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# Laboratory Assessments for Research Sustainability

## *Rothman Lab*

*November 28, 2007*



*...a fun and busy group*

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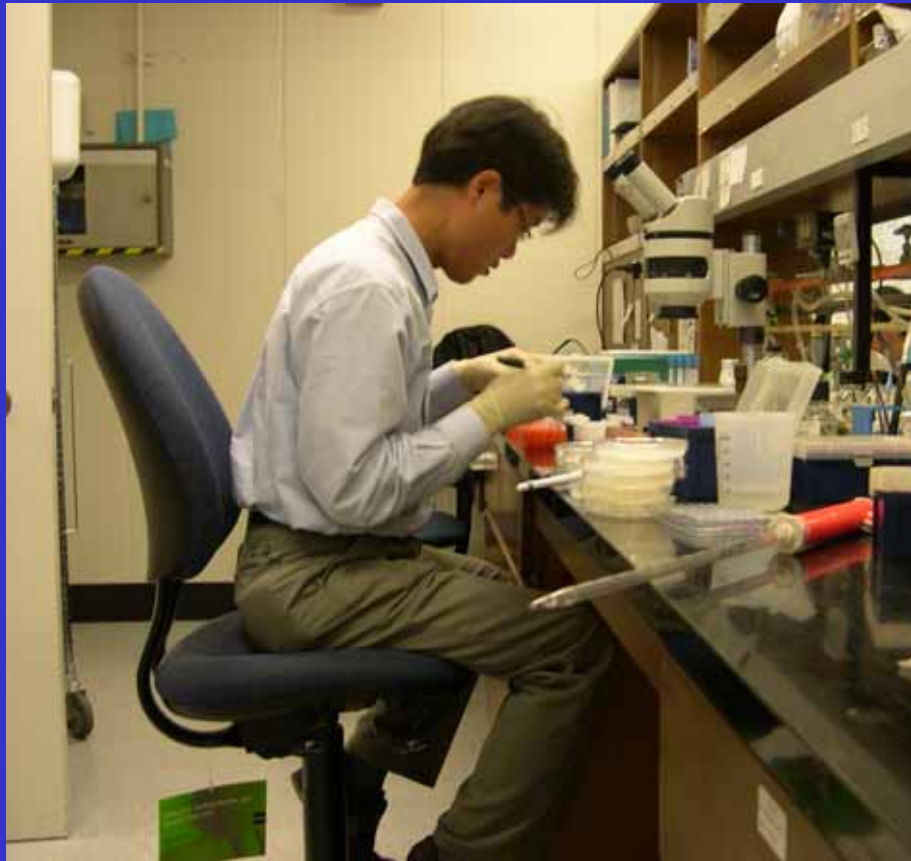
## Laboratory Assessments for Research Sustainability



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# Laboratory Assessments for Research Sustainability

## Agenda:

- Achievements
- Opportunities
- Questions and Feedback



### Rothman Lab Achievements:

- **Energy**

Equipment turned off

- Oven
- Incubator

Freezers defrosted  
every 3 months

Computers sleep in 5-10  
minutes

No space heaters



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## Achievements Continued...

- **Energy--Hoods**
  - Manager joined "Hoods Off"
  - Saves ~\$2,000 per year

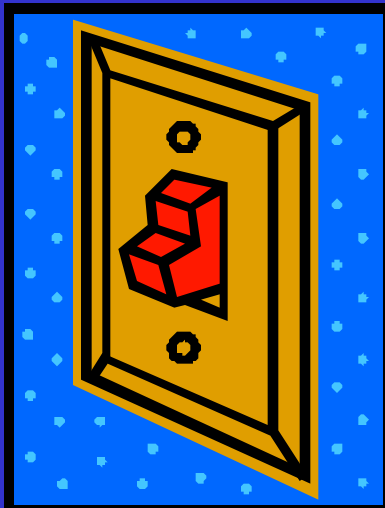




## Achievements Continued...

- **Lighting**

- Lights off in unoccupied rooms
- Lights off when staff leaves







### Achievements Continued...

- **Lighting**
  - Manager joined "Bulb Free", removing bulbs from 5 lights.
  - Saves \$20-30 per fixture annually



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## Achievements: Equipment

Free Incubator from  
LabRATS (~\$2,000)

Refrigerator and  
incubator space used  
efficiently



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## Achievements: Equipment

Low-tech prep area  
needs no power.



