Sjögren's Syndrome Foundation

The Moisture Seekers

www.sjogrens.org

Volume 34, Issue 10 November/December 2016 SjogrensSyndromeFoundation @SjogrensOrg

2016 Year In Review

Report from your Steven Taylor, CEO

As 2016 comes to an end, I am excited to share with you the amazing advancements that have been made this past year by the Sjögren's Syndrome Foundation!

From the publication of the SSF Clinical Practice Guidelines, to the launching of Clinical Trials for new therapeutics, to helping increase public and professional awareness of Sjögren's, the SSF has been quite busy. Our accomplishments in 2016 are thanks to the hundreds of volunteers and healthcare providers who freely gave of their time and talents to help the SSF advance our mission!

continued page 2 ▼

Sjögren's Syndrome Foundation's Clinical Practice Guidelines:

Systemic Manifestations in Sjögren's Patients

The Sjögren's Syndrome Foundation (SSF) has developed the first U.S. Rheumatology Clinical Practice Guidelines for Sjögren's to ensure quality and consistency of care for the assessment and management of patients by offering recommendations to clinicians for systemic disease management.

Recently published in Arthritis Care and Research, these rheumatology guidelines were designed to improve quality and consistency of care for Sjögren's patients by offering recommendations to clinicians for systemic disease management.

Previously, treatment guidelines for serious organ involvement from Sjögren's were borrowed from those used to treat Systemic Lupus Erythematosus (SLE) and Rheumatoid Ar-

continued page 8 ▼

In This Issue

"Year in Review" continued from page 1 ▼

Clinical Practice Guidelines Were Published

First, 2016 saw the publication of two sets of the SSF's Clinical Practice Guidelines for physicians and dentists that give healthcare providers a roadmap on how to treat and manage Sjögren's patients. For those not familiar, Clinical Practice Guidelines are a huge project that most voluntary health organizations do not undertake. However, 5 years ago, when no other organization wanted to accept the challenge to write guidelines for Sjögren's, the SSF accepted the challenge! Not only does this project take time, but it also involves organizing hundreds of physicians and dentists in the process. From the beginning, a small working group of healthcare providers must review all of the Sjögren's research literature available and then develop the first draft of such guidelines. Once the draft is developed, the SSF must recruit 30-50 additional healthcare providers to review these guidelines and comment on any changes they suggest. This group of healthcare providers then must vote on the final clinical recommendations before they can be submitted for publication.

This April, the SSF was so proud when we finished our "Dental Caries Prevention for Sjögren's" guidelines, and they were published by the American Dental Association. These guidelines give dentists a roadmap on how to curb extensive dental decay in their patients. Now that these guidelines were published, our dental working committee will move onto developing guidelines for how to restore patient's teeth once dental decay has started.

This past July, the SSF was excited that the American College of Rheumatology published our first set of clinical practice rheumatological guidelines. These included guidelines for 3 specific areas: Use of Biologics; DMARDs for Inflammatory Musculoskeletal Pain; and Fatigue. The committee will now begin our next five areas, which will include neuropathies, central nervous system involvement, asculitis, lymphoma and pulmonary.

I encourage you to visit our website (www.sjogrens.org) to read more about these guidelines and download information to give to your rheumatologist and/or dentist, and view our first set of published guidelines: SSF Clinical Practice Guidelines for Ocular Management.

Clinical Trials Were Launched

2016 also saw amazing advancements in the area of developing a therapeutic for Sjögren's.

The SSF has been actively working with nine pharmaceutical companies that have shown an interest in developing a therapeutic for Sjögren's. Each of these companies are looking to enter or have entered clinical trials in Sjögren's and are very committed to finding new treatment options for all patients.

continued page 6 ▼

The Moisture Seekers® Newsletter is published by the Sjögren's Syndrome Foundation Inc.,
6707 Democracy Blvd., Ste 325; Bethesda, MD 20817.

Sarah Schafer, MD

Why doesn't my doctor understand Sjögren's?

by Sarah Schafer, MD

Like many Sjögren's patients, I find it disheartening that most doctors remain unfamiliar with the disease. First diagnosed with dry eyes and corneal abrasions at age 18, I had no idea that something bigger was brewing. Over the next three decades, not one of my multiple eye specialists asked about other symptoms that could have led to a timely Sjögren's diagnosis. By my thirties, I had a classic Sjögren's picture of dry eyes and mouth, flu-like fatigue, multiple gastrointestinal problems, chronic sinusitis and widespread musculoskeletal pain. Yet no one put the pieces of the puzzle together, and it wasn't until I experienced incapacitating symptoms that Sjögren's was even considered.

Lack of provider awareness would be understandable if Sjögren's was a rare disease. But Sjögren's is extremely common, affecting approximately 1% of the US population, mostly adult women.[1] This is similar to the number of women living with breast cancer.[2] I like to call Sjögren's "the most common disease no one has ever heard of."

Sjögren's can be debilitating. Despite a high disease burden and increased rates of infection and heart disease, Sjögren's still tends to be "missed and dismissed." While direct complications such as lymphoma and organ involvement are often successfully treated, these conditions lead to death in approximately 10% of Sjögren's patients.[3,4]

After years of advocating for my own care, I am now using my unique vantage point as a physician-patient to teach primary care providers (PCPs) about Sjögren's. From discussions with recent medical school graduates, I have discovered that Sjögren's continues to be glossed over as a mild disease, mostly about managing dryness. Medical students are rarely taught these basics: Sjögren's is common, serious and always systemic.

