

# The Moisture Seekers

Sjögren's  
Syndrome  
SF  
Foundation

[www.sjogrens.org](http://www.sjogrens.org)

Volume 30, Issue 10

November 2012

## Sparking Innovation

### SSF Research Program to Emphasize Innovation and Novel Diagnostics

### 2012 Research Grant Recipients Announced

*by Katherine Morland Hammitt, MA, SSF Vice President of Research*

As the Sjögren's Syndrome Foundation (SSF) prepares for 2013 research grant applications to arrive after the New Year, the Foundation's Research Review Committee has set innovation and exploration into novel diagnostics as top priorities. "We have to spark new ideas in Sjögren's for significant progress to take place, so innovation is crucial," says Steven Taylor, SSF CEO. "And better diagnostics will help all patients – those who will benefit by obtaining a diagnosis much more quickly than in the past and those who are already diagnosed since our efforts will lead to greater awareness among the medical community." While a proposed research project does not have to focus on novel diagnostics, the SSF is encouraging this area as part of its Five-Year Breakthrough Goal "To shorten the time to diagnose Sjögren's by 50% in five years."

All current and past SSF grantees can be viewed at [www.sjogrens.org/research](http://www.sjogrens.org/research).

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"Research Awards" continued from page 1 ▼

### 2012 Research Grant Awards

As the SSF research grants program evolved this year to solely focus on funding innovative concepts, the SSF awarded six highly selective research grants. The SSF received more than double the number of applications this year compared to the year before, and research reviewers remarked on the exceptionally high-quality proposals received, making the final selection extremely difficult. "While we are very grateful to be able to fund as many research projects as we do, so many excellent ideas go unfunded unless and until the Foundation can substantially increase gifts for its research program. We urge our members and all readers to donate to this area that is so critical to our patients' future by visiting our website at [www.sjogrens.org](http://www.sjogrens.org) or calling 1-800-475-6473," says Denise Faustman, MD, PhD, SSF Medical and Scientific Advisory Board Chair. The SSF wishes to acknowledge two family foundations for their magnanimous support: the Leach Family for providing two years of support for SSF Innovative Concept Grantee, Michael J. Passineau, PhD, and the Galewood Foundation for its support of all SSF research and professional programs.

The Foundation is stressing innovation for all grants to ensure that the limited funding it has to give researchers is used to encourage new investigators to explore novel concepts and provide the data necessary for obtaining additional and major funding from government agencies or other funding sources. Grants were awarded in various amounts ranging from \$15,000 to \$50,000 for up to two years, depending on satisfactory progress.

New grants include investigations into cell biology and the role of microRNAs, novel treatment targets for dry eye, and a potential pathway to restore salivary gland function. This year's grantees are:

### SSF Innovative Concept Grant



#### Gene Therapy for Targeting Salivary Gland Treatment

Michael J. Passineau, PhD

*Allegheny-Singer Research Institute, West Penn Allegheny Health System, Pittsburgh, Pennsylvania*

"Ultrasound-assisted gene transfer of IL17R:Fc to the salivary glands as a gene therapy for Sjögren's syndrome"

Dr. Passineau was awarded a second-year renewal of his SSF Innovative Concept Grant in 2012. He is focusing on gene therapy as a therapeutic strategy for Sjögren's (SS). Gene therapy is a particularly exciting approach to this

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I'm not shy about  
speaking my mind...

I was putting artificial tears in my  
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(Cyclosporine Ophthalmic Emulsion) 0.05%**

RESTASIS® helps increase your eyes' natural ability to produce tears, which may be reduced by inflammation due to Chronic Dry Eye. RESTASIS® Ophthalmic Emulsion did not increase tear production in patients using anti-inflammatory eye drops or tear duct plugs.

**Important Safety Information:**

RESTASIS® Ophthalmic Emulsion should not be used by patients with active eye infections and has not been studied in patients with a history of herpes viral infections of the eye. RESTASIS® should not be used while wearing contact lenses. If contact lenses are worn, they should be removed prior to use. The most common side effect is a temporary burning sensation. Other side effects include eye redness, discharge, watery eyes, eye pain, foreign body sensation, itching, stinging, and blurred vision.

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Amanda Serra is an actual RESTASIS® patient and is compensated for appearing in this advertisement.

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RESTASIS® ophthalmic emulsion is indicated to increase tear production in patients whose tear production is presumed to be suppressed due to ocular inflammation associated with keratoconjunctivitis sicca. Increased tear production was not seen in patients currently taking topical anti-inflammatory drugs or using punctal plugs.

### CONTRAINDICATIONS

RESTASIS® is contraindicated in patients with active ocular infections and in patients with known or suspected hypersensitivity to any of the ingredients in the formulation.

### WARNING

RESTASIS® ophthalmic emulsion has not been studied in patients with a history of herpes keratitis.

### PRECAUTIONS

General: For ophthalmic use only.

