



**STATE BOARD OF OPTOMETRY**  
 2450 DEL PASO ROAD, SUITE 105, SACRAMENTO, CA 95834  
 P (916) 575-7170 F (916) 575-7292 www.optometry .ca.gov



Continuing Education Course  
 Approval Checklist

Title:

Provider Name:

- Completed Application
  - Open to all Optometrists?  Yes  No
  - Maintain Record Agreement?  Yes  No
- Correct Application Fee
- Detailed Course Summary
- Detailed Course Outline
- PowerPoint and/or other Presentation Materials
- Advertising (optional)
- CV for EACH Course Instructor
- License Verification for Each Course Instructor
  - Disciplinary History?  Yes  No



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## CONTINUING EDUCATION COURSE APPROVAL APPLICATION

**\$50 Mandatory Fee**

Pursuant to California Code of Regulations (CCR) § 1536, the Board will approve continuing education (CE) courses after receiving the applicable fee, the requested information below and it has been determined that the course meets criteria specified in CCR § 1536(g).

In addition to the information requested below, please attach a copy of the course schedule, a detailed course outline and presentation materials (e.g., PowerPoint presentation). Applications must be submitted 45 days prior to the course presentation date.

**Please type or print clearly.**

<b>Course Title</b> RETINA UPDATE 2017	<b>Course Presentation Date</b> <div style="text-align: center; font-family: monospace; font-size: 1.2em;">                     0 3 / 2 8 / 2 0 1 7                 </div>
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### Course Provider Contact Information

<b>Provider Name</b> SHI HWA <small>(First)</small>	CHANG <small>(Last)</small>	WILLIAM <small>(Middle)</small>
<b>Provider Mailing Address</b> Street <u>200 E GRANGER AVE</u> City <u>MODESTO</u> State <u>CA</u> Zip <u>95350</u>		
<b>Provider Email Address</b> <u>VALLEYRETINA@YAHOO.COM</u>		
Will the proposed course be open to all California licensed optometrists?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Do you agree to maintain and furnish to the Board and/or attending licensee such records of course content and attendance as the Board requires, for a period of at least three years from the date of course presentation?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

### Course Instructor Information

Please provide the information below and attach the curriculum vitae for each instructor or lecturer involved in the course. If there are more instructors in the course, please provide the requested information on a separate sheet of paper.

<b>Instructor Name</b> SHI HWA <small>(First)</small>	CHANG <small>(Last)</small>	WILLIAM <small>(Middle)</small>
<b>License Number</b> <u>A48531</u>	<b>License Type</b> <u>M.D.</u>	
<b>Phone Number</b> ( <u>209</u> ) <u>526-9500</u>	<b>Email Address</b> <u>VALLEYRETINA@YAHOO.CC</u>	

**I declare under penalty of perjury under the laws of the State of California that all the information submitted on this form and on any accompanying attachments submitted is true and correct.**

*Shi Hwa*  
 \_\_\_\_\_  
 Signature of Course Provider

2/14/2017  
 \_\_\_\_\_  
 Date



## **RETINA UPDATE 2017**

To Whom It May Concern:

### **Retina Update 2017 Summary:**

I will be presenting a lecture to optometrists about new therapies for retinal diseases available, genetic advances for the retina, new testing available to identify retinal diseases. I will also cover a new laser treatment available to remove floaters and small gauge vitrectomy. I will have a question and answer session following the presentation.

Thank you,  
Dr. Shi Hwa William Chang.  
Valley Retina P.C.

# **RETINA UPDATE 2017**

## **OUTLINE TOPICS:**

1. New Therapies for Retinal Diseases in 2017.
2. Genetic Advances for Retina
3. Small Gauge Vitrectomy
4. New Testing for Retinal Diseases
5. Floaters Removal
6. 3-D Digital vitrectomy
7. Question and Answer Session.

