25TH ANNUAL

AMERICAN UVEITIS SOCIETY

Winter Symposium

January 15-17, 2022 • Canyons Grand Summit Hotel, Park City, Utah

PROGRAM CO-CHAIRS:

ALAN G. PALESTINE, MD and ALBERT T. VITALE, MD

AUS 25th Annual Winter Symposium

GUEST SPEAKERS

Stacey L. Clardy, MD, PhD
Associate Professor of Neurology
Imaging & Neurosciences Center
University of Utah and
Salt Lake City VA
Salt Lake City, UT

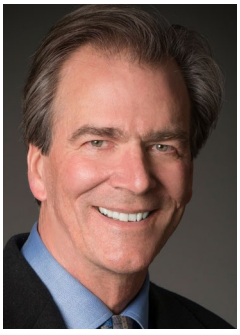
Kristine A. Kuhn, MD, PhD
Associate Professor of Medicine and of Immunology and Microbiology
Division of Rheumatology
University of Colorado
Anschutz Medical Campus
Aurora, CO

Phoebe Lin, MD, PhD
Associate Professor of Ophthalmology
Casey Eye Institute
Oregon Health & Sciences University
Portland, OR

H. Nida Sen, MD, MHS
Professor of Ophthalmology
George Washington University
Volunteer Faculty
National Eye Institute/NIH
Sr. Dir. Global Clinical Lead,
Janssen Retina R&D
Bethesda, MD

PROGRAM CO-CHAIRS

Alan G. Palestine, MD
Professor of Ophthalmology and Rheumatology
University of Colorado
Anschutz Medical Campus
Aurora, CO



Albert T. Vitale, MD
Professor, Ophthalmology and Visual Sciences
John A. Moran Eye Center
University of Utah
Salt Lake City, UT

Saturday
January 15, 2022

7:00 – 8:00 AM
Registration/Breakfast

7:00 – 9:30 AM
Exhibits

8:00 – 8:05 AM
Opening Remarks
ALBERT T. VITALE, MD

8:05 – 9:30 AM
CASE PRESENTATIONS, FREE PAPERS, & DISCUSSIONS
MODERATOR: ALBERT T. VITALE, MD

8:05 – 8:15 AM
Development of the Standardization of Uveitis Nomenclature (SUN) Classification Criteria for the Uveitides
DOUGLAS A. JABS, MD, MBA

8:15 – 8:20 AM
Discussion

8:20 – 8:25 AM
An Undotted Surprise
NIKKI SARAIYA, MD

8:25 – 8:28 AM
Discussion

8:28 – 8:33 AM
Immunocompromised Woman Presents with Unilateral Necrotizing Retinitis
ANDREW W. ELLER, MD

8:33 – 8:36 AM
Discussion

8:36 – 8:41 AM
A Unique Treatment for an Insidious Entity
DANIEL F. KIERNAN, MD, FACS

8:41 – 8:44 AM
Discussion

8:44 – 8:49 AM
A New Cat Scratch Disease?
DALIYA DZHABER, MD

8:49 – 8:52 AM
Discussion

8:52 – 8:57 AM
E. coli Endogenous Panophthalmitis
PAUL W. MALLORY, MD

8:57 – 9:00 AM
Discussion

9:00 – 9:10 AM
Age-Based Analysis of Safety and Efficacy of CLS-TA in the Phase 3 PEACHTREE Trial
CHRISTOPHER R. HENRY, MD

9:10 – 9:15 AM
Discussion

9:15 – 9:25 AM
How Time to Treatment Affects Outcome in the PEACHTREE Study
MICHAEL A. SINGER, MD

9:25 – 9:30 AM
Discussion

9:30 – 10:00 AM
Break

10:00 – 11:00 AM
Suprachoroidal Injection Training Wet Lab hosted by Bausch + Lomb

