a new contact lens disinfection formulation for disinfectant efficacy. Alcon Laboratories, Inc. Poster presented at: ARVO 2005.
3. Garofalo R, Dassanayake N, Carey C, et al. Corneal staining and subjective symptoms with multipurpose solutions as a function of time. *Eye Contact Lens.* 2005;31:166-167.
4. Andrasko GJ, Ryen KA, Garofalo RJ, Lemp JM. Compatability of silicone hydrogel lenses with multi-purpose solutions. Alcon Laboratories, Inc. Poster presented at: ARVO 2006.

SAAO's Fall meeting a big success

Students packed Room 489 for SAAO's Fall 2006 meeting to listen to UCBSO's residents speak about their experiences.



For more information on residency programs open to optometry students, please visit <http://www.orms.org>.

Special thanks to the four guest speakers (Ryan Zwelling, Annie Chin, Puja Goel, and Stephanie Ku) for taking the time to speak with SAAO.

NEI: diabetic retinopathy research

continued from page 2

areas of a particular retina fall outside the norm and could represent areas of increased probability of developing retinopathy. OCT has the potential to be a very useful tool for managing diabetic retinopathy, so stay tuned!

The NEI summer program was a great learning experience. I particularly enjoyed my project because, in addition to data processing, I was able to work with patients and practice some techniques that I will be using in clinic. It also gave me an idea of what is involved in designing and executing a successful study. I highly recommend applying for the NEI summer research program to students who are interested in research or just looking for something eye-related to do on their summer vacation. For more information check out the NEI summer research section of the Berkeley optometry website.

Academy: learning outside of school

continued from page 1

the highest student attendance of all the optometry schools in 2005. Because of that, Amy Lee (IV) won free registration to Academy 2006. Hopefully we are also among the top three schools after they tally up the 2006 numbers so another lucky opto can go next year.

The greatest part about attending the Academy as a student is that it reminds us of the big picture and gives us a glimpse of what's to come in the OD community that we'll be part of. Sometimes, I get lost in the weeds of studying and bogged down by what's on the next exam. The Academy helped me remember that all this studying adds up to something. I can't wait to see what Academy 2007 in Tampa has to offer. And next year's Academy Meeting is October 24-27, so finals won't be a problem. See you there!

4th Year Rotation Round-up

■ Four 4th years take time out of their busy schedules to give us their thoughts on four different externships

Name: Kuniyoshi Kanai (IV)
Externship site: Kaiser Point West
Location: Sacramento area

1. Why did you choose this particular externship? I took a special rotation (Bascom Palmer) and among the few choices left for my last choice, location (being close to Bay area, being able to easily to move in and out) and the HMO setting made me pick up this place.

2. What type of patients did you typically see? Age 2 to age 100. Mostly primary care. No regular contact lens patients (only special fitting such as keratoconus, post-surgical. In these case, you work with your mentor, you don't fit by yourself.)

3. What was your daily schedule like? 8am to 6pm, Monday to Friday. You work with a different OD each day. On Saturdays, I occasionally attended seminars for Kaiser docs.

4. What did you like most about the externship? I got to work with 5 ODs in man-to-man setting. Feedback from doctors are more in detail and useful compared to school. I also observed surgeries by 5 MDs (strab, penetrating keratoplasty, oculoplastic, IOL, etc...)

5. What did you like least? Being given 20 to 40mins at most per patient, patient care is so problem-focused. Also, you have to use Kaiser's computer system, called "Health Connect". Not hard, but it takes a while to completely master.

6. What advice would you give to other students who are interested in this externship? Don't be discouraged by being not so fast at the beginning, that's totally fine. By the end, you'll be fast for sure, and also you will be a good clinical thinker (you will not be a clinician who does things "just because.")

Name: Marisa Chung (IV)
Externship site: VA Puget Sound, American Lake Division
Location: Tacoma, WA

1. Why did you choose this particular externship? Seattle, free room and board (I think this is the only rotation that covers both room and board), and recommendations from previous interns at this location.

2. What type of patients did you typically see? Veterans, who are usually male and over the age of 50. They are great to work with.

3. What was your daily schedule like? Mon-Fri 8-5 (or whenever you get your charts done). Each of us see between 7-10 patients a day. We see pre-ops, post-op cataract surgeries, glaucoma follow-ups, retinopathies, etc.

