2019 SRC Presentation

ISEF SRC 2020 Changes

General/Overview

- Expanded Ethics Statement
- Roles and Responsibilities of the Students and Adults has been rewritten and reformatted
- Added Responsibilities for Qualified Scientist and Designated Supervisor
- Clarified PHBA rules
- Revised “Engineering Projects Guide”

Human Participants

- Page 9, Rule 6: Students are **prohibited** from **independently diagnosing** disease, administering medication and/or performing medical procedures.

- Page 9, Rule 1 of Human Participant Involvement in Student-Designed Invention, Prototype, Computer Application & Engineering/Design Projects: IRB review and pre-approval is necessary when the student-designed invention, prototype, application, etc. is tested by human participants other than the student researcher(s) **or a single adult guardian, adult sponsor/QS/DS when the testing requires an adult tester**.

PHBAs

- Page 14, Rule 8: insertion of antibiotic resistance markers for the clonal selection of bioengineered organisms is permitted, **with the following exceptions**:
  - Students are **prohibited** from the insertion of antibiotic resistance traits
  - Students are **prohibited** from designing or selecting for multiple drug resistance organisms

Engineering Projects Guide

- Changed section heading from “Human Participants” to “Device Testing with Human Participants”

2020 ISEF Ethics Statement

- ISEF Rule Book, Page 4-5:
- Student researchers, as well as adults who have a role in their projects, are expected to maintain the highest ethical standards. These include, but are not limited to:
  - Integrity
  - Legality
  - Respect for Confidentiality and Intellectual Property
  - Stewardship of Environment
  - Animal Care
  - Human Participant Protection
  - Potentially Hazardous Biological Agents (PHBAs)

2020 ISEF Ethics Statement

- Scientific fraud and misconduct are not condoned at any level of research or competition. This includes plagiarism, forgery, use or presentation of other researcher’s work as one’s own and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and ISEF. Society for Science and the Public reserves the right to revoke recognition of a project subsequently found to have been fraudulent.

2020 ISEF Ethics Statement

- ISEF Rule Book, Page 3:
  - “A research project may be part of a larger study performed by professional scientists, but the project presented by the student must be ONLY their own portion of the complete study.”

- ISEF Rule Book, Page 5:
  - “The student researcher is responsible for all aspects of the research project: ... Performing the project (which may include, but is not limited to) experimentation, data collection, engineering, data analysis, and any other process or procedures related to the project.”

ISEF FORMS Things to Remember

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 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:
   - ☐ Humans
   - ☐ Vertebrate Animals
   - ☐ Potentially Hazardous Biological Agents
   - ☐ Microorganisms ☐ rDNA ☐ Tissues

5. ☐ Items to be completed for **ALL PROJECTS**
   - ☐ Adult Sponsor Checklist (1)
   - ☐ Student Checklist (1A)
   - ☐ Research Plan/Project Summary
   - ☐ Approval Form (1B)
   - ☐ Regulated Research Institutional/Industrial Setting Form (1C) (when applicable; after completed experiment)
   - ☐ Continuation/Research Progression Form (7) (when applicable)

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 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)
- ☐ Qualified Scientist Form (2) (required for projects involving DEA-controlled substances or when applicable)

☐ **Other**
- ☐ Risk Assessment Form (3)

		Can be ANY date
Adult Sponsor's Printed Name	Signature	Date of Review (mm/dd/yy)
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:

   Cannot be BEFORE 1/1/19 _____ Cannot EXCEED 12 months from start date _____

   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.**

Must include a-d AND 1-4. If a project did not use 1-4, place N/A next to that number.

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? If yes and not your own, how did you obtain? Did it require permissions? If so, explain. 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.
   - Material Safety Data Sheets are not necessary to submit with paperwork.

Approval Form (1B)

A completed form is required for each student, including all team members.

