



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

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 and topical outline of the subject matter. Applications must be submitted 45 days prior to the course presentation date.

Please type or print clearly.

Course Title <u>STAR WARS: GO ROGUE</u> <u>Eye Rebel: Waging War on Orbital</u> <u>Eye Disease</u>	Course Presentation Date <u>7:45 AM - 11:35 AM</u> <div style="text-align: center; font-family: monospace; font-size: 1.2em;"> 1 2 / 1 8 / 2 0 1 6 </div>
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Course Provider Contact Information

Provider Name <u>Coastal Vision Medical Group</u>		
<u>Gina</u> <small>(First)</small>	<u>Valdemar</u> <small>(Last)</small>	 <small>(Middle)</small>
Provider Mailing Address		
Street <u>7413 S. Main St. #100</u> City <u>Orange</u> State <u>CA</u> Zip <u>92660</u>		
Provider Email Address <u>gina.valdemar@coastal-vision.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.

Instructor Name		
<u>Madhu</u> <small>(First)</small>	<u>Agarwal</u> <small>(Last)</small>	<u>R.</u> <small>(Middle)</small>
License Number <u>73978</u>	License Type <u>MD</u>	
Phone Number <u>(714) 746 9679</u>	Email Address _____	

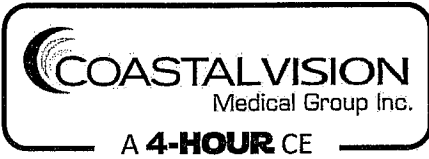
I declare under penalty of perjury under the laws of the State of California that all the information submitted on this form and on any accompanying attachments submitted is true and correct.

[Signature]
 Signature of Course Provider

11-1-16
 Date



IN A TIME OF CELEBRATION, A GROUP OF UNLIKELY HEROES BAND TOGETHER ON A MISSION TO LEARN MORE ABOUT OPTOMETRY, THEIR CHOSEN WEAPON.



WHEN:
 Sunday, December 18th
 Registration opens at 6:45am
 7:45am-11:35am (4-hour CE
 followed by the movie)

WHERE:
 AMC Downtown Disney
 Downtown Disney District
 1565 Disneyland Drive
 Anaheim, CA 92802

Hyperdrive of Toys

Bring any new, unwrapped toy, to benefit Toys for Tots, and receive a movie ticket for you and a guest for Rogue One: A Star Wars Story. Movie to follow CE. Additional tickets available for purchase.



Downtown Disney Parking: First 2 hours are free; additional 2 hours free with AMC validation (Disneyland parking lots may be available for all day parking prices; parking is responsibility of attendee)

For registration information please visit our Affiliate Portal:
coastalvisionmedical.com/site/ces.htm

AGENDA

6:45 am	Check-in (pastries and coffee provided)	
7:45 am	Welcome - Opening Remarks	
7:50 am	Lisa Garbutt, MD	Symfony and Symfony Toric: The Best of Both Galaxies
8:15 am	Jennifer Wu, MD	Corneal Crosslinking "The Lightsaber for Corneal Ectasia"
8:40 am	Raj Rathod, MD	Retina One: A Story of Systemic Discovery
9:05 am	Dan Tran, MD	Combining Laser Corneal Refractive Surgery and Intraocular Lens Technology - The Force Is Strong
9:30 am	Break	
9:55 am	Vincent Hau, MD	Retina Jeopardy...From a Galaxy, Far, Far Away
10:20 am	Betsy Nguyen, MD	MIGS Episode III: Cypass Micro-Stent, A New Hope
10:45 am	Madhu Agarwal, MD	Eye Rebel: Waging War on Orbital Disease
11:10 am	Lisa Garbutt, MD Betsy Nguyen, MD Jennifer Wu, MD	Rogue Diagnosis: Case Presentations
11:35 am	Conclusion	
11:45 am	Movie: <i>Rogue One: A Star Wars Story</i>	

*CE and movie ticket registration is based on first-come, first-served basis. Seating is limited.

November 5, 2016

State Board of Optometry
2450 Del Paso Road, Ste. 105
Sacramento, CA 95834

RE: Late submission of CE course approval; Star Wars: Go Rogue Symposium-Symfony and Symfony Toric; The Best of Both Galaxies, Corneal Crosslinking "The Lightsaber for Corneal Ectasia", Retina One: A Story of Systemic Discovery, Combining Laser Refractive Surgery and Intraocular Lens Technology-The force is strong, Retina Jeopardy, MIGS Episode III: Cypass Micro-Stent, A New Hope, Eye Rebel: Waging War on Orbital Disease, Rogue Diagnosis: Case Presentations.


Dear Practice and Education committee,

I am writing this letter in regards to late submission for the multi-course symposium titled "Star Wars; Go Rogue" scheduled for presentation on 12/18/16. We are just shy of the 45 day submission request, and wanted to include a letter for late submission with our CE approval application.

We continue to work diligently to get all required items to the board needed for CE approval in a timely manner. Due to multiple speakers at the upcoming CE, we had difficulty obtaining all the lectures to meet the submission requirement timeline and would appreciate your consideration of our continuing education approval request.

Please feel free to reach out to us with any other questions. We look forward to continued relations with the State Board of Optometry and the practice and education committee.

Sincerely,


Gina Valdemar
Affiliate Relations and Education Director
Coastal Vision Medical Group
ginavaldemar@coastal-vision.com

Star Wars: Go Rogue 4 hour CE

Course Title: Eye Rebel: Waging War on Orbital Disease

Course Presentation date: 12/18/2016











Speaker: Madhu Agarwal, MD

Target Audience: This lecture is intended for optometrist seeking continuing education

Course Description:

This lecture seeks to provide optometrists with information regarding optic nerve edema. Clinical evaluation, diagnosis and treatment will be reviewed. Multiple cases will be discussed including intracranial, orbital and ocular etiologies.