#### Information for Patients

The emulsion from one individual single-use vial is to be used immediately after opening for administration to one or both eyes, and the remaining contents should be discarded immediately after administration.

Do not allow the tip of the vial to touch the eye or any surface, as this may contaminate the emulsion.

RESTASIS® should not be administered while wearing contact lenses. Patients with decreased tear production typically should not wear contact lenses. If contact lenses are worn, they should be removed prior to the administration of the emulsion. Lenses may be reinserted 15 minutes following administration of RESTASIS® ophthalmic emulsion.

#### Carcinogenesis, Mutagenesis, and Impairment of Fertility

Systemic carcinogenicity studies were carried out in male and female mice and rats. In the 78-week oral (diet) mouse study, at doses of 1, 4, and 16 mg/kg/day, evidence of a statistically significant trend was found for lymphocytic lymphomas in females, and the incidence of hepatocellular carcinomas in mid-dose males significantly exceeded the control value.

In the 24-month oral (diet) rat study, conducted at 0.5, 2, and 8 mg/kg/day, pancreatic islet cell adenomas significantly exceeded the control rate in the low dose level. The hepatocellular carcinomas and pancreatic islet cell adenomas were not dose related. The low doses in mice and rats are approximately 1000 and 500 times greater, respectively, than the daily human dose of one drop (28 µL) of 0.05% RESTASIS® BID into each eye of a 60 kg person (0.001 mg/kg/day), assuming that the entire dose is absorbed.

Cyclosporine has not been found mutagenic/genotoxic in the Ames Test, the V79-HGPRT Test, the micronucleus test in mice and Chinese hamsters, the chromosome-aberration tests in Chinese hamster bone-marrow, the mouse dominant lethal assay, and the DNA-repair test in sperm from treated mice. A study analyzing sister chromatid exchange (SCE) induction by cyclosporine using human lymphocytes *in vitro* gave indication of a positive effect (i.e., induction of SCE).

No impairment in fertility was demonstrated in studies in male and female rats receiving oral doses of cyclosporine up to 15 mg/kg/day (approximately 15,000 times the human daily dose of 0.001 mg/kg/day) for 9 weeks (male) and 2 weeks (female) prior to mating.

#### Pregnancy-Teratogenic Effects

Pregnancy category C.

**Teratogenic Effects:** No evidence of teratogenicity was observed in rats or rabbits receiving oral doses of cyclosporine up to 300 mg/kg/day during organogenesis. These doses in rats and rabbits are approximately 300,000 times greater than the daily human dose of one drop (28 µL) 0.05% RESTASIS® BID into each eye of a 60 kg person (0.001 mg/kg/day), assuming that the entire dose is absorbed.

**Non-Teratogenic Effects:** Adverse effects were seen in reproduction studies in rats and rabbits only at dose levels toxic to dams. At toxic doses (rats at 30 mg/kg/day and rabbits at 100 mg/kg/day), cyclosporine oral solution, USP, was embryo- and fetotoxic as indicated by increased pre- and postnatal mortality and reduced fetal weight together with related skeletal retardations. These doses are 30,000 and 100,000 times greater, respectively than the daily human dose of one-drop (28 µL) of 0.05% RESTASIS® BID into each eye of a 60 kg person (0.001 mg/kg/day), assuming that the entire dose is absorbed. No evidence of embryofetal toxicity was observed in rats or rabbits receiving cyclosporine at oral doses up to 17 mg/kg/day or 30 mg/kg/day, respectively, during organogenesis. These doses in rats and rabbits are approximately 17,000 and 30,000 times greater, respectively, than the daily human dose.

Offspring of rats receiving a 45 mg/kg/day oral dose of cyclosporine from Day 15 of pregnancy until Day 21 post partum, a maternally toxic level, exhibited an increase in postnatal mortality; this dose is 45,000 times greater than the daily human topical dose, 0.001 mg/kg/day, assuming that the entire dose is absorbed. No adverse events were observed at oral doses up to 15 mg/kg/day (15,000 times greater than the daily human dose).

There are no adequate and well-controlled studies of RESTASIS® in pregnant women. RESTASIS® should be administered to a pregnant woman only if clearly needed.

#### Nursing Mothers

Cyclosporine is known to be excreted in human milk following systemic administration but excretion in human milk after topical treatment has not been investigated. Although blood concentrations are undetectable after topical administration of RESTASIS® ophthalmic emulsion, caution should be exercised when RESTASIS® is administered to a nursing woman.

#### Pediatric Use

The safety and efficacy of RESTASIS® ophthalmic emulsion have not been established in pediatric patients below the age of 16.

#### Geriatric Use

No overall difference in safety or effectiveness has been observed between elderly and younger patients.

#### ADVERSE REACTIONS

The most common adverse event following the use of RESTASIS® was ocular burning (17%).

Other events reported in 1% to 5% of patients included conjunctival hyperemia, discharge, epiphora, eye pain, foreign body sensation, pruritus, stinging, and visual disturbance (most often blurring).

