

# Intel ISEF Categories and Subcategories

The categories have been established with the goal of better aligning judges and student projects for the judging at the Intel ISEF. Local, regional, state and country fairs may or may not choose to use these categories, dependent on the needs of their area. Please check with your affiliated fair(s) for the appropriate category listings at that level of competition.

Please visit our website at [www.societyforscience.org/isef/students/project\\_categories](http://www.societyforscience.org/isef/students/project_categories) for a full description and definition of the Intel ISEF categories:

## ANIMAL SCIENCES

Animal Husbandry  
Development  
Ecology  
Pathology  
Physiology  
Populations Genetics  
Systematics  
Other

## EARTH & PLANETARY SCIENCE

Climatology, Weather  
Geochemistry, Mineralogy  
Paleontology  
Geophysics  
Planetary Science  
Tectonics  
Other

## MATHEMATICAL SCIENCES

Algebra  
Analysis  
Applied Mathematics  
Geometry  
Probability and Statistics  
Other

## BEHAVIORAL & SOCIAL SCIENCES

Clinical & Developmental Psychology  
Cognitive Psychology  
Physiological Psychology  
Sociology  
Other

## ENGINEERING: Electrical & Mechanical

Electrical Engineering, Computer  
Engineering, Controls  
Mechanical Engineering,  
Robotics  
Thermodynamics, Solar  
Other

## MEDICINE & HEALTH SCIENCES

Disease Diagnosis and Treatment  
Epidemiology  
Genetics  
Molecular Biology of Diseases  
Physiology and Pathophysiology  
Other

## BIOCHEMISTRY

General Biochemistry  
Metabolism  
Structural Biochemistry  
Other

## ENGINEERING: Materials & Bioengineering

Bioengineering  
Chemical Engineering  
Civil Engineering, Construction Eng.  
Industrial Engineering, Processing  
Material Science  
Other

## MICROBIOLOGY

Antibiotics, Antimicrobials  
Bacteriology  
Microbial Genetics  
Virology  
Other

## CELLULAR AND MOLECULAR BIOLOGY

Cellular Biology  
Cellular and Molecular Genetics  
Immunology  
Molecular Biology  
Other

## ENERGY & TRANSPORTATION

Aerospace and Aeronautical Engineering,  
Aerodynamics  
Alternative Fuels  
Fossil Fuel Energy  
Vehicle Development  
Renewable Energies  
Other

## PHYSICS AND ASTRONOMY

Astronomy  
Atoms, Molecules, Solids  
Biological Physics  
Instrumentation and Electronics  
Magnetics and Electromagnetics  
Nuclear and Particle Physics  
Optics, Lasers, Masers  
Theoretical Physics, Theoretical or  
Computational Astronomy  
Other

## CHEMISTRY

Analytical Chemistry  
General Chemistry  
Inorganic Chemistry  
Organic Chemistry  
Physical Chemistry  
Other

## ENVIRONMENTAL MANAGEMENT

Bioremediation  
Ecosystems Management  
Environmental Engineering  
Land Resource Management, Forestry  
Recycling, Waste Management  
Other

## PLANT SCIENCES

Agriculture/Agronomy  
Development  
Ecology  
Genetics  
Photosynthesis  
Plant Physiology (Molecular, Cellular,  
Organismal)  
Plant Systematics, Evolution  
Other

## ENVIRONMENTAL SCIENCES

Air Pollution and Air Quality  
Soil Contamination and Soil Quality  
Water Pollution and Water Quality  
Other

## COMPUTER SCIENCE

Algorithms, Data Bases  
Artificial Intelligence  
Networking and Communications  
Computational Science, Computer  
Graphics  
Computer System, Operating System  
Software Engineering, Programming  
Languages  
Other



# Checklist for Adult Sponsor (1)

This completed form is required for ALL projects.

