

COORSTEK.



# Supporting Your Science Fair Students

2023-2024 DMRSEF

Season Kickoff

# DMRSEF

## From Start to Science Fair: How do you get there?

- **DMRSEF Online Resources**
  - How to Science Fair videos
  - Paperwork tutorial videos
  - Project Ideas
  - Online learning resources
- **Competition Ready Series Workshops**
  - Science Fair Q&A
  - Skills-based workshops
- **Student Advisory Council**
  - Peer-to-peer support for making it through the fair (and having fun!)



February 23rd 2024 DMRSEF CROSSLINK REGIONAL SCIENCE FAIR

### How to Science Fair

Check out our website for detailed step-by-step instructions and all access to all DMRSEF resources

[clas.ucdenver.edu/denversciencefair/how-science-fair](https://clas.ucdenver.edu/denversciencefair/how-science-fair)

... or reach out to [denversciencefairucdenver.edu](https://denversciencefairucdenver.edu)

#### Step Two: Getting Involved

- Join our *Monthly Newsletter* for updates from the DMRSEF team.
- Attend a Season Kickoff event.
- *Register yourself* for the fair **you do not need a completed project to register!**
- *Sign up to participate* in pre-season events for help along the way.
  - Register for *Science Fair Workshops* on everything from completing your paperwork, to assembling your fair materials, to practicing for your judge interviews

#### Step One: Planning and Preparing

- Check out our video on *Getting Started*.
- Decide if you will be working by yourself or as a team (3 people max). Begin to identify your teachers, mentors, parents, and other adults that will be involved.
- Begin narrowing down your interests for a science fair project and start learning more about your topic and field of study.
  - There are resources on the *Students Page* for selecting a topic.
  - Check out the *2023 DMRSEF Showcase* or the *ISEF Project Database* for inspiration.
- Familiarize yourself with the *ISEF Rule Book* before deciding on a project.
- Talk to subject matter experts. Reach out to the DMRSEF team if you need help locating an expert or mentor.
- Apply for a science fair mini-grant to fund your science on the *Student Grants* tab of our website.

#### Step Three: Designing Your Project

- Make sure you have a testable question or design goal.
- Check out our video guides on formulating *Your Research Question* and *Your Hypothesis*.
- Plan your experimental procedures.
- Make sure any forms that require signatures before the start of experimentation are ready to go. See our *Forms & Rules Page* to learn more.
- Check your project plan against *All DMRSEF and ISEF Rules*. Reach out to the DMRSEF team if you have questions!
- If you are working with a team, have a clear plan for collaboration and division of work.
- Work with your adults to ensure your project plan and materials are ready to go before beginning your experiments.
  - Check out our video on *Methods and Materials*.
- Obtain any necessary pre-approvals from review boards (IRB/SRC/IACUC).
  - Learn more about *Regulatory Bodies* in this video. ◦ Check out the helpful *SRC Preapproval Flowchart* from CSEF.
  - Reach out to the DMRSEF team if you need assistance with preapproval.

## From Start to Science Fair: What Do you Need?

- Testable question
- Completed project
- Science Fair forms
- Presentation materials
  - Physical Display
  - Virtual Display
  - 'Elevator Pitch' Video



# What makes a successful Science Fair project?

**Spoiler Alert: There is no magic bullet...**

**...but communication is key! So is creativity!**

**Those who do well at our fair have:**

- A genuine interest in their topic/problem
- The ability to talk (and teach) clearly and concisely about their research
- A clear understanding of the methods they used and why they were chosen
- Comfort answering questions and the ability to reason through answers
- A story to tell

**Your student's project doesn't need to be overly complex as long as they can tell us what they did and why you did it!**

# Finding a topic

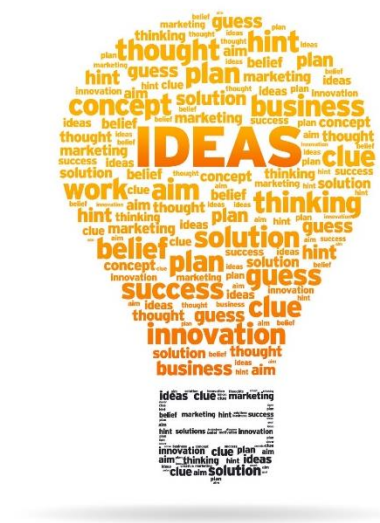
**Remember:** Your student is going to be thinking about this project for at least the next 145 days, it needs to be something they are interested in!

