

## FOUR-HOUR LIVE WEBINAR

Wed., Jan. 10, 2024

(REGISTRATION FORM)

# INFLAMMAGING: INFLAMMATION & ACCELERATED AGING

WHERE PATHOPHYSIOLOGY & PATIENT CARE MEET

### LIVE WEBINAR:

Wed., Jan. 10, 2024, 5:30 PM – 9:45 PM, (Eastern Time)  
or 4:30 PM – 8:45 PM, (Central Time)  
or 2:30 PM – 6:45 PM, (Pacific Time)

NEW EVENING  
SCHEDULE!

\$74 – Pre-Registration Rate: Live Webinar with 4 hours of CE credit.

Registrants will need a computer with a good Internet connection and audio speakers (or headphones) to participate in the live Webinar.

Please note special discounts for homestudy purchase are available for students who are registered for webinars. Please email INR at [info@biocorp.com](mailto:info@biocorp.com) for more information.

Name (please print) \_\_\_\_\_

Home Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

Work Phone \_\_\_\_\_ Home Phone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

Profession \_\_\_\_\_ License No. \_\_\_\_\_

Pharmacists only: NABP # \_\_\_\_\_ Date of Birth mm / dd / yy

### Payment by (please check one):

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### There are four ways to register:

- 1) **Internet:** [www.INRseminars.com](http://www.INRseminars.com)
- 2) **Mail:** INR, P.O. Box 5757, Concord, CA 94524-0757  
(Make check payable to INR.)
- 3) **Fax:** (925) 363-7798
- 4) **Phone:** 1-800-937-6878

Inquiries for Customer Service: 1-877-246-6336 or (925) 609-2820

Purchase orders are accepted. Tax Identification No. 94-2948967

## ACCREDITATION

To obtain the 4 contact hours associated with this course, the health care professional will need to sign in, attend the course, and complete program evaluation forms. At the end of the program, the health care professional successfully completing the course will receive a statement of credit. This is an intermediate-level course.

### NURSES (RNs, NPs, & LPNs)

Institute for Natural Resources (INR) is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

This program provides 4 contact hours for nurses, including 4 Rx contact hours of pharmacology CE. INR has been accredited as a continuing education provider by the Florida Board of Nursing (#50-3026), the Iowa Board of Nursing (#288) for 4 contact hours, and the California Board of Registered Nursing (CEP #06136) and the Kansas Board of Nursing (#LT0140-0927) for 4.8 contact hours.

### DENTAL PROFESSIONALS

INR is an ADA CERP Recognized Provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry. INR designates this activity for 4 hours of continuing education credits. Under Approval No 22-463, the New Jersey Board of Dentistry has approved this course for 4 hours of continuing education credits.

### PHARMACISTS

Institute for Natural Resources is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. The ACPE universal activity number (UAN) for this course is 0751-0000-22-102-L04-P. This is a knowledge-based CPE activity.



### REGISTERED DIETITIANS & DTRS

This program awards 4 hours of CPEUs in accordance with the Commission on Dietetic Registrations provider programs. This course has Activity Number 172245 and Performance Indicators: 8.2.1 and 8.2.4. CPE Level: II.

### PSYCHOLOGISTS, MENTAL HEALTH COUNSELORS, & ADDICTION COUNSELORS

Under CE Broker #50-3026, INR is an approved provider by the Florida Board of Psychology. The Institute for Natural Resources (INR) is approved by the CPA/OPD to sponsor continuing professional education for psychologists. INR maintains responsibility for this program and its content. Psychologists must attend the seminar in its entirety and complete the course evaluation in order to receive credit. Under Sponsor #268.000096, the Illinois Dept of Prof Regulation for Psychologist Licensing and Disciplinary Board has approved INR as a CE sponsor. Under License #PSY000214, the Pennsylvania Board of Psychology has approved INR as a sponsor/provider of CE programs. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Psychology as an approved provider of continuing education for licensed psychologists #PSY-0042. Under Sponsor #00088989 and Approval #6000797244, CRCC has approved this course for 4 contact hours. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Mental Health Practitioners as an approved provider of continuing education for licensed mental health counselors, #MHC-0089. Under Sponsor #197-000240, the Illinois Dept of Prof Regulation has approved INR as a CE sponsor for professional/clinical counselors. INR is approved by the NAADAC Approved Education Provider Program, Provider #182846.