To be completed by the Adult Sponsor in collaboration with the student researcher(s):

Student's Name(s): \_\_\_\_\_

Project Title: \_\_\_\_\_

1.  I have reviewed the Intel ISEF Rules and Guidelines.
2.  I have reviewed the student's completed Student Checklist (1A) and Research Plan/Project Summary.
3.  I have worked with the student and we have discussed the possible risks involved in the project.
4.  The project involves one or more of the following and requires prior approval by an SRC, IRB, IACUC or IBC:
 

<input type="checkbox"/> Humans <input type="checkbox"/> Vertebrate Animals	<b>Potentially Hazardous Biological Agents</b> <input type="checkbox"/> Microorganisms <input type="checkbox"/> rDNA <input type="checkbox"/> Tissues
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5.  Items to be completed for ALL PROJECTS
 

<input type="checkbox"/> Adult Sponsor Checklist (1) <input type="checkbox"/> Student Checklist (1A) <input type="checkbox"/> Regulated Research Institutional/Industrial Setting Form (1C) (when applicable; after completed experiment) <input type="checkbox"/> Continuation/Research Progression Form (7) (when applicable)	<input type="checkbox"/> Research Plan/Project Summary <input type="checkbox"/> Approval Form (1B)
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**Additional forms required if the project includes the use of one or more of the following (check all that apply):**

- Humans**, including student designed inventions/prototypes. (Requires prior approval by an Institutional Review Board (IRB); see full text of the rules.)
  - Human Participants Form (4) or appropriate Institutional IRB documentation
  - Sample of Informed Consent Form (when applicable and/or required by the IRB)
  - Qualified Scientist Form (2) (when applicable and/or required by the IRB)
- Vertebrate Animals** (Requires prior approval, see full text of the rules.)
  - Vertebrate Animal Form (5A) - for projects conducted in a school/home/field research site (SRC prior approval required.)
  - Vertebrate Animal Form (5B) - for projects conducted at a Regulated Research Institution. (Institutional Animal Care and Use Committee (IACUC) approval required prior experimentation.)
  - Qualified Scientist Form (2) (Required for all vertebrate animal projects at a regulated research site or when applicable)
- Potentially Hazardous Biological Agents** (Requires prior approval by SRC, IACUC or Institutional Biosafety Committee (IBC), see full text of the rules.)
  - Potentially Hazardous Biological Agents Risk Assessment Form (6A)
  - Human and Vertebrate Animal Tissue Form (6B) - to be completed in addition to Form 6A when project involves the use of fresh or frozen tissue, primary cell cultures, blood, blood products and body fluids.
  - Qualified Scientist Form (2) (when applicable)
  - The following are exempt from prior review but require a Risk Assessment Form 3: projects involving protists, archae and similar microorganisms, for projects using manure for composting, fuel production or other non-culturing experiments, projects using color change coliform water test kits, microbial fuel cells, and projects involving decomposing vertebrate organisms.
- Hazardous Chemicals, Activities and Devices** (No SRC prior approval required, see full text of the rules.)
  - Risk Assessment Form (3) (have up with potentially hazardous biological agents.)
  - Qualified Scientist Form (2) (required for projects involving DEA-controlled substances or when applicable)

Adult Sponsor's Printed Name \_\_\_\_\_ Signature \_\_\_\_\_ Date of Review \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_



# Student Checklist (1A)

This form is required for ALL projects.

1. a. Student/Team Leader: \_\_\_\_\_ Grade: \_\_\_\_\_  
Email: \_\_\_\_\_ Phone: \_\_\_\_\_  
b. Team Member: \_\_\_\_\_ c. Team Member: \_\_\_\_\_