## Sparking Ideas

- Project Mindstorming
- DMRSEF Project Archives
- Hobbies and interests
- Challenges in daily life

## Keep in mind

- Question should be simple, measurable, and answerable within a few months
- Ask what or how instead of why
- If you hate your topic, it won't get done



# Your role as a supporter

**Reality check:** What is a question you can reasonably answer in the next 3 months?

**Time management:** Registration is due in 103 days; the fair is in 145 days! Don't underestimate time to conduct experiment. Leave room for iteration and problem solving!

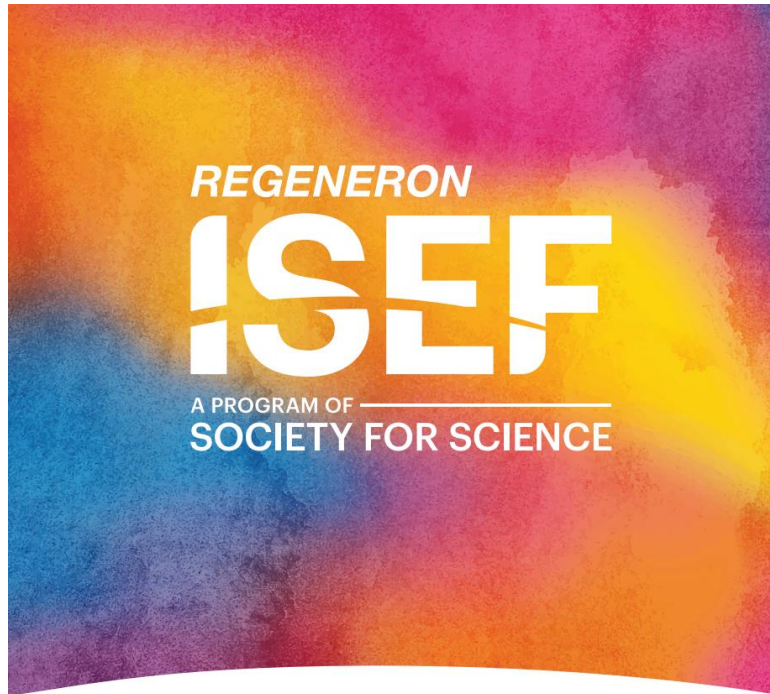
**Depth of understanding:** Get them talking about their work early and often, ask why, challenge their assumptions, encourage them to find answers, help identify resources.

**Referee:** Make sure their project complies with ISEF rules!

**Cheerleader:** Research involves a lot of dead ends, help them get past this frustration.

**Scheduler:** Encourage them to come to our pre-season events. We are here to help!

# ISEF Rules & Forms



INTERNATIONAL RULES  
FOR PRE-COLLEGE SCIENCE RESEARCH  
GUIDELINES FOR SCIENCE AND ENGINEERING FAIRS 2022-2023

The International Rules are organized into 5 key sections:

- Rules for **All Projects**
- **Human Participant Rules**
- **Vertebrate Animal Rules**
- **Potentially Hazardous Biological Agents (PHBA) Rules**
- **Hazardous Chemicals, Activities, or Devices Rules**