11:00 AM – 2:00 PM
Lunch on Own

2:00 – 3:30 PM
CASE DISCUSSION WITH EXPERTS
MODERATOR: ALAN G. PALESTINE, MD

3:30 – 4:00 PM
Break

3:30 – 7:30 PM
Exhibits

4:00 – 6:05 PM
SCIENTIFIC SESSION 1: THE MICROBIOME - MECHANISMS AND EFFECTS ON OCULAR INFLAMMATION AND SYSTEMIC DISEASE
MODERATOR: ALAN G. PALESTINE, MD

4:00 – 4:05 PM
Introduction
ALAN G. PALESTINE, MD

4:05 – 4:50 PM
The Role of the Intestinal Microbiota in Autoimmune Uveitis
PHOEBE LIN, MD, PhD

The intestinal microbiota are microorganisms that reside normally in the gastrointestinal tract and that interface with one of the largest portions of the body's immune system in the gut. Not surprisingly, it has a large impact on immune function, dysfunction, and maintaining immune homeostasis. In a series of studies, we have found that an experimental model of autoimmune uveitis is associated with an intestinal microbial signature, that modifying the intestinal microbiota in a certain way can either exacerbate or protect against uveitis, and that the uveitis-protective microbial signatures are promoting intestinal regulatory T cells and modifying intestinal T cell migration to other parts of the body including the eye. Intestinal microbial-modifying therapeutics could thus likely include certain antibiotics, intestinal microbial metabolite fermentation products on dietary fiber such as short chain fatty acids, and dietary changes (including a high fiber diet). It also turns out that the therapeutics that we typically employ for the treatment of uveitis patients, may also, in fact, partially utilize intestinal microbial mechanisms of action.

4:50 – 5:05 PM
Discussion

5:05 – 5:50 PM
Gut Microbiome Pathways to Systemic Autoimmune Disease
KRISTINE A. KUHN, MD, PhD

Overlapping clinical, genetic, immunologic, and intestinal microbiome features between uveitis, psoriasis, axial spondyloarthritis (axSpA) and inflammatory bowel disease suggest a shared mechanistic pathway through the intestine. While microbiome studies identify differences in bacterial communities, a common bacterium has yet to emerge as a pathogenic factor due to a variety of factors that will be reviewed. Focusing on the functional differences of the full bacterial community inferred from microbiome and metabolomic studies, a common theme emerges in which the bacterial dysbiosis influences pathogenic Th17 immune responses. Our work has demonstrated one pathway in axSpA in which bacterial dysbiosis leads to production of indoles from the bacterial metabolism of

dietary tryptophan and contributes to the development of joint inflammation. Additionally, by using human plasmablast-derived monoclonal autoantibodies to identify immunologically relevant families of bacteria, we find that Ruminococcaceae and Lachnospiraceae, which are often expanded in microbiome studies of rheumatologic disease, are disproportionately targeted by the autoantibodies. Colonization of mice with a human bacterial isolate from Ruminococcaceae results in Th17- and antibody-mediated arthritis. Together, these two studies will review how the microbiome can lead to the development of immune responses resulting in inflammatory arthritis like axSpA.

5:50 – 6:05 PM
Discussion

6:05 – 6:25 PM
Break

6:25 – 7:10 PM
CASE PRESENTATIONS, FREE PAPERS, & DISCUSSIONS
MODERATOR: ALAN G. PALESTINE, MD

6:25 – 6:35 PM
Surgical Interventions in Scleritis in the IRIS Registry
LAURA KOPPLIN, MD, PhD

6:35 – 6:40 PM
Discussion

6:40 – 6:50 PM
Photographic Response Time of Intravitreal Clindamycin for the Treatment of Toxoplasmosis Chorioretinitis
REECE BERGSTROM, DO
Travel Grant Awardee

Purpose: To determine the average time to initial photographic response and resolution in patients with toxoplasmosis chorioretinitis treated with intravitreal clindamycin.

Methods: This is an IRB approved retrospective chart review of patients with toxoplasmosis chorioretinitis with fundus imaging treated with intravitreal clindamycin (1 mg). For this analysis, a masked physician qualitatively graded improvement on fundus photography in comparison to baseline images (pigmentation, improvement of retinitis, etc). The time from injection to first sign of improvement was calculated as was the time to inactivity. Those who were lost to follow-up were excluded from calculations of time to inactivity.