## RETINA and IMAGING UPDATES

Shihwa William Chang, M.D.  
Valley Retina  
Modesto, CA

## DISCLOSURE

- No financial conflict of interest for medication or methods used in this conference.
- There will be mentioning of off-label use of medication.
- 1.5 CE credits awarded by CA state Board of Optometry.

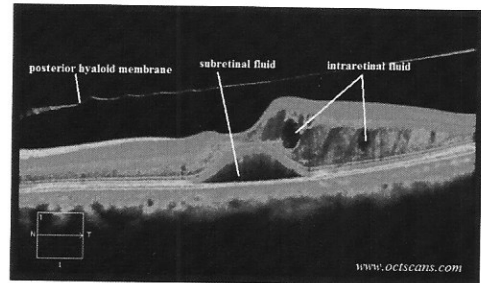
## Treatment of Diabetic Retinopathy

- Diabetic Macular Edema (DME)
- Proliferative Diabetic Retinopathy (PDR)
  - [DRCR.net](http://DRCR.net)
  - Protocol T
  - Protocol S



## Protocol T

- Comparing Eylea, Avastin and Lucentis in treating DME, 2 year results
- Subgroup analysis for patients vision better or worse than 20/50

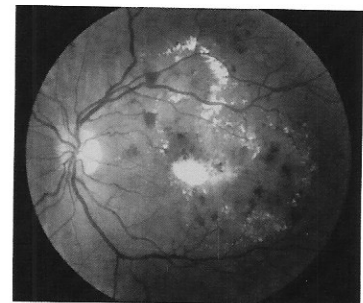


## Protocol T

- 2 year results
  1. Eylea, Avastin, Lucentis - all work well with visual improvement
  2. Only require half the amount of injection at 2nd year
  3. Eylea is superior in visual improvement when treating a patient with initial vision less than 20/50 and a thick macula CST >400um
  4. No serious adverse events or cardiovascular complication compared with the controls
  5. Low rate of endophthalmitis (0.02%, 1 in 5,000)

## Protocol S

- Is anti-VEGF (Ranibizumab) better than using PRP (pan-retinal photocoagulation) laser to treat PDR?
- 2 year results



## Treatment for Dry AMD

- Bromanidine
- Sirolimus
- Lampalizumab
- Zimura
- Eculizumab
- Emixustat
- Stem cell therapy

## Innovative drug-delivery to treat AMD

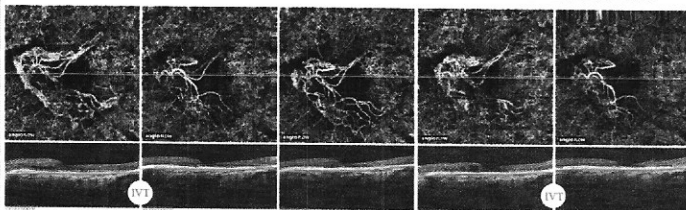
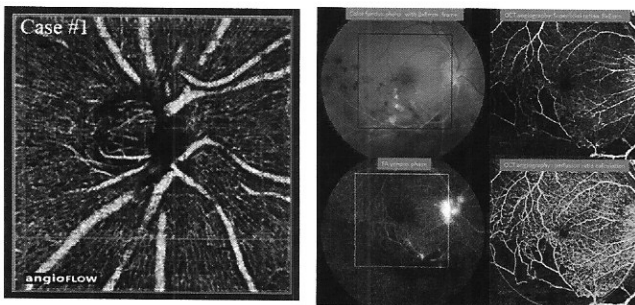
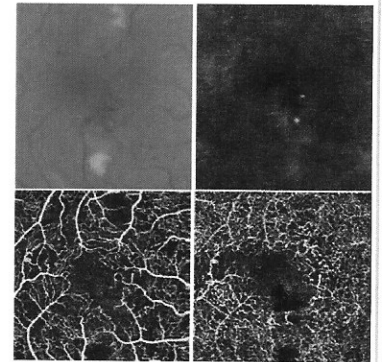
- Biodegradable polymers
- Reservoir implants, holds 4-9 months of drug then refillable in the office
- Encapsulated cell technology