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# Laboratory Assessments for Research Sustainability

## Achievements: **Materials**

*Reuse pipette tip boxes*



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# Laboratory Assessments for Research Sustainability

## Achievements: **Recycling**

Recycle laboratory glassware

Recycle plastic and glass bottles for  
money



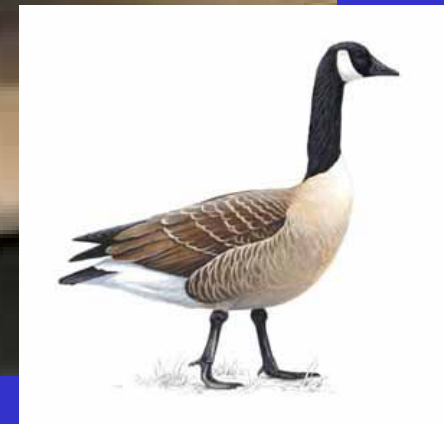
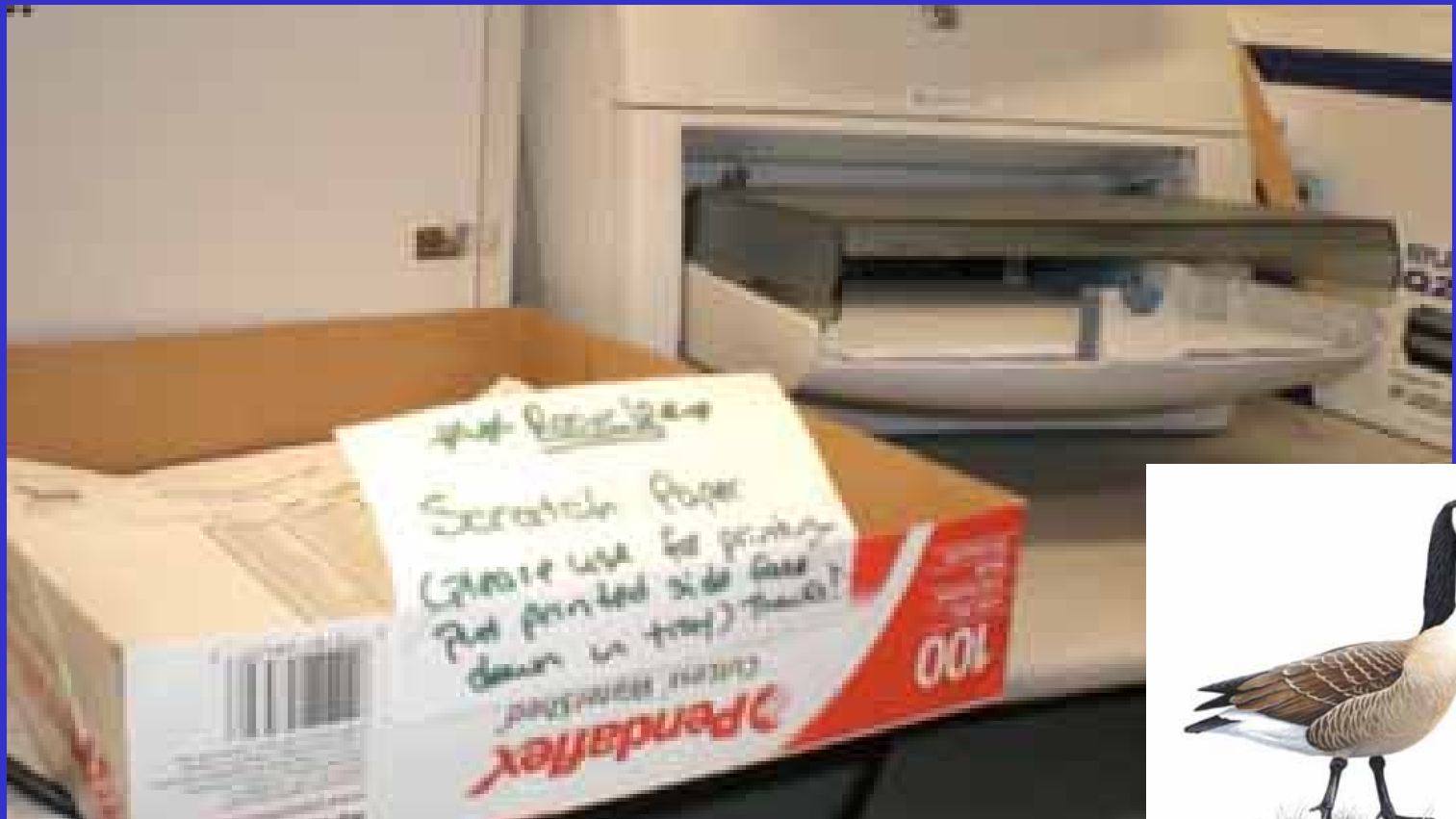
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# Laboratory Assessments for Research Sustainability

## Achievements: Materials--paper

Reusing G.O.O.S. Paper



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# Laboratory Assessments for Research Sustainability

## Achievements: **Water**

No continuous flow processes;

Using lowest grade needed.