**ISEF Rules Wizard:**

<https://ruleswizard.societyforscience.org/>

DENVER SCIENCE FAIR

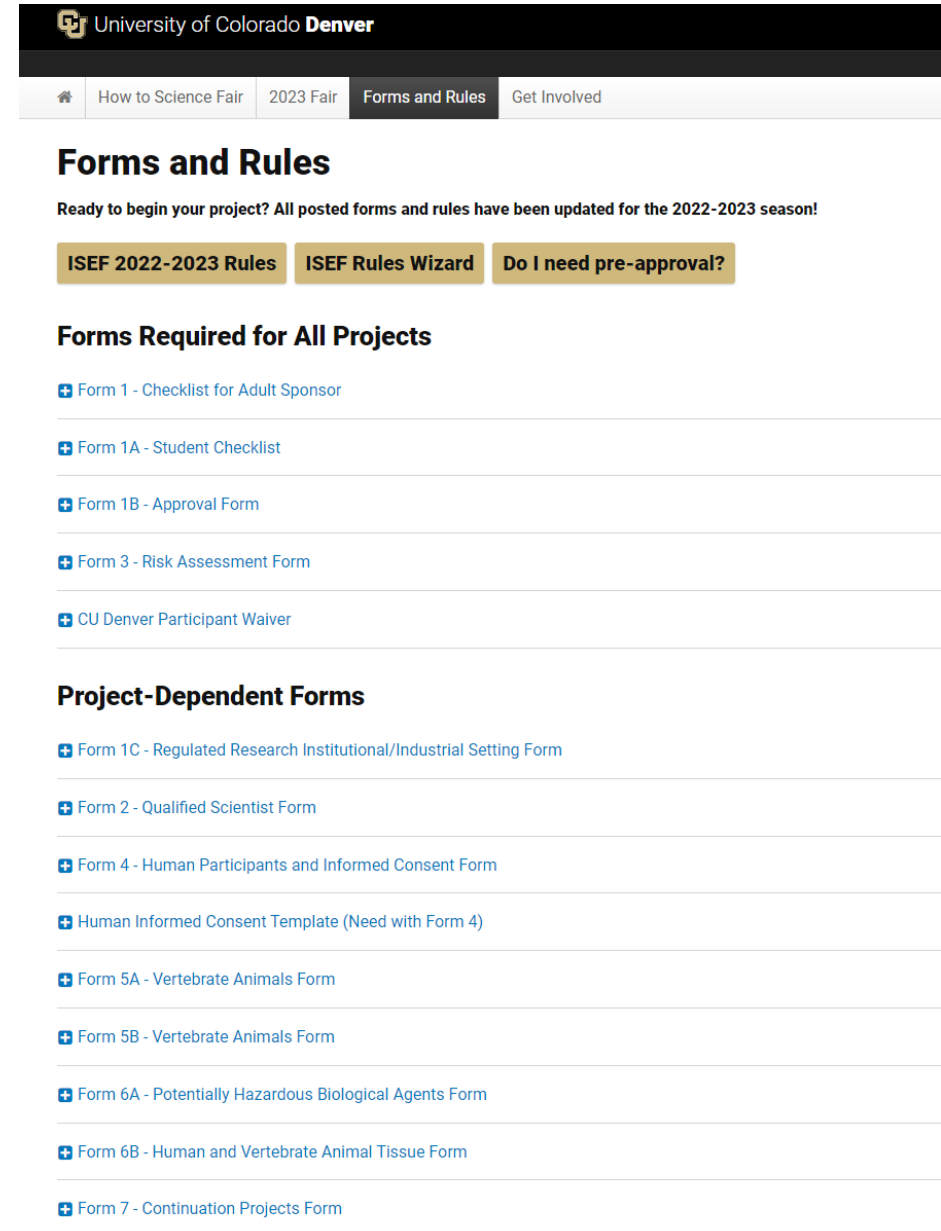
# ISEF Rules & Forms

## Forms Required for ALL Projects:

- Checklist for Adult Sponsor ( Form 1)
- Student Checklist (Form 1A)
- Research Plan/Project Summary
- Approval Form (Form 1B)
- Risk Assessment Form (Form 3)
- Participant Notice of Risk and Waiver

## ISEF Rules Wizard:

<https://ruleswizard.societyforscience.org/>



University of Colorado Denver

How to Science Fair | 2023 Fair | **Forms and Rules** | Get Involved

### Forms and Rules

Ready to begin your project? All posted forms and rules have been updated for the 2022-2023 season!

