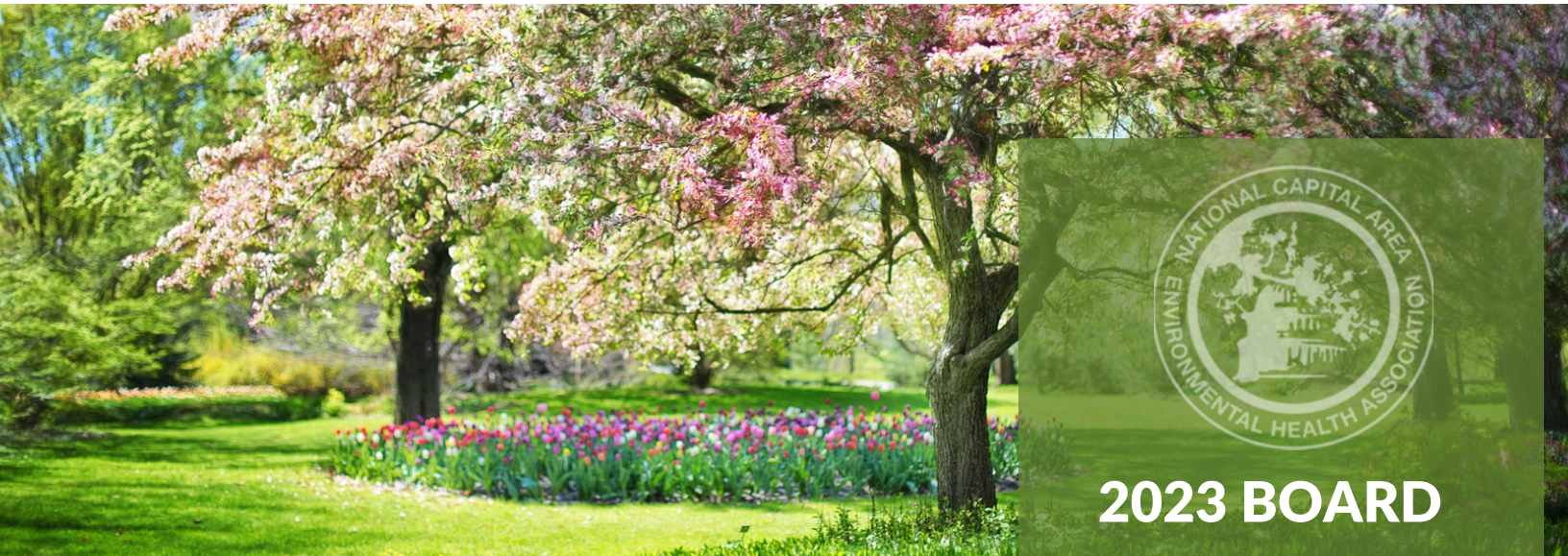


VOL. 24 | ISSUE 1

THE PREVENTATIVE MEASURE

WINTER/SPRING
2023

Triannual Newsletter of the National Capital Area Environmental Health Association



2023 BOARD

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President's Message



Greetings!

I hope this newsletter finds you well and ready to move into another wonderful year! Spring has finally sprung and we are so excited to show our members what NCAEHA has to offer with a brand new Board ready for action!

First off, I would like to thank all of our active members that participated in voting during our 2022 Elections last year. I am thrilled to be your new Board President and look forward to the future of NCAEHA! We also welcome Jan Jaminal, our new VP of Membership, and both Eva Rama and Kara Hoisington as our Directors of Communications! In addition, we have our previous President, Julia Balsley now serving as our NCAEHA Treasurer along with her Past President Role. Continuing on with their previous duties, we have Amanda Colletti as our VP of Programs and Professional Development, Kendra Washington as our Secretary, Erin Miller as our Maryland Representative, Marcella Sikon as our Virginia Representative, Amanda Barto as our DC Representative, and Caroline Friel as our Industry Liaison. This Board is committed to making NCAEHA the best it can be! With changes on the Board come new ideas, a strategic plan and high hopes to increase NCAEHA's presence in the DMV area. We have plans to make adjustments to our current roles as we revive our Professional Development courses, adding educational networking opportunities for students through mentorship programs, and schedule an industry tour! Keep a lookout for updates on these new opportunities later throughout the year!