#### Rx Only



Based on package insert 71876US14B Revised February 2010

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# I Stood Up...

Joan Manny — Office Volunteer



As a Sjögren's patient, Joan is willing to do whatever is needed to help the SSF reach our mission of increasing awareness and helping patients. With a medical background, Joan has been involved with the SSF from the beginning as one of the first national board members when board meetings were held at the dining room table of Elaine Harris, who founded the Sjögren's Syndrome Foundation. Joan then volunteered to serve as a local support group leader for over ten years and was able to help countless patients as they were diagnosed with Sjögren's. Now retired as a support group leader, she continues to stand up for Sjögren's by volunteering weekly at the SSF office to help with office projects and assist staff.

If you've received a support group meeting notice in the mail, an invitation to one of our *Sip for Sjögren's* events, or attended one of the SSF's National Patient Conferences and picked up a binder full of materials – then you are familiar with Joan's work! With a smile on her face, Joan regularly comes to our office to help with whatever is needed.

As a national organization who receives hundreds of calls a day, assists with 65 support groups, educates patients and healthcare providers as well as produces two Sjögren's newsletters – the SSF staff appreciates all that Joan and all of our volunteers around the country do to assist us! With only 8 full-time staff, the SSF is only successful because of our volunteers!

And volunteers will be the reason we achieve our *5-Year Breakthrough Goal*, "to shorten the time to diagnose Sjögren's by 50% in 5 years." From sharing your personal story to volunteering to serve as an *Awareness Ambassador* – every voice makes a difference.

As Joan shared with the SSF, it took her over ten years to receive her diagnosis many years ago and she hopes

that no one has to suffer that long while awaiting a proper diagnosis. Joan's symptoms are more manageable now than when she was first diagnosed, and she is thankful for all the SSF does to help patients. As she just shared recently, "it is remarkable to see how much more information is known about Sjögren's today compared to when I first became involved in the organization."

Thanks Joan for standing up for Sjögren's!

How will you stand up? Call the SSF today at 800-475-6473 to learn about ways you can help! ■



How will you Stand Up?

*"Research Awards" continued from page 2 ▼*

difficult disease because it can directly target the salivary gland with a gene drug, avoiding the systemic toxicity often seen with traditional pharmaceuticals. To overcome problems discovered previously with the use of viral vectors, Dr. Passineau is testing an innovative ultrasound-assisted method of gene drug delivery.

Dr. Passineau has been invited to present his latest findings at the American Association of Dental Research Annual Fall Symposium in November 2012. The SSF grant award also has led to the expansion of a planned lupus center to include Sjögren's in his institute's health system.

### SSF Research Grants Awarded



#### Potential Targets for Dry Eye Therapy

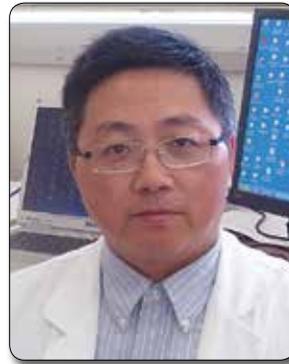
Karsten Gronert, PhD

*School of Optometry, Vision Science, Berkeley, California*

*"Amplification of Intrinsic and Protective Ocular Surface Lipid Circuits as Novel Treatment Targets"*

Dr. Gronert was awarded the first year of a potential two-year SSF grant. SSF research reviewers commented that Dr. Gronert's research project is highly innovative, will help elucidate dry eye pathogenesis in Sjögren's and has a good chance of leading to new therapeutics. They point out that the use of human tear samples will facilitate correlation of animal model findings to clinical Sjögren's.

It is now recognized that essential and frequent inflammatory and immune responses require counter-regulatory circuits that ensure their healthy resolution. The strategy of developing "resolution agonists" that amplify these intrinsic circuits is a new frontier in the battle against chronic inflammatory diseases. Dr. Gronert's group has identified lipid circuits in the eye that drive healthy inflammatory/immune responses and wound healing. These protective lipid circuits are highly expressed in human/mouse corneas and mediate the protective actions of fish oils in the retina. Preliminary data demonstrates that females have a sex-specific inflammatory response, increased corneal injury and delayed wound healing. This estrogen-driven response correlates with reduced expression/activity of the protective lipid circuit in the cornea. Three specific aims will define the roles of this circuit in limiting dry eye-induced disease in the cornea and lacrimal gland and lead to better treatment and understanding of dry eye in Sjögren's.



#### Novel Molecular Mechanisms Underlying SS Pathogenesis

Shen S. Hu, PhD

*UCLA School of Dentistry, Los Angeles, California*

*"Interferon-γ induces immunoproteasome in human salivary gland cells"*

Dr. Hu was awarded a second-year renewal grant in 2012. By studying the molecular and cellular mechanisms involved in Sjögren's, Dr. Hu's project will help us understand the cause and processes involved in this disease. The more we know about the events that lead to Sjögren's, the more likely we can develop new therapeutic strategies for patients. Dr. Hu is focusing on the role of interferon-gamma and immunoproteasome and how proteasome inhibitors might be used for treatment of Sjögren's.



