

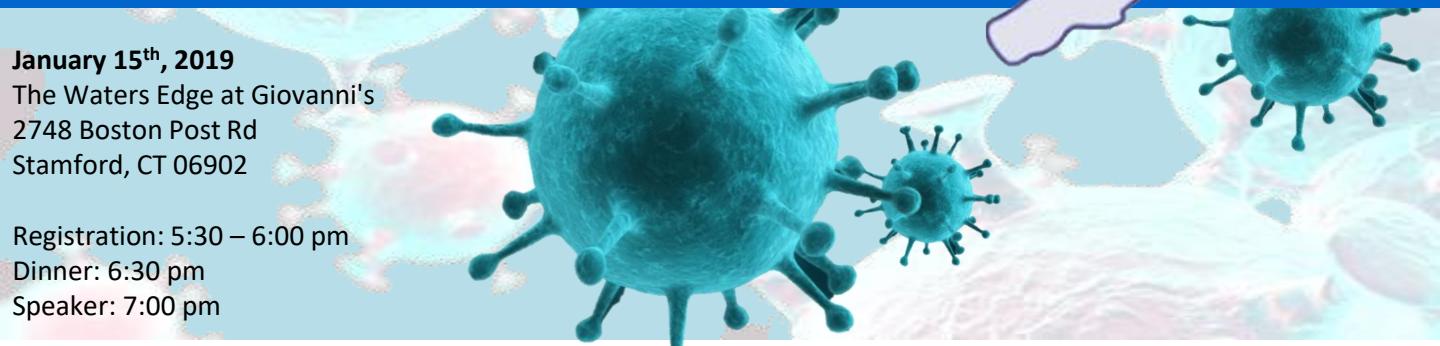
January 15th, 2019

The Waters Edge at Giovanni's
2748 Boston Post Rd
Stamford, CT 06902

Registration: 5:30 – 6:00 pm

Dinner: 6:30 pm

Speaker: 7:00 pm



C T S C C M o n t h l y C h a p t e r M e e t i n g

Ancient Viruses and How They Influence Humanity

Speaker:

Dr. Paul Lawrence

Director of Bioscience,
Research & Product
Development,
Biocogent, LLC

Abstract

Viruses represent one of four different varieties of pathogens that are culprits of disease on this planet. They are uniquely adapted to parasitize the protein synthesis machinery of an infected cell. However, viruses are more than just disease-causing agents to be tackled by modern medicine, they have also been influencing the trajectory of humanity in more ways than just one. This discussion will focus on two distinct groups of "ancient viruses" that have had profound impacts on us as a species and the environment within which we live. The first part will describe endogenous retroviruses that have been modifying our genome and altering our evolution going back to our very distant ancestors. The second half will involve the re-emergence of giant DNA viruses that were frozen in permafrost in a dormant state until global temperature increases started to thaw the ice. The true impact of the resurrection of these incredibly large viruses is a hot topic of debate in the scientific community. And finally, I will conclude with how we have now harnessed viruses such as these for our own benefit in food, pharmaceutical, and cosmetic industries.

Biography

Dr. Lawrence received his doctorate in molecular microbiology from Stony Brook University and before that obtained his bachelor of science degree in molecular biology from the University of New Mexico. During his career, he has conducted biological research in academia, industry, and for the United States government. He has conducted vaccine and anti-viral therapeutic research at Brookhaven National Laboratory and at the Plum Island Animal Disease Center. In industry, he has participated in contract biopharmaceutical research and development for the former Collaborative Bioalliance and Dow Chemical. Dr. Lawrence was also the Director of DNA Production for the anti-counterfeiting biotechnology company, Applied DNA Sciences. Currently, he is the Director of Bioscience Research and Product Development for Biocogent. Over the course of his career, Dr. Lawrence has published more than 15 research manuscripts and review articles, more than 25 online science digests, as well as a textbook chapter on the molecular pathogenesis of one of the world's most infectious viruses.

**CTSCC Monthly Meeting
Registration**

Online at www.ctsc.org

Email Cynthia at
cvalovich@zotos.com

Chapter Meeting Cost

SCC members: \$45

Non-members: \$50

Students and Unemployed: \$35

2019 ELECTED OFFICERS:

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ctscchair@gmail.com

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Letter from the Chair

January 2019

Dear CTSCC Members and Friends,

Happy New Year!!!! I cannot believe it is 2019 already!! Throughout my many years in the industry (22 to be exact), the Society of Cosmetic Chemists has always played an important role in my career, not only through the educational aspects but also the business connections and friends I have made through the SCC throughout the years. I am truly honored to give back to the SCC as the chair of the Connecticut chapter.

