



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

Don't worry, 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. No science background is required, and all ages are welcome. **Saturday Morning Science** is free and open to the public.

Refreshments will be served before the talks, so come early. Seating is limited to 250.

Why TWO Talks?

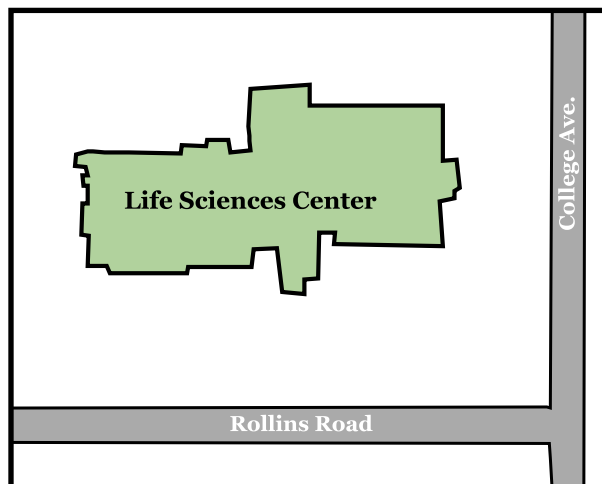
Some talks are divided into two parts to give more background. The talks are not the same—come every week!

Sponsored By:
Office of Research
Physics and Astronomy Department
Biochemistry Department
MU Life Sciences Center

Saturdays
10:30 a.m. – 11:30 a.m.
Monsanto Auditorium*

MU Life Sciences Center
(corner of College Ave. and Rollins)

**Talks on 8 October & 5 November
will be in the Ellis Library Auditorium.*



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

Questions/Comments/Suggestions

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Schedule At A Glance

- 10 Sep. Linking Genes and Proteins
(Lab demonstration follows talk)
- 17 Sep. The “Truth” about Global Warming
- 24 Sep. Carbon Cycling in Soils
- 1 Oct. Can Plants Move?
- 8 Oct. Fuel Cells and the Future of Energy
(Note: Held in Ellis Auditorium)
- 15 Oct. The Origin of Mind, Part 1
- 22 Oct. The Origin of Mind, Part 2
- 29 Oct. Ernst Mayr: The Species King, Part 1
- 5 Nov. Ernst Mayr: The Species King, Part 2
(Note: Held in Ellis Auditorium)
- 12 Nov. Why Are Plants So Picky about Their Mates? Part 1
- 19 Nov. Why Are Plants So Picky about Their Mates? Part 2
- 26 Nov. Thanksgiving Break
- 3 Dec. Bioremediation by Bacteria
- 10 Dec. Muscle Regeneration



2005 FALL SCHEDULE

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10 September
Linking Genes and Proteins

Shari Freyermuth
Bruce McClure
 Biochemistry

How do we know which gene or protein is defective in a genetic disease? This talk will focus on making connections between traits like genetic diseases and the genes and proteins responsible for them. NEW for SMS: This talk will be followed by a short laboratory (limited to 24 participants).



17 September
The “Truth” About Global Warming

Steve Keller
 Chemistry

What is the difference between the “greenhouse effect” and “global warming”? This talk will explore how minor components of the atmosphere can lead to global temperature changes. We will also discuss the use of scientific evidence in public policy discussions.



24 September
Carbon Cycling in Soils

Peter Motavelli
 Soil and Atmospheric Sciences

How do biological cycles affect atmospheric gases? This talk will explore the biological side of global warming and explain how processes in the soil and plants around us are important.



1 October
Can Plants Move?

Mannie Liscum
 Biology

We’ve all seen sunflowers track the sun. How do they do it? Animals move away from danger and toward food. Plants have to stay put, but they can still orient themselves to optimize their access to nutrition (i.e., light, water). This talk will describe the signals and responses plants use to move.



8 October
Fuel Cells and the Future of Energy

Galen Suppes
 Mechanical & Aerospace Engineering

What is a fuel cell? How is it different from a battery? This talk will explain how fuel cells work and why they may play a role in future energy production.



15 & 22 October
The Origin of Mind

David Geary
 Psychological Sciences

The brain is the subject of research across a variety of disciplines. Part 1 will examine how a modern synthesis of neuroscience, evolutionary biology, and psychology informs our current understanding of the mind. Part 2 examines modern research on “intelligence” and “thinking.”



29 October & 5 November
Ernst Mayr: The Species King

Jim Carrel
 Biology

How can different species have evolved from a single ancestor? These two talks will focus on Ernst Mayr (1904-2004) and the contributions of his work to evolutionary biology. We will also examine how insights from population biology, genetics, and evolutionary theory have changed our view of how species change.



12 & 19 November
Why Are Plants so Picky about Their Mates?

Tim Holtsford
 Biology

Choosing a mate is just as important for plants as it is for animals. How plants choose their mates and what happens when they make a poor choice will be the focus Part 1 of this talk. In Part 2, we will look at how plant mating systems affect population genetics and biodiversity.



3 December
Bioremediation by Bacteria

Judy Wall
 Biochemistry

Bacteria live in a range of environments, including oil wells, rusty pipes, and toxic waste dumps. This talk will describe how bacteria can live in these environments, as well as some of the ways we can harness this ability to help with environmental problems.



10 December
Muscle Regeneration

Dawn Cornelison
 Biology

What is muscular dystrophy? What happens to dystrophic muscles? Why does the disease get worse as patients age? What kind of things are being tried to cure it? This talk will introduce the molecular defects underlying Duchenne’s muscular dystrophy and the cells and processes muscle uses to heal itself when it is diseased or damaged.

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