

Saturday Morning Science 2004 Fall Season

MU Life Sciences Center
Corner of College and Rollins
Columbia Missouri
Southwest Entrance

If you want to know a bit more about science or are simply curious, then come join us.

Saturday Morning Science is a series of free, public talks about science. These talks are for everyone with an interest in science. **No science background is required.** Perfect for high school and college students, science teachers, families, retirees and you!

Come share our enthusiasm for science and learn about the projects of MU scientists.

WHAT TO EXPECT?

Expect to be entertained and to see demonstrations. Expect to learn about topics you have read about in newspapers. Most of all, expect to want to come back for more.

*Complimentary coffee and bagels
and over before the football starts
See you Saturday!*

Fall Schedule

Why are the molecules of life so big? How do living things do amazing things like building complex bodies from a single cell or reading this brochure? The secret comes from the way they assemble incredible large and diverse molecules from simple starting materials.



Bruce McClure, September 11 and 18



Are we alone? The new science of astrobiology. If we want to look for life outside of Earth we have to know what we are looking for. Astrobiology combines theory, experiment and observation to ask such questions as: What environmental conditions are compatible with life? What molecular traces does life leave? How might living systems arise? What is the history of early life on Earth (and maybe elsewhere)?

Frank Schmidt and Tim Lyons,
September 25 and October 2



The amazing world of the molecules of life. All living organisms are built from cells, visible only under the microscope. Individual cells are very complicated systems in which proteins, DNA and RNA molecules, the so-called molecules of life, form machines such as motors and pumps, which make life possible. Discover how these minute biomolecular machines work.

Ioan Kosztin, October 9 and 16.

The magic of the quantum world. Although quantum theory is very abstract, it nevertheless allows for some unprecedented yet very real possibilities for extremely fast communication and computation. Find out about teleportation, quantum computers, spooky measurements, and unbreakable codes.



Giovanni Vignale, October 23 and 30



Stem cells: technology, promise, and concerns. Stem cells, particularly those from embryos, are widely discussed and frequently misunderstood. They have great promise for biomedicine, yet their study has become controversial and politicized. These lectures will present a balanced picture of this area of research and is not intended to advocate or oppose it. The topics will include: embryonic and adult stem cells, how they function, where they come from, the derivation of embryonic stem cell lines by somatic cell nuclear transfer ("cloning"), stem cell uses and limitations, as well as arguments for and against President Bush's decision to limit federally funded research.

Mike Roberts, November 6 and 13



Detecting and curing skin cancer without surgery. Imagine a novel method to detect skin cancer tumors and to track the removal of the cancer cells without surgery. All you, the patient, will have to do is place your hand in the LIGHT...

Sunder Balasubramanian, December 4 and 11

Where & When?

Talks will be held on Saturdays from 10:30-11:30 in the **Monsanto Auditorium** of the Life Sciences Center (Corner of College Ave. and Rollins, southwest entrance).

Refreshments will be served before we start. Seating is limited, so come early.



For up-to-date information, including possible schedule changes, www.physics.missouri.edu/satscience.html

**Questions? Comments?
Suggestions?**

satscience@missouri.edu

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Bruce McClure (573) 882-3932

Teachers: if you want to include this series as extracurricular credit contact us for arrangements.



University of Missouri,
department of Physics
and Astronomy



Put your fridge
magnet here

Schedule-At-A-Glance

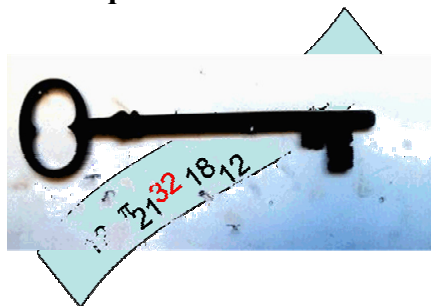
Saturday Morning, 10:30-11:30

September 11, 18: Bruce McClure, **Why are the molecules of life so big?**

September 25, October 2: Frank Schmidt and Tim Lyons, **Are we alone? The new science of astrobiology.**

October 9, 16: Ioan Kosztin, **The amazing world of the molecules of life.**

October 23, 30: Giovanni Vignale, **The magic of the quantum world.**



November 6, 13: Mike Roberts, **Stem cells: the technology, the promise and concerns.**

Thanksgiving break

December 4, 11: Sunder Balasubramanian, **Detecting and curing skin cancer without surgery.**



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