CE Credit: .50 CE Units

- 1  **Eye Rebel: Waging War on Orbital Disease**
Madhu R. Agarwal, M.D.
- 2  **Case of PB**
 - 28 y/o female
 - c/o headaches
 - Blurred vision
 - Occasional double vision.
- 3  **PB**
 - Va 20/30 OU
 - Color 10/15 OU
 - Brightness decreased OS
 - Trace RAPD OS
 - HVF defects
- 4  **PB**
 - Fundus
- 5  **PB**
 - Normal MRI
 - Opening Pressure
 - ◆ 560mm +
 - Diamox initiated at 250 mg po qid
- 6  **PB**
 - 2 months into therapy
 - Papilledema is resolved
 -
- 7  **PB at 2 months**
- 8  **PB at 3 months**
 - Patient complains of headaches worsening.
 - Vision and fields are stable.
 -
 - What do you do?
- 9  **What is it?**
 - Defined by Modified Dandy Criteria
 - ◆ Signs and symptoms of Increased Intracranial pressure (ICP)
 - ◆ Headache
 - ◆ Transient obscuration of vision (TOV)
 - ◆ Tinnitus
 - ◆ Disc edema
- 10  **Modified Dandy Criteria**
 - ◆ Normal Neuroimaging
 - ◆ Nonfocal neurologic exam
 - ◆ Elevated ICP on lumbar puncture > 250mm water

- ◆ Normal CSF (except low protein)
- ◆ No other cause of increased intracranial pressure.

11  **Epidemiology**

- Common in countries with increased incidence of obesity.
- Durcan et al calculated the incidence in Iowa:
 - ◆ 0.9/100,000 general population
 - ◆ 3.5/100,000 females 20-44
 - ◆ 13/100,000 females 10% > IBW
 - ◆ 20/100,000 females 20% > IBW

12  **Epidemiology**

- Age of onset varies greatly ranging from infancy to adulthood.
 - ◆ Children with IIH have worse visual outcomes
- Peak Incidence is in the 3rd decade.
- There is an 8:1 female to male ratio.
- Obesity is present in 90% of all females with IIH.

13  **Etiology**

- 1: ■ IIH – unknown
 - ◆ Associated with Antibiotics
 - ◆ PCN
 - ◆ Tetracyclines
 - ◆ Nalidixic acid
 - ◆ Fluoroquinolone
- 2: ■
 - ◆ OCPs
 - ◆ Steroids
 - ◆ Growth hormone
 - ◆ NSAIDS
 - ◆ Lithium
 - ◆ Dilantin
 - ◆ Vitamin A

14  **Etiology**

- Also associated with
 - ◆ Addison's disease
 - ◆ Dysthyroidism
 - ◆ Pregnancy
 - ◆ Pickwickian syndrome
 - ◆ Sleep apnea syndrome

15  **Etiology**

- Most common association:
Obesity

16  **Etiology**

- Secondary Intracranial Hypertension

- ◆ Venous outflow obstruction
 - ◆ From Cerebral venous sinus obstruction
 - ◆ To cor pulmonale
- ◆ Any venous outflow obstruction between right heart and brain may lead to increased ICP.
- ◆ Hypercoagulable states should be ruled out
 - ◆ Lupus, Antiphospholipid antibody
 - ◆ Sarcoid

17  **History**

- Trauma
- Medication usage
 - ◆ Prescription
 - ◆ Over the counter
 - ◆ Contraceptive pills
- Comorbid illness
 - ◆ Lupus
 - ◆ Sarcoid

18  **Symptoms**

- Headache (90% of all cases)
 - ◆ Severe
 - ◆ Pulsatile
 - ◆ Increasing intensity
 - ◆ Duration > 1 hr
 - ◆ Worse when recumbent

19  **Symptoms**

- Visual Manifestations
 - ◆ Occur in 50-70% of all cases
 - ◆ Identical to those of increased ICP from any cause
 - ◆ TOVs lasting seconds
 - ◆ Vision loss or distortion (macular edema)
 - ◆ Horizontal diplopia (CN VI palsy)
 - ◆ Vertical diplopia (CN IV palsy)

20  **Symptoms**

- Pulsatile tinnitus
- Nausea and vomiting
- Paresthesias
- Arthralgias
- Ataxia
- Hemiparesis
- Facial Spasm

21  **Signs**

- Papilledema (90% of all cases)

22  **Papilledema**

- 1¹ ■ Mechanical signs
 - ◆ Blurred margins
 - ◆ Effaced cup
 - ◆ Elevation of nerve head
 - ◆ NFL edema
 - ◆ Retinal or choroidal folds

- 2² ■ Vascular signs
 - ◆ Venous congestion
 - ◆ Hemorrhages
 - ◆ Cotton-wool spots
 - ◆ Hyperemia
 - ◆ Hard Exudates

23  **Papilledema**

- 1¹ ■
-
-
-
-
-
- Papilledema = High ICP
- 2² ■ Will the Papilledema please stand up?

24  **Signs**

- Decreased Visual Acuity
 - ◆ Macular edema or hemorrhage
 - ◆
-







25  **Signs**

- Optic nerve triad
 - ◆ Color Vision,
 - ◆ Brightness sense
 - ◆ APD
- Variably affected

26  **Signs**

- Visual Fields
- Enlarged blind spot
 - ◆ most common
- Arcuate
- Altitudinal
- Nasal steps also seen

27  **Work-up**

- MRI scan of Brain with Gadolinium
 - ◆ Must rule out:
 - ◆ Intracranial lesions
 - ◆ Venous sinus thrombosis
- 28  **Secondary IH**
- 29  **Lumbar Puncture**
- Obtain an opening pressure!
 - ◆ > 200mm is abnormal
 - ◆ > 250mm meets Dandy criteria
 - Send all fluid for analysis
 - ◆ Cell count
 - ◆ Glucose
 - ◆ Protein
 - ◆ VDRL
 - ◆ Bacterial stains and culture
- 30  **Treatment**
- Secondary Intracranial Hypertension
 - ◆ Treat underlying cause
 - ◆ Venous sinus thrombosis
 - ◆ SVC syndrome
 - ◆ Jugular thrombosis
 - Idiopathic Intracranial Hypertension
- 31  **Management**
- Who should follow?
 - Either Neurologist and Ophthalmologist
 - Or
 - Neuro-Ophthalmologist
 - Why?
 - Serial Visual Field assessment is Key
 - Headache treatment may be beyond scope of ophthalmology practice
- 32  **Management (acute)**
- Diamox (Acetazolamide)
 - ◆ Carbonic anhydrase inhibitor
 - ◆ Reduces production of CSF
 - ◆ 2 grams daily max dose
 - ◆ Build dose slowly to avoid side effects
- 33  **Management (acute)**
- Alternatives
 - Neptazine (metazolamide)
 - ◆ Slightly less effective
 - ◆ Fewer side effects
 - ◆ Cannot be used if Acetazolamide allergic
 - Lasix

