



WESTERN NEUROPATHY ASSOCIATION

February 2019
Issue 02
Volume 17

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Awarded by
GuideStar
November 13, 2018

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Neuropathy Hope

Hope through caring, support, research, education, and empowerment
A newsletter for members of Western Neuropathy Association (WNA)

NEW PAIN MEDICATION GOING TO HUMAN CLINICAL TRIALS

By Kathy Keatley-Garvey

PUBLISHED: December 22, 2018 at 2:54 pm | UPDATED: December 22, 2018 at 2:54 pm

Bev Anderson knew something was wrong.

“All my life I’ve known my feet didn’t have the strength and capability of most of the people I knew,” she recalled.

In high school, she began experiencing severe pain. Her family physician diagnosed her as having “growing pains.”

They weren’t.

It wasn’t until after she’d retired from her 34-year career as an elementary school teacher in Concord that a neurologist correctly diagnosed her— and her brother — as having peripheral neuropathy, a disease that afflicts more than 30 million people in the United States alone. Specifically, she and her brother inherited Hereditary Sensory Autonomic Neuropathy or HSN.

Anderson’s journey to learn more about peripheral neuropathy and to help others led her to co-found the Western Neuropathy Association in Auburn in 1998, and serve as its president for the last two decades.

Her 20-year journey of hope recently led to the University of California, Davis, where distinguished professor Bruce Hammock is researching an enzyme aimed at controlling acute and neuropathic pain.

Anderson and WNA treasurer Darrell O’Sullivan, a former lab manager at the UC Davis Medical Center, recently visited the Hammock lab to present a \$5000 check from the [WNA] association to EicOsis, the Davis company that Hammock founded to move inhibitors of the soluble epoxide hydrolase into human clinical trials.

“We raised the money through \$2,500 from



UC Davis distinguished professor Bruce Hammock, right, chats with Western Neuropathy President Bev Anderson and Treasurer Darrell O’Sullivan in the Hammock lab about his research. The Association just donated \$5,000 to Hammock’s company to move a compound into human clinical trials. KATHY KEATLEY GARVEY-UC DAVIS

our budget, and from voluntary donations from members and friends,” she said. “One member donated \$1000 and asked it to be matched.”

“It was heartwarming to receive a \$5000 check from this dedicated, grass-roots group,” said Hammock, whose research on the compounds spans nearly 50 years. “We are touched.”

Anderson and O’Sullivan toured Hammock’s lab in Briggs Hall, UCD Department of Entomology and Nematology, and discussed his research and the WNA mission and goals.

“There are medications that help the symptoms, but no cure yet,” Anderson said, adding that the Hammock discovery “may be close to a cure for some people who have pain and inflammation.”

“On behalf of EicOsis I want to thank the Western Neuropathy Association, and particularly Bev Anderson and Darryl O’Sullivan, for championing this effort,” Hammock said. “Everyone at EicOsis is touched by the confidence they have

Roster of Our WNA Information and Support Groups

2019 WNA Board of Directors

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**Please contact
your group leader
or check your
local paper to
find out about
the topic/speaker
for the upcoming
meeting.**

Bev Anderson
Editor

Newsletter Design by

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CALIFORNIA

Auburn

1st Monday, 11 AM
Woodside Village MH Park
12155 Luther Road
Sharlene McCord (530) 878-8392

Castro Valley

2nd Wednesday, 1:30 PM
First Presbyterian Church
2490 Grove Way (next to Trader Joe)
Joy Rotz (510) 842-8440

Concord

3rd Thursday, 1:30 PM
First Christian Church
3039 Willow Pass Road
Wayne Korsinen (925) 685-0953

Davis

2nd Tuesday, 3:30-5:00 PM
Davis Senior Center, 646 A Street
Mary Sprifke (530) 756-5102

Elk Grove

2nd Tuesday, 1 PM
Elk Grove Senior Center
8830 Sharkey Avenue
Roger White (916) 686-4719

Folsom

3rd Wednesday, 12:30 PM
Association Resource Center
950 Glenn Dr., Suite 150
Bev Anderson (877) 622-6298

Fresno

3rd Tuesday, 11:00 AM
Denny's Restaurant
1110 East Shaw
Bonnie Zimmerman (559) 313-6140