## OCT Angiography (OCTA)

- Registering the blood flow
  - High speed acquisition for B-scan
  - Reconstructed en face images
  - No injection of dyes
  - No leakage information, only perfusion
  - Costs \$120,000 yet currently not reimbursable

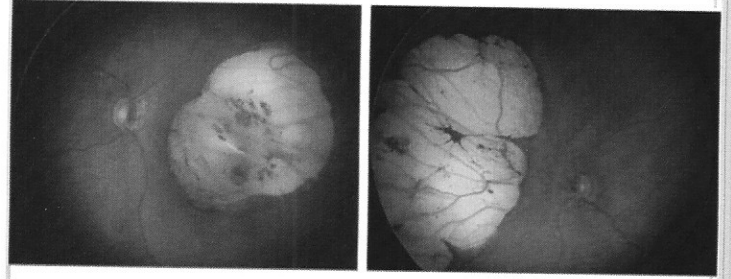
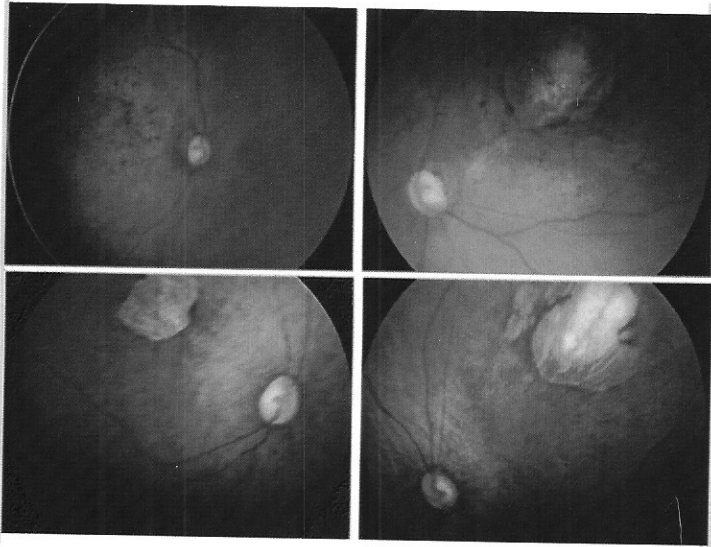
## OCTA

- Wet AMD
- Dry AMD
- Diabetic Retinopathy
- Sickle cell retinopathy



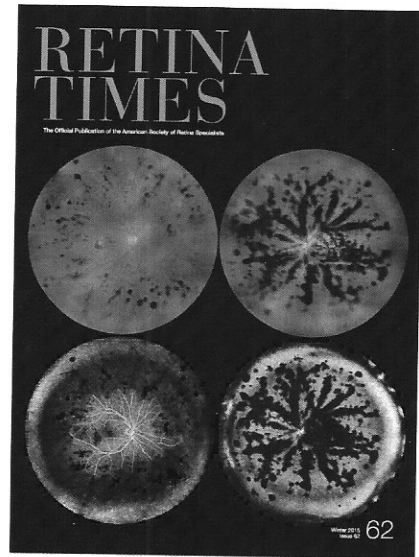
## Widefield fundus photography

- Diabetic retinopathy
- Venous occlusive disease
- Retinal detachment
- Automatic screening and detection



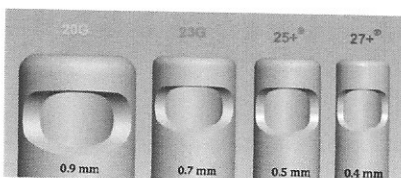
### Hemorrhagic Occlusive Retinal Vasculitis (HORV)

- Post-operative, after cataract surgery
- Severe loss of vision, developed 2-14 days post-op
- Pictures of CRVO and CRAO
- Presumed Vancomycin related Type-3 hypersensitivity
- Significant implication for simultaneous or sequential cataract surgery and using intracameral Vancomycin prophylaxis