- Topamax

34  **Management (acute)**

- Increase outflow
 - ◆ Optic nerve Sheath fenestration
 - ◆ VP or LP shunting
- Reserved for severe presentations (no time for meds to act)
- Refractory cases
- Medication intolerance or allergy

35  **Management (long-term)**

- Weight loss
 - ◆ 8.9 lbs is average reduction needed to control disease.
 - ◆ Patient must maintain weight loss
- With weight loss most patients can be medication free within 2 years of presentation.

36 

37 

54 year-old Latina female with ten years of worsening proptosis OS. Reports some vision loss recently and binocular horizontal diplopia.

PMH: DM, depression, colon polyps

PSH: cholecystectomy 20 yrs ago

Meds: Lexapro, Buspar, Seroquel, metformin, glyburide

38 

- BCVA: 20/20, 20/40
-
- 2+APD OS
-
- Brightness 100, 50
-
- Ta 13, 20
-
- CP 8/8 OU
-
-

39 

- NI EOM OD, 50% OS
-
- 30 PD XT
-
- Hertel: 110: 16, 19
-
- SLE: nl OU
-

40 

41 

42 

43 

44 

45 

46 

47 

2001

2004

48 

Treatment Options

- Observation
- Radiation
 - ◆ Confocal
- Excision

49 

50 

58 yo female complains of painless, gradual decrease in visual acuity OS x 2 years.

PMH: None, excellent health

PSH: None

All: NKDA

Meds: None

Va: sc 20/20
20/20

51 

EOM: full OU

Pupils: brisk, no APD

Tp: 14 OD, 16 OS

52 

53 

54 

Optic Disc Drusen

-
- Calcified hyaline-like material within the
-
- optic nerve anterior to the lamina cribrosa

55  **Prevalence**

- 1% of patients found to have drusen on clinical exam
-
- 2% found to have drusen on pathology
-
- Bilateral in 75% of cases

56  **Etiology**

- Unknown etiology
-
- Some cases - autosomal dominant with incomplete penetrance
-
- Associated with retinitis pigmentosa and angioid streaks.

57  **Symptoms**

-
- Usually no problems with visual acuity
-
- Transient visual obscurations

58  **Signs**

-
- Irregular glistening yellowish globules
- Anomalous disc vessels
- Elevated disc
- Peripapillary hemorrhages
- NFL defects
- Autofluorescence

59  **Histopathology**

- Hyaline-like material
- Positive stain for
 - ◆ Amino acids
 - ◆ Mucopolysaccharides
 - ◆ Calcium
 - ◆ Hemosiderin
- Negative for amyloid

60  **Visual Fields**

-
- Enlarged blind spot
-
- Altitudinal defects
-
- Irregular constriction of peripheral field

61  **Imaging**

-
-
- Bscan: Calcium and shadowing
-
- CT: Drusen highlighted by calcium

Eye Rebel: Waging War on Orbital Disease

Madhu R. Agarwal, M.D.

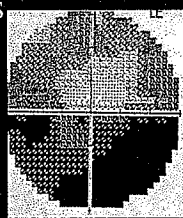
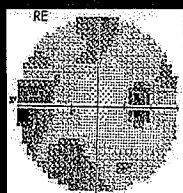
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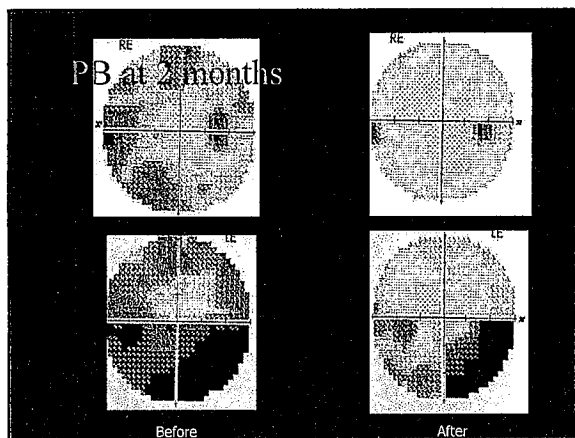
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 - ◇ Sleep apnea syndrome

Etiology

- Most common association:

Obesity

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Symptoms

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Signs

- Papilledema (90% of all cases)



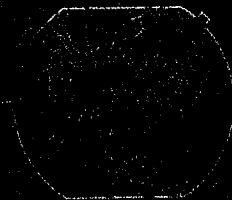
Papilledema

- Mechanical signs
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 - ◇ Effaced cup
 - ◇ Elevation of nerve head
 - ◇ NFL edema
 - ◇ Retinal or choroidal folds
- Vascular signs
 - ◇ Venous congestion
 - ◇ Hemorrhages
 - ◇ Cotton-wool spots
 - ◇ Hyperemia
 - ◇ Hard Exudates

NFL = Nerve Fiber Layer

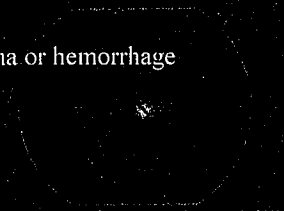
Papilledema

- Will the Papilledema please stand up?
- Papilledema = High ICP



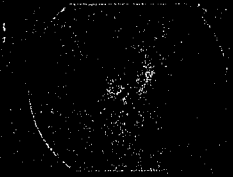
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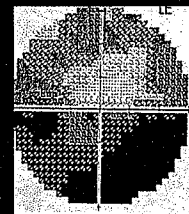
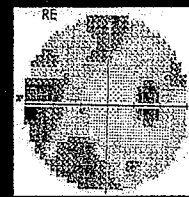
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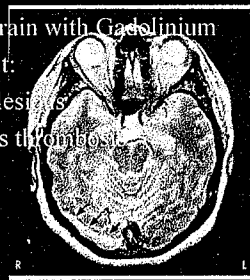
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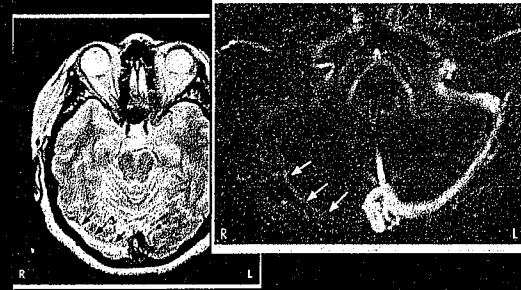