Grass Valley

2nd Monday, 1:30 PM
GV United Methodist Church
236 S. Church Street
Bev Anderson 877-622-6298

Livermore

4th Tuesday, 10 AM
Heritage Estates
900 E. Stanley Blvd.
Lee Parlett (925) 292-9280

Merced

2nd Thursday, 1 PM
Central Presbyterian Church
1920 Canal Street
(Hoffmeiser Center across from the church)
Larry Frice (209) 358-2045

Modesto

3rd Monday, 10:30 AM
Trinity United Presbyterian Church
1600 Carver Rd., Rm. 503
Ray (209) 634-4373

Monterey

3rd Wed., 10:30 AM (odd numbered months)
First Presbyterian Church
501 El Dorado Street
Dr. William Donovan (831) 625-3407

Napa

1st Thursday, 2 PM
Napa Senior Center, 1500 Jefferson St.
Ron Patrick (707) 257-2343
bonjournapa@hotmail.com

Placerville

2nd Wednesday, 1 PM
El Dorado Senior Center
937 Spring Street
Bev Anderson (877) 622-6298

Redwood City

Next meeting, January 22, 2019
4th Tuesday, 1 PM
Sequoia Hospital Health and Wellness Center
749 Brewster Avenue
Danielle LaFlash (415) 297-1815

Roseville

2nd Wednesday, 1PM (odd numbered months)
Sierra Point Sr. Res.
5161 Foothills Blvd.
Stan Pashote (916) 409-5747

Sacramento

3rd Tuesday, 1:30 PM
Northminster Presby. Church
3235 Pope Street
Charles Moore (916) 485-7723

San Francisco

2nd Monday, 11 AM – 12:30 PM
Kaiser French Campus
4141 Geary Blvd. between 6th & 7th Ave.
Rm. 411A - Watch for signs.
Merle (415) 346-9781

San Jose

3rd Saturday, 10:30 AM
O'Conner Hospital, 2105 Forest Avenue
SJ DePaul Conf. Rm.
Danielle LaFlash (415) 297-1815

Santa Barbara

4th Saturday, 10AM (Sept., Oct., Jan., March, May)
St. Raphael Catholic Church
5444 Hollister Ave., Conference Room
Shirley Hopper (805) 689-5939

Santa Cruz

3rd Wednesday, 12:30 PM (odd numbered months)
Trinity Presbyterian Church
420 Melrose Avenue
Mary Ann Leer (831) 477-1239

Santa Rosa

1st Wednesday, 10:30 AM
Steele Lane Community Center
415 Steele Lane
Judy Leandro (707) 480-3740

Thousand Oaks – Westlake Village

2nd Monday, 2:30 – 4 PM
United Methodist Church of Westlake Village
1049 S. Westlake Blvd.
Angie Becerra (805) 390-2999

Walnut Creek

4th Friday, 10 AM
Rossmoor, Hillside Clubhouse
Vista Room
Karen Hewitt (925) 932-2248

NEVADA

Las Vegas

3rd Thursday, 1 PM
Mountain View Presbyterian Church
8601 Del Webb Blvd.
Barbara Montgomery (818) 400-0296

OREGON

Grants Pass

3rd Wednesday 2:00 PM
Club Northwest
2160 N.W. Vine St.
Carol Smith 541-955-4995
David Tally 541-218-4418

For information on groups in the following areas or any other place you are interested in finding out about a support group, call Bev Anderson at (877) 622-6298. She is actively trying to open new groups and re-open closed groups. Check with her about a group in your area especially if you would volunteer to be the leader. New Leadership needed. No meetings for now. Contact for information: Bev Anderson 877-622-6298. **California:** Alturas, Antioch-Brentwood, Bakersfield, Berkeley - Oakland, Carmichael, Clearlake, Costa Mesa, Crescent City, Eureka, Fort Bragg, Garberville, Jackson, Lakeport, Lincoln, Lodi, Madera, Mt. Shasta, Oxnard, Quincy, Redding, Salinas, Santa Maria, San Rafael, Sonoma, Sonora, Stockton, Susanville, Truckee, Tulare-Visalia, Turlock, West Sacramento, Weed, Ukiah, Woodland, Yreka, Yuba City-Marysville. **Nevada:** Reno-Sparks. **Oregon:** Brookings, Medford, Portland, Salem.