The following ten points help to explain why "Sjögren's neglect" persists in medicine. By understanding what is behind the problem, you can better advocate for yourself as a patient.

Sjögren's is a complicated disease. It takes a high index of suspicion to recognize that scattered and mostly invisible symptoms may all be related. Most Sjögren's patients experience the triad of pain, fatigue and dryness. While only the dryness can be measured, doctors must take patient reports of pain and fatigue seriously in order to see the bigger picture.

Sicca (dryness) symptoms are often overlooked in the primary care setting. Sicca is often the best clue to diagnosis. Yet many patients do not mention dryness to their providers, thinking it unimportant or unrelated to their other symptoms. Physicians and patients alike may not recognize that

continued page 12 ▼

"Year in Review" continued from page 2 ▼

These treatments will not simply treat symptoms but will address the disease as a whole. The SSF has actively engaged these companies, along with the FDA and other regulatory agencies, to ensure that the patient voice is utilized in both the design of clinical trials as well as in discussing what patients want from a therapeutic. This discussion was also part of our 2016 National Patient Survey in which over 3,000 patients took part. This survey asked questions about future treatments and what was most important to our patients. Full survey results will be published in 2017 in our SSF publications – so watch for those results.

Awareness Is On The Rise

The SSF is proud of our work in raising awareness. We work diligently throughout the year to increase awareness through our public campaigns as well as those targeted towards healthcare providers. Our goal is to not only increase awareness of Sjögren's but also to encourage healthcare providers to become more educated about Sjögren's and its numerous complications.

Our Awareness Ambassadors last year worked hard at knocking on doors of eye care providers and rheumatologists to ensure that each had the latest information on Sjögren's, especially our clinical practice guidelines! In addition, our volunteers spanned around the country to help increase awareness of the disease by placing posters throughout their communities as well as posting on social media! Our April Awareness Campaign, "This is Sjögren's," was designed by a patient committee and received more interest and views than any other awareness campaign we have done in

the history of the SSF. We believe that our "This is Sjögren's" campaign resonated with patients because they could see themselves in our poster and in our materials! We hope that you agree and that it helped you to explain your Sjögren's to family and friends!

Watch for 2017, as we plan to expand our "This is Sjögren's" campaign!

Added To Our Patient Resources

The SSF is proud of our patient resources and we were excited to add to patient resources this past year.

Our website now contains over 25 patient resource fact sheets on various Sjögren's complications and manifestations that a patient can download and use to help educate themselves, their family members and/or their healthcare providers. We also have three brochures as well as other links to resources that can help a patient navigate their diagnosis.

Our Sjögren's Product Directory is also available for patients to learn about over-the-counter products and prescription treatments that are currently on the market for patients. This directory is regularly updated on the member side of the website and is mailed to all new members when they join the SSF.

One of the most un-used tools the SSF provides is our search feature on our member side of www.sjogrens.org. This search function allows our members to search our newsletter archives for any article or mention of a certain symptom, complication, product etc. Many of our patients don't utilize this resource and we hope you will find helpful in learning more about your disease.

Also in 2016, the SSF not only held over 175 support group meetings around the United States but also held our National Patient Conference in Seattle, Washington. In addition, we also held numerous free educational conference calls on such topics as: Dry Eye and Sjögren's, Men with Sjögren's, Pediatric Sjögren's and Women Under 40 with Sjögren's. In 2017, we plan to expand these calls to additional topics.

Special Thank You

What is most exciting is that there are many other things that we accomplished in 2016. Our staff and volunteers have been busy and we are excited that Sjögren's is finally getting the attention it deserves. I want to thank each and every volunteer and donor who helped to make this past year possible. We thank you for your continued support of our efforts and look forward to another amazing year in 2017! ■

SSF Awards 2016-2017 Research Grants

The Sjögren's Syndrome Foundation is excited to announce that the 2016-2017 research grant recipients have been selected. For 2016, the research review committee sought research grants, which focused their proposed efforts on novel diagnostics and biomarkers but considered all high-caliber, innovative projects. The inspiration for this focus on novel diagnostics and biomarkers is to compliment the efforts of the SSF 5-*Year Breakthrough Goal*, which seeks to reduce the time to diagnosis by 50% in five years.

After careful consideration of this year's outstanding pool of applications, the research review committee awarded three new research grants and renewed two excellent research grants from the 2015-2016 awardees.

2016-2017 research award recipients:

Stergios Katsiougiannis, PhD

Assistant Project Scientist
UCLA School of Dentistry, Center for Oral/Head & Neck Oncology Research, Los Angeles, California

Research Project

System Analysis of Mouse Models for Sjögren's Syndrome Pathogenesis

Abstract

Primary Sjögren's is a chronic, autoimmune disease affecting 4 million patients in the U.S. Previous studies utilizing human and mouse models have highlighted several components of the immune systems as well as non-immunologic factors. However, the intersections between humans and mouse models in terms of pathways and key targets remain elusive. The scientific goal of this proposal is to address the crucial question, "can a mouse model predict the outcome of a clinical intervention for Sjögren's?" Therefore, our goal is to use a systems biology approach to develop models for the initiation, pathogenesis and resolution of Sjögren's. The data for the different stages of the disease will be analyzed by Weighted-Gene Co-Expression Network Analysis (WGCNA). The identified molecular pathways and targets will then be validated on mouse models of Sjögren's development and resolution to generate a validated Sjögren's model based on human disease modeling and mouse model validation.