4. What did you like most about the externship? The people: the doctors and the front staff are all very nice here. It's a great environment where you can learn a lot, but not feel stressed about it.

5. What did you like least? Paper-

Name: Jocelyn Niimi (IV)
Externship site: Bascom Palmer
Location: Miami, FL

1. Why did you choose this particular externship? For the challenge.

2. What type of patients did you typically see? Lots of ocular disease from cornea, retina, glaucoma, lasik post-op, cataract post-op. Also, general optometry eye exams.

3. What was your daily schedule like? It varies every day. You're in a different clinic every day so it's difficult to answer this question.

4. What did you like most about

work, such as typing IOP histories into the computer, which can take hours if you have patients w/ IOP histories going back into the 1990s. But it's a necessary evil and since we're starting computerized IOP flowsheets this year, next year's interns won't have to type in as much as we did.

6. What advice would you give to other students who are interested in this externship? It's a great opportunity to be here. I'm doing a double rotation here and I'm really glad I did that. Come prepared to learn and ask questions. Also, explore the Northwest as much as you can while you're here.

7. Any other information you'd like to share? There's a gym on the VA premises, but there's also a YMCA near where we live that we interns all decided to join. It's a great place to work out and I recommend joining the Northwest Taekwondo team at the YMCA if you get a chance ;).

the externship? The amount of ocular disease you see, plus going to the lectures that ophthalmology residents attend.

5. What did you like least? Fast pace, overwhelming amount of knowledge in those ophthalmologists' brain (this wasn't what I liked the least, but it definitely was something to strive for), and seeing things that you will never be able to treat yourself.

6. What advice would you give to other students who are interested in this externship? Do it even if you might have only the slightest interest! And bring a car!

FIND THE OPTO WORDS!

S R I T T A O P R B N I E S A O S
 U
 G Q A D L E S O P H O R I A C O S
 P
 S L I T O A E P G L N I O E C R T
 Y
 A L A T R A F P T I L U F R C A E
 Y
 G C I U I A M P G O C I A E C S R
 N
 O L U T C A R S R A E B L A C V E
 T
 U L G R L O M P G F T A S P A E O
 S
 S L S T H A M P F F E C Q S L O P
 L

optometry
 cal bears
 glaucoma
 vegf
 slit lamp
 gonioscopy
 stereopsis
 prism
 esophoria
 dry eye

Rotation Round-up continued

Name: Sanjay Chaudhari (IV)
 Externship site: Omni Eye Services
 Location: New Jersey

1. Why did you choose this particular externship? I chose this externship because of location (only 40 mins from NYC) and exposure to ocular disease.

2. What type of patients did you typically see? You see ocular disease with all your patients (no contact lenses/refraction). You're exposed to some strabs, but not much. You'll get a lot of exposure to diabetic ret, ARMD, post-op cataracts, will also see more rare conditions like RP, melanomas, etc.

3. What was your daily schedule like? We start around 8 or 9 and get out around 4 or 5.....the actual day depended on which doc you were working with. For example, with the retinal specialist, you would do 10-14 DFEs. Workin with the OD's, you probably would see about 6-10 patients ranging from urgent cares to glaucoma work-ups and follow-

ups, to cataract post-ops. Working with the Glaucoma specialist here is not beneficial at all, he doesn't let interns do anything.

4. What did you like most about the externship? Best things about this rotation are exposure to ocular disease, the docs are really helpful, and being near NYC.

5. What did you like least? Worst thing about this rotation is having to drive to the different offices (can be an hour or more each way.)

6. What advice would you give to other students who are interested in this externship? I would say choose this rotation if you want a lot of ocular disease. You have to be willing to move far away and drive in unfamiliar areas. But its a great experience if you take advantage of it.

7. Any other information you'd like to share? If you choose this rotation, become cool with the residents because they make the schedules and can hook you up with a really good schedule each week.



#1 Doctor Recommended Forget Dry Eye.™

SYSTANE Lubricant Eye Drops and SYSTANE FREE Lubricant Eye Drops represent a revolution in dry eye care. SYSTANE is the proven to reduce both signs and symptoms of dry eye.¹

1. Christensen MT, Cohen S, Rinehart J, Akers F, Pemberton B, Bloomenstein M, Leshner M, Kaplan D, Meadows D, Meuse P, Hearn C, Stein JM. Clinical evaluation of an HP-Guar gellable lubricant eye drop for the relief of dryness of the eye. *Curr Eye Res.* 2004. Jan;28(1):55-62.