I'm delighting in seeing the daylight lasting a few minutes longer each day as we work our way through this new year. I don't make resolutions for the year, I find making them daily works better. It is a shorter time and if I mess up, I can start again. When I was teaching, each morning was a new beginning. Children would be concerned about a problem that had happened the day before and bring it up thinking that I would still deal with it, but I'd remind them that it was a new day. What was settled yesterday stayed with yesterday. I loved them just as much today as yesterday before it happened. If it was forgiven, it was forgotten. I find that works for me even now. If I met my resolution, I can give myself a hurrah. If I didn't, I forgive and try again. We must be kind and encourage ourselves along the way. Being a good friend starts with yourself.

I hope you enjoy the article that Kathy Keatley-Garvey wrote for U.C. Davis publications. It was picked up by other publications across the country as well. In the article, you find out more about Bruce Hammock, Ph.D.'s project and about my personal neuropathy experience.

You will notice two articles this month that seem to apply to people with chemotherapy-induced peripheral neuropathy (CIPN), but they relate to all of us. One article relates to what toxins do in our body. Some in the medical community don't seem to understand that toxins affect us at the time but also later. Some CIPN patients have shared with me lately that they are being told that if the neuropathy comes after they finish chemo, it must be from something else as it only happens while they are receiving the chemotherapy treatments. This is not true. It affects you the rest of your life and may cause neuropathy later. The Veterans Administration finally recognized this with Agent Orange. For years, they said it had to start by three months after the exposure or it wasn't from Agent Orange. Now they know that Agent Orange in the system continues to cause problems. In other cases, a person can be diabetic for years before the toxins that started at the beginning cause neuropathy. Alcoholics can drink heavily for years before the neuropathy starts. Yet it is a leading cause of neuropathy.

I think if the number of cases of neuropathy were added up for each cause, diabetes might not be considered the main cause. Alcoholism, chemotherapy, and hereditary neuropathies might actually be greater now or later. When a definite cure for diabetes is announced, one of these will be more populous for sure.

The second article is about the cold treatment that is being presented is an alert. It is not recommended by any medical research and can be permanently disabling. Please be wary of the groups like this that are coming up with all kinds of treatments they tout as being helpful for neuropathy. They are out to enrich themselves.

Be sure to mark Friday, May 10, on your calendar for our Annual Medical Conference. It will be in Modesto at Trinity United Presbyterian Church, 1600 Carver Road. Registration will be \$25. There will be information, food, fun, and possibly a surprise or two. You'll want to be there. Pre-Registration is required. Please send the name(s) and phone or e-mail address of those coming and your check for \$25 each to WNA, P.O. Box 276567, Sacramento, CA 95827-6567 or register online at www.WNAinfo.org.

9:00 AM Check In & Exhibits

9:45 AM Conference – Announcements and Introductions

10:00 AM Jeffrey Ralph, M.D., a top neurologist that specializes in neuropathy, from UC-San Francisco along with an Associate Neurologist. Come with your questions and ready for up to date information.

12 Noon – Luncheon and Exhibits

1:00 - Alan Eighmey (pronounced Eye-Me), Elder Law Attorney, Turlock "Being Sure All Is in Order."

2:00 – Nutrition speaker to be named soon

3:00 Raffle prizes, Silent Auction – Evaluation-Close announcements

3:30 Close of Conference

We are hopeful that a surprise special guest will also be with us at least part of the day.

I hope to see you there.

Help With Health Care Challenges

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Bev

DISCOUNTS FOR WNA MEMBERS

The following companies or individuals have agreed to give WNA a discount to WNA members. Give them a call or visit. If you choose to purchase the service or wares of any on this list, pull out your WNA Membership Card and claim the discount.

Anodyne Therapy

Infrared Light Therapy equipment - **12% off all home units.**
Contact: 800-521-6664 or www.anodynetherapy.com

HealthLight Infrared Light Therapy equipment - **5% off Single Boot System and Dual boot system.**

Contact: 888-395-3040 or www.healthlight.us

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The Footpath

825 Lincoln Way
(530) 885-2091
www.footpathshoes.com
WNA Discount: 10% off the regular price shoes.

Elk Grove

Shoes That Fit

8649 Elk Grove Blvd.
(916) 686-1050
WNA Discount: 20% off the regular price shoes.

Fortuna

Strehl's Family Shoes & Repair

Corner of 12th & Main
1155 Main Street
(707) 725-2610
Marilyn Strehl, C.PED is a Certified Pedorthic
WNA Discount: 10% off the regular price shoes.