Nancy McNamara, OD, PhD and Jes Kristen Klarlund, PhD

Associate Professor, The Regents of the University of California School of Optometry, Berkeley, California

Research Project

A New Generation of Eye Drops to Treat the Ocular Manifestations of Sjögren's

Abstract

Dry eye is an onerous manifestation of Sjögren's, and there is a great unmet need to develop effective therapies. The short residence time on the ocular surface greatly limits the efficacy of most potential topical ophthalmic therapeutics. We propose to develop a

continued page 14 ▼

"Guidelines" continued from page 1 ▼

thritis (RA). Among the recommendations, the guidelines address the treatment of inflammatory, musculoskeletal pain in systemic Sjögren's, use of biologic agents and management of fatigue.

With publication of these rheumatology guidelines, the SSF has now published oral, ocular, and rheumatology Clinical Practice Guidelines for Sjögren's under the leadership of Frederick Vivino, MD, FACR, Chief of Rheumatology, Presbyterian Medical Center, University of Pennsylvania, Philadelphia, Pennsylvania. Ann Parke, MD, Professor of Medicine, Division of Rheumatology, St. Francis Hospital and Medical Center, Hartford, Connecticut and University of Connecticut, Farmington, Connecticut, and I co-chaired the Rheumatology Clinical Practice Guidelines Working Group that led this effort for the systemic management of Sjögren's. Nancy Carteron, MD, a member of the Working Group and SSF Medical and Scientific Advisory Board Chair, contributed a major role in drafting the publication manuscript.

SSF Rheumatology Guidelines Summary and Recommendations

Figure 1.

Strength of the Recommendation Definitions

Ratings for the Strength of each Recommendation are based on a variation of GRADE as developed by the American Society of Clinical Oncology (ASCO).*	
Strong	There is high confidence that the recommendation reflects best practice. This is based on: a) strong evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, with no or minor exceptions; c) minor or no concerns about study quality; and/or d) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on: a) good evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, with minor and/or few exceptions; c) minor and/or few concerns about study quality; and/or d) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on: a) limited evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, but with important exceptions; c) concerns about study quality; and/or d) the extent of panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

*http://www.asco.org/sites/www.asco.org/files/online_data_supplement_bcrr_update_2.pdf

For the development of the SSF Rheumatology Guidelines, a highly rigorous and transparent process was employed with important guidance from the American College of Rheumatology and the Institute of Medicine. An extensive, systematic literature review by Topic Review Groups (TRG) was followed by data extraction and drafting of recommendations to be considered by separate consensus expert panels (CEP) consisting of academic and community practice clinicians, registered nurses and patients. Using a modified Delphi-type consensus process, the CEP reached consensus on eighteen recommendations with consensus set at a minimum of 75% agreement. View recommendation on page 10 and 11.

DMARDs for Musculoskeletal Pain

Recommendations regarding the use of disease-modifying anti-rheumatic drugs (DMARDs) to treat musculoskeletal (MSK) pain were presented as a decision tree with use of hydroxychloroquine (HCQ) as the first-line therapeutic approach. Although HCQ treatment failed to reach the primary endpoint for pain in a recent, randomized control trial, other studies have shown that following HCQ treatment, Sjögren's patients demonstrated improvement in inflammatory markers and MSK pain. The favorable safety profile of HCQ contributed to the 92% positive agreement of the Rheumatology Working Group. Thus, the recommendation for the use of HCQ received a moderate strength rating and is considered a best clinical practice first-line therapy.

Biological Medications

Biological therapies such as rituximab will become increasingly important in the management of Sjögren's patients and are best used in Sjögren's patients with serious organ manifestations who fail more conservative treatments. There was strong consensus that TNF-α inhibitors not be used to treat sicca symptoms in patients with Sjögren's. This recommendation was qualified by the consideration that clinicians should not withhold TNF-α inhibitor treatment if a patient also suffers from another condition for which such treatment would be indicated.

Fatigue

Fatigue is most effectively managed with self-care measures and exercise. Exercise provides similar benefit to reduce fatigue in Sjögren's patients as was seen for those with RA, SLE or Multiple Sclerosis.

continued page 12 ▼

Table 1 – Recommendations for Systemic Disease Management in Sjögren's

Sjögren's Syndrome Foundation Clinical Practice Guidelines for Management of Systemic Disease

Recommendations

Biological Therapies*

* Three rounds of Consensus Expert Panel (CEP) review and voting took place for the RTX /xerostomia Recommendation, and 2 rounds were held for the remainder. Recommendation #5 on RTX/systemic management was reviewed an additional time by the CEP for both Biological Therapies and Fatigue.

Recommendation #1 – TNF-α Inhibitors	Strength of Recommendation
TNF-α inhibitors SHOULD NOT BE USED to treat sicca symptoms in patients with primary Sjögren's.*	**STRONG**

* Note that this recommendation should not be interpreted to discourage use of TNF-α inhibitors in situations where there is overlap of Sjögren's with rheumatoid arthritis (RA) or other conditions where TNF-α inhibition therapy is indicated for the treatment of inflammatory arthritis.