Coming up next, we have our 2023 Awards and Scholarships! Nominations will become available this month and include NEHA Awards due May 1st. All other NCAEHA Award and Scholarship Applications for the Jerrold M. Michael Award, James M. Wordsworth Scholarship, Dedicated Service Award, Environmental Health Innovation Award, and NCAEHA Industry Award can be found at the end of this newsletter and are due by June 1st. We are seeking individuals interested in joining the Awards and Scholarships Committee to aid in our application process. If interested, please contact Jan Jaminal, VP of Membership.

Lastly, we have our Spring Educational Conference hosted in collaboration with DC Health which will be held on May 25th in Washington D.C.! Presentations range from food safety topics to environmental hazards and more! Reunite with your fellow NCAEHA Members for this in-person event! Registration and full Agenda coming soon!

I'm looking forward to seeing many of you on May 25th for another informative conference! As always, please let myself or any member of the Board know of any thoughts or suggestions you may have on how we may better serve you. Thank you and Happy Spring!

Nicole Gragasin
NCAEHA.President@gmail.com

Recent Progress in Lyme Disease and Remaining Challenges

Bohe, J.R., Jutras, B.L., Horn, E.J., Embers, M.E., Bailey, A., Moritz, R.L., Zhang, Y., Soloski, M.J., Ostfeld, R.S., Marconi, R.T., Aucott, J., et al. (2021). *Frontiers in Medicine*, volume 8. doi: <https://doi.org/10.3389/fmed.2021.666554>

ABSTRACT

Lyme disease (also known as Lyme borreliosis) is the most common vector-borne disease in the United States with an estimated 476,000 cases per year. While historically, the long-term impact of Lyme disease on patients has been controversial, mounting evidence supports the idea that a substantial number of patients experience persistent symptoms following treatment. The research community has largely lacked the necessary funding to properly advance the scientific and clinical understanding of the disease, or to develop and evaluate innovative approaches for prevention, diagnosis, and treatment. Given the many outstanding questions raised into the diagnosis, clinical presentation and treatment of Lyme disease, and the underlying molecular mechanisms that trigger persistent disease, there is an urgent need for more support. This review article summarizes progress over the past 5 years in our understanding of Lyme and tick-borne diseases in the United States and highlights remaining challenges.

INTRODUCTION

According to the Center for Disease Control and Prevention (CDC), the number of vector-borne diseases reported to the National Notifiable Diseases Surveillance System (NNDSS) between 2004 and 2016 reached a total of 642,602 cases. Of these, tick-borne diseases (TBDs) accounted for 77% (491,671 cases) of reported cases with the total number of cases doubling in 13 years. The pace of emergence of new tick-borne disease cases increased not only for Lyme disease (LD), the most predominant TBD with 82% of cases, but also for spotted fever rickettsiosis, babesiosis, anaplasmosis, and Powassan disease.

The CDC recently estimated ~476,000 clinician diagnosed cases of LD every year in the USA based on insurance claims data from 2010 to 2018, a significant increase from their previous estimate of ~329,000 annual cases using similar methods to generate data from 2005 to 2010. If untreated, infection with Bb can lead to health problems affecting the skin, joints, nervous system, or less commonly, the heart. While most individuals return to health following antibiotic treatment for LD, others go on to experience chronic health problems that can last months to years. The research community has largely lacked the necessary funding to properly advance scientific and clinical understanding of LD and its sequelae, and to develop and evaluate new approaches for prevention, diagnosis, and treatment. The annual NIH investment in LD research so far has been small compared to many other infectious diseases. In this review, we summarize key advances in each of these areas over the past 5 years and identify challenges and opportunities for the field.

Disease	NIH Funding FY 2018 (in millions) ^a	USA reported cases in 2018	Funding per reported case in 2018
HIV/AIDS	\$2,995	36,400 ^b	\$82,280
Malaria	\$202	~2,000 ^c	~\$101,000
West Nile Virus	\$36	2,647 ^d	\$13,600
Lyme Disease	\$30	~33,666 ^e (~476,000 estimated cases) ^f	~\$891 (\$63 per estimated case)
Tuberculosis	\$403	9,029 ^g	\$44,634

For purposes of consistency and comparison across diseases, the table uses funding per case based on the number of reported cases. A difference sometimes exists between the reported number of cases per year and estimates of the actual incidence in some infectious diseases. For LD, the difference is more than 10-fold. For example, the number of reported cases in the USA in 2018 is ~34 k while the estimated number of annual cases is ~476 k (g). Therefore, the research investment by the NIH for LD is around \$63 per new estimated case in 2018. This table is adapted and updated from a version in the Tick-borne Diseases Working Group (TBDWG) report to Congress (5).