### SOCIAL WORKERS & MARRIAGE & FAMILY THERAPISTS

Institute for Natural Resources, #1356, is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved as ACE providers. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. Institute for Natural Resources maintains responsibility for this course. ACE provider approval period: 02/28/2022–02/28/2025. Social workers completing this course receive 4 clinical continuing education credits. Institute for Natural Resources (INR), SW CPE is recognized by the NY SED State Board for Social Work as an approved provider of continuing education for licensed social workers #0195. The California Board of Behavioral Sciences will accept courses approved by ASWB. Under Sponsor #159-000260, the Illinois Dept of Prof Regulation has approved INR as a sponsor of continuing social work education. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Mental Health Practitioners as an approved provider of continuing education for licensed marriage and family therapists. #MFT-0055. Under Sponsor #168.000243, the Illinois Dept of Prof Regulation has approved INR as a CE sponsor for marriage and family therapists. Under CE approval #NVCEP2021, the Nevada Board of Examiners for MFT and CPC has approved INR as a sponsor.

### OCCUPATIONAL THERAPISTS & OTAs

INR is an AOTA Approved Provider of continuing education. Provider #5347. INR has assigned 0.4 AOTA CEUs for this course. The category of this course is Foundational Knowledge. The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

### PHYSICAL THERAPISTS & PTAs

The Florida Physical Therapy Association has approved this course for 4 contact hours (Approval # CE 24-939366). Accreditation of this course does not necessarily imply the FPTA supports the views of the presenter or the sponsors. INR is recognized as an approval agency to approve providers offering continuing competency courses by the Physical Therapy Board of California. This course has been approved by the Institute for Natural Resources (INR) for 4 continuing competency units. The New York State Dept of Education has approved INR as a sponsor of continuing physical therapy education. Under Sponsor #216-000264, the Illinois Dept of Prof Regulation has approved INR as a sponsor for continuing physical therapy education. The New Jersey State Board of Physical Therapy has approved the course for 4 hours continuing education credits. The NJBPTE Course Approval #2209-54.

### CASE MANAGERS

This program has been pre-approved by The Commission for Case Manager Certification to provide continuing education credit to Certified Case Managers (CCMs).

### NURSING HOME ADMINISTRATORS (Distance Learning)

This program has been submitted for Continuing Education through NAB/NCERS for 4 total participant hours from NAB/NCERS. Please visit <https://www.nabweb.org/continuing-education> and choose "NAB Approved CE Database" for the most current approved courses.

### MESSAGE THERAPISTS

Institute for Natural Resources is approved by the National Certification Board for Therapeutic Massage & Bodywork (NCBTMB) as a continuing education Approved Provider, Provider #299936-00, and is also sponsored by NCBTMB to teach New York LMTs continuing education that is accepted by the State of New York for license renewal.



### OTHER HEALTH PROFESSIONALS

Participants successfully completing this course will receive course completion certificates. For rules governing continuing education credit, participants should contact their respective regulatory boards.



INFLAMMAGING:



# INFLAMMATION & ACCELERATED AGING

WHERE PATHOPHYSIOLOGY & PATIENT CARE MEET

(A NEW 4-HOUR INTERACTIVE LIVE WEBINAR)

## SCHEDULE

Please see the Registration Form for the seminar schedule.

Please register early. Space is limited. Registrations are subject to cancellation after the scheduled start time. A transfer can be made from one Webinar to another if space is available. Registrants cancelling up to 72 hours before a Webinar will receive a tuition refund less a \$25.00 administrative fee or, if requested, a full-value voucher, good for one year, for a future Webinar. Cancellation or voucher requests must be made in writing. If a Webinar cannot be held for reasons beyond the control of the sponsor (e.g., acts of God), the registrant will receive free admission to a rescheduled Webinar or a full-value voucher, good for one year, for a future Webinar. A \$25.00 service charge applies to each returned check. Nonpayment of full tuition may, at the sponsor's option, result in cancellation of CE credits issued. The syllabus is not available for separate purchase. Fees subject to change without notice.

## SPONSOR

INR (Institute for Natural Resources) is a non-profit scientific organization dedicated to research and education in the fields of science and medicine. INR is the nation's largest provider of live continuing education programs, offering over 600 live seminars yearly.