Recommendation #2 – TNF-α Inhibitor Cautions	
If TNF-α inhibition therapy is used for RA or other related overlap conditions in Sjögren's patients, health care providers should consider and monitor for the following:*	**STRONG**

- Lymphoma and other malignancies; health care providers should be cognizant that patients with primary Sjögren's | have an increased risk of non-Hodgkin's lymphoma as compared to the general population
- Serious infections, including tuberculosis
- Invasive fungal infections
- Hepatitis B reactivation
- Hepatoxicity
- Heart failure
- Cytopenias
- Hypersensitivity; Serious infusion reactions
- Demyelinating disease

*Patients and physicians should refer to the FDA label for additional information

Recommendation #3 – Rituximab for KCS	
Rituximab MAY BE CONSIDERED as a therapeutic option for keratoconjunctivitis sicca (KCS) in patients with primary Sjögren's and for whom conventional therapies, including topical moisturizers, secretagogues, anti-inflammatories, immunomodulators and punctual occlusion, have proven insufficient.	**WEAK**

Recommendation #4 – Rituximab for Xerostomia	
Rituximab MAY BE CONSIDERED as a therapeutic option for xerostomia in patients with primary Sjögren's with some evidence of residual salivary production, significant evidence of oral damage as determined by the clinician, and for whom conventional therapies, including topical moisturizers and secretagogues, have proven insufficient.	**WEAK**

Recommendation #5 – Rituximab for Systemic Symptoms	
Rituximab MAY BE CONSIDERED as a therapeutic option for adults with primary Sjögren's* and any or all of the following systemic manifestations:	**MODERATE**

- Cryoglobulinemia associated with vasculitis
- Vasculitis
- Severe parotid swelling
- Inflammatory arthritis
- Pulmonary disease
- Peripheral neuropathy – especially mononeuritis

*Note: These patients should have had a suboptimal response to standard oral DMARD agents and/or have experienced unacceptable toxicity from these agents or corticosteroids or are incapable of tapering and discontinuing corticosteroids.

Recommendation #6 – Rituximab Cautions	
Patients and health care providers should be aware that, although uncommon, significant harms may be associated with the use of rituximab and should exercise caution and observe for the following when using Rituximab in Sjögren's patients:*	**STRONG**

- Infusion reactions
- Tumor lysis syndrome in those with NHL
- Progressive multifocal leukoencephalopathy (PML)
- Hepatitis B reactivation with possible fulminant hepatitis
- Severe mucocutaneous reactions
- Infections
- Bowel obstruction and perforation
- Cardiac arrhythmias and angina
- Cytopenias
- Serious bacterial, viral or fungal infections
- In pregnancy and nursing, the risk vs benefit must be carefully considered
- Health care providers should avoid giving live vaccines when patients are on Rituximab.

*Patients and physicians should refer to the FDA label for additional information.

DMARDs for Inflammatory MSK Pain

Recommendations are provided with the following caveats and then listed in a step-by-step process:

- The physician is advised to consider an individual patient's circumstances when weighing risks and benefits of each therapy.
- Insufficient evidence exists on the effectiveness of DMARDs in the treatment of inflammatory musculoskeletal pain in primary Sjögren's. However, recommendations will be formulated based on expert opinion as guided by the consensus group process.
- The following recommendations are listed in order of the Inflammatory Musculoskeletal Topic Review Group's preference for use in the treatment of inflammatory musculoskeletal pain in primary Sjögren's; if one therapy is insufficient in effectiveness, the physician is advised to try the next recommendation in sequence and so on.

Recommendation #1 – Hydroxychloroquine (HCQ)	Strength of Recommendation
A first line of treatment for inflammatory musculoskeletal pain in primary Sjögren's should be hydroxychloroquine.	**MODERATE**

Recommendation #2 – Methotrexate (MTX)	
If hydroxychloroquine is not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, methotrexate alone may be considered.	**MODERATE**

or

Recommendation #3 – HCQ plus MTX	
If either hydroxychloroquine or methotrexate alone is not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, hydroxychloroquine plus methotrexate may be considered.	**MODERATE**

Recommendation #4a – ST Corticosteroids	
If hydroxychloroquine plus methotrexate is not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, SHORT-TERM (1 MONTH OR LESS) corticosteroids of <=15mg a day may be considered.	**STRONG**

Recommendation #4b – LT Corticosteroids	
LONG-TERM (MORE THAN 1 MONTH) ≥15mg a day corticosteroids may be useful in the management of inflammatory musculoskeletal pain in primary Sjögren's, but efforts should be made to find a steroid-sparing agent as soon as possible.	**MODERATE**

The following three recommendations are numbered in order of the Topic Review Group's preference and experience. However, the TRG is grouping these together to allow the physician to choose any of the following and in any order based on that physician's experience and the individual patient.

Recommendation #5 – Leflunomide	
If hydroxychloroquine and/or methotrexate or short-term (1 month or less) corticosteroids are not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, leflunomide may be considered.	**WEAK**

Recommendation #6 – Sulfasalazine	
If hydroxychloroquine and/or methotrexate, corticosteroids, or leflunomide (Arava®) are not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, sulfasalazine may be considered	**WEAK**

Recommendation #7a – Azathioprine	
If hydroxychloroquine and/or methotrexate, corticosteroids, leflunomide , or sulfasalazine are not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, azathioprine may be considered.	**WEAK**

Recommendation #7b – Potential Change in Order	
If major organ involvement occurs in the primary Sjögren's patient, azathioprine may be a better choice than leflunomide or sulfasalazine for the treatment of all complications including inflammatory musculoskeletal pain.	**MODERATE**

Recommendation #8 – Cyclosporine	
If hydroxychloroquine and/or methotrexate, corticosteroids, leflunomide, azathioprine , or sulfasalazine are not effective in the treatment of inflammatory musculoskeletal pain in primary Sjögren's, cyclosporine may be considered.*	**WEAK**

* Few physicians have noted experience with cyclosporine in Sjögren's, and many have stated a greater level of experience with and a preference for using a biologic in place of cyclosporine.