^ahttps://report.nih.gov/hiv-basics/categorical_spending.aspx
^b<https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics>
^c<https://www.cdc.gov/parasites/malaria/index.html>
^d<https://www.cdc.gov/westnile/statsmaps/cumMapsData.html>
^e<https://wonder.cdc.gov/nndss/static/2018/annual/2018-table2i.html>
^f<https://www.cdc.gov/mmwr/volumes/68/wr/mm6811a2.html>
^g<https://www.cdc.gov/lyme/stats/humancases.html>

DIAGNOSIS

The diagnosis of LD can be a complex task for the provider because, outside of the erythema migrans (EM) lesion of early LD, diagnosis relies on non-specific clinical signs and symptoms that may or may not be supported by laboratory evidence. A prospective study evaluated the ability of emergency room (ER) physicians across 5 hospitals in endemic areas in the Northeast of the USA to accurately discriminate between LD (early disseminated or late) and non-LD using clinical judgment alone, prior to the receipt of laboratory evidence. Among 1,021 children being evaluated for LD (based on presence of one or more EM lesions or Lyme serology tests ordered and compatible symptoms) and enrolled in the study between 2015 and 2017, clinician suspicion of LD in the ER setting was found to be minimally accurate compared to diagnoses supported by laboratory evidence.

Twelve percent of patients whom the treating clinician deemed to be unlikely to have LD, actually had LD. Thirty-one percent of patients whom the clinician deemed very likely to have LD, actually did not have LD.

Around 40% of patients diagnosed with LD have signs and symptoms associated with disseminated or late LD, indicating that delayed diagnosis and treatment are a common occurrence. In a recent population-based study of 778 patients surveyed in Pennsylvania who were treated for LD in the past 5 years, 31% had a time to treatment >30 days and 10% had time to treatment >6 months, where time to treatment is defined as the sum of time to first medical contact and time under care until receiving treatment. A qualitative study of 26 patients treated for LD in Pennsylvania suggests that patient appraisal of their own signs and symptoms plays a role in delayed treatment, specifically the misattribution of non-specific symptoms, the intermittent nature of symptoms and the lack of a “bull’s-eye rash,” which is commonly misunderstood to be the only representative skin lesion of LD. High rates of initial delayed or misdiagnosis is also commonly reported by LD patients that meet the PTLDS case definition or those with chronic symptoms more broadly.

STEALTHY TO SICKLY

The collection of tick exposure history from patients suspected of having LD lacks sensitivity because ticks are stealth biters. They are able to avoid detection by human hosts during feeding. Many people diagnosed with LD have no recollection of being bitten by a tick. While the major endemic regions in the USA are the Northeast, mid-Atlantic and upper Midwest states, Ixodes spp. ticks capable of carrying LD pathogens are found in many states.

A recent citizen-science based effort to collect ticks submitted by volunteers from across the USA identified ticks capable of carrying *Borrelia* species in 35 states. In California, where LD is not considered endemic, infected *Ixodes* spp. ticks have been found in 42 counties (72%) according to surveillance data.

If untreated, a patient with a *Bb* infection may go through several stages of LD, with different signs and symptoms at each stage. In most people, the first stage of LD begins with “flu-like” symptoms and an EM lesion. LD is known as the “great imitator” because symptoms are varied and often overlap with common health complaints, sometimes making early diagnosis more difficult. The most common symptoms of early LD are fever, chills, headache, fatigue, neck stiffness, myalgia, joint pain and swollen lymph nodes. There are likely hundreds of health conditions with significant overlap with these non-specific signs and symptoms. As spirochetes disseminate from the site of the tick bite, additional EMs and manifestations can occur including 7th cranial nerve palsy, meningitis, or Lyme carditis. In the third stage, without proper treatment, patients may also experience neuroborreliosis or Lyme arthritis (LA).

The type and severity of LD manifestations are known to vary across infected individuals for reasons that are unclear but are likely attributable to both, differences in the infecting pathogen and the characteristics of the infected individual. They range from asymptomatic or subclinical infection all the way to severe complications from LD that, in rare cases, result in death from Lyme carditis.