West Sacramento

Beverly's Never Just

Haircuts and Lilly's Nails
2007 W. Capitol Ave
Hair - (916) 372-5606
Nails - (916) 346-8342
WNA discount: 10% off the regular price.

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CHEMO-INDUCED NEUROPATHY COMMON AFTER CHILDHOOD CANCER

Neurotoxicity more prevalent in children treated with cisplatin

By Judy George, Contributing Writer, MedPage Today May 14, 2018

Chemotherapy-induced peripheral neuropathy is common in childhood cancer survivors and should be screened for in follow-up clinics, a cross-sectional analysis from Australia suggests.

Clinical abnormalities consistent with peripheral neuropathy occurred in about half of childhood cancer survivors 8.5 years after chemotherapy ended, with cisplatin producing long-term neurotoxicity more frequently than vinca alkaloids, reported Susanna Park, PhD, of the University of Sydney, and co-authors in JAMA Neurology.

"Traditionally, chemotherapy-induced peripheral neuropathy in children has been thought of as something that may occur during treatment but largely resolves in the long term. This study suggests that this is not the case," the study's first author, Tejaswi Kandula, MBBS, of the University of New South Wales in Sydney, told MedPage Today.

"Given that childhood cancers are on the rise, with an incidence of approximately 17 children per 100,000, this study is important because it shines a light on what could be an often-overlooked late effect of childhood cancer treatment," added Jonas Sokolof, DO, of New York University Langone's Rusk Rehabilitation, who was not involved with the research.

"We know that about 60% of all childhood cancer survivors will develop late effects," Sokolof told MedPage Today. While most of the emphasis has been on cardiac sequelae, infertility, and secondary cancers, "peripheral neuropathy, like many other late effects of childhood cancer treatment, has the potential to be very debilitating."

Neuropathy has been linked to common chemotherapy agents, including vincristine and other vinca alkaloids, cisplatin, and carboplatin. For this study, Kandula and colleagues recruited childhood cancer survivors who had been treated with

chemotherapy before age 17 at Sydney Children's Hospital. They excluded patients with other causes of neuropathy including diabetes, critical illness neuropathy or inherited neuropathic conditions, and other neurodevelopmental disorders.

Of 121 childhood cancer survivors in the study, 53.7% were male. Participants underwent neurotoxicity assessments at a median age of 16 -- which was a median of 8.5 years after they completed treatment -- with results compared to healthy age-matched controls. Among cancer survivors, vinca alkaloids and platinum compounds were the main neurotoxic agents used.

Clinical abnormalities in Total Neuropathy Scores were present in 50.5% of childhood cancer survivors who were treated with neurotoxic chemotherapy. Lower limb sural sensory amplitudes were smaller in cancer survivors who were exposed to neurotoxic chemotherapy compared with controls (mean reduction of 5.8 μ V; 95% CI 2.8-8.8; $P < 0.001$), suggesting a reduced number of functioning axons. Patient-reported outcomes showed lower quality of life and physical functioning scores tied to Total Neuropathy Scores.

Overall, abnormalities were more prevalent in patients who had been exposed to cisplatin. Given the limited literature about cisplatin toxicity in pediatric patients, the discrepancy between vincristine and cisplatin toxicity found in this study makes cisplatin-treated patients an important population to follow, Kandula observed.

The researchers' finding that "half of childhood cancer survivors had clinically apparent chemotherapy-induced peripheral neuropathy is very similar to our recent report in adult women cancer survivors and should awaken clinical practice to address this neurotoxic side effect of cancer treatment," Kerri Winters-Stone, PhD, of Oregon Health

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WHOLE-BODY CRYOTHERAPY CAUSED COLD BURN INJURY

Trendy treatment never FDA-approved for health benefits

By Pam Harrison, Contributing Writer, MedPage Today December 14, 2018

Another injury related to whole body cryotherapy (WBC) has been reported by practitioners in Philadelphia, serving as yet another warning of WBC's potential to cause serious adverse effects.