2. Title of Project: \_\_\_\_\_  
\_\_\_\_\_

3. School: \_\_\_\_\_ School Phone: \_\_\_\_\_  
School Address: \_\_\_\_\_  
\_\_\_\_\_

4. Adult Sponsor: \_\_\_\_\_ Phone/Email: \_\_\_\_\_

5. Does this project need SRC/IRB/IACUC or other pre-approval?  Yes  No Tentative start date: \_\_\_\_\_

6. Is this a continuation/progression from a previous year?  Yes  No  
If Yes:  
a. Attach the previous year's  Abstract and  Research Plan/Project Summary  
b. Explain how this project is new and different from previous years on  Continuation/Research Progression Form (7)

7. This year's laboratory experiment/data collection:  
\_\_\_\_\_  
Actual Start Date: (mm/dd/yy) \_\_\_\_\_ End Date: (mm/dd/yy) \_\_\_\_\_

8. Where will you conduct your experimentation? (check all that apply)  
 Research Institution  School  Field  Home  Other: \_\_\_\_\_

9. List name and address of all non-home and non-school work site(s):  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone/ email \_\_\_\_\_

10. Complete a Research Plan/Project Summary following the Research Plan/Project Summary instructions and attach to this form.

11. An abstract is required for all projects after experimentation.



# Research Plan/Project Summary Instructions

A complete Research Plan/Project Summary is required for ALL projects and must accompany Student Checklist (1A).

1. All projects must have a Research Plan/Project Summary
  - a. Written prior to experimentation following the instructions below to detail the rationale, research question(s), methodology, and risk assessment of the proposed research.
  - b. If changes are made during the research, such changes can be added to the original research plan as an addendum, recognizing that some changes may require returning to the IRB or SRC for appropriate review and approvals. If no additional approvals are required, this addendum serves as a project summary to explain research that was conducted.
  - c. If no changes are made from the original research plan, no project summary is required.
2. Some studies, such as an engineering design or mathematics projects, will be less detailed in the initial project plan and will change through the course of research. If such changes occur, a project summary that explains what was done is required and can be appended to the original research plan.
3. The Research Plan/Project Summary should include the following:
  - a. **RATIONALE:** Include a brief synopsis of the background that supports your research problem and explain why this research is important and if applicable, explain any societal impact of your research.
  - b. **RESEARCH QUESTION(S), HYPOTHESIS(ES), ENGINEERING GOAL(S), EXPECTED OUTCOMES:** How is this based on the rationale described above?
  - c. Describe the following in detail:
    - **Procedures:** Detail all procedures and experimental design including methods for data collection. Describe only your project. Do not include work done by mentor or others.
    - **Risk and Safety:** Identify any potential risks and safety precautions needed.
    - **Data Analysis:** Describe the procedures you will use to analyze the data/results.
  - d. **BIBLIOGRAPHY:** List major references (e.g. science journal articles, books, internet sites) from your literature review. If you plan to use vertebrate animals, one of these references must be an animal care reference.

Items 1–4 below are subject-specific guidelines for additional items to be included in your research plan/project summary as applicable.

1. **Human participants research:**
  - a. **Participants:** Describe age range, gender, racial/ethnic composition of participants. Identify vulnerable populations (minors, pregnant women, prisoners, mentally disabled or economically disadvantaged).
  - b. **Recruitment:** Where will you find your participants? How will they be invited to participate?
  - c. **Methods:** What will participants be asked to do? Will you use any surveys, questionnaires or tests? What is the frequency and length of time involved for each subject?
  - d. **Risk Assessment:** What are the risks or potential discomforts (physical, psychological, time involved, social, legal, etc.) to participants? How will you minimize risks? List any benefits to society or participants.
  - e. **Protection of Privacy:** Will identifiable information (e.g., names, telephone numbers, birth dates, email addresses) be collected? Will data be confidential/anonymous? If anonymous, describe how the data will be collected. If not anonymous, what procedures are in place for safeguarding confidentiality? Where will data be stored? Who will have access to the data? What will you do with the data after the study?
  - f. **Informed Consent Process:** Describe how you will inform participants about the purpose of the study, what they will be asked to do, that their participation is voluntary and they have the right to stop at any time.
2. **Vertebrate animal research:**
  - a. Discuss potential ALTERNATIVES to vertebrate animal use and present justification for use of vertebrates.
  - b. Explain potential impact or contribution of this research.
  - c. Detail all procedures to be used, including methods used to minimize potential discomfort, distress, pain and injury to the animals and detailed chemical concentrations and drug dosages.
  - d. Detail animal numbers, species, strain, sex, age, source, etc., include justification of the numbers planned.
  - e. Describe housing and oversight of daily care
  - f. Discuss disposition of the animals at the termination of the study.
3. **Potentially hazardous biological agents research:**
  - a. Give source of the organism and describe BSL assessment process and BSL determination.
  - b. Detail safety precautions and discuss methods of disposal.
4. **Hazardous chemicals, activities & devices:**
  - Describe Risk Assessment process, supervision, safety precautions and methods of disposal.