[ISEF 2022-2023 Rules](#) | [ISEF Rules Wizard](#) | [Do I need pre-approval?](#)

#### Forms Required for All Projects

- + Form 1 - Checklist for Adult Sponsor
- + Form 1A - Student Checklist
- + Form 1B - Approval Form
- + Form 3 - Risk Assessment Form
- + CU Denver Participant Waiver

#### Project-Dependent Forms

- + Form 1C - Regulated Research Institutional/Industrial Setting Form
- + Form 2 - Qualified Scientist Form
- + Form 4 - Human Participants and Informed Consent Form
- + Human Informed Consent Template (Need with Form 4)
- + Form 5A - Vertebrate Animals Form
- + Form 5B - Vertebrate Animals Form
- + Form 6A - Potentially Hazardous Biological Agents Form
- + Form 6B - Human and Vertebrate Animal Tissue Form
- + Form 7 - Continuation Projects Form





# Project Roles & Responsibilities

## Student Researcher(s)

- Responsible for all aspects of the project
- Can compete in team of up to 3 students

## Student(s) Parent/Guardian

- Must give permission for student participation
- May serve in other adult roles described below

## Adult Sponsor (AS)

- May be a **teacher**, **parent**, professor, and/or professional scientist
- Must have a solid background in science, understand ISEF rules, and be willing to work closely with the student(s) throughout the duration of the project
- Adult Sponsor must stay consistent throughout the project



## Qualified Scientist (QS)

- Should have earned doctoral or professional degree in a scientific discipline *related to the student's area of research*
- In some cases, professional experience can substitute for advanced degrees (check with DMRSEF Staff for approval)
- Qualified Scientist must be familiar with local and federal regulations governing the student's area of research
- **Adult Sponsors** can also serve as the **Qualified Scientist** if they meet the criteria described above
- If the QS is located in a different city/state/country that prevents them from directly overseeing the student's work, they may appoint a trained **Designated Supervisor (DS)**
- The **Designated Supervisor** must be trained in student's area of research, but does not need an advanced degree
- The **Adult Sponsor** may act as the **Designated Supervisor**

# REQUIRED

## 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: \_\_\_\_\_

- I have reviewed the ISEF Rules and Guidelines, including the science fair ethics statement.
- I have reviewed the student's completed Student Checklist (1A) and Research Plan/Project Summary.
- I have worked with the student and we have discussed the possible risks involved in the project.
- The project involves one or more of the following and requires prior approval by an SRC, IRB, IACUC or IBC:  
 Humans  Potentially Hazardous Biological Agents  
 Vertebrate Animals  Microorganisms  rDNA  Tissues
- Items to be completed for **ALL PROJECTS**  
 Adult Sponsor Checklist (1)  Research Plan/Project Summary  
 Student Checklist (1A)  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, archaea 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)
- I attest to the information checked above and that I have read and agree to abide by the science fair ethics statement.

Only check boxes that are appropriate to your research

This is usually a teacher or parent

This must be dated BEFORE the "Actual Start Date" on form 1A

Adult Sponsor's Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

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

Phone \_\_\_\_\_

Email \_\_\_\_\_

**REQUIRED**

### 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: \_\_\_\_\_  
\_\_\_\_\_

This is usually a teacher or parent

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)

This should be the date that the student started collecting data

7. This year's experimentation/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. Source of Data:  
 Collected self/mentor  Other Describe/url: \_\_\_\_\_

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

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

12. **An abstract is required for all projects after experimentation.**

# REQUIRED

## Research Plan/Project Summary Instructions

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

- 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.
- 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.
- 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:
    - a. **Procedures:** Detail all procedures and experimental design including methods for data collection, and when applicable, the source of data used. Describe only your project. Do not include work done by mentor or others.
  - d. **Risk and Safety:** Identify any potential risks and safety precautions needed.
  - e. **Data Analysis:** Describe the procedures you will use to analyze the data/results.
  - f. **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 end of the study.
- **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.