Work-up

- MRI scan of Brain with Gadolinium
 - ◇ Must rule out:
 - ◇ Intracranial lesions
 - ◇ Venous sinus thrombosis



Secondary IH



Lumbar Puncture

- Obtain an opening pressure!
 - ◇ > 200mm is abnormal
 - ◇ > 250mm meets Dandy criteria
- Send all fluid for analysis
 - ◇ Cell count
 - ◇ Glucose
 - ◇ Protein
 - ◇ VDRL
 - ◇ Bacterial stains and culture

Treatment

- Secondary Intracranial Hypertension
 - ◇ Treat underlying cause
 - ◇ Venous sinus thrombosis
 - ◇ SVC syndrome
 - ◇ Jugular thrombosis
- Idiopathic Intracranial Hypertension

Management

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Or
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- Why?
- Serial Visual Field assessment is Key
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Management (acute)

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 - ◇ Carbonic anhydrase inhibitor
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- With weight loss most patients can be medication free within 2 years of presentation.

Another Case of Disc Edema

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PMH: DM, depression, colon polyps
PSH: cholecystectomy 20 yrs ago
Meds: Lexapro, Buspar, Seroquel, metformin, glyburide

□ BCVA: 20/20, 20/40

□ 2+APD OS

□ Brightness 100, 50

□ Ta 13, 20

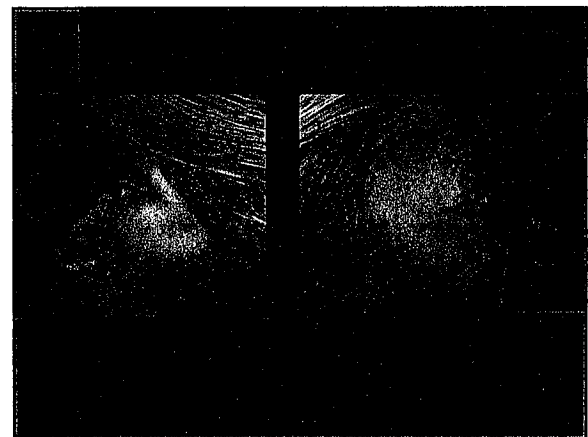
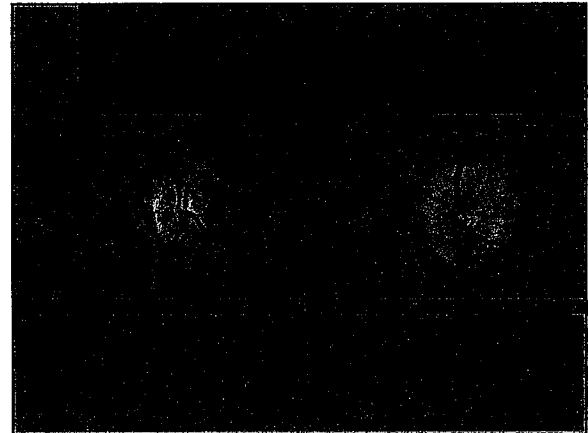
□ CP 8/8 OU

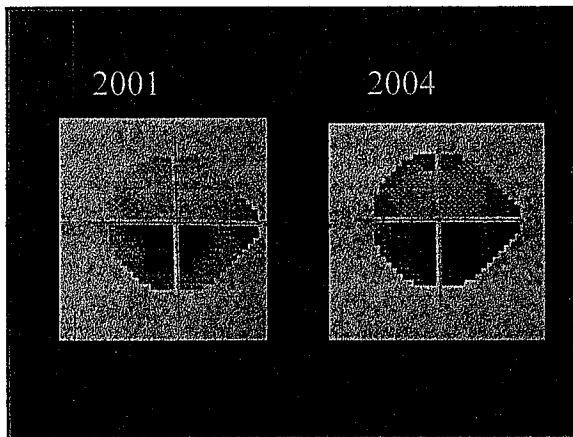
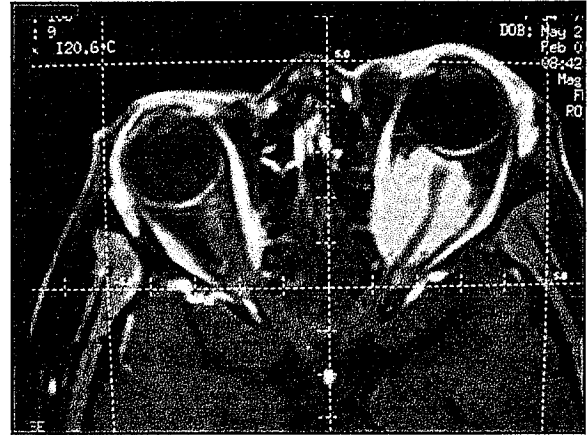
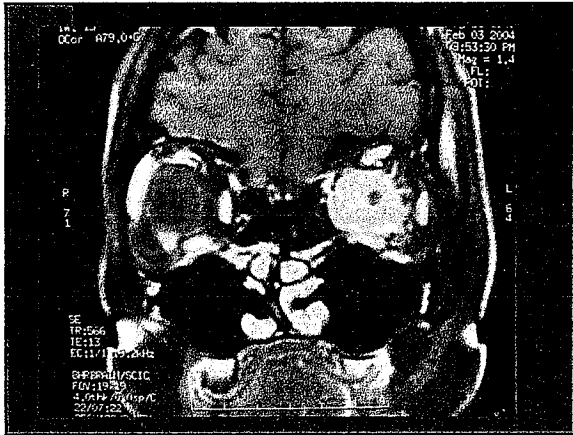
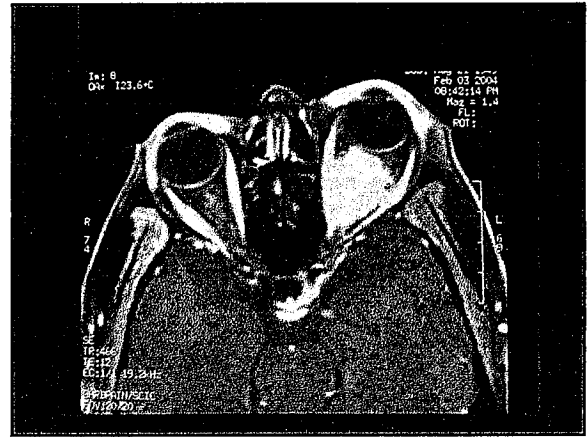
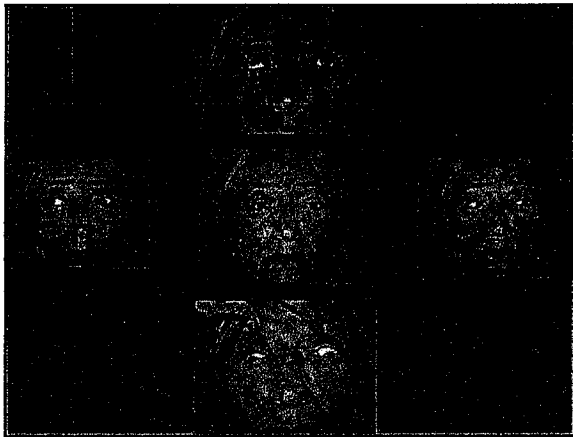
□ NI EOM OD, 50% OS