Fatigue*

* Two rounds of CEP review and voting took place for all Fatigue Recommendations numbered 4 and higher, and 3 rounds were held for Recommendation #3 on HCQ.

Recommendation #1– Exercise	Strength of Recommendation
Education about self care measures SHOULD include advice about exercise to reduce fatigue in Sjögren's.	**STRONG**

Recommendation #2 - Dehydroepiandrosterone (DHEA)	
DHEA is NOT RECOMMENDED for treatment of fatigue in Sjögren's.	**STRONG**

Recommendation #3 – Hydroxychloroquine†	
Hydroxychloroquine MAY BE CONSIDERED in selected situations to treat fatigue in Sjögren's.*	**WEAK**

* Note the following caveat: The decision to treat fatigue in Sjögren's with hydroxychloroquine requires comprehensive evaluation of disease activity, sicca manifestations and subjective variables and should be individualized according to the clinical context.

† This Recommendation went through 3 rounds of the Consensus Expert Panel.

Recommendation #4 - TNF- α Inhibitors	
Neither Etanercept nor infliximab is recommended for treatment of fatigue in Sjögren's.	**STRONG**

For the following 11 therapeutic questions addressed by the Fatigue TRG, there was insufficient evidence to issue a recommendation:

- IL-1 inhibition (anakinra)
- azathioprine
- mycophenolate
- zidovudine
- doxycycline
- lamivudine
- leflunomide
- abatacept
- belimumab
- epratuzumab

"Guidelines" continued from page 8 ▼

The Sjögren's Syndrome Foundation Clinical Practice Guidelines Committee (CPGC): Steven E. Carsons[1], Ann Parke[2], Frederick Vivino[3], Nancy Carteron[4], Richard Brasington[5], Robert Fox[6], Stuart Kassan[7], R. Hal Scofield[8], Julius Birnbaum[9], Steven Mandel[10], William Ehlers[11], Vidya Sankar[12], Katherine Morland Hammitt[13].

1 Winthrop University Hospital & Stonybrook University School of Medicine, 2 St. Francis Hospital & Medical Center & University of Connecticut, 3 Presbyterian Medical Center, University of Pennsylvania, 4 University of California San Francisco, 5 Washington University School of Medicine, 6 Rheumatology Clinic, 7 Colorado Arthritis Associates & University of Colorado, 8 Oklahoma Medical Research Foundation, University of Oklahoma Health Sciences Center and Department of Veteran Affairs Medical Center, 9 Johns Hopkins University School of Medicine, 10 Hofstra-North Shore-LU School of Medicine, 11 University of Connecticut, 12 University of Texas Health Science Center at San Antonio Dental School, 13 Sjögren's Syndrome Foundation.

This information was taken from *Arthritis Care and Research*.

Please visit www.sjogrens.org to find the most updated information about the SSF Clinical Practice Guidelines and be sure to talk to your physician about them. ■

"Why" continued from page 5 ▼

burning, gritty eyes or difficulty swallowing food without liquids are dryness symptoms.

Sjögren's patients usually look well, even when they are quite ill. There are no blood tests that correlate with the severity of the disease. This makes it easy for providers to write off patients as complaining or malingering.

Misdiagnosis is common. Symptoms often overlap with more familiar conditions such as depression, fibromyalgia, hypothyroidism and irritable bowel syndrome. Menopause often unmasks Sjögren's symptoms that have been brewing for years. While these conditions may co-occur with Sjögren's, PCPs often fail to consider the possibility of Sjögren's as the major culprit.

Delayed diagnosis. The typical Sjögren's patient has a delay of nearly four years until diagnosis. True delays are even longer: many patients describe decades of symptoms before things got bad enough to seek diagnosis. Clearly this needs to change. PCPs need to be taught how to recognize Sjögren's and take the first steps to diagnosis.

Diagnosis can be difficult. Better tests are needed! There is no one test or group of tests that diagnoses Sjögren's early and accurately. Many patients who do not have Sjögren's antibodies ("seronegative") are told they do not have Sjögren's. Yet 30% of Sjögren's patients are in this seronegative group. These patients typically experience even greater delays in diagnosis, because the confirming minor salivary gland biopsy is not always done, and it may take years to turn positive. Normal blood tests do not rule out Sjögren's!

Patients with serious organ system complications are often misclassified as other autoimmune diseases. This happens largely due to the ongoing misperception of Sjögren's as a mild disease. These patients may never get properly diagnosed, perpetuating the "Sjögren's is mild" mythology.

Research neglect. Clinical studies of Sjögren's lag far behind other connective tissue diseases. While this is changing, this lack of research keeps Sjögren's under the radar of awareness as an important health issue.

Until 2016, no standard of care existed for Sjögren's management. Doctors tend to be highly motivated to practice medicine within the standard of practice in their community. The recently published clinical practice guidelines (CPGs) will be a good first step in providing consistent treatment standards for rheumatologists, ophthalmologists and dentists.

Rheumatologists are not always up to date on Sjögren's management. There are still some rheumatologists- the very specialists who treat Sjögren's- who do not consider Sjögren's to be serious enough to warrant treatment. There are too many present day stories of patients with debilitating fatigue and pain who are refused treatment because the rheumatologist told them that "their Sjögren's was not bad enough". Hopefully the CPGs will provide incentive for these rheumatologists to treat Sjögren's patients sooner. Most Sjögren's experts with extensive clinical experience believe that treatment slows progression and prevents serious complications.