The research plan is the most important document because it provides the regional SRC board the necessary details of the planned research.

This detailed description of the research guides the SRC to be able to determine if the proper forms were completed and if they contain the correct information.

Must be VERY detailed and include what it is you are going to do and how you are going to do it!

- Materials
- Methods
- Data Analysis
- Safety Precautions

**Don't forget safety information!** Tell us where you are going to do your research and what precautions you will be taking. Include citations for safety procedures!

# REQUIRED

## 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 science fair 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 \_\_\_\_\_ 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 \_\_\_\_\_ Date Acknowledged (mm/dd/yy)  
(Must be prior to experimentation.)

This must be dated **BEFORE** the "Actual Start Date" on form 1A

This must be dated **BEFORE** the "Actual Start Date" on form 1A

### 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.

SRC/IRB Chair's Printed Name \_\_\_\_\_  
Signature \_\_\_\_\_ Date of Approval (mm/dd/yy)  
(Must be prior to experimentation.)

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).**

SRC Chair's Printed Name \_\_\_\_\_  
Signature \_\_\_\_\_ Date of Signature (mm/dd/yy)  
(May be after experimentation)

If you are conducting an experiment with **humans**, vertebrate animals, or potentially hazardous activities or supplies you will need **pre-approval** from your school SRC/IRB

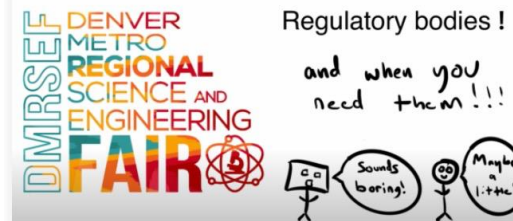
### 3. Final ISEF Affiliated Fair SRC Approval (Required for ALL Projects)

**SRC Approval After Experimentation** \_\_\_\_\_  
I certify that this project adheres to the applicable SRC/IRB rules and complies with all ISEF Rules.

Regional SRC Chair's Printed Name \_\_\_\_\_ Date of Approval (mm/dd/yy)

State/National SRC Chair's Printed Name \_\_\_\_\_ Date of Approval (mm/dd/yy)  
(where applicable)

Do NOT write anything in this space



SciComm: Regulatory Bodies



[https://www.youtube.com/watch?v=-P12e\\_TXi6o](https://www.youtube.com/watch?v=-P12e_TXi6o)

**REQUIRED**

### Risk Assessment Form (3)

Must be completed before experimentation. May be required for projects involving Hazardous Chemicals, Materials or Devices or Potentially Hazardous Biological Agents; recommended for all projects.

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. Identify and assess the risks and hazards involved in this project.
2. a) List all hazardous chemicals, activities or devices to be used; b) identify and list all microorganisms to be used that are exempt from pre-approval (see Potentially Hazardous Biological Agent rules).
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.



Science Fair: Understanding Safe Science Practices



<https://www.youtube.com/watch?v=suckAeLdJcl>

**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 the International Rules, including the science fair ethics statement and will provide direct supervision.

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

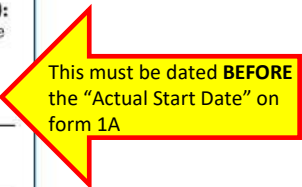
Signature \_\_\_\_\_

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

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

Position/Institution \_\_\_\_\_

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



# Common Paperwork Mistakes

- **Incomplete paperwork**
  - Double check your check boxes!
- **Incorrect Dates:** Most forms must be dated **prior** to when experiments are performed
  - **NOTE:** Forms 1C and 5B must be dated **after** Experimentation
- **Vague research plan**
- **Multiple Adult Sponsors:** The same adult must sign as the AS on all forms
- **Improper documentation of risk assessment and mitigation**
  - Don't forget form 3!
- **Animal research:** IACUC approval required **before** experimentation
- **Human research:** school IRB must approve research plan **before** experimentation begins
  - Participants 18 or above must give their **informed consent**
  - Participants under 18 must give **assent** and **parental written permission** may be needed as well