MMW: ying-yang professor

continued from page 3

ference in these patients' lives. I also try to tie in some of their classroom knowledge to patient care. Studies show us what to expect in terms of the causes of vision impairment in older populations. Things such as age related macular degeneration, diabetic retinopathy, glaucoma and cataracts are the most common causes. Because of the prevalence of these problems in older populations, it's important to keep up on the latest knowledge and treatments for these conditions. This is why I think that it's important to be a member of the Academy—attending the annual meeting allows you access to aspects of the latest care and research. To me, being the best optometrist you can be requires continual education—for life. While what we teach students is up to date now, in a year or two you'd be amazed by how things can change.

WY: Since you teach first years and then again the third and fourth years, do you have advice for us on what things we should be working on during the year in-between?

MW: While I think that it's critical to learn as much didactic (book and classroom) information as possible, it's important to explore the many aspects of optometry. There are so many aspects of practice, whether it's learning BV (binocular vision), pediatrics, ocular disease etc— so it's important to expose yourself to areas and people that you might not necessarily have exposure to at school. Attending meetings such as the Academy and ARVO are great experiences for students. While there are lots of reasons why not to attend— it might not be a good time of the year, you have midterms and finals, there's a lot of stress and there's a million reasons not to go— it's really important to go to. I think

that some of our best students are well rounded and try a lot of different things like attending meetings to get a different perspective on what they are learning in school.

WY: What do you do for fun on the weekends?

MW: I ride a motorcycle.

WY: Wow, do you really? Do you and Dr. Corzine have a motorcycle gang?

MW: Ha ha, no. I guess I really have this ying-yang thing going on. Because I drive a Volvo but also ride a motorcycle.

WY: Is it a Harley?



Dr. Whiteside on her trusty bike

MW: No, those are kind of expensive. This is my first motorcycle and it's like when you get your first car as a teenager and you make all your mistakes on it. I've had this one for two years. It's a Honda Rebel. I'm not a heavy duty rider; I more or less drive around here. But I do ride with one of our neighbors who is part of a motorcycle

group. Oh, and then two months ago I crashed it.

WY: A bad crash?

MW: No, not too bad. I was just really lucky. It was September or October and it was at night. I left something here (at school). It was a really nice night so I thought I'd just ride my bike. I was riding down by Strawberry Creek – below the Lawrence Hall of Science and a deer jumped in front of me. I had the choice of veering to the left into oncoming traffic – a bad option. I could also turn right and hit the curb, or I could go straight and hope the deer gets out of the way... so I went straight. Unfortunately the deer didn't get out the way! I ended up hitting a two point buck and sliding the bike 10 feet. After I stopped, the deer got up and ran away but there was fur all over my bike. Other than my boot getting a

bit scraped on the side, I didn't get a scratch. I have no idea how I managed not to get banged up but I was pretty lucky.

WY: You must not have been going that fast then?

MW: Probably around 25 (mph).

WY: That's still fast enough to get hurt.

MW: Yeah. But I had proper protection on. My boots had leather and plastic to guard your feet and I was just really lucky that I wore them.

WY: So do you do the full on outfit with the leather jacket and black helmet?

MW: Yeah, the jacket but I have a white helmet.

WY: And what color is your bike?

MW: It's black.

WY: So if we see a female driving a black Honda Rebel with a white helmet, we'll know it's you.

MW: Yes, and there will be a dent on the mirror. But just a small one!

SAAO Board

Susan Kim: UCSBO Student Liaison
 Dot Nguyen, Grace Wong: Educational Co-Directors
 Premilla Banwait, Ehaab Zubi: Co-Secretary
 Jasmine Wong: Membership
 Lisa Craig: Treasurer
 Way Yu: In Perspective Editor
 Kuni Kanai: 4th Year Class Rep
 Liz Kang: 3rd year Class Rep
 Kelly Kao: 2nd Year Class Rep
 Ann-Chi Chen, Melody Zhargami: Co-1st Year Class Reps
 Marisa Chung; Past AAO Student Liaison
 Robert Dister: Faculty Liaison

In Perspective Contributors:
 Sanjay Chaudhari, Jessica Neuville,
 Jocelyn Niimi

Special thanks to Alcon for their generous support

