



# SoFlacs



Vol. 30, No. 3

South Florida Section American Chemical Society

February-March 2020



## Section Meeting

**Saturday, February 22, 1:00 PM**

**Physical Science Building 55, Room 226**

**Florida Atlantic University**

Boca Raton \*See free parking info below

## Toby G. Rossman, PhD

Professor of Environmental Medicine  
NYU Langone Health

### The Science of Aging – Extending Healthy Life

Human life expectancy has been increasing for at least 100 years. We will soon have more older people than children and more people at “extreme old age” (>85) than ever before. Although people are living longer, it also means that more people are living with noncommunicable diseases such as type 2 diabetes, obesity, cardiovascular diseases, arthritis, chronic respiratory diseases, dementias, and cancers. For others, aging is accompanied by major disabilities. How much of this can be prevented? This lecture reviews what we know about the aging process, and in particular, what we know about healthy aging. Theories of aging fall into two classes: accumulation of molecular damage by endogenous and exogenous (environmental) agents (“wear and tear theory”), particularly damage to DNA; and genetically programmed cell death. Much is known about factors affecting the major diseases and disabilities of aging, including genetics, obesity, tobacco, and a sedentary lifestyle. Science-based methods to extend healthy life will be discussed, including the roles of diet, exercise, social interaction, and some experimental drugs.

Dr. Rossman held the rank of tenured Professor of Environmental Medicine at New York University School of Medicine (NYUSOM) (now NYU-Langone Health) and Director of the Molecular Toxicology and Carcinogenesis Research Core of the NYU/NIEHS Center. She did her undergraduate work (Biology major/Chemistry minor) at Washington Square College (NYU), and completed her Ph.D. in Basic Medical Sciences (Microbiology and Biochemistry) at NYUSOM in 1968. Following a postdoctoral in Pathology at NYUSOM, and a position as Associate Research Scientist at the Nelson Institute of Environmental Medicine (NYUSOM), she was appointed Assistant Professor of Environmental Medicine in 1974, and subsequently promoted to Associate Professor (1978) and Full Professor (1985). She retired in 2009, but remains on the faculty. She received continuous funding for her research for over 30 years, mainly from the NIH, but also from USEPA and small amounts from non-federal sources. She published over 120 articles, mostly on mechanisms of carcinogenesis and was first to report on the comutagenicity of arsenic and later developed the only animal model of arsenic-induced skin cancer. Dr. Rossman has served on the Chemical Pathology Study Section (NIH), the National Toxicology Program (NTP) Study Section, the American Cancer Society Study Section (Genetics), the Environmental Health Sciences Review Committee (NIEHS), on NIH Small Business Grants (Genetics) Study Section, and on the Metabolic Pathology Study Section (NIH). She was on the editorial boards of *Environmental and Molecular Mutagenesis* and *Mutation Research, Molecular Toxicology and Teratogenesis, Carcinogenesis and Mutagenesis*, and is a reviewer for many other journals as well as Federal and State documents. She participated in the International Agency for Research in Cancer (IARC) reviews of the carcinogenicity of metals in Lyon, France (1993, 2004 and 2009). She organized and chaired the session on mechanisms of carcinogenesis at the NIH/EPA meeting “Arsenic: Health Effects, Mechanisms of Action, and Research Issues” in 1997. She was co-organizer of the first, second, and third International Meetings on Molecular Mechanisms of Metal Toxicity and Carcinogenicity. Most recently, she was on the Program Committee for the 9<sup>th</sup> Symposium of Metals in Biology and Medicine held in Lisbon and the Scientific Advisory Board (arsenic) for the USEPA. She now consults for the legal profession, teaches at local universities, and runs the Hudson Valley Science Café. Her interest in aging science stems from her studies on the mechanisms of carcinogenesis and the fact that cancers are mainly diseases of aging.

\*Directions to the Physical Science Building: Enter the main campus of FAU and follow the road around until you see the stadium on left hand side. At the traffic light (FAU Blvd) make a right into the parking lot. At the stop sign, make a right. Free parking in lot 4 will be on the right hand side. Ingrid Jones will be outside at 12:30 pm to direct guests to the Physical Science Building. You can call her at 561-386-6899 if you need help finding the parking.

# Chemical Sciences Symposium

Saturday, April 4, 2020

8:30 AM to 4:30 PM

**Nova Southeastern University**  
Health Professions Division, Terry/Assembly Building,  
Room 2104 (Finkelstein Auditorium)  
3200 South University Drive, Ft. Lauderdale

## Theme: Evolution of Immunity

### Call for Abstracts

Cash prizes for best student poster presentations. High school, undergraduate and graduate students are encouraged to present posters on their research (does not have to be related to the symposium theme)

### Abstract Instructions:

1. Word Count Limit: 350. Format: Microsoft Word, Times New Roman, font size 12
2. Submission deadline: Friday, March 27, 2020
3. Poster size max 4' high x 6' wide
4. Registration and submission: <http://ularkin.org/SoFLACSSymposium2020> (Submission can start anytime from Jan, 31-2020 and **submission closes at 5 PM on Friday, March 27, 2020**)
5. For questions please contact: **Dr. K.V. Venkatachalam (Dr. Venk)** at [venk@nova.edu](mailto:venk@nova.edu) or **Dr. Rudi Ettrich** at [rettrich@ularkin.org](mailto:rettrich@ularkin.org)

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### 2020 SoFL-ACS Officers

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## U.S. National Chemistry Olympiad

The SOFLACS Local Section of the American Chemical Society (ACS) is hosting the U.S. National Chemistry Olympiad (USNCO).

**Local Competition: 4 pm March 5 @FIU-BB and 9 am March 7 @NSU-Davie**

**National Exam: Saturday April 18, 2020 8 am to 4 pm**

**Contact: Dr. Venkatesh Shanbhag, [shanbhag@nova.edu](mailto:shanbhag@nova.edu) (through your Chem teacher)  
Dr. Milagros Delgado, [delqadom@fiu.edu](mailto:delqadom@fiu.edu)**

Select students participating in the SOFLACS Local Section's Local Chemistry Olympiad Competition will be nominated to participate in the National Chemistry Olympiad Exam. The 20 top-scoring students are chosen to attend a study camp.



### Eligibility

- Students must be U.S. citizens or legal, permanent residents of the United States (green card holders) to take the U.S. national examination.
- High school students who will graduate no earlier than spring of the year that they participate in the competition are eligible/
- Students must be under the 20 years of age on the first of July of the year of the competition.

# I WANT YOU

**for the U.S. National Chemistry Olympiad**

[www.acs.org/olympiad](http://www.acs.org/olympiad)