# Regulatory Bodies and Project Pre-Approval

- Sometimes projects need **pre-approval** before the start of experimentation (Form 1B)
  - **Human Subjects**
  - **Animal Subjects**
  - **Potentially Hazardous Biological Agents (PHBAs) or other high-risk activities**
- **Where** you are conducting the project will determine **who** will need to preapprove
  - **Home/School/Field**
  - **Industrial Setting or Regulated Research Institute (RRI)**
- **School (Local) SRC/IRB**
  - No one on the board can be directly related to the student's project (i.e. teacher or parent)
  - Minimum of 3 members
    - An educator
    - A school administrator (preferably principal or vice principal)
    - A professional with the expertise to evaluate the physical/psychological risk of the study (nurse, psychologist, doctor, social worker, etc.)



## 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.

Even though your school IRB may have given approval, the study must conform to all ISEF regulations

### 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 (Form 2):  Yes  No
3. Risk Assessment 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.**

<b>Medical or Mental Health Professional</b> (a psychologist, medical doctor, licensed social worker, licensed clinical professional, 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) _____
<b>Educator</b>	
Printed Name _____	Degree/Professional License _____
Signature _____	Date of Approval (Must be prior to experimentation.) (mm/dd/yy) _____
<b>School Administrator</b>	
Printed Name _____	Degree/Professional License _____
Signature _____	Date of Approval (Must be prior to experimentation.) (mm/dd/yy) _____

This form is to be filled out by the SCHOOL IRB and not the regional science fair review committee (SRC). However, be sure that your school IRB is aware of the rules and limitations of student research projects. For more information and the full list of rules: <https://student.societyforscience.org/human-participants>

This CANNOT be the same teacher that signed as the "Adult Sponsor"

This must be dated BEFORE the "Actual Start Date" on form 1A

This must be dated BEFORE the "Actual Start Date" on form 1A

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Regulatory bodies!  
and when you need them!!!

SciComm: Regulatory Bodies

[https://www.youtube.com/watch?v=-P12e\\_TXi6o](https://www.youtube.com/watch?v=-P12e_TXi6o)

## 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.

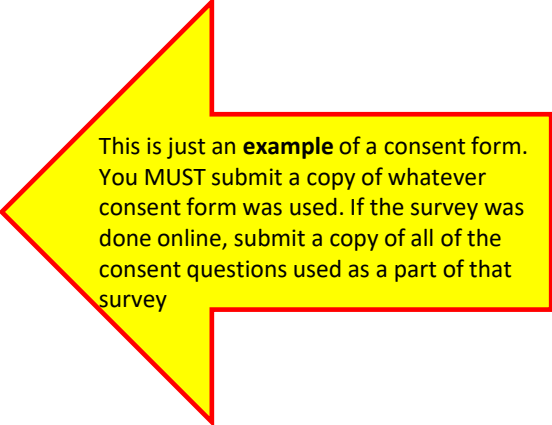
By signing this form I am attesting that I have read and understand the information above and I freely give my consent/ assent to participate or permission for my child to participate.

**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: \_\_\_\_\_



This is just an **example** of a consent form. You **MUST** submit a copy of whatever consent form was used. If the survey was done online, submit a copy of all of the consent questions used as a part of that survey

## 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: \_\_\_\_\_

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

1. Have you reviewed the ISEF rules relevant to this project and the science fair ethics statement 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:

### 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 (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 \_\_\_\_\_

Signature \_\_\_\_\_

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

Phone \_\_\_\_\_

Email \_\_\_\_\_

This must be dated BEFORE the "Actual Start Date" on form 1A

If needed, this must be dated BEFORE the "Actual Start Date" on form 1A

# Registration Due January 12<sup>th</sup>... Then What?

## **DMRSEF Team:**

- Assigns your project to SRC members to be reviewed
- Hosts workshops and Q&A sessions to help along the way

## **Participants:**

- Finish analyzing data
- Begin building poster board
- Put together digital materials
- Practice, Practice, Practice!

