

# YALE UNIVERSITY

## DEPARTMENT OF CHEMISTRY

### THE CHEMISTRY CHRONICLE

May 29, 2015

#### ANNOUNCEMENTS

For further information on any of the items included here, or if you would like to contribute information to future bulletins, please contact [chemistry.adminoffices@yale.edu](mailto:chemistry.adminoffices@yale.edu) no later than Thursday by 12:00 p.m.

**Discovering the Beauty of Science:** Scientists may not consider themselves artists, however, there are times when science and research experiments lead to incredibly beautiful visual results. Yale affiliates including graduate students, postdocs and faculty, working in scientific research are invited to share the visual results of their work where science crosses over to art. Images will be reviewed by an interdisciplinary panel of artists, scientists and members of the medical community and selected for an exhibition at the Yale School of Medicine. Images must be submitted electronically using form located at: <http://medicine.yale.edu/ysm/news/article1.aspx?id=9133>  
Contest deadline is 6/30/15.

**Yale University – Email Subscription Service** – If you would like to subscribe to a Yale Publication or to find out what publications are available, follow this link <https://messages.yale.edu/Subscribe/> Here you will find publications of interest to Faculty, Staff, Postdocs and Graduate Students.

**Workday@Yale for Faculty and Staff** – Beginning July 2015, Yale is transitioning to Workday as the campus-wide unified Human Resources and Payroll information system. Workday's functionality will allow faculty and staff to view and manage information related to their benefits, pay, and personal information. These activities are currently completed in the Yale Portal under My Pay & Info and My Benefits, respectively. For example, you will use Workday to: Access and change your benefits, set up and manage direct deposit (including printing your payslips and W-2) and Edit personal contact and emergency contact information. Registration has begun for auditorium style training. To sign up follow this link [Workday Employee Self Service Training](#). Don't have time to attend training? Workday is intuitive and you may only need the [Workday Basics for Faculty and Staff](#).

#### SEMINARS

[Chemistry Department Seminar Schedule](#)

##### Chemistry Seminars:

**Friday, May 29.** Lecture in Inorganic Chemistry: Karsten Meyer, Friedrich-Alexander-University Erlangen-Nuremberg. "Small Molecule Activation at Reactive Metal Complexes: From High-Valent Metal Nitrides to Ammonia Synthesis". Sterling Chemistry Lab, Rm. 160, 4:30 pm.

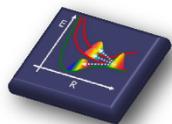
##### MB&B Seminars:

**Wednesday, June 3.** Wah Chiu, Baylor College of Medicine. "New Opportunities for CryoEM to Depict Structural Mechanisms of Biological Processes". Bass 305, 3:45 Tea, 4:00 Seminar.

#### SYMPOSIA

Planning has begun for this year's **Yale Chemistry Symposium**, which will take place on **Friday, August 28th**. This symposium is held at the beginning of the academic year and is organized and managed entirely by the second-year class of graduate students in the Chemistry Department. The purpose of the symposium is three-fold: 1) to welcome the newest class of graduate students to Yale Chemistry; 2) to provide current graduate students with an opportunity to present their research in a more formal setting; 3) to build camaraderie between the members of the second-year graduate class before they enter a crucial year in their graduate studies.

Saturday, November 7, 2015



# John Tully Retirement Symposium

The Tully Retirement Symposium is scheduled to take place at Yale's Sterling Chemistry Laboratory on **Saturday, November 7, 2015**. A variety of individuals associated with John and his multifaceted scientific endeavors graciously have agreed to participate as keynote speakers for this day-long meeting:

- Professor Joel M. Bowman (Emory University)
- Professor Louis E. Brus (Columbia University)
- Professor Sharon Hammes-Schiffer (University of Illinois Urbana Champagne)
- Professor Martin P. Head-Gordon (University of California, Berkeley)
- Professor William H. Miller (University of California, Berkeley)
- Professor Krishnan Raghavachari (Indiana University)
- Professor John D. Weeks (University of Maryland)