What Can You Do?

Make sure you are being followed by a rheumatologist, ophthalmologist and dentist who are familiar with Sjögren's and its complications. Take a copy of the new

continued page 16 ▼

You Stood Up!

Students Help the SSF Get New Ocular Guidelines Out to Providers!

As you have read in this issue of *The Moisture Seekers*, during the past year the SSF Clinical Practice Guidelines have begun to roll out. This is an exciting time in the world of Sjögren's! Our first set of guidelines was Ocular Management in Sjögren's Patients. The SSF shared these guidelines with you in the Summer issue of *The Moisture Seekers* and in our newsletter for medial professionals, *Sjögren's Quarterly*. However, getting the new guidelines out to appropriate providers in an easy to use format is one of the most important steps in the implementation process.

The SSF created laminated SSF Sjögren's Clinical Practice Guideline Resource Sheets that were handed out by Awareness Ambassadors to providers in their local communities. In addition, these sheets were mailed to all of the eye care professionals in the SSF database, which is close to 800 providers across the nation! To help with this large mailing, 3 honors students from Maple Hill Middle School stepped up and stuffed and labeled all of the envelopes to be mailed. Elaina, Emily and Jenna worked quickly and efficiently having all envelopes ready in just a couple of hours.

We are grateful to these students for their support and assistance! Their help allowed us to get these guidelines out quickly so the providers can begin putting them to use and treating patients according to published standards. We plan to have the girls help us again soon by mailing out our dental and rheumatology guidelines!

To view the Ocular Clinical Practice Guideline Reference Sheet, please visit www.sjogrens.org. ■

"Research Grantees" *continued from page 7 ▼*

novel drug delivery system that allows proteins to be administered as eye drops and preliminary data show that proteins can remain active at the ocular surface for at least 16 hours. We have previously documented that the knock-out mouse for the autoimmune regulator (AIRE) gene is an excellent model for Sjögren's that develops severe dry eye. Anakinra is an interleukin-1 antagonist that is used clinically to reduce inflammation in several autoimmune diseases, and we will analyze its ability to reduce inflammation in corneas of AIRE-deficient mice. The delivery system is very versatile and can be used to deliver other bioactive proteins for instance to enhance innervation, to counter opacification, and to support the physical integrity of the cornea in Sjögren's.

Xaralobos Varelas, PhD
Assistant Professor, Boston University School of Medicine, Department of Biochemistry, Boston, Massachusetts

Research Project

Defining Epithelial Cues Contributing to Sjögren's

Abstract

Although the etiology of Sjögren's remains unknown, the prevailing model has been that loss of secretory function is a secondary effect of lymphocytic infiltrates. Our studies offer alternative insight, as our observations indicate that aberrant epithelial features may arise independent of the immune response and therefore provides signals that drive Sjögren's development. We propose to test and define whether the pathogenesis of Sjögren's arises from the aberrant epithelial integrity. Specifically, we hypothesize that loss of epithelial cell polarity promotes abnormal activation of the Hippo pathway effector Yap, which drives epithelial and stromal changes that elicit an immune response. We will test our hypothesis by characterizing Sjögren's patient tissues, and aligning our observations with analysis of polarity defective mouse models. Our work will therefore provide important molecular insight into dysregulated polarity as a driver of Sjögren's phenotypes, offering potential novel therapeutic strategies.

Renewed 2015-2016 research awards:

Maria Edman, PhD
Research Associate, Department of Pharmacology and Pharmaceutical Sciences, School of Pharmacy, University of Southern California
Research Project: Tear Fluid and Serum Levels of Cathepsin S and its Endogenous Inhibitor Cystatin C as Biomarkers for Sjögren's

Markus Hardt, PhD
Assistant member of staff, Department of Applied Oral Sciences, The Forsyth Institute, Cambridge, Massachusetts
Research Project: Identification of Proteolytic Profiles Diagnostic of Sjögren's ■

SSF in Action!

PhRMA Research and Hope Awards

Cynthia Lopynski and Patricia Hurley of the Sjögren's Syndrome Foundation's Board of Directors and SSF CEO, Steven Taylor, attended the Pharmaceutical Research and Manufacturers of American (PhRMA) 2016 Research & Hope Awards in Washington, D.C. on September 13.

This year's program celebrated the progress and promise of autoimmune research and care. PhRMA recognized patient advocates and researchers for their tireless efforts to advance the treatment and care of patients with autoimmune diseases. Kathy Hammitt, SSF Vice President of Medical and Scientific Affairs, was among those honored and provided insight into the autoimmune patient experience. The evening featured a keynote address by actress Jamie-Lynn Sigler [Sigler was diagnosed with multiple sclerosis in 2002], best known for her role in the HBO television series "The Sopranos."

The Research & Hope Awards illustrate how biopharmaceutical researchers and others in the innovation ecosystem work together to not only bring new medical advances to patients, but also thwart deadly diseases through increased awareness, public health efforts and increased collaboration. The SSF was proud to be in attendance and celebrate the spirit of collaboration in an effort to benefit all patients. Congratulations Kathy Hammitt on this much deserved recognition! ■

"Why" continued from page 12 ▼

clinical practice guidelines to your next appointment. Visit www.sjogrens.org to print out a copy for your physician.

Understand that PCPs are unlikely to be well educated about Sjögren's, due to the many reasons listed above. However, if they are caring for you, it is their job to learn about Sjögren's. I recommend starting with a copy of this article and a referral to the Sjögren's Foundation website at www.sjogrens.org. This website has excellent professional information and resources including a link to the CPGs.