INR has no ties to any ineligible organizations and sells no products of any kind, except educational materials. Neither INR nor any instructor has a material or other financial relationship with any health care-related business that may be mentioned in an educational program. If INR were ever to use an instructor who had a material or other financial relationship with an entity mentioned in an educational program, that relationship would be disclosed at the beginning of the program. INR takes all steps to ensure that all relevant program decisions are made free of the control of a commercial interest as defined in applicable regulatory policies, standard, and guidelines. INR does not solicit or receive gifts or grants from any source, has no connection with any religious or political entities, and is totally supported by its course tuition.

INR's address and other contact information follows:

P.O. Box 5757, Concord, CA 94524-0757

Customer service: 1-877-246-6336 or (925) 609-2820

Fax: (925) 363-7798

E-Mail: [info@inrseminars.com](mailto:info@inrseminars.com); website, [www.INRseminars.com](http://www.INRseminars.com)

Tax Identification Number 94-2948967.

Education expenses (including enrollment fees, books, tapes, travel costs) may be deductible if they improve or maintain professional skills. Treas. Reg. Sec. 1.162-5. Recording of the seminar, or any portion, by any means is strictly prohibited. INR's liability to any registrant for any reason shall not exceed the amount of tuition paid by such registrant.

For American Disability Act (ADA) accommodations or for addressing a grievance, please send the request by email to [info@inrseminars.com](mailto:info@inrseminars.com) or by fax to (925) 363-7798. For ADA matters (including sign-language interpreters), INR would appreciate advance notice so as to ensure our ability to provide the appropriate accommodation.

# INFLAMMAGING: INFLAMMATION & ACCELERATED AGING

## Frequently Asked Questions

### Q: What do I have to do to complete the live Webinar successfully?

To obtain the 4 contact hours associated with this course, the health professional will need to sign-in (by typing in the chat-box), attend the course online, and complete the program evaluation form and post-test electronically. At the end of the program, after all the evaluation and post-tests are accounted for, the health professional successfully completing the program will receive a statement of credit. This will take approximately 3 to 5 business days. This is an intermediate-level course.

### Q: How will I know that my profession qualifies for continuing education

**credit?** Please see the section marked Accreditation. All professions for which INR (Institute for Natural Resources) has approval are listed in the Accreditation section.

### Q: What happens if I have technical difficulties watching or hearing a

**Webinar?** You can transfer the tuition paid to another Webinar within two years or request a recording within 3 to 5 days to complete the webinar ASAP for live credit.

### Q: My profession is not listed on the brochure. Is it possible to obtain

**continuing-education credit?** Possibly. Please contact INR's customer-service office at 1-877 246-6336 or by email at [info@biocorp.com](mailto:info@biocorp.com). The customer-service office can tell you if INR has approval for your profession.

## COURSE SUMMARY

Inflammation is a normal response of living tissue to damage or cellular injury. It is the immune system's first line of defense against irritation or infection. Unchecked, progressive inflammation can cause serious illness and even death in patients of any age. However, the ravages of uncontrolled inflammation observed in various forms of vascular disease, cancer, metabolic disorders, sepsis, neurodegenerative disorders, and autoimmune conditions often spiral out of control in mid-life and beyond.

Accurately recognizing the pathophysiology involved in any illness is essential in determining the correct diagnosis. It is even more important in formulating an effective treatment plan. This webinar will offer a comprehensive review and update of the processes causing acute and chronic inflammation, as well as the clinical signs and symptoms of inflammatory illness. Particularly relevant here, given the global tragedy of COVID-19, is the inflammatory phenomenon of "Cytokine Storm" and the threat posed by obesity. Unfortunately, fat cells synthesize cytokines just as white blood cells do. The metabolic mayhem caused by excess adipose tissue is often devastating in terms of Hypertension, Diabetes Mellitus, hormone dependent malignancies, Myocardial Infarction, stroke, severe asthma, arthritis, and even Alzheimer's disease.

Finally, the webinar will offer practical strategies to advise patients on the benefits of medically significant weight loss, the importance of high level oral hygiene and creating an anti-inflammatory protocol that works in real life.