Results: 276 fundus photos were included from a set of 19 patients overall. Five patients were treated with clindamycin monotherapy, 2 patients were oral Bactrim only, and 12 patients were given oral Bactrim and clindamycin therapy from the start. On average, patients showed observed first improvement 20.67 days after their injection (range 7 to 42 days). The fastest time to response was 7 days after treatment with intravitreal clindamycin. Five patients time to response was within 8-15 days. The average time to complete inactivity was found to be 9.37 weeks (1 -35 weeks). The average time to respond for those on oral Bactrim and intravitreal clindamycin was 18.71 days (3 days to 47 days). Average number of injections to signs of improvement was 1.44. Two patients worsened despite intravitreal injections. 1 patient was on oral Bactrim only and worsened. After worsening despite oral Bactrim, the patient received an intravitreal injection, the lesion was stable and began to improve 8 days later. 6 patients resolved with intravitreal clindamycin only. 5 patients had optic nerve or macular lesions and were treated with oral Bactrim and intravitreal clindamycin. (x number of these patients resolved within x days. X number did not grow).

Conclusion: In this series, the average time to initial photographic improvement was about 3 weeks, with 1/3 displaying some response within 2 weeks. In this series the use of combination of oral and intravitreal therapy in macula and nerve threatening lesions lead to resolution in all cases without lesion growth. This combination should be considered in sight threatening disease. This study is limited by the frequency of follow-up imaging which underestimates the time to effect observed.

6:50 – 6:55 PM
Discussion

6:55 – 7:05 PM
Retinal Detachment in Syphilitic Uveitis
RAMANA S. MOORTHY, MD

7:05 – 7:10 PM
Discussion

7:10 – 7:24 PM
INDUSTRY PARTNER PRESENTATIONS

7:10 – 7:17 PM
Allergan, an AbbVie Company

7:17 – 7:24 PM
Bausch + Lomb

7:24 – 7:30 PM
Wrap Up
ALAN G. PALESTINE, MD

7:30 PM
End of Session

7:45 – 10:00 PM
Dinner at The Canyons Grand Summit Hotel

Sunday
January 16, 2022

7:00 – 8:00 AM
Breakfast

7:00 – 9:35 AM
Exhibits

8:00 – 9:32 AM
CASE PRESENTATIONS, FREE PAPERS, & DISCUSSIONS
MODERATOR: ALBERT T. VITALE, MD

8:00 – 8:10 AM
Anti-drug Antibodies in Non-infectious Uveitis
SUNIL BELLUR, MD
Travel Grant Awardee

Purpose: To analyze the association between circulating drug levels and anti-drug antibodies, concurrent treatment with an anti-metabolite, and clinical response in patients

treated with adalimumab or infliximab for non-infectious uveitis.

Methods: A single site, retrospective study was conducted at the National Eye Institute. Patients of all ages treated with adalimumab or infliximab who underwent anti-adalimumab or anti-infliximab immunoassay testing for the presence of anti-drug antibodies were included. Chart review was performed and demographic data, diagnosis, disease duration, duration of therapy, frequency of drug administration, co-existing immunosuppressive treatment (IMT), response to therapy (defined as complete, partial, or failed), reason for lab draw (routine vs. failing therapy), drug level at time of lab draw, presence of anti-drug antibodies (ADA), and anti-drug antibody level, were all reviewed.

Results: Forty-two patients were included in the adalimumab group and 12 in the infliximab group. Mean age was 43.57-years old in the adalimumab group with a mean duration since diagnosis and duration of therapy of 84.17 and 30.64 months, respectively. In the infliximab group, mean age was 42.67-years old and with mean disease duration of 92.5 months and mean duration of therapy of 20.91 months. 42.8% of all adalimumab patients had anti-drug antibodies (mean antibody level of 97.33 AU/mL). No patients in the infliximab group had anti-drug antibodies.

