Science Fair Paperwork and SRC/IRB Tips

Fall 2016
Adult Roles and Responsibilities

- Several adults can and should help students with their scientific research:
  - Adult Sponsor
  - Qualified Scientist
  - Designated Supervisor
  - Institutional Review Board (IRB)
  - Scientific Review Committee (SRC)

- Consult the Intel ISEF Rules & Guidelines pages 5 & 6 for detailed descriptions.
Adult Sponsor

• Oversees project to make sure that student...
  • is informed of ISEF Rules and Guidelines
  • is aware of risks associated with project
  • is aware of forms required for project
  • is provided proper supervision during experimentation
  • if required, submits project to IRB or SRC

• Teacher usually serves as Adult Sponsor
Qualified Scientist

- Required for **some** projects
- Completes Form 2 – QS Form
- Should have a doctoral or professional degree related to student research
  
  Or

  Have applicable experience and expertise with review and approval by the SRC
Designated Supervisor

- Supervises projects involving hazardous chemicals, activities or devices
- Supervises projects requiring a Qualified Scientist when the Qualified Scientist cannot directly supervise the student
- For vertebrate animal projects, an Animal Care Supervisor is required
What is an SRC/IRB?

- SRC stands for Scientific Review Committee
  - A group of knowledgeable individuals who review **all** student research projects prior to competition and **some** student research projects before experimentation.

- IRB stands for Institutional Review Board
  - A group of knowledgeable individuals who review **all** student research involving human participants prior to experimentation.

- Combined SRC/IRB (**We have this in WY.**)
  - A group of 4 knowledgeable individuals that evaluate **all** projects include those using human participants.
Why have a State Science Fair SRC/IRB?

- Encourage and teach students how to do safe, legal, and ethical research.

- Prevent problems before competition and sometimes even before experimentation.

- Continue to send students to Intel ISEF and Broadcom MASTERS (it is part of the rules).
## Common Paperwork Problems

### At Regional Fairs
- Incomplete or late paperwork
- Missing human participant Form 4 and Human Informed Consent
- No differentiation between qualified scientist and designated supervisor
- Inappropriate or unsafe handling of potentially hazardous biologic agents
- Failure to provide paperwork for continuing projects

### At the Intel ISEF
- No SRC approval or insufficient research plan for vertebrate animal projects
- Human projects without prior approval or consent forms
- Inadequate information for projects culturing potentially-pathogenic agents
- Continuation projects with inadequate information to document progress
- Eligibility questions – ages of students, number of team members, length of research, and scientific conduct
Selected projects are reviewed prior to the start of experimentation:

- Human Subjects
- Vertebrate Animals
- Potentially Hazardous Biological Agents

*Dates on the paperwork must reflect this.*

*This is a golden opportunity to give students advice on how to revise projects to make them safer or more ethical.*
SRC/IRB Review Timeline

- All projects are reviewed after experimentation and prior to competition.
- During this review, the SRC/IRB is looking for compliance with Intel ISEF Rules & Guidelines.

Rules are designed to “ensure the safety of students, to protect the participants and environments studied and to limit the liability of the adults who assist with the projects.”

Students, adults and fair leadership should all become familiar with these Intel ISEF Rules & Guidelines.
SRC/IRB Review Timeline

• SRC/IRB review prior to experimentation should result in one of the following decisions:
  • Approval – SRC/IRB chair signs box 2a or 2b on Form 1B
  • Disapproval – SRC/IRB chair provides student and sponsor with reasons for disapproval and suggestions for corrections needed for approval. (These projects require re-review after corrections are made.)

• SRC/IRB review after experimentation and shortly before competition:
  • A signature at the bottom of Form 1B indicates project complies with all Intel ISEF Rules & Guidelines and is approved for competition.
Intel ISEF publishes a full checklist for SRC/IRBs to use when reviewing projects after experimentation:

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

- Review the abstract and look for evidence of human participants (Form 4), animals (Forms 5A or 5B), potentially hazardous biological agents (Forms 6A or 6B), work done at a regulated research institution (Form 1C), a continuation study (Form 7), hazardous chemicals or devices (Form 3).

Wyoming State Science Fair (WSSF) does not require abstracts to be on the ISEF Form (no boxes to check).

- WSSF guidelines for writing abstracts are available at [http://www.uwyo.edu/sciencefair/important-information.html](http://www.uwyo.edu/sciencefair/important-information.html)
SRC/IRB Review Checklist

• Checklist for Adult Sponsor (Form 1)
• Look for consistency in answers and forms
SRC/IRB Review Checklist

- Research Plan & Post Project Summary
  - This document contains most of the critical information needed to determine approval.
  - Contact the student or adult sponsor if more information is needed.