# Regulated Research Institutional/Industrial Setting Form (1C)

This form must be completed AFTER experimentation by the adult supervising the student research conducted in a regulated research institution, industrial setting or any work site other than home, school or field.

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

**To be completed by the Supervising Adult in the Setting (NOT the Student(s)) after experimentation:**  
(Responses must remain on the form as it is required to be displayed at student's project booth.)

The student(s) conducted research at my work site:

1. Did you or your proxy (e.g. graduate student, postdoc, employee) mentor or provide substantial guidance to the student researcher?  Yes  No
  - a. If no, describe your and/or your institution's role with the student researcher and his/her project (e.g. supervised use of equipment on site without ongoing mentorship and sign below.
  - b. If yes, complete questions 2–5.
2. Is the student's research project a subset of your ongoing research or work?  Yes  No

Use questions 3, 4 and 5 to detail how the student's project was similar and/or different from ongoing research or work at your site.
3. Describe the independence and creativity with which the student:
  - a. developed the hypotheses or engineering goals for her/her research project
  - b. designed the methodology for his/her research project
  - c. analyzed and interpreted data
4. Detail the student's role in conducting the research (e.g. data collection, specific procedures performed). Differentiate what the student observed and what the student actually did.
5. Did the student(s) work on the project as part of a group?  Yes  No

If yes, how many individuals were in the group and who were they (e.g. high school students, graduate students, faculty, professional researchers)?

I attest that the student has conducted the work as indicated above and that any required review and approval by institutional regulatory board (IRB/IACUC/IBC) has been obtained. Copies are attached if applicable. I further acknowledge that the student will be presenting this work publicly in competition and I have communicated with the student research regarding any requirements for my review and/or restrictions of what is publicized.

Supervising Adult's Printed Name \_\_\_\_\_ Signature \_\_\_\_\_ Title \_\_\_\_\_

Institution \_\_\_\_\_ Date Signed (must be after experimentation) \_\_\_\_\_

Address \_\_\_\_\_ Email/Phone \_\_\_\_\_



## Qualified Scientist Form (2)

May be required for research involving human participants, vertebrate animals, potentially hazardous biological agents, and DEA-controlled substances. Must be completed and signed before the start of student experimentation.

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

**To be completed by the Qualified Scientist:**

Scientist Name: \_\_\_\_\_

Educational Background: \_\_\_\_\_ Degree(s): \_\_\_\_\_

Experience/Training as relates to the student's area of research: \_\_\_\_\_

Position: \_\_\_\_\_

Institution: \_\_\_\_\_

Address: \_\_\_\_\_

Email/Phone: \_\_\_\_\_

- 1) Have you reviewed the Intel ISEF rules relevant to this project?  Yes  No
  
2. Will any of the following be used?
  - a. Human participants  Yes  No
  - b. Vertebrate animals  Yes  No
  - c. Potentially hazardous biological agents (microorganisms, rDNA and tissues, including blood and blood products)  Yes  No
  - d. DEA-controlled substances  Yes  No
  