The cohort was stratified based on clinical response; in the adalimumab group 54.8% of patients (23/42) were complete responders with a mean drug level (MDL) of 11.89 mcg/mL, 14.3% (6/42) were partial responders with MDL 9.67 mcg/mL, and 30.9% (13/42) were non-responders with MDL 8.88 mcg/mL. Anti-drug antibodies were present in 30.4% (7/23) of complete responders (MDL was 5.30mcg/mL and mean antibody level (MAL) was 73.38 AU/mL), 50% (3/6) of partial responders (MDL 2.13mcg/ML and MAL 250.2 AU/mL), and 61.5% (8/13) of non-responders (MDL 3.60 mcg/mL and MAL 35.33 AU/mL).

Mean drug and antibody levels were also analyzed based on use of a concurrent anti-metabolite. Antibodies were present in 26.7% (4/15) of patients on mycophenolate mofetil, 40% (6/15) on methotrexate and 53.3% (8/15) on monotherapy. The MDL was 12.57 mcg/mL with an MAL of 50.33 AU/mL for the mycophenolate group, 11.73mcg/mL and 42.8 AU/mL for methotrexate, and 7.35mcg/mL and 147.34 AU/mL for monotherapy.

Conclusion: Anti-drug antibodies were observed in 42.8% of adalimumab patients and 0 infliximab patients. Within the adalimumab cohort, complete responders had a higher MDL compared to partial and non-responders. Furthermore, complete responders had lower rates of anti-drug antibodies versus partial and non-responders. Notably, when antibodies were present, MDL was lower regardless of clinical response, suggesting that a complete clinical response is associated with higher circulating drug levels even when anti-drug antibodies are present. Lastly, concurrent antimetabolite use had a higher MDL and lower frequency of ADA in the adalimumab group, suggesting a benefit to their use. Further work is needed to better understand the impact of ADA in uveitis.

8:10 – 8:15 AM
Discussion

8:15 – 8:25 AM
Risk Factors and Incidence of Refractory Pseudophakic Macular Edema After Cataract Surgery
BRADLEY JACOBSEN, MD

8:25 – 8:30 AM
Discussion

8:30 – 8:35 AM
A Series of Unfortunate Events
ANJUM KORESHI, MD

8:35 – 8:38 AM
Discussion

8:38 – 8:43 AM
Vitreous Debris
ARTHI G. VENKAT, MD, MS

8:43 – 8:46 AM
Discussion

8:46 – 8:51 AM
Is It Really What It Seems?
MAURA DI NICOLA, MD

8:51 – 8:54 AM
Discussion

8:54 – 9:04 AM
Vitreoretinal Biopsy Techniques and the Role for Retinal Biopsy in Vitreoretinal Lymphoma: A Single-institution Experience
DANNY MAMMO, MD
Travel Grant Awardee

Purpose: Vitreoretinal lymphoma (VRL) is a clinical diagnostic challenge. Multiple failed treatment regimens due to the rarity of the diagnosis and familiarity among many specialists lead to delayed diagnoses. The fragility of lymphoma cells and the difficulty of distinguishing malignant cells from inflammatory cells also makes the cytopathologic diagnosis difficult. Since many patients with vitreoretinal lymphoma are at high risk for concurrent or subsequent central nervous system lymphoma, timely diagnosis is critical in order to begin life-prolonging treatment. Diagnostic vitrectomies with cytology and/or flow cytometry analysis are still the most widely used method to confirm diagnosis and guide treatment, as most institutions do not have access to cytokine, MYD88, or metagenomic analysis. This study highlights a single institution's diagnostic vitrectomy experience for vitreoretinal lymphoma.

Methods: A single-center retrospective chart review of all diagnostic vitrectomies performed for suspicion of VRL between January 2015-August 2021 was performed. All cases were performed by one of two vitreoretinal uveitis specialists (SS, SKS). Undiluted vitreous specimens were collected and sent in CytoLyt® fixative for cytology analysis.

Diluted vitreous specimens were collected in Roswell Park Memorial Institute (RPMI) Medium and sent for flow cytometry. Decision to perform a retinal and/or subretinal tissue biopsy (RTB) was at the discretion of the operating surgeon. All specimens were analyzed by pathologists at our institution.