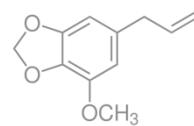
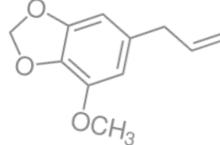
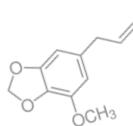
We have an exciting 2019 planned. First we would like to extend our appreciation to Nick Huss who closed out 2018 in November with a fantastic talk about emulsion theory. We will start out 2019 strong in January with Dr. Paul Lawrence from Biocogent speaking to us about ancient viruses and their influence on humanity. In March, Dr. David Clay will educate us about the use of silicones in the personal care industry. On top of the educational dinner meetings planned, please look out for further networking opportunities later in the year.

I want to send a BIG thank you to Elizabeth Mycka whose dedication through the last 20 years has been indispensable to our chapter. Without the help of the entire board, no single person can keep a chapter running and we would love to see more volunteers in 2019. If you are interested in volunteering for any positions, please speak to me or any of our dedicated board members.

We look forward to seeing you at our next meeting.



Sue Sperring
2019 Chair, Connecticut Chapter
Society of Cosmetic Chemists



Mark your calendars! CTSCC 2019 Meeting Dates

January 15, 2019

March 19, 2019

April 16, 2019

Golf Outing

TBD

Summer Event

September 17, 2019

October 15, 2019

November 19, 2019

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Photo of Hamden, CT by Professor Bop (Flickr)



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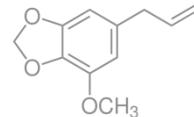
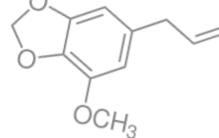
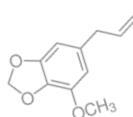
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**Technical Corner**

The Skin Aging Exposome

Author: Roger L. McMullen

Exposome refers to the collective exposure of a person throughout a lifetime—from conception onwards—to various environmental elements that influence the overall health state of the individual. Exposure to certain elements is positive while other factors may negatively contribute to the health state of the human being. Exogenous sources could be solar radiation, chemicals, and infectious agents.¹ We often think of exposure arising from exogenous sources; however, endogenous factors, such as metabolism can also play an integral role. Inasmuch, the exposome is also influenced by lifestyle factors, such as diet and exercise.

The study of the exposome—exposomics—shares many commonalities with other state-of-the-art techniques, such as genomics, proteomics, lipidomics, metabolomics, etc., inasmuch that it utilizes large pools of data to arrive at conclusions regarding the link between exposures and health outcomes. A key to arriving to these conclusions relies on the persistent measurement of biomarkers and obtaining a very accurate history of exposure.²

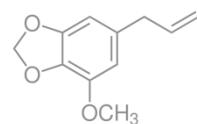
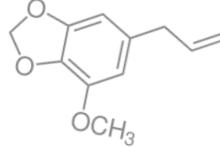
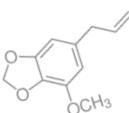
Typically, the exposome is defined for the entire organism or individual organs in the body. Until recently, there has not been much discussion in the skin research community about the exposome of skin. However, Jean Krutmann and coworkers paved the way by setting the stage for the skin aging exposome.³ Exposure to solar radiation, pollution, and tobacco smoke are well established factors that contribute to skin aging. Decades of research substantiate the role of UV light in photoaging.⁴ It should be noted, however, that genetic factors, such as melanin levels in the skin, determine the degree of damage suffered as a result of exposure to solar radiation.

In more recent years, researchers discovered that exposure to infrared light also contributes to photoaging.⁵ In addition, air pollution also contributes to extrinsic skin aging.⁶ Other mediators, such as nutrition, sleep quality, stress, and temperature are also believed to play a significant role in skin homeostasis. These factors by themselves and in conjunction with each other may all contribute to the skin aging exposome. In a recent review article, the influence of exposome factors on acne are outlined, indicating how nutrition, medication, pollution, psychosocial, and lifestyle factors play an important role in determining the extent of acne development as well as its treatment.⁷

The use of cosmetic products may also play an integral role in the state of the skin aging exposome. The toxicological and safety profile of cosmetic ingredients should be considered as paramount in the evaluation of their affects on the skin. On the other hand, cosmetic products designed to combat photoaging or other types of extrinsic aging may improve the health state of skin and contribute positively to the exposome. In addition, preventive measures can be taken by individuals to reduce their exposure to factors that negatively impact the skin aging exposome.