□ 30 PD XT

□ Hertel: 110: 16, 19

□ SLE: nl OU





Treatment Options

- Observation
- Radiation
 - ◊ Confocal
- Excision

Another Case of Disc Edema??

58 yo female complains of painless, gradual decrease in visual acuity OS x 2 years.

PMH: None, excellent health

PSH: None

All: NKDA

Meds: None

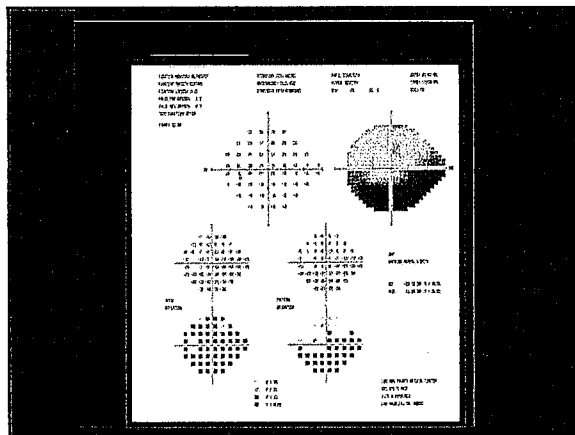
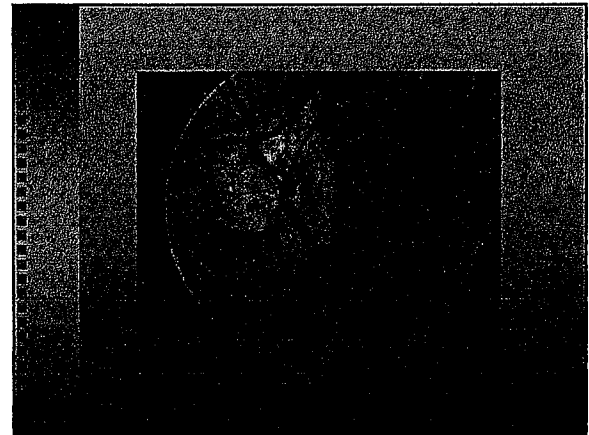
Va: sc 20/20

20/20

EOM: full OU

Pupils: brisk, no APD

Tp: 14 OD, 16 OS



Optic Disc Drusen

Calcified hyaline-like material within the optic nerve anterior to the lamina cribrosa

Prevalence

- ❑ 1% of patients found to have drusen on clinical exam
- ❑ 2% found to have drusen on pathology
- ❑ Bilateral in 75% of cases

Etiology

- ❑ Unknown etiology
- ❑ Some cases - autosomal dominant with incomplete penetrance
- ❑ Associated with retinitis pigmentosa and angioid streaks.

Symptoms

- ❑ Usually no problems with visual acuity
- ❑ Transient visual obscurations

Signs

- ❑ Irregular glistening yellowish globules
- ❑ Anomalous disc vessels
- ❑ Elevated disc
- ❑ Peripapillary hemorrhages
- ❑ NFL defects
- ❑ Autofluorescence

Histopathology

- ❑ Hyaline-like material
- ❑ Positive stain for
 - ◇ Amino acids
 - ◇ Mucopolysaccharides
 - ◇ Calcium
 - ◇ Hemosiderin
- ❑ Negative for amyloid

Visual Fields

- ❑ Enlarged blind spot
- ❑ Altitudinal defects
- ❑ Irregular constriction of peripheral field

Imaging

- Bscan: Calcium and shadowing
- CT: Drusen highlighted by calcium

CV Resume



Madhu R. Agarwal

Curriculum Vitae

General Information

Maiden name: Madhu R. Chopra
Birthplace: Los Angeles, California

Board Certification:

American Academy of Ophthalmology

Languages:

Fluent in Spanish and Hindi

Private Practice

California Orbital Consultants, Redlands

Previous Employment

• Associate Professor of Ophthalmology, Loma Linda University Department of Ophthalmology
• Clinical Instructor in Ophthalmology, Doheny Eye Institute, University of Southern California

Education

Fellowship

• Neuro-ophthalmology and Orbital Surgery (Ophthalmic Plastics/Adult Strabismus) Doheny Eye Institute, University of Southern California
Faculty: Alfredo A. Sadun, M.D., Ph.D. and Peter A. Quiros, M.D.
(7/2003-7/2004)