BULLSEYE RASH

The characteristic EM lesion develops inconsistently across humans 3–30 days following a bite from an infected tick. The EM is often an annular, erythematous, expanding cutaneous lesion that may or may not have a central clearing. While it is sometimes referred to as a “bulls-eye rash,” presentation is known to vary considerably. Variation in skin pigmentation, as well as coloring and shape of the rash may also lead to missed or delayed clinical diagnoses. The central clearing in the rash is reported to be less common in endemic areas compared to non-endemic areas. While reports vary across studies, up to 30% of individuals diagnosed with LD do not develop an EM lesion or its presence is missed. If an EM lesion is absent, there is no clinically recommended laboratory test available to aid in the diagnosis of early LD because the currently recommended serologic tests are highly insensitive in the first few weeks of infection.



DIRECT DETECTION

Many bacterial infections are diagnosed using a variety of culture methods and the confirmation of pathogen identity through molecular techniques or differential biochemical assays. This is not currently practical or feasible for LD. The direct detection of the pathogen in blood can be a challenge because of the narrow window of spirochetemia that is more likely during early infection and the low numbers of circulating *Bb*. While the pathogen may disseminate from the site of the tick bite through the blood, it also disseminates through the lymphatics and is known to invade other more privileged tissues, such as the heart, nervous system, and connective tissue. *Bb* is a fastidious, slow-growing bacteria that requires up to 12 weeks of incubation in culture before a negative result is determined, which is too long to be useful in clinical diagnosis. In one study on the ability to detect spirochetemia in patients with EM through culture methods, they estimated 1 cultivable spirochete per 10 mL of whole blood. *Bb* culture also requires specialized skills and tools that most laboratories are not equipped with outside of the research setting, where these techniques remain valuable for basic science research. Finally, antibiotic treatment decreases culture positivity rates, making it useful only in untreated patients. Blood, serum or plasma is not a reliable tissue to detect *Bb* by PCR because the spirochetes are transient and in low copy number. Skin biopsy from the EM lesion is a more useful tissue diagnostically, but this step is invasive and patients that present with an EM lesion do not require laboratory confirmation for diagnosis of LD.

For the reasons outlined above, there is an urgent need for pathogen-detection methods that are highly sensitive and specific and capable of reliably detecting infection by multiple pathogenic species of *Borrelia* and strains of *Bb* (see section Genomic Insights From *Borreliaceae* Lineages) at all stages of infection and disease (57). Of special concern are individuals with acute infection that do not present with an EM rash and have yet to generate a humoral response to *Bb*.

The factors that control the development of EM rash also need to be delineated, along with a surrogate set of biomarkers to aid diagnosis of more complex cases of suspected LD. *Ixodes* ticks can carry multiple human pathogens (see section Transmission of *Bb* via *Ixodes* spp. Vectors), and diagnostic methods capable of detecting the most prevalent tick-borne pathogens and clinically relevant strains of *Borrelia* are needed. Promising new diagnostic methods are being developed using serology, direct detection assays, and other tests that measure host response to the pathogen.

TREATMENT

Antimicrobial therapy for LD is often successful, especially when patients are treated in the early phase following detection of an EM lesion. As disease progresses, treatment must be extended and may be less effective. Administration of doxycycline or amoxicillin for 14–21 days is the recommended treatment for early or early disseminated phase patients who do not have neurological involvement. Lyme arthritis is an indication of disseminated disease and the recommended treatment for this is the aforementioned oral antibiotic for 28 days. For patients with clinically evident neurological involvement, treatment with intravenous ceftriaxone is recommended. These suggested regimens are based on objective measurements. However, in the guidelines from the Infectious Disease Society of America (IDSA), the authors point out that “Response to treatment is usually slow and may be incomplete.”

There is widespread agreement in the medical community about the appropriate treatment of acute LD, however the appropriate treatment of patients meeting the Post-treatment Lyme disease syndrome (PTLDS) case definition remains a challenge due to incomplete knowledge about the condition and related uncertainties. Moreover, the recently updated IDSA guidelines for the treatment of LD remove mention of PTLDS altogether.

More clinical trials are needed to assess the efficacy and safety of drug regimens and complementary therapies for LD and its sequelae. This year, the first clinical trial coordinating center was established at Columbia University to facilitate the conduct of high-quality multi-site clinical trials and pilot studies related to LD and other TBDs. Furthermore, tools capable of discriminating the etiology of persistent health issues following treatment for LD are needed in order to improve therapy development efforts and target treatments for more precise patient-centered care.