References

1 Helmick CG, Felson DT, Lawrence RC, et al. National Arthritis Data Workgroup. E. *Arthritis Rheum*. 2008;58:15-25.

2 Brito-Zeron P, Theader E, *et al*. Clin Immunol 2015 Dec. 1-20

3 Ng, Wan-Fai. *Rheumatology*. 2010;49:844-853.

4 Vitali,C, Del Papa, N. *Best Practice & Research Clinical Rheumatology* 2015;29: 63-70

in memoriam

In Memory of Dorothy Huang
Debra Mikaelian and Family
Herrmann Family Fund

In Memory of James (Jim) Church
Douglas and Marcia Dapper
Jean and Scott Carpenter

In Memory of Paula Linn
Scott, Chris and Olivia

In Memory of Connie Rodriguez
Irma Rodriguez and Fred Fernandez

In Memory of George G. McManness, Jr.
Duane and Carolyn Bergkamp
Charlie and Vada Wheatley
Charles and Joan Shelley
Brian Truscott (Merrill Lynch)
William Truscott

In Memory of Nancy Ann Kipp
Ray Kipp

In Memory of Karen Edgington
Greg and Tricia Schroeder

in honor

In Honor of Dr. Cheryl Levin
Orr Family Foundation, Inc.

In Honor of Elaine Harris
Leiba E. Husock

In Honor of Giuliana and Andrew Capigatti
Susan, Zane and Jett Bacich

In Honor of John Gornall
Arnall Golden Gregory LLP.

In Honor of Sarah Schafer
Janet and Carl

In Honor of Valerie Perdue and Charles Fox
Greta Myers

2017 SSF Event Fall Calendar

FEBRUARY

Saturday, February 4, 2017
Los Angeles Sjögren's Education Lunch Beverly Hills, CA

MARCH

Saturday, March 18, 2017
Phoenix Walkabout, Phoenix, AZ

Friday, March 31 - April 1, 2017
SSF National Patient Conference,Cherry Hill, NJ

If there is already an event in your area and you would like to get involved, or learn about starting one, please visit www.sjogrens.org or contact us at (301) 530-4420 x207

Watch for the January Issue of ***The Moisture Seekers*** to view more SSF events in 2017!

The Sjögren's Syndrome Foundation would like to thank you for your continued support and dedication to the fight against Sjögren's. Your generosity and support has helped get us to this point, making our achievements possible.

As we approach the end of the year, we are able to celebrate the numerous achievements made in Sjögren's research and awareness including the progress towards developing a therapeutic for Sjögren's and the publications of first-ever Sjögren's Clinical Practice Guidelines. This was an exciting year in Sjögren's and we look forward to continuing our momentum!

While we have made great progress, there is still a lot of work to be done and this is why we are asking you for your support as 2016 comes to an end. Please consider giving a year-end donation and together, we can continue to make a difference in the lives of those living with Sjögren's.

Wishing you a joyous holiday season and happy New Year.

❑ Enclosed is my gift of $ _____ to support the Foundation's initiatives and programs.

❑ I am interested in learning more about how to make a stock donation.

❑ Please send me information about listing the SSF in my will.

Thank you for your support of the Sjögren's Syndrome Foundation.

Mail to SSF, BB&T Bank · PO Box 890612 · Charlotte, NC 28289-0612 or Fax to: 301-530-4415

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ E-mail _____

❑ Enclosed is a check or money order (in U.S. funds only, drawn on a U.S. bank, net of all bank charges) **payable to SSF**.

❑ MasterCard ❑ VISA ❑ Discover ❑ AmEx Card Number _____ Exp. Date _____

Signature _____ CC Security Code _____

Top 5 Sjögren's Resources from the SSF Bookstore

Bonus Offer: Free gift with purchase!

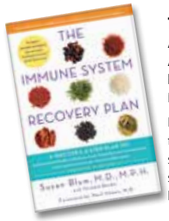
Purchase one of the SSF's Top 5-Resources using the form below and receive a free audio CD of Dr. Timothy Niewold's talk, "A Sjögren's Overview," from the 2016 SSF National Patient Conference, along with the handouts and visual aides used during the presentation!

The Sjögren's Book, Fourth Edition
edited by Daniel J. Wallace, MD

Published in conjunction with the Sjögren's Syndrome Foundation in 2011, this edition of the Sjögren's Syndrome Handbook is completely revised and expanded from the Third Edition, with new articles and the latest information on Sjögren's.
Member Price: $28 Non-Member Price: $32

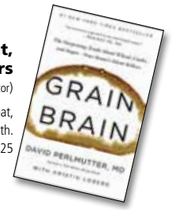
The Sjögren's Syndrome Survival Guide
by Teri P. Rumpf, Phd and Katherine Morland Hammitt (VP of Medical & Scientific Affairs)

Often referred to as a support group in a book, this is a complete resource for Sjögren's sufferers, providing the newest medical information, research results, and treatment methods available, as well as the most effective and practical self-help strategies.
Member Price: $17 Non-Member Price: $20



The Immune System Recovery Plan: A Doctor's 4-Step Program to Treat Autoimmune Disease
by Susan Blum, MD, MPH (Author), Mark Hyman, MD (Foreword), Michele Bender (Contributor)