### 27-G Vitrectomy

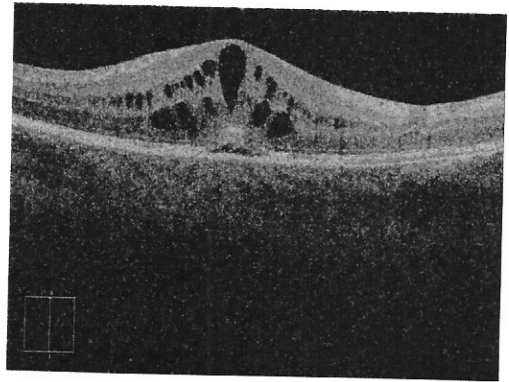
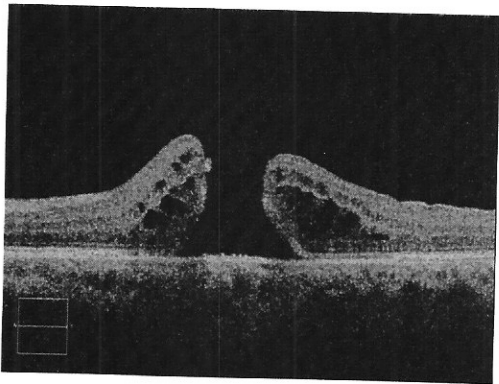
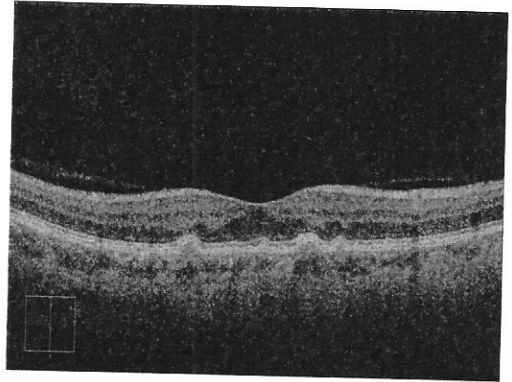
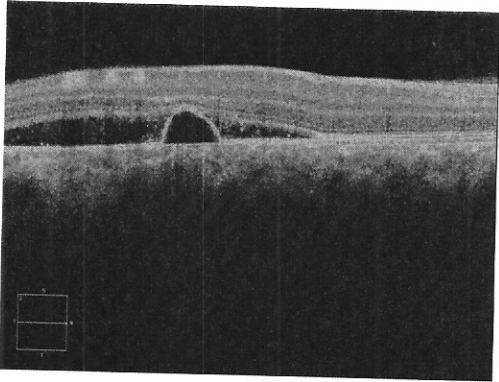
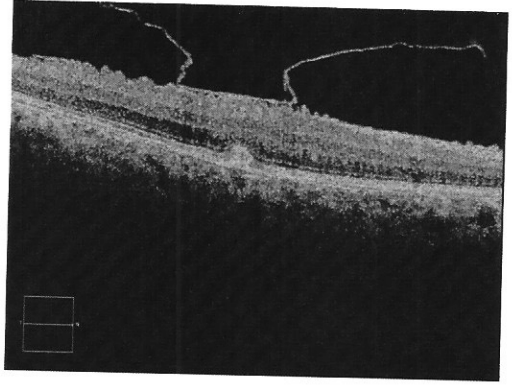
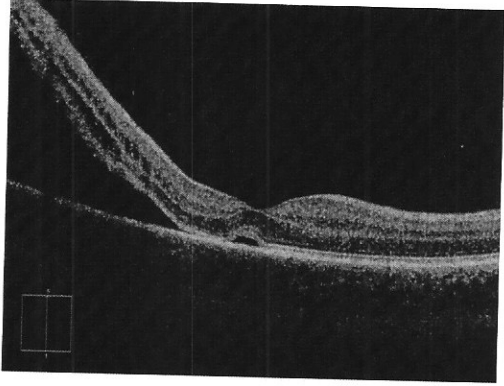
- Smaller incision
- Sutureless
- Ports are closer to the retina
- High speed cutter 7,500 cpm
- Lower retinal complication



### Using sterols to restore lens transparency in congenital cataract

- Science 2015:350:674-677
- Makley et al. uses sterols to bind and stabilize  $\alpha$ -crystallins, makes it soluble and prevent its accumulations. In experiment with mice and human infants, it reverses the binding of crystallin and can potentially apply to the treatment of amyloid accumulation in Alzheimer's disease.