DRUG DISCOVERY AND PRECLINICAL TRIALS

Although early-stage LD can be successfully treated with doxycycline or amoxicillin, late-stage LD with arthritis and neurological symptoms can be refractory to antibiotic treatment. Wu et al. showed that stationary phase Bb are unexpectedly susceptible to cell wall synthesis inhibitors, and vancomycin in particular almost completely eradicates Bb in vitro. Feng et al. recently identified FDA-approved drug candidates that are more effective at killing dormant Bb in vitro than the current Lyme antibiotics. They found the drug combination Daptomycin + Cefoperazone (or Cefuroxime) + Doxycycline was most effective at eradicating Bb grown in vitro and more recently in the mouse model for Bb persistence.

The development of an anti-tick vaccine is one potential approach to protect people from multiple tick-borne diseases, including LD, as recently reviewed elsewhere. *Ixodes scapularis* ticks transmit 16 human pathogens associated with tick-borne disease in the USA, including Bb, *Borrelia miyamotoi*, *Babesia microti*, *Anaplasma phagocytophilum*, Ehrlichia muris-like agent (EMLA) and Powassan virus. During transmission to a human, bacteria interact with tick proteins in the gut and salivary glands. These interactions can influence whether transmission occurs. Increased protection might be conferred if any of several steps in the transmission cycle are inhibited by targeting one or several of these tick proteins simultaneously. For example, mice that were given antiserum to the tick protein, Salp15, and then were challenged with Bb, showed protection from colonization. Tick proteins may also elicit “tick immunity,” a process during which a host becomes resistant to tick bites because the ticks cannot feed properly. If a vaccine can be developed that creates tick immunity in humans, this may enable the prevention of LD, and other tick-borne diseases, especially for those that migrate slowly from tick to human.

PREVENTION

In the USA, Bb is the most common vector-borne pathogen; LD comprises 62.6% of all vector-borne diseases and 81.2% of all tick-borne diseases. There is an increasing trend of new cases in counties and states neighboring high-incidence regions, indicating a spread of the pathogen and disease risk in new geographical areas. The current complexities around the diagnosis and treatment of LD and PTLD suggest a growing need for primary prevention and to understand the intricacies of the ecological factors that impact disease risk.

Popular ecological preventative techniques gravitate around reduction of host populations, reduction of ticks, and reduction of pathogen infection in ticks or hosts. Popular human-behavioral strategies include altering the risk of exposure of humans through behavioral changes associated with self-protection, use of outdoor space, and modifications of the environment. White-footed mice are the primary reservoir for Bb and their density has been shown to affect LD risk. The culling of white-tailed deer is a common preventative technique, but research sheds doubt on the viability or practicality of mass culling, suggesting that the technique is only effective on islands or closed populations where complete elimination can be accomplished. Personal protective measures, including checking body for ticks and use of tick repellent are frequently promoted by government and public health agencies. Some of these measures have been shown to reduce disease risk, yet effectiveness may be as low as 20–40%, with some practices like checking one's body for ticks being found ineffective. One challenge to prevention is the fact that nymphal ticks are as small as a poppy seed, and their bites can easily go unnoticed.

Land usage or cover has shown strong trends of being impactful on exposure to LD, but still being researched is the spatial scale of land usage. Questions of land use in residential spaces or neighborhoods are still being explored, as well as the human movement within those spaces.

LYME DISEASE RESEARCH CENTER

The primary focus of the Johns Hopkins Lyme Disease Research Center (LDRC) is clinical translational research to advance the fundamental understanding of LD through the characterization of carefully constructed cohorts of LD patients and controls, as well as a clinical biorepository of blood and tissue biospecimens. The LDRC enrolls participants from an expanded Mid-Atlantic region into a variety of research protocols, which all collect detailed health histories, clinical, and behavioral data. Over 350 participants have been enrolled in ongoing longitudinal cohort studies (some followed for up to 10 years), which include patients meeting CDC criteria for early and late LD, as well as uninfected controls without LD. The SLICE studies obtain a number of different biosamples including: a skin biopsy (in patients with acute LD), whole blood, serum, plasma, PBMCs, DNA, RNA, skin and fecal swabs, and most recently, urine. All these samples are processed in the laboratory, aliquoted, archived and stored. To-date, they have shared ~6,000 sample aliquots for collaborative initiatives.