Residency

• Ophthalmology, Doheny Eye Institute, University of Southern California
(7/2000-6/2003)

Internship

• Internal Medicine, University of California, Los Angeles-Olive View Medical Center, (7/1999-6/2000)

Educacion

• University of California, Los Angeles School of Medicine (8/1995-5/1999)
– Doctor of Medicine

• University of California, Los Angeles (9/1992-6/1995)
Bachelor of Science in Biochemistry
Phi Beta Kappa, Magna cum laude

Professional Activities

- Scientific Reviewer, Frontiers in Neuro-Ophthalmology (2010- present)
- Co-Chair, NANOS Symposium at the American Academy of Ophthalmology Meeting, San Francisco (2009)
- Committee Member, Neuro-ophthalmology Planning Group for the American Academy of Ophthalmology Sub-specialty Meeting (2009-present)
- Scientific Reviewer, Eye (2008-9)
- Vice-Chair, Patient Education Committee for North American Neuro-Ophthalmology Society (2008-10)
- Panel Member/Editor, Practicing Ophthalmologists Committee /Recertification Curriculum in Neuro-ophthalmology for the American Academy of Ophthalmology (2009-2014)
- Elected Commissioner, Joint Commission of Allied Health Personnel in Ophthalmology (2007-2012)
- Committee Member, North American Neuro-ophthalmology Society Committee to the American Academy of Ophthalmology (2006-present)

- “ Committee Member, LLU Residency Selection Committee (2005, 2006, 2007)
- “ Committee Member, LLU School of Medicine Compliance (2005-date)
- “ Co-Director of Quality Assurance, LLU Department of Ophthalmology (2005-date)
- “ Committee Member, LLU Department of Ophthalmology Marketing (2006-date)
- “ Committee Member, LLU Department of Ophthalmology Compensation (2006-2007)
- “ Chair, LLU Department of Ophthalmology Resident Research Day (June 2006)
- “ Scientific Reviewer, Ophthalmology (2005)

Honors

- “ UCLA Medical Alumni Association Award for Distinguished Service
- “ UCLA Obstetrics and Gynecology Stipend for the Advancement of Breast Cancer Research
- “ American Heart Association Student Research Grant/Award
- “ Phi Beta Kappa Honors Society
- “ Golden Key National Honors Society
- “ Alpha Lambda Delta Honors Society
- “ UCLA Faculty Women’s Club Scholarship liaison
- “ National Merit Scholarship
- “ UCLA Dean’s Honor List All Quarters

Presentations

- “ “Double Trouble: A Look at Breast Cancer Metastases in Your Neighborhood.” Doheny Eye Institute. Los Angeles, CA. April 10, 2010.
- “ “Hang in There: Myasthenia Gravis.” American Academy of Ophthalmology Meeting, San Francisco, October 24, 2009.
- “ “Ischemic Optic Neuropathies.” Inland Empire Optometric Symposium. Ontario, CA. March 15, 2009.
- “ “Taking a History in the Evaluation of Optic Atrophy.” Doheny Eye Institute at USC. December 13, 2008.
- “ “Eyelid Skin Cancer.” California Optometric Association/Optowest. Monterey, CA. November 16, 2008.
- “ “Neuro-ophthalmology Basics.” California Optometric Association/Optowest. Monterey, CA. November 15, 2008.
- “ “Understanding MS and Other Neurological Conditions.” California Optometric Association/Optowest. Monterey, CA. November 14, 2008.

- .. "Ptosis: Nuances for the Clinician." Joint Commission for Allied Health Professionals in Ophthalmology National Meeting. New Orleans. November 9, 2008.
- .. "Giant Cell Arteritis." Joint Commission for Allied Health Professionals in Ophthalmology National Meeting. New Orleans. November 10, 2008.
- .. "So You Think It's Just Ptosis." Senior Instructor for the American Academy of Ophthalmology Conference. New Orleans, November 10, 2008.
- .. "Thyroid Eye Disease". Department of Ophthalmology Conference for Optometrists. Loma Linda University. November 4, 2008.
- .. Moderator/Speaker. Walsh Meeting at the North American Neuro-ophthalmology Society Meeting. Orlando, FL. March 9, 2008.
- .. Review of Neuro-ophthalmology and Oculoplastics." Inland Empire Optometry Society. February 22, 2008.
- .. "Understanding Diplopia." Doheny Eye Institute at USC. December 8, 2007.
- .. "Ocular Malingering". Department of Ophthalmology Conference for Optometrists. Loma Linda University. November 4, 2007.
- .. "Ophthalmology and Multiple Sclerosis: Breakfast with the Experts." American Academy of Ophthalmology Conference. New Orleans. November 12, 2007.
- .. "Thyroid Eye Disease: Nuances for the Clinician." Joint Commission for Allied Health Professionals in Ophthalmology National Meeting. New Orleans. November 9, 2007.
- .. "So You Think It's Just Ptosis." Senior Instructor for the American Academy of Ophthalmology Conference. New Orleans. November 11, 2007
- .. "Challenging Syndromes in Neuro-ophthalmology". C and E Optometry Symposium. Anaheim Marriot. October 29, 2007.
- .. "Ophthalmology and Multiple Sclerosis: Breakfast with the Experts." American Academy of Ophthalmology Conference. Las Vegas, Nevada. November 14, 2006.
- .. "Around the World in Neuro-ophthalmology and Oculoplastics." Department of Ophthalmology Conference for Optometrists. Loma Linda University. November 5, 2006.
- .. "Neuro-ophthalmology Basics." Neuro-ophthalmology Symposium. Anaheim Marriot. October 29, 2006.
- .. "Posterior Ischemic Optic Neuropathy." Department of Anesthesiology Grand Rounds. Loma Linda University. October 11, 2006.
- .. "Trigeminal Neuralgia." Doheny Eye Institute's Ophthalmic Pain Symposium. September 9, 2006.
- .. "Thyroid Eye Disease." Department of Medicine Grand Rounds. Loma Linda University. August 6, 2006.
- .. "Oculoplastics for the Beginning Ophthalmology Resident." Department of