#### Novel Cellular Pathway for Sjögren's Pathogenesis

Maria Kukuruzinska, PhD

*Department of Molecular & Cell Biology, Boston University, Boston, Massachusetts*

*"Functional Role of the Hippo Pathway in Sjögren's Syndrome"*

The SSF granted Dr. Kukuruzinska the first of a potential two-year research award for her proposal to examine an under-explored area of pathogenesis in Sjögren's. SSF research reviewers praised this project highly for its innovation and significance to the field of Sjögren's. If proven correct, Dr. Kukuruzinska's hypothesis could serve as a basis for a number of additional funded studies as well as identify new targets for therapeutic intervention.

Increasing evidence indicates that salivary secretory dysfunction might precede or trigger glandular destruction. Dr. Kukuruzinska's studies to-date have identified cell-cell adhesion and loss of cell shape as features of SS. Her lab's most recent work suggests that components of the Hippo signaling pathway, a recently discovered tumor suppressor pathway with key roles in tissue growth, regeneration and organ size, is dysregulated in human specimens of SS. Since Hippo signaling interacts

with components of cell-cell adhesion and other cellular processes, she will examine whether dysregulation of the Hippo pathway is one of the underlying causes of SS.



### Identifying an Early Diagnostic Marker in Early Stage Sjögren's

Melinda Larsen, PhD

*The Research Foundation of SUNY, University at Albany, Department of Biological Sciences, Albany, New York*

"Application of Multiplexing Technology to the

Study of Sjögren's Syndrome"

Dr. Larsen was awarded a second-year renewal grant in 2012 to investigate new diagnostic targets for early stage disease in Sjögren's. Several protein targets have been identified that change early in disease development, but the cell types that produce these targets and how they cause disease have never been examined before Dr. Larsen's investigation. She specifically is looking into whether

a specific pathway called rac1 is dysregulated and might be an early event in disease initiation and, if so, could lead to an early diagnostic marker for Sjögren's. Rac1 is part of a family of cellular signaling involving G-couple protein receptors. Her group is using novel multiplexing technology to identify this and other potential diagnostic targets.

Following quantitative analysis during the second year of her grant, Dr. Larsen plans to submit the results for publication and present her work during an upcoming professional conference.



### Restoring Salivary Gland Function by Blocking Type 1 Interferons

Seshagiri Rao Nandula,  
Postdoctoral Fellow

*School of Dentistry, University of Minnesota, Minneapolis, Minnesota*

"Role of type 1 interferon signaling in the development of Sjögren's syndrome"

*continued page 12 ▼*

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# November Breakthrough Bullet:



The Foundation plans to achieve its *5-Year Breakthrough Goal* by focusing on three specific action items:

- Increasing public awareness
- Increasing involvement from our friends and partners
- Increasing education and awareness among healthcare professionals

It's often easy for members to see the progress we are making with the first action item because we are holding many more awareness events, but harder to recognize what we're accomplishing with the second two. For November's Breakthrough Bullet, we want to tell you about one of the ways we are accomplishing our third action item: "Increasing education and awareness among healthcare professionals."

A common frustration of Sjögren's is that many medical professionals are neither aware of what Sjögren's is or fully aware of all the different ways Sjögren's can be manifested in the body. We know that it takes on average 4.7 years to get diagnosed with Sjögren's, and so we need to educate those healthcare providers who can help to speed up that diagnosis.

This year, the Foundation staff worked with our SSF Board of Directors (comprised of patients and physicians) to create a detailed plan to increase our visibility at health-

care professional conferences – especially those specialties that see symptoms long before patients are diagnosed.

**This year, we made it a priority to attend and present at 4 professional conferences:**

**ACR (American College of Rheumatology)**

**CDA (California Dental Association)**

**FDA (Florida Dental Association)**

**AOA (American Optometric Association)**

Every SSF presentation was attended by healthcare professionals who wanted to learn more! These conferences provided an ideal venue for the Foundation to talk to physicians and dentists about Sjögren's symptoms and educate them as to why it is important to look for and diagnose Sjögren's. Although dry eye and dry mouth are the most common reason people are diagnosed, we need these healthcare providers to understand that correctly diagnosing patients with Sjögren's is critical so that they can be monitored for serious manifestations.

By increasing awareness about Sjögren's, we will shorten the time it takes to diagnose Sjögren's. Join us in our effort by volunteering to increase awareness and also asking your physician if they receive our *Sjogren's Quarterly* (healthcare professional newsletter) or want free brochures for their office. Have them contact the SSF at 800-475-6473. ■

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### Numoisyn Liquid

#### Prescribing Information

**Ingredients:** Water, sorbitol, linseed (flaxseed) extract, *Chondrus crispus*, methylparaben, sodium benzoate, potassium sorbate, dipotassium phosphate, propylparaben.