3. Was this study a sub-set of a larger study?  Yes  No
  
4. Will you directly supervise the student?  Yes  No
  - a. If no, who will directly supervise and serve as the Designated Supervisor? \_\_\_\_\_
  - b. Experience/Training of the Designated Supervisor: \_\_\_\_\_

**To be completed by the Qualified Scientist:**

I certify that I have reviewed and approved the Research Plan/Project Summary prior to the start of the experimentation. If the student or Designated Supervisor is not trained in the necessary procedures, I will ensure her/his training. I will provide advice and supervision during the research. I have a working knowledge of the techniques to be used by the student in the Research Plan/Project Summary. I understand that a Designated Supervisor is required when the student is not conducting experimentation under my direct supervision.

\_\_\_\_\_  
Qualified Scientist's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Approval

**To be completed by the Designated Supervisor when the Qualified Scientist cannot directly supervise.**

I certify that I have reviewed the Research Plan/Project Summary and have been trained in the techniques to be used by this student, and I will provide direct supervision.

\_\_\_\_\_  
Designated Supervisor's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Approval

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Email



## Risk Assessment Form (3)

Required for projects using hazardous chemicals, activities or devices, and microorganisms which are exempt from pre-approval. Must be completed before experimentation.

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

**To be completed by the Student Researcher(s) in collaboration with Designated Supervisor/Qualified Scientist: (All questions must be answered; additional page(s) may be attached.)**

1. List all hazardous chemicals, activities, or devices that will be used; identify microorganisms exempt from pre-approval (see Potentially Hazardous Biological Agent rules).
2. Identify and assess the risks involved in this project.
3. Describe the safety precautions and procedures that will be used to reduce the risks.
4. Describe the disposal procedures that will be used (when applicable).
5. List the source(s) of safety information.

**To be completed and signed by the Designated Supervisor (or Qualified Scientist, when applicable):**  
I agree with the risk assessment and safety precautions and procedures described above. I certify that I have reviewed the Research Plan/Project Summary and will provide direct supervision.

\_\_\_\_\_  
Designated Supervisor's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Review (mm/dd/yy)

\_\_\_\_\_  
Position & Institution

\_\_\_\_\_  
Phone or email contact information

\_\_\_\_\_  
Experience/Training as relates to the student's area of research





## Human Participants Form (4)

Required for all research involving human participants not at a Regulated Research Institution. If at a Regulated Research Institution, use institutional approval forms for documentation of prior review and approval. (IRB approval required before experimentation.)

Student's Name(s)	Title of Project
Adult Sponsor	Phone/Email
<b>Must be completed by Student Researcher(s) in collaboration with the Adult Sponsor/Designated Supervisor/Qualified Scientist:</b>	
1. <input type="checkbox"/> I have submitted my Research Plan/Project Summary which addresses ALL areas indicated in the Human Participants Section of the Research Plan/Project Summary Instructions.	
2. <input type="checkbox"/> I have attached any surveys or questionnaires I will be using in my project or other documents provided to human participants. <input type="checkbox"/> Any published instrument(s) used was /were legally obtained.	
3. <input type="checkbox"/> I have attached an informed consent that I would use if required by the IRB.	
4. <input type="checkbox"/> Yes <input type="checkbox"/> No Are you working with a Qualified Scientist? If yes, attach the Qualified Scientist Form 2.	

### BELOW - IRB USE ONLY

**Must be completed by Institutional Review Board (IRB) after review of the research plan. All questions must be answered for the approval to be valid. (If not approved, return paperwork to the student with instructions for modifications.)**

- Approved with Full Committee Review (3 signatures required) and the following conditions: (All 6 must be answered)
1. Risk Level (check one):  Minimal Risk  More than Minimal Risk
  2. Qualified Scientist (QS) Required:  Yes  No
  3. Designated Supervisor (DS) Required:  Yes  No
  4. Written Minor Assent required for minor participants:  
 Yes  No  Not applicable (No minors in this study)
  5. Written Parental Permission required for minor participants:  
 Yes  No  Not applicable (No minors in this study)
  6. Written Informed Consent required for participants 18 years or older:  
 Yes  No  Not applicable (No participants 18 yrs or older in this study)
- Approved with Expedited Review (1 signature required). Study involves either of the following:
- Human participants will only provide feedback on project design/student-designed invention or prototype etc., no personal data will be collected and there are no health or safety hazards.
  - Student is the only subject of the research and no more than minimal risk is involved.