1. To Be Completed by Student and Parent

a. **Student Acknowledgment:**

- I understand the risks and possible dangers to me of the proposed research plan.
- I have read the ISEF Rules and Guidelines and will adhere to all International Rules when conducting this research.
- I have read and will abide by the following Ethics statement

Student researchers are expected to maintain the highest standards of honesty and integrity. Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include but are not limited to plagiarism, forgery, use or presentation of other researcher's work as one's own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and ISEF.

Student's Printed Name	Signature	Must be PRIOR to experimentation Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

b. **Parent/Guardian Approval:** I have read and understand the risks and possible dangers involved in the **Research Plan/Project Summary**. I consent to my child participating in this research.

Parent/Guardian's Printed Name	Signature	Must be PRIOR to experimentation Date Acknowledged (mm/dd/yy) (Must be prior to experimentation.)

2. To be completed by the local or affiliated Fair SRC

(Required for projects requiring prior SRC/IRB APPROVAL. Sign 2a or 2b as appropriate.)

a. **Required for projects that need prior SRC/IRB approval BEFORE experimentation** (humans, vertebrates or potentially hazardous biological agents).

The SRC/IRB has carefully studied this project's **Research Plan/Project Summary** and all the required forms are included. My signature indicates approval of the **Research Plan/Project Summary** before the student begins experimentation.

HS SRC CHAIR
SRC/IRB Chair's Printed Name

HS SRC CHAIR Signature	PRIOR to experimentation Date of Approval (mm/dd/yy) (Must be prior to experimentation.)

Only "In-House" with Humans, Verts, PHBAs

OR

b. **Required for research conducted at all Regulated Research Institutions with no prior fair SRC/IRB approval.**

This project was conducted at a regulated research institution (**not home or high school, etc.**), was reviewed and approved by the proper institutional board before experimentation and complies with the ISEF Rules. **Attach (1C) and any required institutional approvals (e.g. IACUC, IRB).**

HS SRC CHAIR
SRC Chair's Printed Name

HS SRC CHAIR Signature	AFTER experimentation Date of Signature (mm/dd/yy) (May be after experimentation)

RRI with Humans, Verts, PHBAs

3. Final ISEF Affiliated Fair SRC Approval (Required for ALL Projects)

SRC Approval After Experimentation and Before Competition at Regional/State/National Fair LISEF COMPLETES FOR FINALISTS ONLY

I certify that this project adheres to the approved **Research Plan/Project Summary** and complies with all ISEF Rules.

Regional SRC Chair's Printed Name	Signature	Date of Approval (mm/dd/yy)
State/National SRC Chair's Printed Name *(where applicable)*	Signature	Date of Approval (mm/dd/yy)

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 be on the form as it is required to be displayed at student's project booth; please do not print double-sided.)

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? 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. ☐ Yes ☐ No

3. Describe the independence and creativity with which the student:
   a. developed the hypotheses or engineering goals for the research project

   b. designed the methodology for his/her research project

   c. analyzed and interpreted data

Please ask mentors to be as explicit as possible throughout form.

(Continued on next page)

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

Student's Name(s) _____

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)?

This question is crucial to understanding who is working in the lab with the student(s).

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) (mm/dd/yy)
Address		Email/Phone

Qualified Scientist Form (2)

May be required for research involving human participants, vertebrate animals, potentially hazardous biological agents, and hazardous substances and devices. 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 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. Hazardous substances and devices ☐ Yes ☐ No
3. Will this study be 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:

Often missed - only needs to be completed if there is a DS. Above covers experience of QS.

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

_____ Prior to experimentation

Signature Date of Approval (mm/dd/yy)

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

_____ Prior to experimentation

Signature Date of Approval (mm/dd/yy)

_____ _____

Phone Email

Risk Assessment Form (3)

Must be completed before experimentation.

At 2019 ISEF, the ISEF SRC stated they would like this form completed for every project.

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	Prior to experimentation 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 recruitment or data collection.)

Student's Name(s) | Title of Project

Adult Sponsor | Phone/Email

Must be completed by Student Researcher(s) in collaboration with the Adult Sponsor/Designated Supervisor/Qualified Scientist:

1. ☐ 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. ☐ I have attached any surveys or questionnaires I will be using in my project or other documents provided to human participants.
   ☐ Any published instrument(s) used was/were legally obtained.
3. ☐ I have attached an informed consent that I would use if required by the IRB.
4. ☐ Yes ☐ No Are you working with a Qualified Scientist? If yes, attach the Qualified Scientist Form 2.