Shi-Hwa William Chang, M.D.

Updated April 8, 2014,

Work History

Valley Retina, PC , 11/06 to present

200 E Granger Ave

Modesto, CA 95350

Ph: 209-526-9500

Fax: 209-526-9555

I founded the retina practice after relocating to Modesto. I Currently also have satellite offices in Stockton and Merced

Retina Specialists of the Finger Lakes, PC 7/99 to 10/06

2300 Buffalo Rd Ste 700 B, Rochester, NY 14624

I was the owner and president of the practice.

The practice was sold before I relocated to California

Retinal Specialist 7/95 - 7/99

Reed Eye Associates 500 Kreag Road Pittsford, NY 14534

I was employed by an ophthalmology group practice.

Education

Retina surgery fellowship 7/94 - 6/95

University of British Columbia, Vancouver, Canada

Director: William H. Ross MD, Ph: 604-874-0404

Suite 400, 805 West Broadway at Willow, Vancouver BC, Canada

Ophthalmology residency 7/91 - 6/94 (PGY- 2,3,4)

University of California, San Francisco

Emergency Room physician 7/90 - 6/91 (Private practice)

Bellwood General Hospital, Bellflower, CA

Internal Medicine residency 6/89 - 6/90 (PGY - 1)

Medical College of Ohio, Toledo

Master of Science, Neuroscience program. 9/88 - 5/89 (Graduate Study) University of Michigan, Ann Arbor

Ophthalmology residency 7/86 - 6/88 (Foreign Training)

National Taiwan University Hospital, Taipei, Taiwan

Medicine Instructor 7/84 - 5/86 (Mandatory Military Service)

Army Medical Service School ,Taipei, Taiwan

Bachelor of Science/Medical School 7 year Program 9/77 - 6/84

National Taiwan University, Taipei, Taiwan

Licensure

California since August 1990

Certification	American Board of Ophthalmology 10/96 to 12/31/2016
Affiliation	Active Attending, Memorial Medical Center, Modesto CA Active Attending, Doctors' Medical Center, Modesto CA Active Surgeon, Trinity Surgery Center, Stockton, CA  Member, Stanislaus County Medical Society Member, California Medical Association  Fellow, American Academy of Ophthalmology Member, American Society of Retina Specialists
Publications	The Generation Mechanism of the C-Wave of the Electroretinogram, Thesis, Neuroscience Program, University of Michigan 1989  Comparative Study of Stereoacutities between Monocular and Binocular Refractical Amblyopes. Transaction of Ophthalmological Society of the Republic of China: 28: 297-300, 1989  Cataract of Pseudohypoparathyroidism: A Case Report. Transaction of Ophthalmological Society of the Republic of China: 27: 112-116, 1988  Transscleral Choroidal Biopsy in the Diagnosis of Choroidal Lymphoma. Gunduz and Chang. Survey of Ophthalmology 43:6:551-555, 1999
Presentations	Inadvertent Globe Perforation After Retrobulbar or Peribulbar Anesthesia - Survey of Vitreoretinal Surgeons in Vancouver, BC. S.W. Chang, A.L. Maberley, K.L. Finley. Fellowship Paper, University of British Columbia, 1995  Management of flashes and floaters. Rochester Ophthalmological Conference. May 17, 2002  Common Retina Surgical Conditions for Primary Care. Morning continuing education series at Doctor's Med Center, Modesto 4/11/07
Hobbies	Fishing, Tennis, Cycling, Swimming and Travel