- Ophthalmology Grand Rounds. Loma Linda University. July 20, 2006.
- “Neuro-ophthalmology and Oculoplastics.” Inland Empire Ophthalmic Technician Meeting. July 12, 2006.
 - “Cita Con Su Medico.” Spanish Radio Show about Ophthalmology. June 25, 2006.
 - “Eyelid Reconstruction.” Department of Dermatology Grand Rounds. Loma Linda University. April 26, 2006.
 - “Eyelid Cancer.” Inland Empire Optometry Symposium. Ontario Marriot. March 26, 2006.
 - “Painful Clinical Syndromes in Neuro-ophthalmology and Orbital Surgery”. Alumni Weekend, APC. Loma Linda University. March 5, 2006.
 - “Oculoplastics.” Lecture for Loma Linda University Housestaff. Loma Linda. February 8, 2006
 - “Neuro-ophthalmology Update.” “Neurosurgery Update.” Department of Neurosurgery. Loma Linda University. February 15, 2006.
 - “Oculoplastics for the Plastic Surgeon.” Department of Plastic Surgery Grand Rounds. Loma Linda University. February 8, 2006.
 - “Understanding Blepharospasm.” Dystonia Support Group of the Inland Empire. Loma Linda University. February 2, 2006.
 - “Hook, Line, and Sinker: Surprising Outcomes in Neuro-ophthalmology and Orbital Surgery.” Inland Empire Optometric Society. Ontario, CA. January 11, 2006.
 - “Neuro-ophthalmology and Orbital Surgery.” Department of Family Medicine Grand Rounds. Loma Linda University. December 9, 2006.
 - “The Double Whammy.” Department of Ophthalmology Conference for Optometrists. Loma Linda University. November 6, 2005.
 - “Comprehensive Review of Ophthalmology.” Loma Linda University School of Medicine. October 28, 2005.
 - “Neuro-ophthalmology and Orbital Disease.” Department of Neurology Grand Rounds. Loma Linda University School of Medicine. October 26, 2005.
 - “Cranial Nerve Palsies.” Women in Optometry. Riverside, CA. September 21, 2005.
 - “The Wild World of Disc Edema.” Inland Empire Optometric Society. Ontario, CA March 20, 2005.
 - “Clinicopathology of Tumors of the Ccular Adnexa.” Annual Postgraduate Conference. Loma Linda University Medical Center. March 6, 2005.
 - “Painful Clinical Syndromes in Neuro-ophthalmology and Orbital Disease.” Pain Management Symposium. Doheny Eye Institute. February 12, 2005.
 - “Benign intracranial hypertension: Is it really benign?” Women in Optometry. Inland Empire Optometric Society. January 18, 2005.
 - “Giant Cell Arteritis.” Conference in Ophthalmology for Optometrists. Loma

Linda University. October 31, 2004.

“Amniotic Membrane Transplantation.” Department of Ophthalmology, Resident Research Day. Loma Linda University Medical Center. June 5, 2004.

“Orbital Pseudotumor with Cranial Invasion and Bone Destruction.” North American Neuro-ophthalmology Society/Walsh Presentation. March 28, 2004.

“Facial Pain Syndromes.” Neuro-ophthalmology Symposium. Doheny Eye Institute. February 14, 2004.

“Amniotic Membrane Transplant in the Treatment of Fat Adherence Syndrome.” Doheny Alumni Conference. June 14, 2003.

“Canalicular Stenosis in a Patient Treated with Systemic 5-fluorouracil.” Doheny Alumni Conference. June 7, 2002.

“Severe Sebaceous Cell Carcinoma Necessitating Evisceration in a 97 Year-old Male.” Doheny Eye Institute Resident Conference. January 2002.

“Neurotrophic Keratitis.” Doheny Alumni and Residents’ Conference. June 16, 2001.

“Choroidal Metastasis as Presenting Sign of Systemic Malignancy in a 35 Year-old Male.” Doheny Eye Institute Grand Rounds. June 1, 2001.

“Hypertensive Retinopathy in a 44 Year-old Male.” Doheny Eye Institute Grand Rounds. May 18, 2001.

“Ocular Rosacea in a 42 Year-old Male.” Doheny Eye Institute Grand Rounds. April 13, 2001.

“Ocular Malingering in a 16 Year-old Female.” Doheny Eye Institute Grand Rounds. March 9, 2001.

“Cat-scratch Neuroretinitis in a 53 Year-old Female.” Doheny Eye Institute Grand Rounds. February 9, 2001.

“Neurofibromatosis II in a 23 Year-old Male.” Residents’ Day Conference. Doheny Eye Institute. January 13, 2001.

“Pseudoexfoliation Syndrome.” Residents’ Day Conference. Doheny Eye Institute. January 13, 2001.

“Central Retinal Artery Occlusion in a 60 Year-old Male.” Doheny Eye Institute Grand Rounds. November 17, 2000.

“Blebitis Post-trabeculectomy in an 81 Year-old Female.” Doheny Eye Institute Grand Rounds. October 13, 2000.

“56 Year-old Male with New Onset Diplopia Secondary to Neurocysticercosis.” Doheny Eye Institute Grand Rounds. September 1, 2000

“Candida Chorioretinitis in a 35 Year-old Male IV Drug User.” Doheny Eye Institute Grand Rounds. August 18, 2000.

“Central Serous Retinopathy in a 30 Year-old Male.” Doheny Eye Institute Grand Rounds. July 28, 2000.

“Anterior Uveitis in a 22 Year-old Female with Crohn’s Disease.” Doheny Eye Institute Grand Rounds. July 14, 2000.

“Pseudoexfoliation Glaucoma.” Jules Stein Eye Institute Glaucoma Conference. September, 1998.

