Aaron Gayle, Eric Mason, Kenneth Story, Samuel Courville, Carroll Olson, Bess Boucher
# Full IRB Review Summary Form

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<th>Date Submitted</th>
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<td>02/24/2014</td>
<td>Pikes Peak Community College</td>
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## Title of Research Project
Melanin as a Radiation Barrier

## Principal Investigator/Project Director
**Dr. Lisa Hollis-Brown**  
**Department:** Biology  
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## Co-investigator/Student Investigator
**Carroll Olson**  
**Department:** Student  
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## Anticipated Funding Source
NASA’s Colorado Space Grant Consortium

## Projected Duration of Research
- 3 months

## Projected Starting Date
Upon approval

## Other organizations and/or agencies, if any, involved in the study
PPCC DemoSat Program

## SUMMARY
- What is the purpose of the study? (state the research questions and hypotheses)
- Who will be the research subjects? How will they be solicited or contacted? How many subjects will be studied? How will consent be obtained (or assent and parent consent if minors are recruited as participants)?
- What procedures will be used for data collection? What measures or observations will be taken in the study? How much time will be required of each subject?
- What methods will be used to ensure the confidentiality of the data (address the specific location of the physical storage of the data, who will have access to it, how long it will be kept, and how it will be disposed of)
- What are your plans for publication or dissemination of the results?

**Attach copy** of the Informed Consent Form; any questionnaires, tests or other instruments that will be used to collect data; and any recruitment materials that will be used to contact or solicit participants.
**Experimental C.C₂**

No sunlight

Exposure: Space radiation

**Prediction:**
- Severe damage
- Many abnormal/mutated/dead cells

**Control A.A₂**

No sunlight

Exposure: No space radiation

**Prediction:**
- No damage
- Normal cells

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**Experimental B.B₂**

Sunlight 1st

Exposure: Space radiation 2nd

**Prediction:**
- Melanin production
- Slight damage
- Some abnormal/mutated cells

**Legend**

- K = Keratinocyte
- M = Melanocyte
- ⚫ = Melanin

**Experimental D.D₂**

Sunlight 1st

Exposure: Space radiation 2nd

**Prediction:**
- Melanin production
- Slight damage
- Some abnormal/mutated cells

**Legend**

- K = Keratinocyte
- M = Melanocyte
- ⚫ = Melanin