Results: 55 diagnostic vitrectomies were performed and 33 (60%) yielded positive results for VRL. Of the 33 positive intraocular biopsies, RTB was performed in 11 (33%) cases. All 11 RTB specimens were positive for vitreoretinal lymphoma. 7 (21%) of the positive cases yielded a negative vitreous biopsy but a positive RTB. 3 of these 7 had had a prior negative vitreous biopsy before an additional surgical intervention was undertaken due to high clinical suspicion for VRL. 26/33 (79%) of cases had a positive vitreous biopsy. When comparing the RTB only positive group to the vitreous alone positive group there was no significant difference in terms of age but the RTB group had a long time of symptom onset to vitrectomy (3 months, p=0.023).

Conclusion: Diagnostic vitrectomy with cytology and flow cytometry analysis is an effective method to diagnose vitreoretinal lymphoma. This is one of the largest single center vitreoretinal lymphoma biopsy series, providing real world clinical data. In our series of positive cases, 21% of cases had a negative vitreous biopsy but positive RTB. RTB only positive patients presented at a later time course than patients with positive vitreous biopsies, possibly due to these patients having undergone multiple courses of steroid treatments with continual lysis of vitreous lymphocyte cells, making the cytopathology diagnosis more difficult. RTB should be considered in select cases at time of primary diagnostic vitrectomy in order to expedite diagnosis and lead to more timely treatment.

9:04 – 9:09 AM
Discussion

9:09 – 9:14 AM
Acute Bilateral Panuveitis in Autoimmune Lymphoproliferative Syndrome due to CTLA4 Haploinsufficiency
GRANT JUSTIN, MD

9:14 – 9:17 AM
Discussion

9:17 – 9:27 AM
Primary Autologous Stem Cell Treatment for Primary Vitreoretinal Lymphoma
BRIAN LEE, MD

9:27 – 9:32 AM
Discussion

9:32 - 9:35 AM
Wrap Up
ALBERT T. VITALE, MD

12:00 – 2:00 PM
Lunch on Own

2:00 – 3:30 PM
CASE DISCUSSION WITH EXPERTS
MODERATOR:
RAMANA S. MOORTHY, MD

3:30 – 4:00 PM
Break

3:30 – 7:30 PM
Exhibits

4:00 – 6:05 PM
SCIENTIFIC SESSION 2: AUTOIMMUNE/PARANEOPLASTIC RETINOPATHY AND AUTOIMMUNE/PARANEOPLASTIC NEUROLOGIC DISEASE
MODERATOR: ALBERT T. VITALE, MD

4:00 – 4:05 PM
Introduction
ALBERT T. VITALE, MD

4:05 – 4:50 PM
Autoimmune Retinopathy
H. NIDA SEN, MD, MHS

Autoimmune retinopathies (AIR) represent a group of inflammatory mediated retinopathies with otherwise unexplained vision loss associated with visual field deficits, photoreceptor dysfunction as evidenced on electroretinography (ERG), and the presence of circulating autoantibodies targeted against retinal antigens. Earlier in the disease course ophthalmic examination can be normal, though some patients may show retinal vascular attenuation, diffuse retinal atrophy with or without pigmentary changes, or waxy disc pallor. Autoimmune retinopathy (AIR) refers to both paraneoplastic and non-paraneoplastic forms of an acquired retinal degeneration thought to be mediated by the production of antiretinal antibodies. However, the mechanisms underlying AIR pathogenesis are incompletely understood. Standardized criteria have yet to be established for the diagnosis of AIR, which in turn complicates the diagnosis and management of AIR. Consequently, the natural history, prognosis, and management of AIR are complicated. The talk will summarize the literature on the epidemiology, diagnosis, and management of AIR, with a focus on non-paraneoplastic disease and the role of immunomodulatory therapy.