Photo by Ursula Ferrer (Flickr)



The Skin Aging Exposome

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References

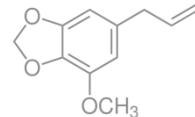
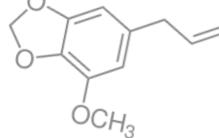
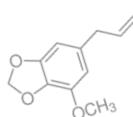
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About the Author

Dr. Roger L. McMullen has over 20 years of experience in the personal care industry with specialties in optics, imaging, and spectroscopy of hair and skin. Currently, he is Principal Scientist in the Measurement Science department at Ashland Specialty Ingredients. Roger received a B.S. in Chemistry from Saint Vincent College and completed his Ph.D. in Biophysical Chemistry at Seton Hall University. Roger actively engages and participates in educational activities in the personal care industry. He is also an Adjunct Professor at Fairleigh Dickinson University and teaches Biochemistry to students pursuing M.S. degrees in Cosmetic Science and Pharmaceutical Chemistry. Prior to pursuing a career in science, Roger served in the U.S. Navy for four years on board the USSYORKTOWN (CG 48), a guided missile cruiser—one of the first ships with the Aegis Combat System.

(originally published in NYSCC Cosmetiscope Vol. 24 No. 9)



Upcoming Events

January

- 15 – CTSCC – Ancient Viruses and How They Influence Humanity (Darien, CT)
- 17 – New England Chapter – Color Seminar for Cosmetic Science (Worcester, MA)
- 17 – NYSCC – Exposome Seminar (Iselin, NJ)
- 23 – Long Island Chapter – Enhancing Cosmetic and Therapeutic Ingredient Development Through Fermentation Technologies (Farmingdale, NY)

March

- 19 – CTSCC Monthly Meeting – Silicones with Dave Clay, Momentive (Norwalk, CT)
- 21 – New England Chapter – TBA

May

- 7-8 – NYSCC – Supplier's Day



Volunteer with the CTSCC!

Consider volunteering for a committee position with the CTSCC, or recommending someone you know who may be interested.

Benefits include:

- Exposure to the national SCC organization
- Experience in a trade organization, suitable for adding to a resume
- Excellent networking opportunities
- A voice in future speakers and helping to decide the direction of the chapter

Please contact any board or committee member with questions or for additional details!

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ATTENTION! ATTENTION!

In-House CEP Courses Available

In-House Courses are highly-personalized courses brought to companies to address challenges or areas of need. These courses, taught by knowledge experts, provide professionals with an up-to-date cosmetic science education. Recent In-House Courses have been organized for **Benefit Cosmetics, Mary Kay, Bayer, the FDA** and others.

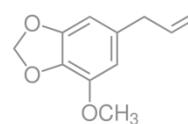
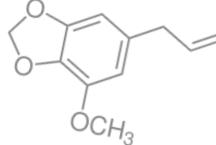
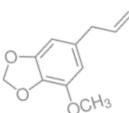
Companies interested in providing in-depth technical information to their employees can contract an education day in a location of their choosing.

- ▶ **SOCIETY** covers the costs of booking the instructor and all of the instructor's traveling expenses (including hotel, flight, car, etc.)
- ▶ **COURSES** can be scheduled for 1 or 2 days on any topic of particular interest to the company
- ▶ **COMPANIES** can choose the instructor if they seek a specific knowledge expert

Current courses available include:

Scale Up & Processing	Botanicals & Naturals for The Naturals Market	Preservatives
Regulatory	Chemistry & Regulations of Cosmetic Colorants	Cosmetic Rheology
Color	Molecular Biology & Gene Expression	Color & Make-Up
GMPS For Cosmetics	Phytochemistry 101 For Cosmetic Chemists	Surfactants
Cosmetic Formulations	cGMPS For Cosmetics and Otc's	Cosmetic Raw Materials
Regulatory Update	Practical Basic & Theory in Emulsion Technology	Fragrance as A Science
Beginning Cosmetic Chemistry	Cosmetic Chemists Guide to Product Development	Silicone Chemistry
Basic Hair Science	Sustainable Cosmetic Product Development	and more!

To reserve a course for your team,
contact Sam Neely at sneely@scconline.org



Connect with area professionals through the newsletter!

Do you have an **employment opportunity** in the Connecticut area or beyond?

Do you have a **technical article**, raw material insights, relevant writing, or other piece you'd like to share with the community?

Have you captured **photos** at CTSCC events?

Please contact Yingxia Wang to be featured in the newsletter (yingxia.wang@unilever.com).

Are you interested in supporting CTSCC with a newsletter **sponsorship**? Please contact Ariel Vered for more information (avered@brenntag.com).

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The National Organization is dedicated to the advancement of cosmetic science. The Society strives to increase and disseminate scientific information through meetings, continuing education courses and publications. For more information please make sure to visit our website: www.ctsc.org