If anything below here, for IRB USE ONLY IS INCOMPLETE, the project is a POTENTIAL fail to qualify.

BELOW - IRB USE ONLY

If anything below here, for IRB USE ONLY IS INCOMPLETE, the project is a POTENTIAL fail to qualify.

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 (Form 2): ☐ Yes ☐ No
3. Designated Supervisor (DS) Required (Form 3): ☐ 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)

IRB SIGNATURES (All 3 signatures required) 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.) (mm/dd/yy)
Prior to experimentation

Educator

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)
Prior to experimentation

School Administrator

Printed Name | Degree/Professional License

Signature | Date of Approval (Must be prior to experimentation.) (mm/dd/yy)
Prior to experimentation

If IRB requires, written assent or consent, must have for EVERY participant.

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 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: _____ (mm/dd/yy)

_____ _____

Research Participant Printed Name: Signature:

Parental/Guardian Permission (if applicable)

Date Reviewed & Signed: _____ (mm/dd/yy)

_____ _____

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 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 (select one):

Must be completed PRIOR to experimentation by SRC. SRC MUST include a veterinarian if a vertebrate animal will be used.

- ☐ 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. (Fees may apply.)

Printed Name	Email/Phone

Signature	Date of Approval (mm/dd/yy)
	Prior to experimentation

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 (mm/dd/yy)
	Prior to experimentation

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.
   IACUC MUST be attached and include proper dates as it pertains to the project.

Qualified Scientist/Principal Investigator

Printed Name

Signature

After experimentation

Date (mm/dd/yy)

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).

Often missed because of spacing. Be sure it is included if DS is on project.

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

☐ Experimentation on the microorganisms/cell lines/tissues to be used in this study will NOT be conducted at a Regulated Research Institution, but will be 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 microorganisms/cell lines/tissues to be used in this study will be 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 _____

☐ Experimentation on the microorganisms/cell lines/tissues to be used in this study will be 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 ISEF rules.

One of the above boxes must be checked off. If IACUC /IBC approval needed have information completed.

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 _____

After Experimentation

Date of review (mm/dd/yy) _____

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.

HS SRC CHAIR

SRC Printed Name _____ Signature _____

After experimentation

Date of review (mm/dd/yy) _____

HS SRC Chair completes AFTER experimentation. Same date as box 2b on Form 1B.

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 a of IACUC approval.

   Must attach IACUC with dates.

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. At least one of these boxes must be checked.

  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 (mm/dd/yy) (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 previous year and earlier projects.

Components	Current Research Project	Previous Research Project: Year: _____
1. Title		
2. Change in goal/ purpose/objective	Be specific!	
3. Changes in methodology	Clearly outline all differences in project!	
4. Variable studied	Do this for all components!	
5. Additional changes		

Attached are:

☐ Abstract and Research Plan/Project Summary, Year _____

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 _____ Any date Date of Signature (mm/dd/yy)

ISEF Common SRC Problems

Incomplete Research Plan

- Must include proposed and actual start and end dates
- Must include detailed research plan
- Must have all work site information completed

Incorrect or incomplete Abstract

- Must be in proper format
- Must be without acknowledgements
- Must have checks properly marked and be signed
- Must reflect current year’s work done by student

Missing Designated Supervisor Form 3

- Must be completed for projects that involved chemicals, equipment, or other potential hazards
- Often missing, and often incomplete without description of safety precautions taken

Prior year’s paperwork for continuations

- Continuing projects, even those with clear demonstration of significant progress must provide prior year’s research (1A and Research Plan Attachment)
- Consider the project a continuation if prior work has been done in same general research area

Top Five ISEF SRC Problems (Guarantee to require an Interview)

Top 5 ISEF SRC Problems (require interviews)

1. Vertebrate animal projects without proper SRC or IACUC approval or lacking appropriate detail in the research plan.

Top 5 ISEF SRC Problems (require interviews)

2. Human participant projects without evidence of proper prior approval or informed consents.

Top 5 ISEF SRC Problems (require interviews)

3. Projects involving the culture of potentially-pathogenic and pathogenic agents without appropriate detail about materials cultured, methods, or location of culturing and storage.