The center collaborates with key investigators who utilize these samples for immune profiling, transcriptomics, proteomics, metabolomic, and microbiome-based studies.

The LDRC has demonstrated that PTLD is a definable condition that is distinguishable from those that “return to health” following infection and treatment for LD. With the ability to compare PTLD patients with controls uninfected with LD, the SLICE studies show that the rates of individuals with both symptoms and a decline in health-related quality of life are significantly higher in patients previously treated for acute LD than in controls (14 vs. 4%) (unpublished data).

DISCUSSION

More research into the prevention, diagnosis and treatment of LD is needed in order to address the significant health risks posed by this tick-borne disease. The annual NIH and CDC investment in Lyme and tick-borne diseases research has been relatively unchanged for decades and is small compared to many other infectious diseases. In 2015, the Steven & Alexandra Cohen Foundation established a research consortium involving over 30 leading universities, research laboratories and other organizations that aim to advance Lyme and tick-borne disease diagnosis and treatment, human vaccination, awareness and education, data science and management, and ecological prevention. Philanthropic funding, including a new public-private partnership around novel diagnostic technologies, is critical to address the historically small amount of federal funding for LD compared to some other infectious disease of public health concern. While the Kay Hagan Tick Act did recently boost federal support for LD research, more is needed.

In closing, in consideration of the unique global circumstances with the COVID-19 pandemic, it is important to highlight several features of the current context that may impact the LD community. For example, COVID-19 may further complicate diagnosis of LD since non-specific symptoms in these two conditions overlap and people may be spending more time outdoors. The emergence of a persistent syndrome, popularly referred to as long COVID, among a subset of patients following treatment or convalescence may invigorate research and provide insights that carry-over into other infectious diseases with post-treatment sequelae, such as LD.

save the date.

MAY 25, 2023 @ DC HEALTH

Please join us as we reunite for our second In-Person Conference of the year! Hosted in collaboration with DC Health, our Spring Conference will be held in Washington, DC on May 25th.

.....

**\$15 for active NCAEHA Members to attend, \$30 for non-members.
Registration and Agenda coming soon!**





IF YOU HAVEN'T ALREADY, IT'S TIME TO RENEW YOUR 2023 MEMBERSHIP!



BENEFITS OF MEMBERSHIP:

- ✓ Be a part of a local association in the DC, MD, and VA area that is focused on environmental health (EH)
- ✓ Network with other local EH professionals in academia, industry, government, private sector, and other areas
- ✓ Advance your career by pursuing a credential or certification with our discounted annual courses like the REHS, CP-FS, CPO, and more
- ✓ Gain more knowledge and/or earn up to 15 Continuing Education hours per year by attending our nearby Educational Conferences
- ✓ Enjoy a good time with your EH colleagues and build new connections at our social events
- ✓ Recognize an EH professional by nominating them for an award or scholarship
- ✓ Pursue local EH employment opportunities with easy accessibility through our announcements
- ✓ Stay updated through our newsletter, website, and social media and announcements on other events, trainings, webinars, and more

Memberships expire on December 31, 2022.
Regular Membership Renewal: \$20.00
Student and Silver Membership Renewal: \$5.00

Membership Renewal may be completed online at www.ncaeha.org
by simply logging onto your profile and click the RENEW button!
Payments are accepted online via credit card.

Awards and Scholarships 2023

Now is the time to recognize a fellow individual or colleague with one of our renowned NCAEHA Awards! We are offering 9 Awards and 1 Scholarship to deserving individuals who have made great contributions to Environmental Health and our organization. Applications may be found on our website at ncaeha.org/awards and are due to our VP of Membership no later than June 1st, 2023.



James M. Wordsworth Scholarship

James Wordsworth has been a long standing restaurateur and advocate for the work Environmental Health Professionals do to help keep the public safe. Mr. Wordsworth is a Honorary Lifetime Member of NCAEHA and every year helps make a scholarship available to a candidate that is seeking higher education in a field related to Environmental Health.

Jerrold M. Michael Award

Jerrold Michael was the Founding President of NCAEHA. He was a true leader and pioneer in the field of Environmental Health. This award is to recognize a professional in the field of environmental health that has contributed to his or her employer's environmental health mission, to the goals of the National Capital Area Environmental Health Association, and to the advancement of the environmental health profession.