**Disclaimer: These live interactive INR presentations provide continuing education for health care and mental health professionals with the understanding that each participant is responsible to utilize the information gained in an appropriate manner congruent with his/her/their scope of licenses.**

## PROGRAM/LECTURE

Registration: 30 Minutes Prior to Start Time

### Part 1 - Understanding the Problem

- **The Role of Inflammation in Aging and Disease:** Increased Vascular Permeability. The Migration of White Blood Cells. Acute and Chronic Inflammation.
- **Causes of Acute Inflammation:** Viruses and Bacteria, Hypersensitivity Reactions (Contact Dermatitis and Hives), Trauma and Burns. Irritants and Chemicals. Ischemia and Necrosis.
- **Recognizing the Signs and Symptoms of Inflammation:** "Rubor" or Erythema, "Calor" or Heat (Fever, Vascular Dilatation), "Tumor" or Swelling (Edema), "Dolor" or Pain. Malaise, Tachycardia, and Fatigue.
- **Why Inflamed Tissues Hurt:** The Role of Bradykinins, Histamine, Prostaglandins, Serotonin, and Substance P.
- **Understanding Loss of Function:** How Inflammation Inhibits Movement Through Pain and Swelling. Autoimmune Forms of Arthritis.
- **The Role of Cytokines in Serious Illness:** Tumor Necrosis Factor Alpha, Interleukins, Chemokines, Interferons, and Colony Stimulating Factors. "Cytokine Storm" in COVID-19. The Cytokine Cascade and Vascular Events. Hypercoagulation.

Break - 15 Minutes

### Part 2 - Diagnosis & Treatment

- **Laboratory Findings in Inflammatory Conditions:** Elevated White Blood Cell Count (Neutrophils), Elevated Erythrocyte Sedimentation Rate (ESR), and Elevated High-Sensitivity C-Reactive Protein.
- **Autoimmune Diseases, Inflammation, and Accelerated Aging:** The Connection between Rheumatoid Arthritis and Myocardial Infarction.
- **Fat Cells Synthesize Cytokines:** The Link Between Obesity and Inflammation. Excess Weight and Hypertension, Type II Diabetes, Coronary Artery Disease, Cerebrovascular Accident, Asthma, Alzheimer's, and Parkinson's Disease.
- **Cancer, Aging, and Inflammation:** The Hormone Dependent Malignancies (Breast, Ovarian, Prostate, Gallbladder, and Colon).
- **Periodontal Disease and Systemic Illness:** The Effects of Aging on the Oral Cavity. Medical Disorders Linked to Gum Disease. High Level Hygiene to Reduce Inflammation in the Mouth.
- **The Benefits of Medically Significant Weight Loss:** Cardiac, Metabolic, Musculoskeletal, Sleep Architecture, and Cancer Risk.
- **Helping Patients Create an Anti-Inflammatory Protocol:** Easing Up on Flour, Sugar, Saturated and Trans Fats, Fast Food, Processed Food, and Alcohol. Portion Control, Healthy Snacking. Exercise and Sleep.

Questions & Answers, Post-test, & Evaluation (15 Minutes)

## LEARNING OBJECTIVES

Participants completing this course will be able to:

- 1) identify the clinical signs and symptoms of inflammation.
- 2) describe the role of various cytokines in serious illness including COVID-19 and acute cardiac events.
- 3) discuss the link between obesity and chronic conditions such as hypertension, Type-2 Diabetes, Asthma, and various forms of dementia.
- 4) list the common medical conditions associated with periodontal disease
- 5) describe the practical strategies known to facilitate weight loss and reduce systemic inflammation.
- 6) describe, based on the material presented in this course, the implications for nursing, pharmacy, nutrition, mental health, dentistry, occupational and physical therapy.

## INSTRUCTOR

**Dr. Laura Pawlak (PhD, MS, RDN)** received her Ph.D. in biochemistry at the University of Illinois and her M.S. in nutrition at the University of Illinois.

To become a registered dietitian (R.D.), Dr. Pawlak took her internship in dietetics at the Hines Veterans Administration Hospital in Illinois.

Dr. Pawlak conducted her postdoctoral research in biochemistry at the University of California, San Francisco Medical Center and is the author of 22 scientific publications and many academic books.

An expert in obesity, diet, nutrition, and behavior, Dr. Pawlak, has produced and presented -- nationally and internationally -- hundreds of continuing-education programs for health professionals and others. As an registered dietitian, she counseled clients in the areas of sports nutrition and weight loss.

INR reserves the right to change instructors without prior notice. Every instructor is either a compensated employee or independent contractor of INR.

## SYSTEM REQUIREMENTS

For system requirements to participate in INR's live webinars, please visit Zoom's website at <https://support.zoom.us/hc/en-us/articles/201362023-Zoom-system-requirements-Windows-macOS-Linux>.