4:50 – 5:05 PM
Discussion

5:05 – 5:50 PM
At the Center of it All - The Eye in CNS Autoimmunity
STACEY L. CLARDY, MD, PhD

In this talk, we will discuss the spectrum of autoimmune and paraneoplastic diseases that can affect the eye, as well as conditions that can mimic autoimmunity. The ophthalmologist is often the first clinician to examine these patients, as the visual symptoms are commonly the initial - or most troubling -- symptom of disease for many patients. We will discuss an approach to diagnosis and treatment, including a focus on the strengths and weaknesses of available laboratory assays.

5:50 – 6:05 PM
Discussion

6:05 – 6:25 PM
Break

6:25 – 7:05 PM
CASE PRESENTATIONS, FREE PAPERS, & DISCUSSIONS
MODERATOR: ALBERT T. VITALE, MD

6:25 – 6:30 PM
Late Interventions in Cancer-associated Retinopathy
CHRISTOPHER CONRADY, MD, PhD

6:30 – 6:33 PM
Discussion

6:33 – 6:38 PM
Bilateral Diffuse Uveal Melanocytic Proliferation (BDUMP) Treated with Plasmapheresis: Case Report
NATALIA A.L. FIGUEIREDO, MD

6:38 – 6:41 PM
Discussion

6:41 – 6:46 PM
Placoid Perplexity
MARK W. JOHNSON, MD

6:46 – 6:49 PM
Discussion

6:49 – 6:54 PM
AIR or CAR?
AMIT REDDY, MD

6:54 – 6:57 PM
Discussion

6:57 – 7:02 PM
Quantification of the Difficulties and Limitations Experienced in Autoimmune Retinal Degenerations by the Michigan Retinal Degeneration Questionnaire and Its Correlation with Specialized Visual Function Tests
THIRAN JAYASUNDERA, MD, MS

7:02 – 7:05 PM
Discussion

7:05 – 7:13 PM
INDUSTRY PARTNER PRESENTATIONS

7:05 – 7:10 PM
Regeneron Pharmaceuticals, Inc.

7:10 – 7:13 PM
EyePoint Pharmaceuticals

7:13 – 7:30 PM
Wrap Up
ALBERT T. VITALE, MD

7:30 PM
End of Session

Monday
January 17, 2022

7:00 – 8:00 AM
Breakfast

8:00 – 9:21 AM
CASE PRESENTATIONS, FREE PAPERS, & DISCUSSIONS
MODERATOR: ALAN G. PALESTINE, MD

8:00 – 8:05 AM
Introduction
ALAN G. PALESTINE, MD

8:05 – 8:15 AM
Demographic, Visual Outcomes and Local Steroid Use of Pediatric Uveitis Patients Through the IRIS Registry
SRUTHI AREPALLI, MD

8:15 – 8:20 AM
Discussion

8:20 – 8:30 AM
Posterior Scleritis in the IRIS Registry
KAREN ARMBRUST, MD, PhD

8:30 – 8:35 AM
Discussion

8:35 – 8:45 AM
Adaptive Optics and Multimodal Imaging for Inflammatory Vitreoretinal Interface Abnormalities
MARIE-HELENE H. ERRERA, MD, PhD

8:45 – 8:50 AM
Discussion

8:50 – 9:00 AM
Comparative Outcomes of Glaucoma Surgeries in Patients with Uveitis
RACHEL PATEL, MD

9:00 – 9:05 AM
Discussion

9:05 – 9:10 AM
Management of Vision Loss After a Traumatic Penetrating Injury in the Fellow Eye
SUSHANT WAGLEY, MD

9:10 – 9:13 AM
Discussion

9:13 – 9:18 AM
Laser Pointers: Buyer Beware
JOSEPH SIMONETT, MD

9:18 – 9:21 AM
Discussion

9:21 – 9:30 AM
Closing Remarks
ALAN G. PALESTINE, MD and ALBERT T. VITALE, MD

9:30 AM
Meeting Adjourns

Save The Date

AUS 26th Annual Winter Symposium
Canyons Grand Summit Hotel, Park City, Utah
January 14-16, 2023

SPECIAL THANKS

The American Uveitis Society
gratefully acknowledges the following companies
for their support:

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Allergan, an AbbVie Company
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