NEHA Certificate of Merit -- DUE MAY 1, 2023

Each year, NEHA recognizes one individual and one team, from each of its Affiliates, who has made outstanding contributions to the profession of environmental health. It is one of the benefits of your affiliation with NEHA. Recipients are announced in the NEHA Journal of Environmental Health.

Dedicated Service Award

This recognition is awarded to Long-term members who are retiring this year. Candidates can be nominated by any member of NCAEHA. Eligibility: to be eligible a nominee must: be an Environmental Health Professional that is approaching retirement within the next year, be a member in good standing of NCAEHA for a minimum of 2 years, be actively engaged in the field of environmental health, and have performed professional duties in the field of environmental health above and beyond the usual employment requirements so as to elevate the professional status of the Environmental Health Professional.

Environmental Health Innovation Award

This award is presented to a NCAEHA member or organization for creating a new idea, practice or product that has had a positive impact on improving the environment or public health and quality of life. The purpose of this award is to recognize these individuals and to encourage others to search for creative solutions.

NCAEHA Industry Award

This award is presented to a company or industry which has demonstrated support to NCAEHA and has made a significant contribution to the field of environmental health and/or to NCAEHA.

Members of the Year - VA, MD, DC

These members are chosen by the VP of Membership and Secretary and are awarded for their outstanding dedication to NCAEHA. Winners will have demonstrated active conference attendance, committee work, and have been active Members for 2 years or more. A selection from Virginia, Maryland, and DC will be awarded, if applicable.



National Capital Area Environmental Health Association Nomination Form for: **NEHA Certificate of Merit Award** For Individual or Team



About the award: Each year at the NEHA Annual Educational Conference & Exhibition (AEC), NEHA recognizes an individual or team, from each of its Affiliates, who has made outstanding contributions to the profession of environmental health. It is one of the benefits of your affiliation with NEHA and your local Affiliate chapter. This is a National recognition.

NOMINATED BY:

Name: _____

Job Title: _____

Address: _____

Phone: _____

E-Mail: _____

NOMINEE:

Name: _____

Job Title: _____

Employer: _____

Please attach a brief (one page or less) explanation of the reasons you believe that the above named individual or team should be selected as this year's **Certificate of Merit Award** recipient. Specifically describe how this person or team has contributed to the field of Environmental Health.

THE NOMINATION COMMITTEE MAY CONTACT YOU FOR ADDITIONAL INFORMATION.

Nominations may be sent either by postal service or email to
NCAEHA and must be received by **May 1, 2023**.

Send complete nominations to:

NCAEHA.VP.Membership@gmail.com



National Capital Area Environmental Health Association
Nomination Form for: Jerrold M. Michael Award
(Environmental Health Professional of the Year)

***About the award:** Jerrold Michael was the Founding President of NCAEHA. He was a true leader and pioneer in the field of Environmental Health. This award is to recognize a professional in the field of environmental health that has contributed to his or her employer's environmental health mission, to the goals of the National Capital Area Environmental Health Association, and to the advancement of the environmental health profession.*

NOMINATED BY:

Name: _____

Job Title: _____

Address: _____

Phone: _____

E-Mail: _____

NOMINEE:

Name: _____

Job Title: _____

Employer: _____

Please attach a brief (one page or less) explanation of the reasons you believe that the above named individual should be selected as this year's **Jerrold M. Michael Award** recipient. Specifically describe how this person has contributed to his or her employer's environmental health mission, to the goals of the National Capital Area Environmental Health Association, and to the advancement of the environmental health profession.

THE NOMINATION COMMITTEE MAY CONTACT YOU FOR ADDITIONAL INFORMATION.

Nominations may be sent either by postal service or email to
NCAEHA and must be received by **June 1, 2023**.

Send complete nominations to:
NCAEHA.VP.Membership@gmail.com



National Capital Area Environmental Health Association

James M. Wordsworth Scholarship Application

About the award: James Wordsworth has been a long standing restaurateur and advocate for the work Environmental Health Professionals do to help keep the public safe. Mr. Wordsworth is an Honorary Lifetime Member of NCAEHA and every year helps make a scholarship available to a candidate that is seeking higher education in a field related to Environmental Health.

1. Name (Last, First, Middle Initial): _____

2. Permanent Address: _____

3. City: _____ State: _____ Zip Code: _____

4. Telephone Number: _____

5. E-mail Address: _____

6. Are you an active member of the National Environmental Health Association (NEHA)? YES / NO

7. Are you an active member of the National Capital Area Environmental Health Association (NCAEHA)? YES / NO

8. Education (list most current first):

School	Major	Dates	Degree
1.			
2.			
3.			