(DI use high due to flushing)

Water Polishing set-up available for free  
through LabRATS



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# Laboratory Assessments for Research Sustainability

## Achievements: Transportation

- Half take the bus
- PI rides to work (takes METRO *en France*)
- Almost all participate in Transportation Alternatives Program (TAP)



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# Laboratory Assessments for Research Sustainability

## Achievements:

### Staff Training and Awareness

- Aware of basic conservation issues
- When equipment on and off

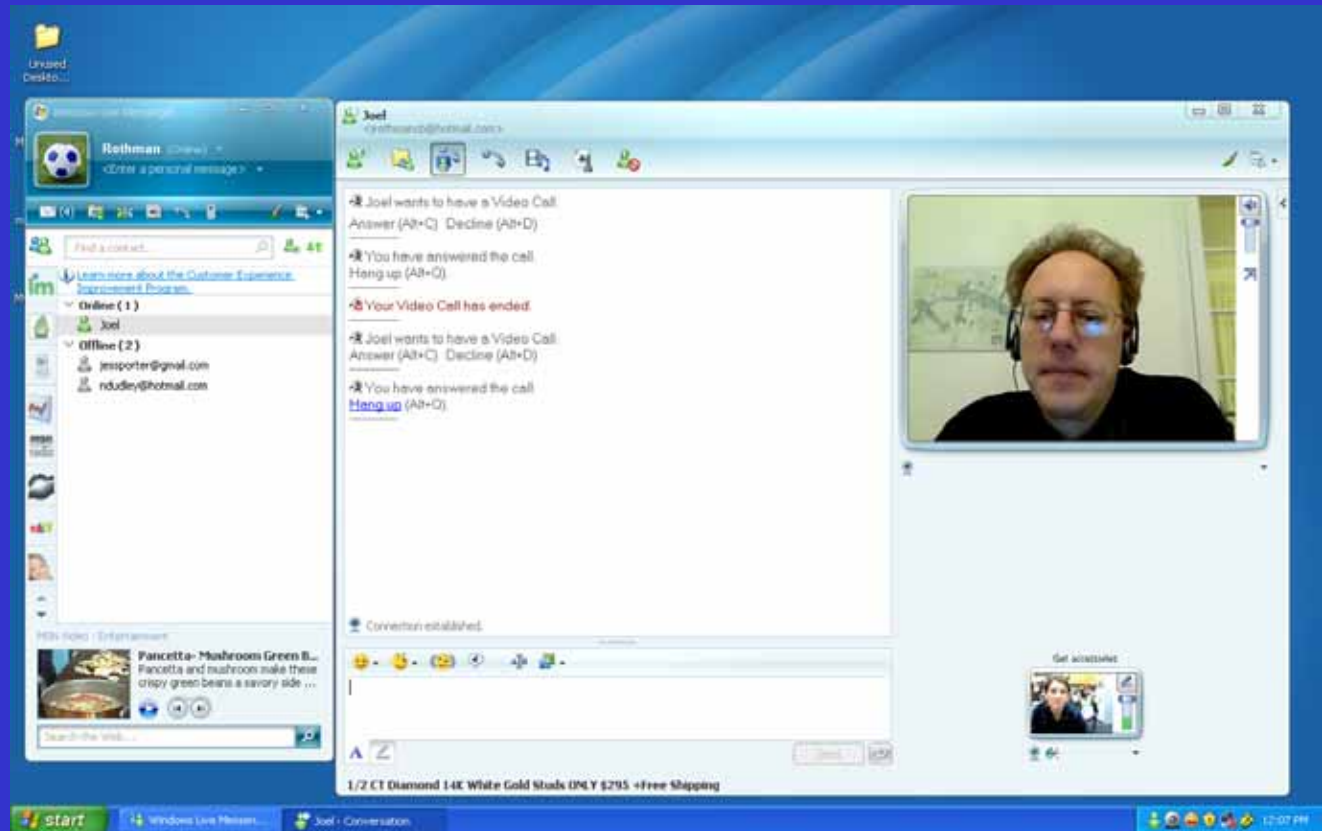
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# Laboratory Assessments for Research Sustainability

## Achievements: Communication

- Weekly Video Conference



Windows  
Live  
Messenger

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# Laboratory Assessments for Research Sustainability

## Achievements: Communication

Lab staff has good  
"chemistry"

Responsibilities are  
clearly delegated





## Laboratory Assessments for Research Sustainability

### Opportunities:

- Energy

- Constant energy users plugged in -- What is start-up time vs. demand?