## SCHOLARSHIPS/FELLOWSHIPS

There are many generous sources of support both at Yale and beyond campus for graduate students to conduct their research and develop as professionals. From sponsoring the Dean's Fund to convene student-organized seminars and conferences to conducting the campus review process for the Fulbright program, the Graduate School promotes opportunities for students to fund their work at a variety of levels. In addition, the Graduate School has developed and identified a number of resources to communicate these opportunities to students. For further information, visit <http://gsas.yale.edu/funding-aid/fellowships/gsas-other-fellowships>

Fall Data Science Fellowship: **The Data Incubator** is an intensive 7-week fellowship that prepares masters, PhDs, and postdocs in STEM + social science fields seeking industry careers as data scientists. Further information can be found at: <https://www.thedataincubator.com/?ref=v646221>

## JOB OPPORTUNITIES

**Wolfe Laboratories, Inc.** has two new openings for candidates seeking postdoctoral work.

See additional information attached. Interested candidates are requested to email a copy of their resume with a cover letter and unofficial transcripts to: [steve.pangione@wolfelabs.com](mailto:steve.pangione@wolfelabs.com).

## **POSTDOCTORAL SCIENTIST-PHARMACEUTICAL DEVELOPMENT (Small Molecule)**

**JOB SUMMARY:** We require an experienced physical organic chemist with broad knowledge of and significant hands on experience with small molecule analytical technology including chromatographic and physical characterization methods. This individual will plan and execute experiments in physicochemical analysis and structural characterization.

### **DUTIES AND RESPONSIBILITIES:**

- Evaluate physicochemical properties of small molecules relevant to drug development and subsequently communicate the interpretation and implication of results to clients.
- Develop analytical methods and characterize product variants
- Execute and oversee specialized analytical testing and generation of technical documents
- Maintain a strong awareness of current scientific literature, particularly in the area of drug substance characterization, and actively apply new concepts as appropriate.
- Design experiments to develop pre-clinical and clinical formulations of drug candidates to support drug discovery and development.
- Design experiments to determine the stability in prototype clinical formulations, to detect and identify the decomposition products, and to achieve formulations with acceptable shelf-life.
- Perform laboratory experiments related to the above.
- Create presentations for outside scientific meetings and conferences to showcase Wolfe Laboratories' scientific leadership in the field of small molecule analysis and characterization.
- Interface with clients to develop an in-depth understanding of client objectives and define solutions to meet their program requirements
- Develop compelling approaches and solutions to address client needs
- Write persuasive proposals for the projects
- Regularly interact with clients to keep them abreast of project progress
- Write and review interim and final reports.

## **REQUIRED BACKGROUND AND EXPERIENCE:**

- Ph.D. in Physical Organic Chemistry, Pharmaceutical Chemistry, Medicinal Chemistry, Process Chemistry, Chemical Engineering, or closely related discipline
- In depth expertise in physical organic chemistry and the structural characterization of small molecules as they relate to the pre-formulation and formulation development of new drugs
- Expertise in the field of physicochemical analysis and structural characterization
- Hands-on experience with method development as well as analytical methods used for physicochemical characterization of pharmaceutical products such as spectroscopy and HPLC analysis.
- A demonstrated drive to apply technical knowledge to developing drug formulations
- Established track record of significant contributions as an individual technical expert as well as a leader of small teams
- Outstanding written and oral communication skills as well as polished and persuasive client presentation skills

## **ADDITIONAL DESIRABLE BACKGROUND:**

- Capability with DSC, TGA, and/or lyophilization
- Experience in creating and delivering trainings

## **WHERE THIS JOB COULD LEAD:**

At Wolfe Laboratories Inc., we pride ourselves on retaining and growing our team members, and ensuring they are developing to their full potential. This position can provide many different avenues for advancement, including:

- Training towards becoming a Project Manager
- Leader of an innovative business line
- Become a Lead Technical Researcher
- Managing a team of Postdoctoral employees

Interested candidates are requested to email a copy of their resume with a cover letter and unofficial transcripts to: [steve.pangione@wolfelabs.com](mailto:steve.pangione@wolfelabs.com).

