



## Saturday Morning



Grab a cup of coffee and a bagel and join us for *Saturday Morning Science*—a series of one-hour science talks.

These are not your typical science lectures. Expect to be entertained, to see demonstrations, to learn a lot, and—best of all—to want to come back for more.

*Saturday Morning Science* is free and open to the public. No science background is required. All ages are welcome.

Bagels, donuts, coffee, and juice are served before the talks, so come early. Talks start at 10:30. Doors open and refreshments are available at about 10:00. Seating is limited to 250.

### Questions, Comments, Suggestions

satscience@missouri.edu  
<http://satscience.missouri.edu>

### Organizers

Bruce McClure  
Wouter Montfrooij  
Marc Johnson

Saturdays

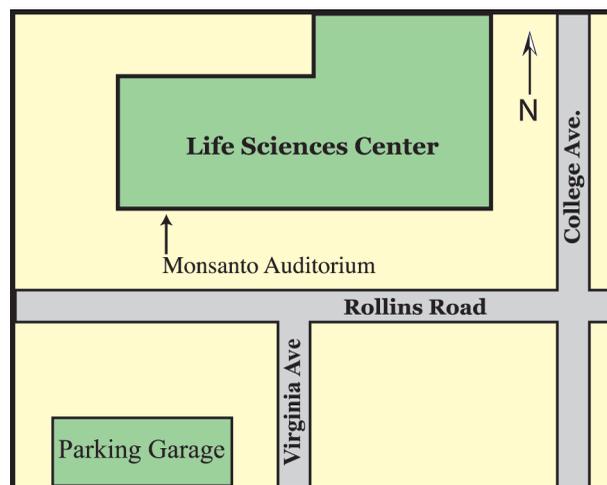
10:30 a.m. – 11:30 a.m.

Monsanto Auditorium

Christopher S. Bond Life Sciences Center\*

For directions, visit:  
<http://map.missouri.edu>

Free visitor parking is allowed in the Virginia Avenue Parking Garage (Levels 1, 2, and 3) on the weekends. Entrance to the parking garage is off Virginia Avenue, south of the Bond Life Sciences Center.



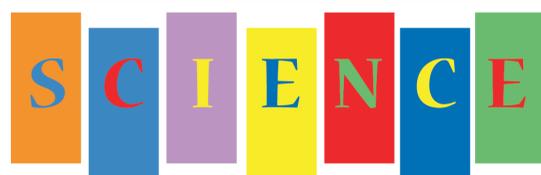
SMS is largely a volunteer effort. Our sponsors provide funding for refreshments, advertising, and occasional external speakers. Donations are much appreciated and will help the program continue to thrive. If you can help, please contact us at [satscience@missouri.edu](mailto:satscience@missouri.edu)

### Thanks to Our Sponsors!

MU Office of Research



## Saturday Morning

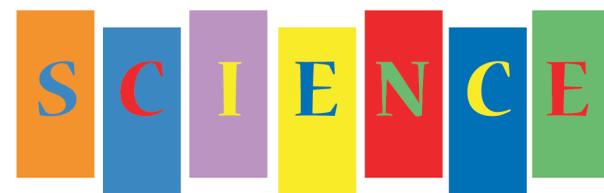


### Schedule At-A-Glance

- 12 Sep. Clean Vehicles: From Agricultural Waste To High-Tech Storage Tanks
- 19 Sep. Wanted -- Red Blood Cells: Dead Or Alive
- 26 Sep. Darwin's Germ: The Life & Times of *E. coli*
- 3 Oct. An Injection of Plague
- 10 Oct. Would Darwin Recognize Modern Darwinism?
- 17 Oct. How Does Malaria Jump From Mosquitoes to Humans?
- 24 Oct. Charles M. Rick's Hunt For The Wild Tomato
- 31 Oct. How Are Drugs Designed?
- 7 Nov. Autism's Causes & Treatments: Separating Facts From Fantasy
- 14 Nov. Cure You Or Cripple You?
- 21 Nov. Break
- 28 Nov. Break
- 5 Dec. What Is Superconductivity?
- 12 Dec. The Chemistry of NASCAR



## Saturday Morning



# 2009 FALL SCHEDULE

Saturdays

10:30 a.m. – 11:30 a.m.

Monsanto Auditorium

Christopher S. Bond Life Sciences Center



12 September

### Clean Vehicles: From Agricultural Waste To High-Tech Storage Tanks

*Galen Suppes*

MU researchers have invented an economical way to store natural gas in a form that could power your next car. We'll discuss the current challenges and how they might be overcome in the next 5 years.



3 October

### An Injection Of Plague

*Deb Anderson*

Plague. The word alone is scary. The plague bacterium has altered human history repeatedly. How does it sneak through our defenses to cause such a horribly infectious disease, time and again?



24 October

### Charles M. Rick's Hunt For The Wild Tomato

*Roger Chetelat*  
*University of California-Davis*

Much of what we know about the origins of our main food crops comes from intrepid scientist-plant collectors like Charles M. Rick. The wild tomatoes he collected in the Andes are helping meet future challenges to food security.



14 November

### Cure You Or Cripple You?

*Mark Daniels*

This talk describes how your immune system works. What happens when your immune system gets confused? Can it attack you instead of an invader? Can invaders steal your identity?



19 September

### Wanted -- Red Blood Cells: Dead Or Alive

*Mark Milanick*

What other roles do red blood cells have apart from carrying oxygen? Can red blood cells be modified so they can be used to measure acid or glucose or other blood parameters in patients?



10 October

### Would Darwin Recognize Modern Darwinism?

*André Ariew*

Darwinism has revolutionized biology, but some ideas that are central to modern concepts of evolution were not really his. Come hear about what Darwin was thinking about in the mid-1800s and how evolutionary thinking has changed.



31 October

### How Are Drugs Designed?

*Xiaoqin Zou*

What are drugs, and how do they work? By knowing the structures of the proteins involved in disease, we can use computers to design new molecules that can be used in treatment.



5 December

### What Is Superconductivity?

*Paul Miceli*

Metals conduct electricity, some incredibly well. These superconductors can carry currents that persist for years. We will use demos to explore these materials, look at the reason behind this extraordinary behavior, and explain why cars will fly in the future.



26 September

### Darwin's Germ: The Life & Times Of E. coli

*George Stewart*

*Escherichia coli* plays a beneficial role in our health and well being, but it also can be a serious food-borne pathogen. We will explore why this bacterium is usually harmless but sometimes can be deadly.



17 October

### How Does Malaria Jump From Mosquitoes To Humans

*Brenda Beerntsen*

Malaria has plagued humans for centuries. The organism that causes the disease has a complex multi-host life cycle. Learning how it survives and moves between species may lead to new therapies or control measures.



7 November

### Autism's Causes & Treatments: Separating Facts From Fantasy

*Judy Miles*

Autism affects children's social behavior and language, making life challenging for children and their families. Find out what we are learning about the genetic and non-genetic causes of autism and how it informs treatment.



12 December

### The Chemistry of NASCAR

*Steve Keller*

Fuel. Tires. Body. Engine parts. Helmet. Driver's suit. Everything in a NASCAR racer is made from the most advanced materials possible to maximize speed, maneuverability, and safety. Come and learn about the material science behind one of the most popular sports in the country.