**How Supplied:** 30 mL per bottle or 300 mL per bottle.

**Therapeutic Group:** Numoisyn Liquid is an oral solution formulated for the relief of chronic and temporary xerostomia (dry mouth), which may be a result of disease, medication, oncology therapy, stress, or aging.

**Indications:** Numoisyn Liquid is indicated for the treatment of symptoms of dry mouth. Numoisyn Liquid relieves the symptoms of dry mouth by enhancing swallowing, improving speech mechanics, and lubricating the oral cavity like natural saliva. Numoisyn Liquid may be used to replace natural saliva when salivary glands are damaged or not functioning. The viscosity is similar to that of natural saliva.

**Contraindications:** Numoisyn Liquid are contraindicated in patients with a known history of hypersensitivity to any of the ingredients.

**Special Precautions for Use:** As Numoisyn Liquid contains linseed (flaxseed) extract, patients with irritable bowel syndrome or diverticular disease or those on a high linseed diet may experience abdominal discomfort.

**Warning:** Federal law restricts Numoisyn Liquid to sale by, or on the order of, a physician or properly licensed practitioner.

**Interactions:** There are no known interactions between Numoisyn Liquid and any medicinal or other products.

**Directions for Use:** Shake bottle well. Take 2 mL (about 1/2 teaspoon) of Numoisyn Liquid and rinse around in the mouth before swallowing. Use as needed.

**Side Effects:** Patients may experience difficulty in swallowing, altered speech, and changes in taste. If side effects persist or become severe, patients should contact a physician.

**Storage:** Store at room temperature. Do not refrigerate. Use within 3 months of first opening. KEEP OUT OF REACH OF CHILDREN.

**Please Note:** Numoisyn Liquid is translucent and may contain some natural particles that do not affect the quality of the product.

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### Numoisyn™ Liquid

### Numoisyn Lozenges

#### Prescribing Information

**Ingredients:** Sorbitol (0.3 g per lozenge), polyethylene glycol, malic acid, sodium citrate, calcium phosphate dibasic, hydrogenated cottonseed oil, citric acid, magnesium stearate, and silicon dioxide.

**Pharmaceutical Form:** Oral lozenge

**Contents:** 100 lozenges per bottle. Net weight of 40 g (0.4 g per lozenge).

**Therapeutic Group:** Numoisyn Lozenges are oral lozenges formulated to promote lubrication of oral mucosa that may be dry due to a variety of circumstances, including medication, chemotherapy or radiotherapy, Sjögren's syndrome, or oral inflammation.

**Indications:** Numoisyn Lozenges are indicated for the treatment of xerostomia (dry mouth). Numoisyn Lozenges provide temporary relief of dry mouth due to damaged salivary function. Numoisyn Lozenges are formulated to support the natural protection of teeth provided by saliva so that no damage occurs to teeth with repeated use of the lozenges.

**Contraindications:** Numoisyn Lozenges are contraindicated in patients with fructose intolerance or a known history of hypersensitivity to any of the ingredients.

**Warning:** Federal law restricts Numoisyn Lozenges to sale by, or on the order of, a physician or properly licensed practitioner.

**Interactions:** There are no known interactions between Numoisyn Lozenges and any medicinal or other products.

**Directions for Use:** Let one Numoisyn Lozenge dissolve slowly in the mouth when needed. To obtain optimal effect, move the lozenge around in the mouth. Repeat as necessary. Do not exceed 16 lozenges in 24 hours.

**Side Effects:** Excessive consumption can cause minor digestive problems.

**Storage:** Store at room temperature. KEEP OUT OF REACH OF CHILDREN.

**Overdose:** No overdoses have been reported to date.

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### Numoisyn™ Lozenges



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# Rheumatoid Arthritis and Sjögren's Syndrome

*by Richard Brasington, MD*

**R**heumatoid arthritis (RA) and Sjögren's syndrome (SS) are both common autoimmune diseases. Because they often may occur together, physicians should be sure to look for evidence of Sjögren's in their RA patients!



# Patient Education Sheet

## **Rheumatoid Arthritis and Sjögren's Syndrome**

*The SSF thanks Richard Brasington, MD for authoring this Patient Education Sheet.  
Dr. Brasington is Professor of Medicine and Rheumatology Fellowship Program  
Director at Washington University School of Medicine, St. Louis, Missouri.*