Dr. Susan Blum, one of the most sought-after experts in the field of functional medicine, shares the four-step program she used to treat her own serious autoimmune condition and help countless patients reverse their symptoms, heal their immune systems, and prevent future illness.
Member Price: $22 Non-Member Price: $25



Grain Brain: The Surprising Truth about Wheat, Carbs, and Sugar - Your Brain's Silent Killers
by David Perlmutter, MD (author) and Kristin Loberg (contributor)

A #1 New York Times bestseller – the devastating truth about the effects of wheat, sugar, and carbs on the brain, with a 4-week plan to achieve optimum health.
Member Price: $20 Non-Member Price: $25

SHOWgrins - Women Who Walk on Water
by Betty Collier

Betty brings into the limelight the cases of Cathy Taylor, Estrella Bibbey, Judy Kang, Lynn Petruzzi, and Paula Beth Sosin. These five extraordinary women opened their hearts and shared their Sjögren's stories with the world for everyone to understand more about this chronic illness to help increase awareness and expedite new diagnoses and treatment options.
Member Price: $13 Non-Member Price: $16

This book can be purchased using the order form below, online at www.sjogrens.org/ssfstore or by contacting the Sjögren's Syndrome Foundation office at 800-475-6473.

	Non-Member Price	Member Price	Qty	Amount
The Sjögren's Book, 4th Edition: *by Daniel J. Wallace, MD*	$32.00	$28.00		
The Sjögren's Syndrome Survival Guide: *by Teri P. Rumpf, Phd and Katherine Morland Hammitt*	$20.00	$17.00		
The Immune System Recovery Plan: A Doctor's 4-Step Program to Treat Autoimmune Disease: *by Susan Blum, MD, MPH (Author), Mark Hyman, MD (Foreword), Michele Bender (Contributor)*	$25.00	$22.00		
Grain Brain: *by David Perlmutter, MD (author) and Kristin Loberg (contributor)*	$25.00	$20.00		
SHOWgrins - Women Who Walk on Water: *by Betty Collier*	$26.00	$13.00		
Maryland Residents add 6% sales tax				
Shipping and Handling: U.S. Mail: $5 for first item + $3 for each additional item Canada: $14 for first item + $3 for each additional item Overseas: $22 for first item + $3 for each additional item				
Total Amount				

Mail to SSF, BB&T Bank · PO Box 890612 · Charlotte, NC 28289-0612 or Fax to: 301-530-4415

Name _____

Address _____

City _____ State _____ Zip _____

Telephone _____ E-Mail _____

❑ Enclosed is a check or money order (in U.S. funds only, drawn on a U.S. bank, net of all bank charges) payable to SSF.

❑ MasterCard ❑ VISA ❑ Discover ❑ AmEx Card Number _____ Exp. Date _____

Signature _____ CC Security Code _____

Save The Date

2017 NATIONAL PATIENT CONFERENCE

This spring we invite you to join with fellow Sjögren's patients, their families, medical experts, and product exhibitors and attend our 2017 National Patient Conference at the Crowne Plaza Philadelphia/Cherry Hill hotel.

Sjögren's is not the same for every person diagnosed, which is why educating yourself on the most up-to-date information and treatment options is so important. Attending the SSF National Patient Conference is one way you can gain information from many different sources while also meeting fellow patients.

This year's Conference will include opportunities to:

- Learn from national Sjögren's experts, researchers and SSF staff
- Find new products and receive free samples in our exhibitor hall
- Share with your fellow patients
- Browse Sjögren's resources at the SSF Book Table

We encourage you to take this opportunity to gain an understanding of all the key aspects of Sjögren's. This two-day educational experience will give you the tools to take control of your health and learn how to manage and understand your Sjögren's symptoms and complications.

Watch for your Conference brochure coming in January or visit www.sjogrens.org to see updated Conference information.

2017
National Patient Conference
March 31 – April 1
Crowne Plaza
Philadelphia/Cherry Hill
2349 West Marlton Pike
Cherry Hill, New Jersey

Presentation topics will include:

- Sjögren's Overview
- Pulmonary Issues and Sjögren's
- Oral Manifestations of Sjögren's
- Pediatric Sjögren's
- Ocular Manifestations of Sjögren's
- Men with Sjögren's
- Social Security Disability for Sjögren's
- And More To Be Announced!

The Moisture Seekers
Sjögren's Syndrome Foundation Inc.
6707 Democracy Blvd., Ste 325
Bethesda, MD 20817
Phone: 800-475-6473
Fax: 301-530-4415

If you would like to receive this newsletter but are not currently an SSF Member, please contact us! 800-475-6473

Every Santa has His Secret.

www.sjogrens.org/shopforsjogrens

Shop and support the SSF

Shop for Sjögren's

Simplify your holiday shopping by using these links and having your gift delivered directly to you, while also supporting the SSF!

Shop to benefit the Sjögren's Syndrome Foundation

The Sjögren's Syndrome Foundation has partnered with online retailers who will donate a portion of your purchase to the SSF, so shopping online is now an easy way to contribute to Sjögren's!

Just visit **www.sjogrens.org/shopforsjogrens** and click through the links provided so that your purchases will benefit the SSF. Once you select the "Sjögren's Syndrome Foundation" as your charity of choice, whenever you return to these retailers and log in, any shopping you do will benefit the SSF It's that simple!

Some of our partners include:

amazon amazonsmile
You shop. Amazon gives.

Amazon is one of the most popular online stores in the world, offering a wide variety of products.

iGive.com

iGive.com offers exclusive deals with over 700 brand name stores you know and love, with a specified percentage of each purchase coming back to the SSF.