**IRB SIGNATURES (All 3 signatures required unless expedited review checked above)** None of these individuals may be the adult sponsor, designated supervisor, qualified scientist or related to (e.g., mother, father of) the student (conflict of interest).

**I attest that I have reviewed the student's project, that the checkboxes above have been completed to indicate the IRB determination and that I agree with the decisions above.**

**Medical or Mental Health Professional (a psychologist, medical doctor, licensed social worker, licensed clinical professional counselor, physician's assistant, doctor of pharmacy, or registered nurse) with expertise related to this project.**

Printed Name	Degree/Professional License
Signature	Date of Approval (Must be prior to experimentation.)
<b>Educator</b>	
Printed Name	Degree
Signature	Date of Approval (Must be prior to experimentation.)
<b>School Administrator</b>	
Printed Name	Degree/Professional License
Signature	Date of Approval (Must be prior to experimentation.)



# Human Informed Consent Form

**Instructions to the Student Researcher(s):** An informed consent/assent/permission form should be developed in consultation with the Adult Sponsor, Designated Supervisor or Qualified Scientist. This form is used to provide information to the research participant (or parent/guardian) and to document written informed consent, minor assent, and/or parental permission.

- When written documentation is required, the researcher keeps the original, signed form.
- Students may use this sample form or may copy ALL elements of it into a new document.

If the form is serving to document parental permission, a copy of any survey or questionnaire must be attached.

Student Researcher(s): \_\_\_\_\_

Title of Project: \_\_\_\_\_

I am asking for your voluntary participation in my science fair project. Please read the following information about the project. If you would like to participate, please sign in the appropriate area below.

Purpose of the project:

If you participate, you will be asked to:

Time required for participation:

Potential Risks of Study:

Benefits:

How confidentiality will be maintained:

If you have any questions about this study, feel free to contact:

Adult Sponsor/QS/DS: \_\_\_\_\_ Phone/email: \_\_\_\_\_

## Voluntary Participation:

Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific question.

By signing this form I am attesting that I have read and understand the information above and I freely give my consent/assent to participate or permission for my child to participate.

## Adult Informed Consent or Minor Assent

Date Reviewed & Signed: \_\_\_\_\_

Research Participant Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Parental/Guardian Permission (if applicable)

Date Reviewed & Signed: \_\_\_\_\_

Parent/Guardian Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_



# Vertebrate Animal Form (5A)

Required for all research involving vertebrate animals that is conducted in a school/home/field research site.  
(SRC approval required before experimentation.)

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

## To be completed by Student Researcher:

1. Common name (or Genus, species) and number of animals used.
2. Describe completely the housing and husbandry to be provided. Include the cage/pen size, number of animals per cage, environment, bedding, type of food, frequency of food and water, how often animal is observed, etc. Add an additional page as necessary.
3. What will happen to the animals after experimentation?
4. Attach a copy of wildlife licenses or approval forms, as applicable
5. The Intel ISEF Vertebrate Animal Rules require that any death, illness or unexpected weight loss be investigated and documented by a letter from the qualified scientist, designated supervisor or a veterinarian. If applicable, attach this letter with this form when submitting your paperwork to the SRC prior to competition.