- Rheumatoid arthritis (RA) and Sjögren's syndrome (SS) are both common autoimmune diseases. Because they often may occur together, physicians should be sure to look for evidence of Sjögren's in their RA patients!
- RA is a form of systemic inflammatory arthritis in which many joints, especially the small joints of the hands and feet, become swollen and stiff. If not treated effectively, RA can lead to permanent joint damage, disability and even a shortened life span.
- Sjögren's is another systemic inflammatory disease, typically causing dry eyes and dry mouth. Inflammation of "exocrine" glands leads to diminished tear and/or saliva production.
- Both RA and SS can involve other organs. For example, RA can involve inflammation of nerves and the lining of the heart. SS can cause inflammation of the peripheral and central nervous systems.
- We do not understand the cause of either condition. Both RA and SS are "autoimmune diseases" in which uncontrolled activity of the immune system becomes misdirected toward our own tissues rather than protecting us from infectious organisms.
- We believe that some people inherit the tendency to develop RA and Sjögren's and that the diseases develop when something in the environment, perhaps an infection, stimulates the immune system to react. The immune system becomes unrestrained and runs amok, producing damage to our own tissues and organs.
- In many cases, the diagnosis of RA and SS is straightforward: RA patients have swollen painful joints, and SS patients have dry eyes and mouth. However, sometimes the distinction is not so clear. For example, a patient with primary SS might have joint pain without swelling. Primary SS can also look very much like systemic lupus erythematosus (SLE), another systemic autoimmune disease.
- The diagnosis of both conditions is considered a "clinical diagnosis," meaning that recognizing a certain pattern of symptoms and clinical findings leads to the diagnosis.
- Laboratory tests are often helpful. For example, about 80% of RA patients have a positive blood test for "rheumatoid factor (RF)." Over half of SS patients are positive for "SSA" or "anti-Ro." But this is not as simple as it might seem. Patients with primary SS often have a positive RF test without having RA, and patients with RA and secondary SS may have a positive SSA test. Test results must be interpreted in the context of all other symptoms and findings in an individual patient.
- SS often causes very distressing dryness in the mouth, eyes, breathing tubes and vagina which can often be effectively treated with local lubricating agents and systemic medications. However, SS can sometimes have very serious complications: the risk of developing lymphoma is increased 40-fold in SS patients.
- Likewise, although the major problem in RA is joint pain and fatigue, severe RA which is not effectively treated shortens the life expectancy considerably, especially due to the increased risk of heart disease.
- Effective treatment is available for both RA and SS. Each person requires an individualized treatment plan based on the severity of his/her condition and specific problems. A rheumatologist is the physician most likely to be familiar with these conditions, although primary care doctors, ophthalmologists, orthopedists, dermatologists and other specialists have an important role to play.

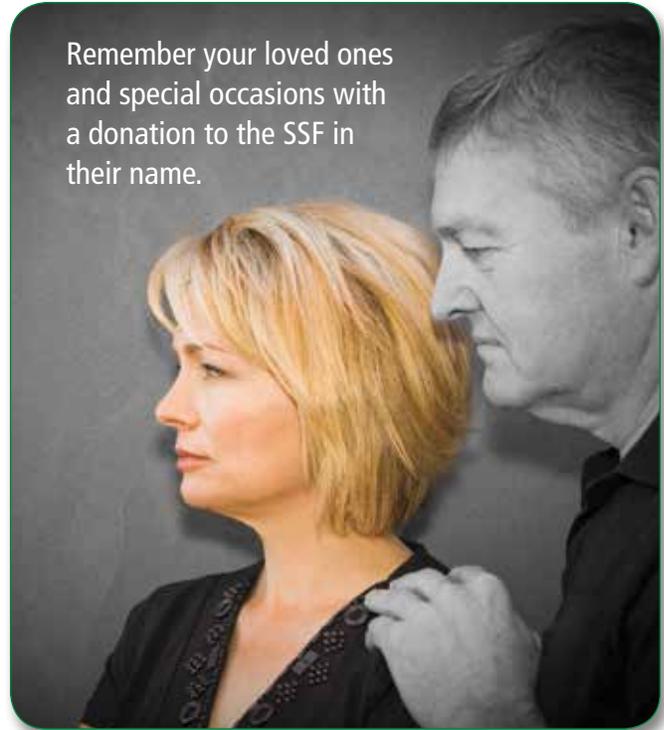
For more information on Sjögren's syndrome contact the Sjögren's Syndrome Foundation at:  
6707 Democracy Blvd, Suite 325, Bethesda, MD 20817 • 800-475-6473 • [www.sjogrens.org](http://www.sjogrens.org) • [ssf@sjogrens.org](mailto:ssf@sjogrens.org).

*"Research Awards" continued from page 7 ▼*

Dr. Nandula was praised by SSF research reviewers for submitting a highly innovative project that could lead to new therapeutics if the findings support the theory that blocking type 1 interferon signaling can restore salivary gland function. He was awarded the first of a possible two-year SSF research grant this year.

It is widely suggested that a virus or bacteria may trigger the immune system which leads to an attack of the glands. This infection leads to the production of type 1 interferons which play a key role in the pathogenesis of Sjögren's. Dr. Nandula's group is proposing to block the type 1 interferon signaling as a therapeutic option to this disease in a mouse model. By blocking type 1 interferon signaling, he expects the mice to restore the salivary gland function and to resolve the infiltration within the gland. Moreover, the local delivery of the proposed molecules (siRNAs) within the salivary gland is more advantageous than a systemic delivery, which often causes toxic effects on other organs. He hopes the study will lead to a new therapeutic option for Sjögren's patients. ■

Remember your loved ones and special occasions with a donation to the SSF in their name.