Year and date of expected graduation from current program: _____ GPA: _____

9. Employment history (list present employer first):

Employer	Job Title	Years Employed
1.		
2.		
3.		

10. Write a short summary of your professional achievements, including any major contributions you have made that resulted in the increased protection of human health and the environment. (Attach additional page)

11. List civic groups and other community activities of which you are a member. Also, note any special honors received. (Attach additional page)

12. Provide one letter of recommendation from either the school in which you are currently enrolled, an active NCAEHA member, or a current or past supervisor

Send completed application by **June 1, 2023** to: NCAEHA.VP.Membership@gmail.com



National Capital Area Environmental Health Association Nomination Form for: Dedicated Service Award

About the award: *This recognition is awarded to Long-term members who are retiring this year. Candidates may be nominated by any member of NCAEHA.*

Eligibility: *to be eligible a nominee must be*

- 1. An Environmental Health Professional that is approaching retirement within the next year.*
- 2. A member in good standing of NCAEHA for a minimum of 2 years.*
- 3. Actively engaged in the field of environmental health.*
- 4. Have performed professional duties in the field of environmental health above and beyond the usual employment requirements so as to elevate the professional status of the Environmental Health Professional.*

NOMINATED BY:

Name: _____

Job Title: _____

Phone: _____

E-Mail: _____

NOMINEE:

Name: _____

Job Title: _____

Retirement Date and Years of Service: _____

Employer: _____

E-Mail: _____

Please attach a brief (one page or less) explanation of the reasons you believe that the above named individual should be selected as this year's Dedicated Service Award recipient.

THE NOMINATION COMMITTEE MAY CONTACT YOU FOR ADDITIONAL INFORMATION.

Nominations may be sent either by postal service or email to
NCAEHA and must be received by **June 1, 2023**.

Send complete nominations to: **NCAEHA.VP.Membership@gmail.com**



National Capital Area Environmental Health Association Nomination Form for: Environmental Health Innovation Award

About the award: *This award is presented to a NCAEHA member or organization for creating a new idea, practice or product that has had a positive impact on improving the environment or public health and quality of life. The purpose of this award is to recognize these individuals and to encourage others to search for creative solutions.*

Recognized for:

- A new idea
- A new practice
- A new product
- or similar

NOMINATED BY:

Name: _____

Job Title: _____

Phone: _____

E-Mail: _____

NOMINEE:

Name: _____

Job Title: _____

Employer: _____

Innovation: _____

Please attach a brief (one page or less) explanation of the reasons you believe that the above named individual should be selected as this year's **Environmental Health Innovation Award** recipient. Specifically describe how this person or team has impacted the environment or public health and quality of life through their new health innovation.

THE NOMINATION COMMITTEE MAY CONTACT YOU FOR ADDITIONAL INFORMATION.

Nominations may be sent either by postal service or email to
NCAEHA and must be received by **June 1, 2023**.

Send complete nominations to: **NCAEHA.VP.Membership@gmail.com**



National Capital Area Environmental Health Association Nomination Form for: NCAEHA Industry Award

About the award: *This award is presented to a Company or Industry which has demonstrated support and has made a significant contribution to the field of environmental health and/or to NCAEHA.*

Eligibility: *Company or Industry must*

- *Be an employer of at least one current NCAEHA member(s) in good standing*
- *Have performed duties in the field of environmental health above and beyond the usual requirements so as to elevate the professional status of the profession and/or NCAEHA*
- *Exemplify the characteristics of excellence, leadership, organization and dedication to the environment*

NOMINATED BY:

Name: _____

Job Title: _____

Phone: _____

E-Mail: _____

NOMINEE:

Company/Industry: _____

Region (if applicable): _____

Phone: _____

Email: _____

Please attach a brief (one page or less) explanation of the reasons you believe that the above named company should be selected as this year's NCAEHA Industry Award recipient. Specifically describe how this company has significantly contributed to the field of environmental health and/or to NCAEHA.

THE NOMINATION COMMITTEE MAY CONTACT YOU FOR ADDITIONAL INFORMATION.

Nominations may be sent either by postal service or email to
NCAEHA and must be received by **June 1, 2023**.

Send complete nominations to: **NCAEHA.VP.Membership@gmail.com**