Top 5 ISEF SRC Problems (require interviews)

4. Continuing projects without enough detail in the research plan to demonstrate significant progress, including an abstract that is often too similar to the previous year’s.

Top 5 ISEF SRC Problems (require interviews)

5. Projects that have eligibility questions regarding either the number of students involved in the project (team to individual or too many team members), the longevity of the research involved, or the age of the participants.

LISEF Reasons to Fail To Qualify

Pg. 13 of LISEF Guidelines

Eligibility:

- Student worked with a partner or team but competed as an individual, or vice versa
- Project data collection was more than 1 year in length or was too old
- Student, individual or team member, was not associated with a Nassau or Suffolk county school district
- Project display has more than one year's data (this includes replication data even if replication done in current year)

Scientific Misconduct:

- Plagiarism
- Student presents mentor's research as his/her own
- Falsification of data
- Misrepresentation of team membership
- Reverting to previously disapproved version of display
- Any ethical misconduct
- **Lack of adherence to ISEF Ethics Statement**

Vertebrate Studies:

- Missing IACUC preapproval for vertebrate animal studies
- Studies done at home/school/field that should have been done at a regulated research institution
- Induced toxicity studies
- Predator/vertebrate prey experiments
- Studies where student performed euthanasia on a vertebrate animal
- Studies with an animal death in any group or subgroup due to experimental procedures of the student or *of any other person using the same vertebrate animals*
- Studies where animals have a weight loss greater than or equal to 15%
- Studies where there was an inappropriate restriction of water or food
- Studies treated as embryonic studies that were actually vertebrate studies
- Projects that cause more than momentary or slight pain or distress to vertebrate animals, even if caused by a *person using the same vertebrate animal*, unless *approved* anesthetics, analgesics and/or tranquilizers are used

Human Participant Studies

- Missing prior IRB approval for human participant studies and pilots of same studies. *This includes submitting a signed Form 4 that lacks any IRB determinations.*
- Studies that under-evaluated risk and did not have a Qualified Scientist
- Studies where the IRB required written documentation of consents which were not obtained
- Student administration, scoring and/or interpretation of a published instrument without the required qualifications as specified by the instrument publisher
- Testing a medical intervention device in a place other than RRI

Potentially Hazardous Biological Agents (PHBAs)

- Microorganisms were cultured at home
- Certification for a high school BSL-2 lab not obtained
- Violation of BSL-1 protocol of unknown microorganisms which require keeping plates sealed
- BSL-2 studies done in a BSL-1 lab
- Genome editing studies not done at a RRI

Other Reasons for FTQ

- **Lack of adherence to ISEF Ethics Statement**
- Hazardous Chemical Studies conducted at home or in the field without a LISEF SRC pre-approved Designated Supervisor
- continuation study which was merely a repeat of a previous project conducted by any student
- Failure to submit the Project PDF File Upload by the published deadline

Operational Guidelines for SRC and IRB

https://student.societyforscience.org/rules-faq

https://student.societyforscience.org/committee-training

https://student.societyforscience.org/checklist-src-review

https://student.societyforscience.org/common-scientific-research-committee-src-problems

https://student.societyforscience.org/reasons-failing-qualify-intel-isef

https://student.societyforscience.org/reasons-failing-qualify-intel-isef

Important Links for Adult Sponsor

https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/Risk-Assessment-Guide.pdf

https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/Risk-Assessment-Guide.pdf

https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/Online-Survey-Consent-Procedures.pdf

https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/BSL1-Checklist.pdf

https://sspcdn.blob.core.windows.net/files/Documents/SEP/ISEF/Resources/BSL2-Checklist.pdf