As detailed by Jordan Wang, MD, of Thomas Jefferson University and colleagues in the *Journal of the American Academy of Dermatology*, a 71-year old patient presented to the center with a cold burn injury that he had sustained while undergoing WBC at a cryotherapy facility the day before. The man had opted to use WBC for the treatment of his back pain and arthritis.

The researchers said they suspected that a nozzle through which liquid nitrogen is sprayed into the chamber had malfunctioned and that the liquid nitrogen was instead sprayed directly on the patient's back for a brief period of time.

"This is an unfortunate case of a burn secondary to cold, [and] it can be compared to a frost bite," Cameron Rokhsar, MD, of New York Cosmetic, Skin & Laser Surgery Center in New York, told MedPage Today via email when asked for his perspective. "The cooling treatment protocol is not Food and Drug Administration-approved, and there is no proven scientific benefit to this treatment, but there is a real risk of burn as is highlighted by this case," he said.

The authors agreed, and noted in their case report that "WBC is a new and trendy treatment of which practitioners should be aware because of potential adverse events."

The burn patient was subsequently treated with systemic steroids, topical corticosteroids, ibuprofen, and silver sulfadiazine cream to protect his denuded skin.

Wang and colleagues explained that spas, wellness centers, and cryotherapy facilities have opened up to the general public in recent years and have begun offering WBC to anyone willing to pay for it. "The cryotherapy chamber is appropriately the size of a phototherapy light box," Wang explained. "And while standing in the chamber, the head of the patient is above the top and outside of the chamber," with the rest of the body is "bombarded" with a liquid nitrogen mist that cools the chamber from -100° to -140° C.

Each session lasts for 2-5 minutes, and proponents of WBC think that people can engage in several sessions a week. Treatment is thought to hasten muscle recovery and alleviate

back pain and muscle stiffness. WBC is also claimed to improve energy and sleep patterns as well as skin health. However, the FDA has never approved any type of WBC chamber and in fact, warns against their use because of the potential harmful effects including frostbite, burns, eye injury, and even asphyxiation.

A Cochrane review published in 2015 found insufficient evidence to support any claims that WBC can prevent or treat muscle soreness after exercise, and several documented adverse events related to WBC have been reported in the literature.

For example, one case report documented an abdominal aortic dissection in a middle-aged male following multiple WBC sessions, and another report described a patient who developed an episode of cold panniculitis after eight WBC treatments.

As Rokhsar explained, these cooling machines use liquid nitrogen. "If the liquid nitrogen or its vapors come in contact with the skin, it can induce a burn," he added. The degree of the burn will depend on the severity and duration of exposure to the liquid nitrogen, but even short bursts of exposure can cause blisters and pain just like a burn from sources of heat.

Dermatologists often use liquid nitrogen to destroy unwanted growths on the skin such as warts and precancerous lesions by spraying nitrogen on the lesion in a controlled manner, but that is quite different to WBC.

"Cold burns are much less common than their thermal counterparts," Wang and co-authors pointed out. Nevertheless, freezing temperatures to which individuals are exposed during WBC can cause intracellular water crystallization, damaging proteins and membranes, and the resulting vasoconstriction induced by cold temperatures can also lead to hypoperfusion; endothelial injury may decrease vascular integrity.

Wang and co-authors reported no conflicts of interest.

Primary Source: *Journal of the American Academy of Dermatology*

Source Reference: O'Connor M, et al "Cold burn injury after treatment at whole-body cryotherapy facility" *JAAD* 2019; 5 1): 29-30. Used with permission by MedPage Today.

DISCOUNTS FOR WNA MEMBERS

Continued from page 4

Neuropathy Support Formula

(1-888-840-7142) is a supplement that a sizable number of people are taking and reporting it has helped them. The company gives members of WNA a discount and free shipping. The 30-day supply is \$40 (normally \$49.97). It can be auto-shipped monthly for the same. A 3-month supply via auto-ship is \$95.00. They also have a Nerve Repair Optimizer that is available for \$20 with free shipping. Marsha, the manager, said that if anyone wants more information about the product, they can call and ask for her. If she is not readily available, leave your number and she will call you back.

Additional Discounts

Do you know a business that might offer our members a discount? Tell them that they will be listed each month in our newsletter and on our website so our members will know of their generosity and patronize their business. Call (877) 622-6298 or e-mail info@pnhelp.org.

