



ANALOG STUDY RESOURCE WORKSHEET

I. General Information

Principal Investigator:

Investigation/Activity title:

Investigation/Activity objective:

HRP Risk/Gap/Task/Deliverable the study addresses

Study Duration

Study Need Date

Number of subjects

Gender preference/distribution of subjects? M F No preference

Age range of subjects

Fitness level of subjects (i.e., good health with no history of cardiovascular, neurological, gastrointestinal, or musculoskeletal problems)

Any inclusion criteria? (e.g., meeting the success criteria required for a modified Air Force Class III physical)

Any exclusion criteria? (e.g., a positive Quantiferon TB test indicating active tuberculosis)

II. Facility Requirements

Logistics required (e.g., laboratory, medical, internet, metabolic kitchen, office, sleeping accommodations, transportation, support personnel, safety):

Hardware required (e.g., test equipment, laboratory equipment, tooling):

Is shipping support required to deliver the hardware to the analog? Yes No

If yes, please provide specific information and details.

Is setup support required for the hardware when it arrives at the analog? Yes

No If yes, please provide specific information and details.

Software type (e.g., COTS, Custom):

Connectivity required (e.g., access to NASA systems, networks, applications)

Special badging considerations (e.g., foreign national)

Identify environment/conditions required to meet study objectives (e.g., internal light conditions, external light condition, danger, physical isolation, crowdedness/habitable, volume characteristics, team size, leadership, team structure, personal space, rest & recreation options, quality of life support conditions, workload, mission duration, communication w/outside, level of external ground control, exposure time, similarity to astronauts, task relevance, pre-packaged food used, lunar-like terrain, etc.):

Are extreme environment/conditions required to meet study objectives? Yes

No If yes, please identify those conditions(e.g. unable to reach medical

treatment within an hour, extended time in a saturation dive, inability to return quickly, dangerous or hazardous operations, etc.)

Identify simulation requirements (e.g., confinement, fractional gravity [microgravity {0-g, flight}, lunar {1/6 g}, Mars {3/8 g}], , isolation from outside world (difficult logistics), limited local infrastructure, remote communications, autonomous operations, autonomous medical care or “telemedicine”, Moon/Mars – relevant field/EVA activities, Lunar surface, Martian surface)

III. Science Requirements

Provide a testing schedule in the table below. Include the name of the test/activity, dates required, and estimated subject time requirements in the table below. Time estimates should reflect the time required for testing of one subject; however, if an operator is required for an analog activity, their time should be included as well (unless the operator is a lab tech external to the analog or NASA). Activities that are performed once regardless of the number of participants (e.g., set-up and stow) should be listed separately.

Pre-Study

Test/Activity	Schedule	Subject time (min)	
		Per Session X Number of Sessions	Total
<i>E.g., DXA</i>	<i>BR-11+/- 2-days</i> <i>NOTE: "BR" is an acronym for Bed Rest</i>	<i>60 X 3</i>	<i>180</i>
<i>E.g., Oxidative Damage (Blood Collection)</i>	<i>D-6 days & D-2 days</i> <i>NOTE: "D" is an acronym for Dive</i>	<i>10 X 2</i>	<i>20</i>

Is subject training required? Yes No

If yes, please give a brief summary of the plan for providing any required training.

In-Study

Test/Activity	Schedule	Subject time (min)	
		Per Session X Number of Sessions	Total
<i>E.g., DXA</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>E.g., Oxidative Damage (Blood Collection)</i>	<i>D6th day & D13th day</i>	<i>10 X 2</i>	<i>20</i>

Post-Study

Test/Activity	Schedule	Subject time (min)	
		Per Session X Number of Sessions	Total
<i>E.g., DXA</i>	<i>BR + 2 +/- 2 days</i>	<i>60 X 3</i>	<i>180</i>
<i>E.g., Oxidative Damage (Blood Collection)</i>	<i>D+0 days & D+5 days</i>	<i>10 X 2</i>	<i>20</i>

Follow-up

Test/Activity	Schedule	Subject time (min)	
		Per Session X Number of Sessions	Total
<i>E.g., DXA</i>	<i>BR + 180 as subjects are available</i>	<i>60 X 1</i>	<i>60</i>
	<i>BR + 365 as subjects are available</i>	<i>60 X 1</i>	<i>60</i>
<i>E.g., Oxidative Damage (Blood Collection)</i>	<i>Not required</i>	<i>N/A</i>	<i>0</i>

a. Is real-time data transmittal either required or highly desirable? (NOTE:

“Required” means that the experiment cannot be performed if data transmittal infrastructure is not available; “highly desired” means that the experiment data will be transmitted if the data transmittal infrastructure is available.)

b. How critical is the timing of the test/activity? Please explain any flexibility in the schedule provided in the table above. Examples of study timing requirements that may be difficult to implement are: early in the mission, late in the mission, any activity that must be performed daily or weekly, and any activity requiring precisely timed operations.

c. Does the study require timely return of hardware or samples? Yes No

If "Yes", explain the nature of the requirement and the impacts if it cannot be met. Also indicate if early retrieval of items, special handling for samples (e.g., conditioned), encrypted data delivery, or hazardous shipment is required.

IV. Technical Expertise

Will the PI or their representative be present during the test/activity or resident at the analog during the study? Yes No If no, please give a brief summary of the plan for providing any required technical expertise necessary for performing the study.