## To be completed by Local or Affiliate Fair Scientific Review Committee (SRC) BEFORE experimentation.

### Level of Supervision Required for agricultural, behavioral or nutritional studies:

- Designated Supervisor REQUIRED. Please have applicable person sign below.
- Veterinarian and Designated Supervisor REQUIRED. Please have applicable persons sign below.
- Veterinarian, Designated Supervisor and Qualified Scientist REQUIRED. Please have applicable persons sign below and have the Qualified Scientist complete Form (2).

The SRC has carefully reviewed this study and finds it is an appropriate study that may be conducted in a non-regulated research site.

### Local or Affiliate Fair SRC Pre-Approval Signature:

\_\_\_\_\_  
SRC Chair Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Approval (must be prior to experimentation) (mm/dd/yy)

### To be completed by Veterinarian:

- I have reviewed this research and animal husbandry with the student before the start of experimentation.
- I have approved the use and dosages of prescription drugs and/or nutritional supplements.
- I will provide veterinary medical and nursing care in case of illness or emergency.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Email/Phone

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Approval

### To be completed by Designated Supervisor or Qualified Scientist when applicable:

- I have reviewed this research and animal husbandry with the student before the start of experimentation and I accept primary responsibility for the care and handling of the animals in this project.
- I will directly supervise the experiment.

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Email/Phone

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of Approval



## Vertebrate Animal Form (5B)

Required for all research involving vertebrate animals that is conducted in at a Regulated Research Institution.  
(IACUC approval required before experimentation. Form must be completed and signed after experimentation.)

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

Title and Protocol Number of IACUC Approved Project \_\_\_\_\_

**To be completed by Qualified Scientist or Principal Investigator:**

1. Species of animals used: \_\_\_\_\_ Number of animals used: \_\_\_\_\_

2. Describe, in detail, the role of the student in this project: animal procedures and related equipment that were involved, oversight provided and safety precautions employed. (Attach extra pages if necessary.)

3. Was there any weight loss or death of any animal? If yes, attach a letter obtained from the qualified scientist, designated supervisor or a veterinarian documenting the situation and the results of the investigation.

4. Did the student's project also involve the use of tissues?

No

Yes; complete Forms 6A and 6B

5. What laboratory training, including dates, was provided to the student?

6. Attach a copy of the Regulated Research Institution IACUC Approval. A letter from the Qualified Scientist or Principal Investigator is not sufficient.

**Qualified Scientist/Principal Investigator**

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_





## Potentially Hazardous Biological Agents Risk Assessment Form (6A)

Required for research involving microorganisms, rDNA, fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids.  
SRC/IACUC/IBC approval required before experimentation.

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

To be completed by the QUALIFIED SCIENTIST/DESIGNATED SUPERVISOR in collaboration with the student researcher(s).  
All questions are applicable and must be answered; additional page(s) may be attached.

### SECTION 1: PROJECT ASSESSMENT

1. Identify potentially hazardous biological agents to be used in this experiment. Include the source, quantity and the biosafety level risk group of each microorganism.
2. Describe the site of experimentation including the level of biological containment.
3. Describe the procedures that will be used to minimize risk (personal protective equipment, hood type, etc.).
4. What final biosafety level do you recommend for this project given the risk assessment you conducted?
5. Describe the method of disposal of all cultured materials and other potentially hazardous biological agents.

### SECTION 2: TRAINING

1. What training will the student receive for this project?
2. Experience/training of Designated Supervisor as it relates to the student's area of research (if applicable).

### SECTION 3: For ALL CELL LINES and MICROORGANISMS – To be completed by the QUALIFIED SCIENTIST or DESIGNATED SUPERVISOR – Check the appropriate box(es) below:

- Experimentation on the cell line/microorganism used in this study was NOT conducted at a Regulated Research Institution, but was conducted at a (check one)  BSL-1 or  BSL-2 laboratory. This study has been reviewed by the local SRC and the procedures have been approved prior to experimentation.
- Experimentation on the cell line/microorganism used in this study was conducted at a Regulated Research Institution and was approved by the appropriate institutional board prior to experimentation; institutional approval forms are attached.  
Origin of cell lines: \_\_\_\_\_ Date of IACUC/IBC approval (mm/dd/yy) \_\_\_\_\_
- Experimentation on the cell line/microorganism used in this study was conducted at a Regulated Research Institution, which does not require pre-approval for this type of study. The SRC has reviewed that the student received appropriate training and the project complies with Intel ISEF rules.