## IT'S TIME

### United Way • Combined Federal Campaign • State Payroll Deduction

Each fall your local United Way, Combined Federal Campaign, state employee, and private employer payroll deduction campaigns begin. We hope you will remember the Sjögren's Syndrome Foundation when choosing where to allocate your donation.

If we are not listed on the contribution form, you usually may write in the Sjögren's Syndrome Foundation.

Tell your co-workers, friends, and family members how important it is to choose and write in the Sjögren's Syndrome Foundation on their campaign form, too.

If your employers will not allow you to write in the Sjögren's Syndrome Foundation, remind them that we are a national non-profit 501(C3) organization and qualify for most payroll deduction campaigns. If they

need more information, please contact the Foundation at 800-475-6473 ext. 207 and ask for Ben Basloe.

#### **Just think – every dollar counts.**

Last year alone – thanks to those who chose to give through their employer's payroll campaign – the Sjögren's Syndrome Foundation was able to increase its Research and Awareness commitments.

Remember, the Foundation has received the:





**NEW**

## **NeutraSal<sup>®</sup> Sjögren's Syndrome Support Kit**

### **Containing:**

- **NeutraSal<sup>®</sup>**
- **Omega-3 with Vitamin E Supplement\* for Dry Eyes and Dry Mouth comfort**
- **Dry Mouth Gum with Xylitol**

\*Compare to the ingredients in Thera Tears Nutrition (Advanced Vision Research, Inc.)

**Complimentary with  
Every NeutraSal<sup>®</sup>  
Prescription**

**Proudly Supports**



**For additional  
information, visit  
[www.neutrasal.com](http://www.neutrasal.com)  
or call 866-963-8881**

The symptoms of Sjögren's Syndrome can have devastating effects. Oral dryness can result in severe and chronic dental decay, fissures, infections, and difficulty in speaking and swallowing.

Introducing  
**NeutraSal<sup>®</sup>**  
(Supersaturated Calcium Phosphate Rinse)

### **What is NeutraSal<sup>®</sup>**

NeutraSal<sup>®</sup> is an advanced electrolyte solution indicated in the treatment of dry mouth (xerostomia) in patients with Sjögren's Syndrome. NeutraSal<sup>®</sup> consists of single use packets of dissolving powders that when mixed with water creates an oral rinse supersaturated with calcium, phosphate and bicarbonate ions.

- 💧 Calcium and phosphate ions have been shown to aid in the the prevention of dental caries (cavities) and promote the remineralization of the teeth in normal saliva
- 💧 Sodium bicarbonate ions reduce the acidity of the saliva in the mouth and break up accumulating mucus
- 💧 The pH of NeutraSal<sup>®</sup> is similar to normal saliva which may protect the mouth against potential opportunistic fungal (oral thrush) and bacterial infections
- 💧 Clinically proven to relieve the symptoms of dry mouth in Sjögren's Syndrome patients with no reported side effects or drug to drug interactions

### **NO PATIENT LEFT BEHIND PROGRAM**

**The No Patient Left Behind Program is designed to provide access to NeutraSal<sup>®</sup> treatment for all patients regardless of their insurance coverage and includes no out-of-pocket costs for patients. NeutraSal<sup>®</sup> is a prescription only product. Ask your physician.**

**INVADO  
PHARMACEUTICALS**

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## Team Sjögren's – Goes Turkey (again)!



*Turkey Trots Across America* was such a success last year that the SSF has decided to once again ask you to step up and join us this November!

We are hoping to have over 100 runners wearing *Team Sjögren's* shirts on Thanksgiving Day as they run in their local hometown *Turkey Trot* races. *Turkey Trot* races happen all over the U.S. and can range from a 1-mile fun run to a 5K race to even a 10K distance. It doesn't matter which one you do – it's your choice – but this is a great way to increase awareness and help the SSF raise crucial funds for Sjögren's research and education.

You can run yourself or organize a team to run with you – either way, you will be helping us to raise awareness.

### So here is how it works:

Visit [www.firstgiving.com/ssf](http://www.firstgiving.com/ssf) and click on the *Turkey Trots Across America* page. On that page you will find all the information for how to set up your own personalized webpage, how to recruit a team and how to receive a *Team Sjögren's* shirt to wear on race day!

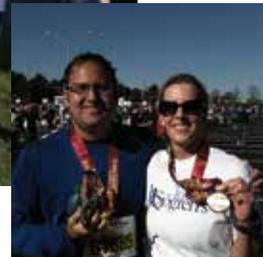
Once you create your webpage, we will contact you to send you an informational pack with ideas for recruiting a team, fundraising and how to educate your local community.

We encourage you to recruit friends and family to

join you at the *Turkey Trot* but if you can't find anyone to join you, then run or walk yourself! What a great way to spend the day of "thanks" – Thanksgiving – by going out and raising awareness for Sjögren's.