We'll mail an agreement form to the business, and once we have it, we'll add them to this list.

NEUROPATHY MEDICAL LITERATURE REVIEW By William B. Donovan, M.D.

We can access the National Library of Medicine (NLM) to obtain information on peripheral neuropathy (PN). There are over 100 medical articles a month written on PN.

I review these references and select articles that would appear to be most interesting to us neuropathy sufferers. This is the link to **PubMed** that will connect to the **NLM**:

www.ncbi.nlm.nih.gov/sites/entrez

If you are reading this article on the computer, just click on the above link to go there. If you are reading the print edition of the newsletter, type this link into the address bar of the browser on a computer. If you don't know how, get a librarian or friend to help you.

After you get to **PubMed**, you will see a line that says "Search *PubMed*" followed by "for" and a space. Every article in the **NLM** is given a **PMID**, an eight digit identification number. I will give you **PMID** numbers of the selected articles. Type the **PMID** into the space after the "for" and click on "Go" at the end of the space, or press the ENTER key on your keyboard. You will then see a one paragraph abstract of the article appear, as well as links to related articles.

The reader can also go to the WNA website www.pnhelp.org, click on the RESOURCES tab and select MEDICAL LITERATURE REVIEW from the menu to review the archive of summaries that have appeared in this column over recent years.

This month's PMIDs:

- 29104252 This Japanese review outlines a major cause of neuropathic pain: nerve damage caused by chronic inflammation, with increase in macrophages that release pro-inflammatory chemokines and cytokines. Recent investigation of nicotinic acetylcholine receptor ligands and T helper type cytokines demonstrate that these substances can block this inflammation.
- 29109295 This prospective multicenter study of spinal cord stimulation found that 55% of patients with painful diabetic neuropathy were still experiencing more than 50% pain relief following implantation.
- 29533926 This is a report of an animal study that was able to prevent small pain fiber degeneration due to diabetic neuropathy. They targeted the chemokine CXCL 12/CXCR4 which they hypothesize causes nerve degeneration.
- 29979431 This Chinese review searched the medical literature for randomized controlled trials that used Fasulin, a rho-kinase inhibitor, to treat diabetic peripheral neuropathy. Thirteen acceptable studies totaling 1148 patients were found. By adding Fasulin to either methylcobalamine (B12) or lipoic acid, highly significant improvement was found in both clinical efficacy and nerve conduction velocities. The literature cited was mainly from China where Fasulin is commonly used as a vasodilator.

Chemo-Induced Neuropathy Common after Childhood Cancer – *Continued from page 4*

and Science University in Portland, who was also not involved with the study, told MedPage Today.

Neuropathy's link to poorer quality-of-life scores in this analysis also is "distressing for young survivors because they have decades of education, work, and social plans ahead of them," Winters-Stone added.

Childhood cancer survivors are at high risk of cardiovascular disease and diabetes which may affect peripheral nerves later in life, Kandula noted, and "chemotherapy-induced peripheral neuropathy means these patients have a reduced axonal reserve and are potentially more at risk of early peripheral neuropathy when risk factors are compounded." Untreated neuropathy may hinder physical activity and compound future problems, but identifying neuropathy and prescribing physical therapy could help patients move and exercise more. The Total Neuropathy Score is "easily administered in less than 5 minutes and would make a good screening tool," Kandula suggested.

While this analysis "confirms the assumption that peripheral

neuropathy frequently persists in many childhood cancer survivors," it provides only a snapshot of what these patients experience and does not reveal anything about cause and effect, Sokolof added.

The study was funded by grants from the National Health and Medical Research Council, the Cancer Institute of New South Wales, and funds from the Royal Australasian College of Physicians and Brain Sciences UNSW of the University of New South Wales, Sydney.

The researchers reported having no conflicts of interest.

LAST UPDATED 05.14.2018

Primary Source: JAMA Neurology

Source Reference: Kandula T, et al "Chemotherapy-induced peripheral neuropathy in long-term survivors of childhood cancer: Clinical, neurophysiological, functional, and patient-reported outcomes" JAMA Neurology 2018; DOI: 10.1001/jamaneurol.2018.0963. Used with the permission of MedPres Today.

put in us to develop a treatment for chronic pain. There are never guarantees in drug development, but certainly their support drives us to work hard to move this drug through FDA and on to clinical trials.”