- Equipment

- Hot water bath
  - 1.4 kWhr/day
- Centrifuge
  - < 0.2 kWhr/day



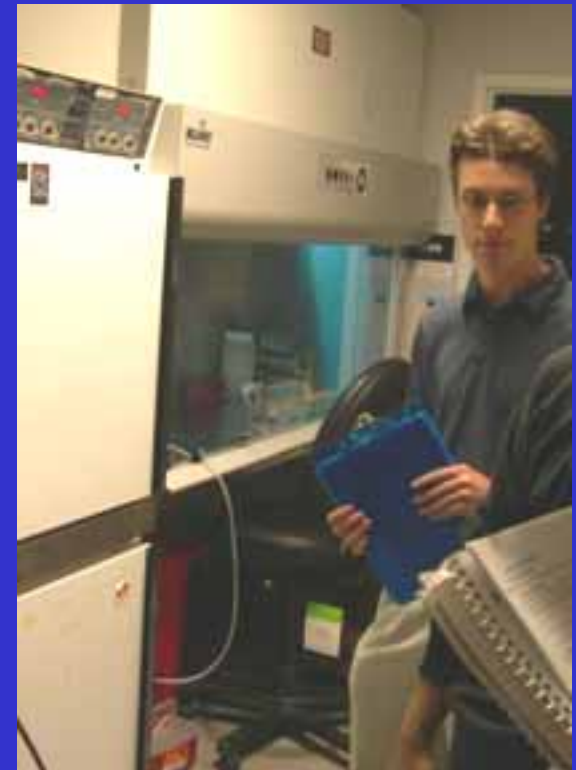
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## Opportunities:

- **Equipment, continued**  
Laminar flow hood available on 3<sup>rd</sup> floor for auger plates if needed.





## Opportunities ...

- **Materials**
  - Consider buying alternative products
  - Adopt-A-Chemical Program\*
  - Print double-sided
  - Recycling
    - paper



\* <http://sustainability.ucsb.edu/LARS/programs/adopt.php>



# Opportunities ...

- **Lighting**
  - Freezer room
    - 128 hrs/week
  - Chemical room
    - 110 hrs/week
  - Front room
    - 90 hrs/week
  - Task lighting
  - “lights off” signs



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## Opportunities ...

- **Water**
  - Water Polisher from LabRATS
- **Commuting and Travel**
  - [http://tap.tps.ucsb.edu/tap\\_Benefits.php](http://tap.tps.ucsb.edu/tap_Benefits.php)



Bike lockers outside Bio II



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## Opportunities ...

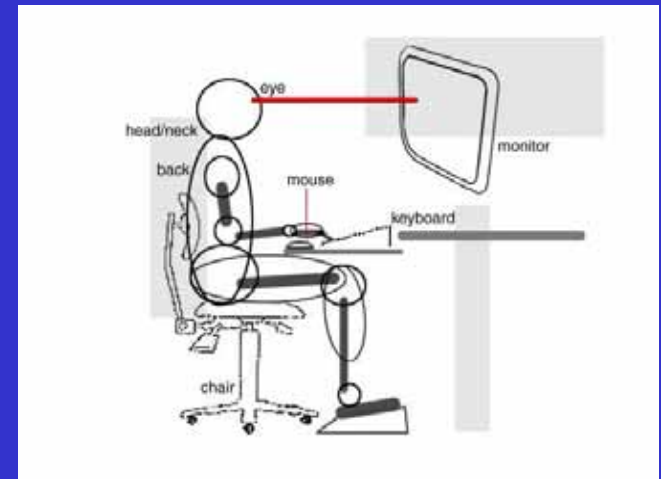
- **Communication**
  - Join the LabRATS online group.  
Email:  
[UCSB\\_LabRATS-subscribe@yahoogroups.com](mailto:UCSB_LabRATS-subscribe@yahoogroups.com)
  - 1 Conservation representative





## Opportunities ...

- Other
  - Contact EH&S ergonomic specialist to help with desk posture and repetitive motion issues.
    - Julie McAbee, Ergonomics Coordinator,  
[julie.mcabee@buss.ucsb.edu](mailto:julie.mcabee@buss.ucsb.edu)



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# Laboratory Assessments for Research Sustainability

Next Steps:

Questions and Suggestions?

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# Laboratory Assessments for Research Sustainability

## Contact Us!

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