Publications

- “ Hoehn A, Agarwal MR, Saini A. Third nerve palsy as a presenting sign of preeclampsia. *Obstetrics and Gynecology*. Pending
- “ Tokuhara K, Agarwal MR. A Severe case of adult onset asthma associated orbital xanthogranuloma. *Archives of Ophthalmology*. Pending
- “ Hsu V, Agarwal MR. Ig A associated orbital plasmacytoma. *Journal of the Ophthalmic Plastic and Reconstructive Surgery*. Pending.
- “ Hsu V, Agarwal MR. Squamous cell carcinoma in the anophthalmic socket. *Journal of Ophthalmic Plastic and Reconstructive Surgery*. Pending publication.
- “ Sorenson K, Agarwal MR. Septo-Optic Dysplasia as Failure to Thrive. *Journal of Family Medicine*, 2007, p. E2-E4.
- “ Bekendam P, Narvaez J, Agarwal MR. Corneal Melting associated with the use of topical nepafenac. *Cornea*, 2007, p. 1002-1003.
- “ Agarwal MR, Yoo JH. Optic nerve sheath fenestration for vision preservation in Idiopathic Intracranial Hypertension. *Journal of Neurosurgery/Neurosurgery Focus*, November 2007, 23(5): E7 (p. 1-4).
- “ Kronberg B, Agarwal MR. Pituitary apoplexy with catastrophic visual field loss. *Resident and Staff Physician*, January 7, 2008, E1-4.
- “ Dovich J, Agarwal MR. Deep Venous Malformation extending from lower face to deep orbit causing intermittent pupillary defect. *North American Neuro-Ophthalmology Society*, February 28, 2006.
- “ Agarwal MR, Wagner P. Disc edema as first sign of recurrence of acute lymphoblastic leukemia. *Journal of Pediatric*, May 2006, 148(5):703.
- “ Zoumalan CI, Agarwal M, Sadun AA. Optical coherence tomography can measure axonal loss in patients with ethambutol-induced optic neuropathy. *Graefes Arch Clin Exp Ophthalmol*, May 2005, 243(5):410-6.
- “ Agarwal MR, Esmali B, Burnstine MA. Squamous metaplasia of the canaliculi associated with 5-fluorouracil: A clinicopathologic case report. *Ophthalmology*, 2002;109(12): 2359-61.
- “ King JA, Affeldt JC, Agarwal MR. Etiologic profile of vortex keratopathy. *Investigative Ophthalmology and Visual Science*, 2003: 44(4):277.
- “ Jacobson E K, Affeldt JC, Agarwal MR. Contact lens related limbal stem cell deficiency. *Investigative Ophthalmology and Visual Science*, 2003: 44(4):301.
- “ Hedayi RS, Affeldt JC, Agarwal MR. Epithelial basement membrane dystrophy and dry eye. *Investigative Ophthalmology and Visual Science*, 2003; 44(4):460.
- “ Hunter K, Affeldt J, Agarwal MR. Efficacy of staged punctal occlusion for

treatment of neurotrophic keratitis. *Investigative Ophthalmology and Visual Science*, 2003; 44(4):406.

• Row PK, Affeldt JC, Agarwal MR. Central isolated band keratopathy and neurotrophic keratitis. *Investigative Ophthalmology and Visual Science*, 2003; 44(4):410.

• Agarwal MR, Feldon SE, Nguyen V. Clinical features of Graves' ophthalmopathy in a Latino incidence cohort. *Investigative Ophthalmology and Visual Science*, 2002; 43(4):337.

• Jacobson E K, Affeldt JC, Quiroz B, Agarwal MR, et al. Retinal surgery related neurotrophic keratitis. *Investigative Ophthalmology and Visual Science*, 2002; 43(4):57.

• King JA, Affeldt JC, Agarwal MR. Central Corneal Hypoesthesia Secondary to Peripheral Corneal Inflammatory Disease. *Investigative Ophthalmology and Visual Science*, 2002; 43(4):34.

• Kurteeva K, Affeldt JC, Albin T, Agarwal MR. Fibrillary lines: new clinical, ultrastructure, and theoretic observations. *Investigative Ophthalmology and Visual Science*, 2002; 43(4):1663.

• Affeldt JC, Agarwal MR. Lasik-related stage III neurotrophic keratitis. *Investigative Ophthalmology and Visual Science*, 2002; 43(4):2120.

• Agarwal MR, Affeldt JC, Heidar-Hunter K. Dry Eye and the Treatment of Neurotrophic Keratitis. *Investigative Ophthalmology and Visual Science*, 2001; 42(4):S31

• Prendiville P, Chopra M, Gauderman WJ, Feldon SE. The role of restricted motility in determining outcomes for vertical strabismus surgery in Graves' ophthalmopathy. *Ophthalmology*, 2000; 107(3):545-549.

• Radziszewski W, Chopra M, Zembowicz A, Gryglewski R, Ignarro LJ, Chaudhuri G. Nitric oxide donors induce extrusion of cyclic GMP from isolated human blood platelets by a mechanism which may be modulated by prostaglandins. *Intl J Cardiol*, 1995; 51:211-220.

• Radziszewski W, Zembowicz A, Chopra M, Gryglewski R., Ignarro LJ, Chaudhuri G. Nitric oxide donors induce efflux of cyclic GMP from human blood platelets. *The Federation of the American Society of Experimental Biologists (FASEB) Journal*, 1994; 8(4):A337.

Book Chapters

• Sadun AA and Agarwal MR: Topical Diagnoses in Neuro-ophthalmology. In Walsh and Hoyt's *Clinical Neuro-Ophthalmology*. Sixth Edition. Williams & Wilkins, Baltimore. 2005.

Professional Certifications

- " Board Certified, American Academy of Ophthalmology
- " North American Neuro-ophthalmological Society
- " American Academy of Ophthalmology
- " American Society of Cataract and Refractive Surgery
- " UCLA Association of Chemists and Biochemists

Volunteer Experience

- " Board of Directors, UCLA Medical Alumni Association (1995-1999)
- " UCLA Medical Center Career Conference Planning Committee (1995-1999)
- " Celebration of Sight at Cedars Sinai Medical Center (1998)
- " San Fernando Valley Health Fair- Ophthalmic screening exams (1998)
- " Camp Ronald McDonald for Good Times- Pediatric Oncology (1997-1999)
- " Umma Free Clinic- Downtown Los Angeles (1997-1999)
- " Salvation Army Homeless Clinic (1997-1998)