“We are, of course, working to raise support from federal agencies, venture funds and the pharmaceutical industry, but this support from Bev and her associates is heartfelt and inspiring. It illustrates what a great need there is to develop treatments for pain,” Hammock said. “The fact that the support is coming from so many of the people who are suffering from pain is particularly inspiring.”

“It is inspiring about how upbeat the individuals are in these organizations as they support each other and exchange approaches in dealing with pain,” he pointed out. “But underlying these optimistic conversations is the reality that pain can be an overpowering factor compromising the leading a full and healthy life. We must find a solution to the problems of pain and neuropathy.”

The clinical trials, expected to begin this year, will target chronic or neuropathic pain with a non-opiate analgesic. In parallel, Hammock and his UC Davis colleagues are developing a drug to treat a commonly fatal pain condition in horses called laminitis as well as arthritic pain in dogs and cats.

Hammock traces the history of his work to 1969 to his graduate student days in the laboratory of UC Berkeley Professor John Casida. Hammock was researching insect developmental biology and green insecticides when he and colleague Sarjeet Gill, now a distinguished professor at UC Riverside, discovered the target enzyme in mammals that regulates epoxy fatty acids.

“The work led to the discovery that many regulatory molecules are controlled as much by degradation and biosynthesis,” Hammock said. “The epoxy fatty acids control blood pressure, fibrosis, immunity, tissue growth,

pain and inflammation to name a few processes.”

Peripheral neuropathy is a complex disease. It refers to “the many conditions that involve damage to the peripheral nervous system, the vast communication network that sends signals between the central nervous system (the brain and spinal cord) and all other parts of the body,” according to the National Institute of Neurological Disorders and Stroke. “Best known are the signals to the muscles that tell them to contract, which is how we move, but there are different types of signals that help control everything from our heart and blood vessels, digestion, urination, sexual function, to our bones and immune system. The peripheral nerves are like the cables that connect the different parts of a computer or connect the Internet. When they malfunction, complex functions can grind to a halt.”

“There are over 150, some say over 200, known causes of neuropathy,” said Anderson, a resident of Colfax. “Diabetes is considered a chief cause, but chemotherapy and likely hereditary neuropathies are gaining on it.”

Anderson noted that neuropathy “usually starts in the longest nerve which is the one that goes to the toes. When the progress gets up to the knees, it may start in the fingers and hands as that is now about the same length. However, it may also start in the hands if the injury that causes the neuropathy is in the cervical spine area initially.”

The mission of WNA, comprised of 500 members and many other attendees in California, Oregon and Nevada, is “to provide support, information and referral to people with neuropathy and to those who care about them, to inform and connect with the health care community and to support research,” Anderson said. The all-volunteer organization seeks to establish and develop support groups in as many cities as possible.



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Call WNA using our toll free phone numbers:

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■ PN Information/Advice ■ Support Group Inquiries

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■ YALE SCIENTISTS IDENTIFY BACTERIUM THAT CAUSES AUTOIMMUNE RESPONSE

Scientists at Yale University have identified *Enterococcus gallinarum* as the bacterium in the small intestines that can travel outside of the gut to lymph nodes, the liver, and spleen and is directly linked to causing an autoimmune response and inflammation. By being able to target this bacterium, scientists will be able to control the autoimmune response with an antibiotic or vaccine. Autoimmune disease occurs when someone's immune system attacks healthy tissue, and Guillain-Barre Syndrome (GBS) and Chronic Inflammatory Demyelinating Polyneuropathy (CIDP) are neuropathies caused by an autoimmune response.

Source: "The enemy within: Gut bacteria drive autoimmune disease," by Ziba Kashef, Yale News, March 8, 2018. <https://news.yale.edu/2018/03/08/enemy-within-gut-bacteria-drive-autoimmune-disease>



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A California public benefit, nonprofit,
tax-exempt corporation.

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Our mission is to provide support, information and referral to people with neuropathy and to those who care about them, to inform and connect with the health care community, and to support research.

Dues - \$30 a year

All contributions and dues are tax-deductible.

We are supported by dues-paying members, contributions by members and friends, and occasionally, small grants and fundraisers.

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