Wolfe Laboratories, Inc. (WLI), founded in 1999, and located in Watertown, MA, is a premier contract research organization that provides integrated early drug development solutions to the biopharmaceutical industry. Wolfe Laboratories is an essential element of the drug development ecosystem, recognized by global and virtual biopharmaceutical companies as a science-driven organization whose mission is to provide outstanding

discovery and development services tailored to its clients' needs for rational formulation development. Wolfe Laboratories integrates the critical path components of early development to ensure that programs advance while meeting rigorous scientific demands with flexibility to address dynamic challenges and aggressive timelines. Wolfe Laboratories' vision is to improve human health, and we continue to strive towards that goal by embracing our core values of integrity, excellence and teamwork. The company has a high percentage of repeat clients, which is a testament to its long-term commitment of continual investment in its capabilities to meet biopharma's growing demand for high quality, integrated early development services.

For more information visit us at: [www.wolfelabs.com](http://www.wolfelabs.com).

Wolfe Laboratories, Inc is an Equal Employment Opportunity employer.

## **POSTDOCTORAL SCIENTIST-** **PHARMACEUTICAL DEVELOPMENT (Protein)**

**JOB SUMMARY:** We require a highly motivated Postdoctoral Scientist to work on protein stability & aggregation as it relates to therapeutic protein development. The current postdoctoral project is designed to understand the fundamental mechanism/s of protein instability, sub-visible particulate formation and aggregation using variety of chromatographic, biophysical and biochemical tools.

### **DUTIES AND RESPONSIBILITIES:**

- Evaluate physical and biophysical properties of peptides, proteins, and bioconjugates relevant to drug development and subsequently communicate the interpretation and implication of results to clients.
- Develop analytical and high throughput biophysical methods to characterize product variants
- Execute and oversee specialized analytical testing and generation of technical documents
- Maintain a strong awareness of current scientific literature, particularly in the area of protein characterization, and actively apply new concepts as appropriate.
- Design experiments to develop pre-clinical and clinical formulations of drug candidates to support drug discovery and development.
- Design experiments to determine the stability in prototype clinical formulations, to detect and identify the decomposition products, and to achieve formulations with acceptable shelf-life.
- Perform laboratory experiments related to the above.
- Create presentations for outside scientific meetings and conferences to showcase Wolfe Laboratories' scientific leadership in the field of protein analysis and characterization.
- Interface with clients to develop an in-depth understanding of client objectives and define solutions to meet their program requirements
- Develop compelling approaches and solutions to address client needs
- Write persuasive proposals for the projects
- Regularly interact with clients to keep them abreast of project progress
- Write and review interim and final reports.

## **REQUIRED BACKGROUND AND EXPERIENCE:**

- Ph.D. in Biochemistry, Biophysics, Chemistry, Biomolecular engineering, Organic Chemistry, Chemical engineering or closely related disciplines
- In depth experience in the area of protein biophysics involving structure-folding-stability relationships. This includes purification, stability, kinetics and thermodynamics of folding of monomeric proteins, particularly as they relate to the pre-formulation and formulation development of new drugs
- Hands-on experience with chromatographic method development as well as techniques used for biophysical characterization of biopharmaceutical products such as calorimetry, spectroscopy, higher order structure analysis, protein mass spectroscopy, CE, HPLC, ELISA, and carbohydrate analysis.
- Strong knowledge of Organic Chemistry principles
- A demonstrated drive to apply technical knowledge to developing drug formulations
- Established track record of significant contributions as an individual technical expert
- Outstanding written and oral communication skills as well as polished and persuasive client presentation skills

## **ADDITIONAL DESIRABLE BACKGROUND:**

- Good understanding of excipient and ligand interaction with proteins
- Evaluation of thermodynamic and kinetic models
- Experience in creating and delivering trainings

## **WHERE THIS JOB COULD LEAD:**

At Wolfe Laboratories Inc., we pride ourselves on retaining and growing our team members, and ensuring they are developing to their full potential. This position can provide many different avenues for advancement, including:

- Training towards becoming a Project Manager
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clients' needs for rational formulation development. Wolfe Laboratories integrates the critical path components of early development to ensure that programs advance while meeting rigorous scientific demands with flexibility to address dynamic challenges and aggressive timelines. Wolfe Laboratories' vision is to improve human health, and we continue to strive towards that goal by embracing our core values of integrity, excellence and teamwork. The company has a high percentage of repeat clients, which is a testament to its long-term commitment of continual investment in its capabilities to meet biopharma's growing demand for high quality, integrated early development services.

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