- WSSF research plan guidelines are available at http://www.uwyo.edu/sciencefair/important-information.html
• Student Checklist (Form 1A)

• Item 7 – look at these dates carefully and make sure that SRC/IRB pre-approval was granted prior to “actual start date”, and that the study period was no more than 12 months beginning in January.
SRC/IRB Review Checklist

• Approval Form (Form 1B)
  • Student and parent signatures must be before the “actual start date” on Form 1A.
  • Pre-approval is indicated by the SRC Chair’s signature in #2a or #2b.
  • Post-approval (approval for competition) is indicated by SRC Chair’s signature in #3. Date should be shortly prior to the fair event and after the “actual end date” indicated on Form 1A.

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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 Intel 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
      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 researches work as one’s own, and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs and the Intel ISEF.

   Student’s Printed Name: __________________________
   Student’s Signature: __________________________
   Date Acknowledged (mm/dd/yy): __________________________

   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: __________________________
   Parent/Guardian’s Signature: __________________________
   Date Acknowledged (mm/dd/yy): __________________________

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 on humans, vertebrates or potentially hazardous biological agents.

   The SRC/IRB has carefully studied this projects 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.

   SRC/IRB Chair’s Printed Name: __________________________
   Signature: __________________________
   Date of Approval (mm/dd/yy): __________________________ (Must be prior to experimentation.)

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

   SRC Approval After Experimentation and Before Competition at Regional/State/National Fair
   I certify that this project adheres to the approved Research Plan/Project Summary and complies with all Intel ISEF Rules.

   Regional SRC Chairs Printed Name: __________________________
   Signature: __________________________
   Date of Approval: __________________________

   State/National SRC Chairs Printed Name (where applicable): __________________________
   Signature: __________________________
   Date of Approval: __________________________
SRC/IRB Review Checklist

- Risk Assessment (Form 3)
  - This should be completed before experimentation.
  - WY students tend to underestimate risks.
  - If in doubt, it is best to complete this form.
SRC/IRB Review Checklist

- Human Participants Form (4)
  - Must have IRB signatures:
    - Educator or School Administrator cannot also be the Adult Sponsor, Designated Supervisor, Qualified Scientist, or relative of the student.
    - Dates must all be prior to “actual start date” indicated on Form 1A.
SRC/IRB Review Checklist

- Human Informed Consent Form
- All approval signatures must be prior to “actual start date of experiment”.

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/CES: __________________________ 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: __________________________
If vertebrate animal study is done at school, home or field site, use form 5A and SRC/IRB pre-approval is required.

If vertebrate animal study is done at a Regulated Research Institution, use Form 5B.
• Potentially Hazardous Biological Agents Risk Assessment Form (6A):
  • Source, quantity and BSL (biological safety level) must be identified.
  • BSL-3 and BSL-4 studies are NOT ALLOWED.
  • Microorganisms MAY NOT be cultured at home.
  • Must have signatures of Designated Supervisor or Qualified Scientist and the Regional Fair SRC/IRB.
Human and Vertebrate Animal Tissue Form (6B):

- Animals may not be euthanized solely for the purpose of the student research.
- Substances must be handled in accordance with standards for Blood Borne Pathogens.
- Signature of Designated Supervisor or Qualified Scientist is required.
**SRC/IRB Review Checklist**

- Continuation/Research Progression Projects Form (7):
  - All information should be visible on the form (i.e., NO “see attached” comments in the boxes).
  - Research Plans & Abstracts from previous years must be attached.
  - A study is a continuation if ...
    - the study is in the same field
    - information from a previous year helped with the current study
    - the current study refers to earlier research done by the same student.
    - longitudinal studies are OK, but original data from a previous year cannot be presented (only a comparison between years can be presented).

**Studies that are repetitions of a previous study with no changes except an increase in sample size or retests are NOT PERMITTED.**
Questions?

- If you are in doubt about the paperwork or ISEF Rules & Guidelines please seek out clarification:
  - For an overview of forms and dates: [https://student.societyforscience.org/overview-forms-and-dates](https://student.societyforscience.org/overview-forms-and-dates)
  - Call the Wyoming State Science Fair office (If we don’t immediately know the answer, we’ll find out and get back to you.): 307-766-9863 or write to wyostatefair@gmail.com.