If you have any questions about *Turkey Trots Across America* or want help in setting up your webpage, contact Ben Basloe at the Sjögren's Syndrome Foundation at 301-530-4420, ext. 207.

Thanks for standing up and going turkey with *Team Sjögren's*!



## Is Dry Eye Disease making your eyes burn?

Find the experts at [AllAboutDryEye.com](http://AllAboutDryEye.com)

Millions suffer from Dry Eye Disease, and yet the vast majority are not receiving the care they need. The first step toward relief from dry eye symptoms is talking to an expert doctor. You'll be cared for by certified specialists in tear testing at an Accredited Dry Eye Center. These centers use the TearLab® Osmolarity System, the most advanced technology to diagnose and manage Dry Eye Disease. For more information about Dry Eye Disease, or to locate an Accredited Dry Eye Center expert near you, visit us at

**AllAboutDryEye.com**



## in honor

**In Honor of Ginger Smith**  
Jason Smith

**In Honor of Lois Peach**  
Sharon Dutcher

**In Honor of Marcy Levine's Birthday**  
Braden & Stephanie Levine  
Suesan & Barr Taylor

**In Honor of Sarah Nelson & Dan McAvoy's Wedding**  
Betsey & Neil Cullen



Sjögren's Syndrome Foundation

# *Legacy of Hope*



If you would like to receive information on how you can *Leave a Legacy* to support the Sjögren's Syndrome Foundation's critical research initiatives or to support one of our many other programs, please contact Steven Taylor at 800-475-6473.

*Leave A Legacy –  
Remember Us in Your Will*



## in memoriam

**In Memory of Anna Venza**  
Beryl & Jennifer Hamilton  
Lisa Roxburgh & Christina LaBarca

**In Memory of Barb Tschida**  
Dean & Kelly Kubicek

**In Memory of Betty DeWitt**  
Paul DeWitt

**In Memory of Dean Soliday**  
Ed White & Bill Carlson

**In Memory of Debbie Reese Hebert**  
Libby Ewell Morgan

**In Memory of Genevieve O'Donnell**  
Craig & Linda Fontana-Smith  
Laura & Rick Glanz  
Mary Ann & Roger Grabowski  
Paul Grabowski & Melissa Ruiz  
The Lee Family  
Dorothy McLaughlin  
Arline Rubin

**In Memory of Helene Noble**  
Mary Denton  
Marion & Phyllis Hill  
Moses & Pat Lane  
Marilyn Salit

**In Memory of Herbert Alan King**  
Merry Jo, Jerry & Heidi Jo Hansen

**In Memory of Joan Swain**  
George, Mike, Jacqueline & Hanna Swain  
Ron, Justin, Grayson Kramer and Mallory Spotswood

**In Memory of Joanne C. Baker**  
Sidney Baker

**In Memory of Joyce Ann Stott**  
Ellen Flynn  
Lisa McEntire-McBride & Larry H. McBride  
Gena Moss

O.P. Elementary School Faculty & Staff  
Pacolet Hills Baptist, Polk Association  
Judith Smith  
SRHS Security Department

**In Memory of Leona Mathews**  
Helen Hayes and Tom & Lynette Branday  
Dorothy Reed  
Tom & Peggy Tierney

**In Memory of Sarah Pruitt Palmer**  
Lyndra Daniel  
Sam & Lin Kayser  
The Milby Family  
Shannon Miller  
Jeanette Robideaux

**In Memory of Dorothy Virginia Williams**  
Jerry Miller

**In Memory of Cynthia Williamson**  
Carol Watson

## *The Moisture Seekers*

Sjögren's Syndrome Foundation Inc.  
6707 Democracy Blvd., Ste 325  
Bethesda, MD 20817

Phone: 800-475-6473  
Fax: 301-530-4415

# This Holiday Season, Don't Forget... Shop for Sjögren's

## Shop to benefit the Sjögren's Syndrome Foundation

The Sjögren's Syndrome Foundation has partnered with online retailers who will donate a portion of the value 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](http://www.sjogrens.org/shopforsjogrens) and click through the links provided so that your purchases will benefit the SSF. Some of our partners include:

- ◆ **Amazon.com** is one of the most popular online stores in the world, offering a wide variety of products. Up to 8% of the value of your purchase is donated back to the Foundation.
- ◆ **Drugstore.com** is a leading online provider of health, beauty, vision, and pharmacy products. The website allows you to shop as if you were at your local drug store, and you can get instant savings while 10% of your purchase benefits the SSF.
- ◆ **Walmart.com** offers access to a wide assortment of products at their everyday low prices, with up to 4% of your purchases being donated to the SSF.
- ◆ **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. Be sure to select "Sjögren's Syndrome Foundation" as your charity of choice. Whenever you return to iGive.com and log in, any shopping you do will benefit the SSF! It's that simple.

Just go to  
[www.sjogrens.org/shopforsjogrens](http://www.sjogrens.org/shopforsjogrens)  
and start shopping!