### CERTIFICATION – To be SIGNED by the QUALIFIED SCIENTIST or DESIGNATED SUPERVISOR

The QS/DS has seen this project's research plan and supporting documentation and acknowledges the accuracy of the information provided above. This study has been approved as a (check one)  BSL-1/ BSL-2 study, and will be conducted in an appropriate laboratory.

\_\_\_\_\_  
QS/DS Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of review (MM/DD/YYYY)

### SECTION 4: CERTIFICATION – To be completed by the LOCAL or AFFILIATED FAIR SRC

The SRC has seen this project's research plan and supporting documentation and acknowledges the accuracy of the information provided above.

\_\_\_\_\_  
SRC Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date of review (MM/DD/YYYY)



## Human and Vertebrate Animal Tissue Form (6B)

Required for research involving fresh/frozen tissue (including primary cell lines, human and other primate established cell lines and tissue cultures), blood, blood products and body fluids. If the research involves living organisms please ensure that the proper human or animal forms are completed. **All projects using any tissue listed above must also complete Form 6A.**

Student's Name(s) \_\_\_\_\_

Title of Project \_\_\_\_\_

### To be completed by Student Researcher(s):

1. What vertebrate animal tissue will be used in this study? Check all that apply.

- Fresh or frozen tissue sample
- Fresh organ or other body part
- Blood
- Body fluids
- Primary cell/tissue cultures
- Human or other primate established cell lines

2. Where will the above tissue(s) be obtained. If using an established cell line include source and catalog number.

3. If the tissue will be obtained from a vertebrate animal study conducted at a research institution attach a copy of the IACUC certification with the name of the research institution, the title of the study, the IACUC approval number and date of IACUC approval.

### To be completed by the Qualified Scientist or Designated Supervisor:

I verify that the student will work solely with organs, tissues, cultures or cells that will be supplied to him/her by myself or qualified personnel from the laboratory; and that if vertebrate animals were euthanized they were euthanized for a purpose other than the student's research.

#### AND/OR

I certify that the blood, blood products, tissues or body fluids in this project will be handled in accordance with the standards and guidance set forth in U.S. Occupational Safety and Health Act, 29CFR, Subpart Z, 1910.1030 - Blood Borne Pathogens.

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date of Approval  
(Must be prior to experimentation.) \_\_\_\_\_

Title \_\_\_\_\_

Phone/Email \_\_\_\_\_

Institution \_\_\_\_\_



## Continuation/Research Progression Projects Form (7)

Required for projects that are a continuation/progression in the same field of study as a previous project.  
*This form must be accompanied by the previous year's abstract and Research Plan/Project Summary.*

Student's Name(s) \_\_\_\_\_

**To be completed by Student Researcher:** List all components of the current project that make it new and different from previous research. The information must be on the form; use an additional form for 2014–2015 and earlier projects.

Components	Current Research Project	Previous Research Project
1. Title		2016–2017  2015–2016
2. Change in goal/ purpose/objective		2016–2017  2015–2016
3. Changes in methodology		2016–2017  2015–2016
4. Variable studied		2016–2017  2015–2016
5. Additional changes		2016–2017  2015–2016

Attached are:

- 2016–2017 Abstract and Research Plan/Project Summary    
  2015–2016 Abstract

I hereby certify that the above information is correct and that the current year Abstract & Certification and project display board properly reflect work done only in the current year.

Student's Printed Name(s) \_\_\_\_\_ Signature \_\_\_\_\_ Date of Signature \_\_\_\_\_