# Regional SRC Review

- The **DMRSEF SRC** is a group of scientists and educators that reviews EVERY project submitted to the fair prior to competition
- We read your research plans and check your forms to make sure you have followed all required rules and guidelines
- Our main concern is **SAFETY** – your safety as scientists, the safety of your human and/or animal subjects, the safety of the environment
- We are not here to stop you from competing in the fair! My goal every year is to have ZERO projects fail to qualify (FTQ)
- The SRC is here to help you get your paperwork over the finish line. You cannot compete until your SRC Reviewer has signed off on your project, so please be responsive to their emails and requests
- If at any point in the season you are in doubt about the rules, email [denversciencefair@ucdenver.edu](mailto:denversciencefair@ucdenver.edu) – **We want to help!**

# Presentation Materials

## BRING TO THE FAIR

- **Physical poster board**
- Optional physical materials: Notebook, Demos

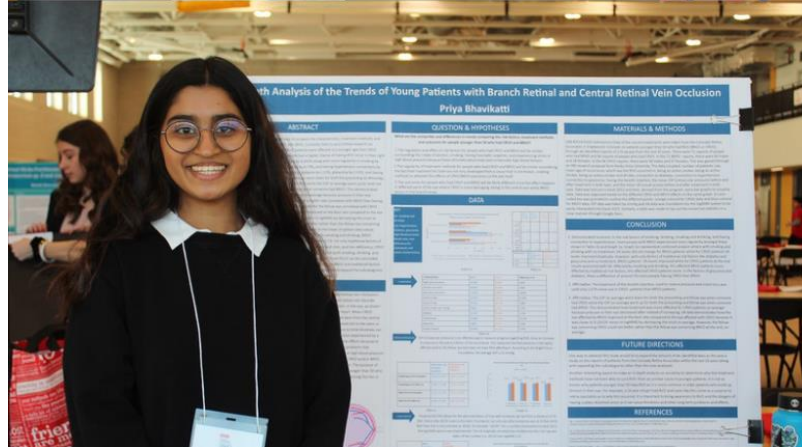
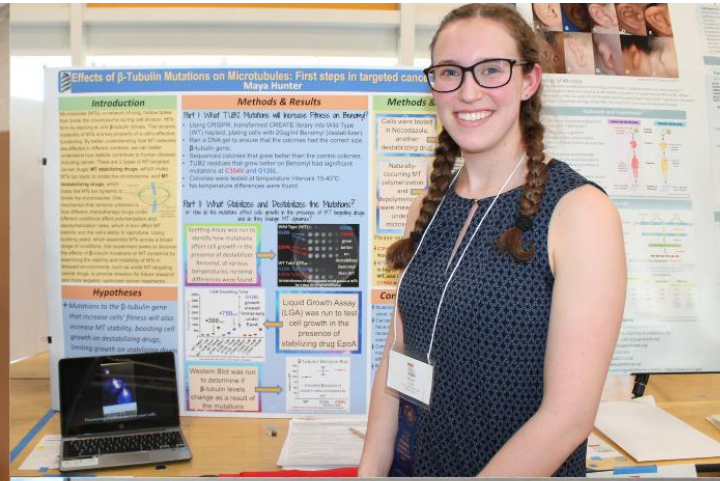
## UPLOAD TO SYMPOSIUM

- **2-3 Minute Introduction Video**
- **Digital Poster Slide Deck**
- Optional digital materials: Demo video, Supporting documents

**PLEASE EVALUATE THE PROJECT ON THE FOLLOWING ELEMENTS:**

<b>Criteria:</b>	<b>Score:</b>	<b>Notes:</b>
<b>Research Question</b>	/10	
<b>Design &amp; Methodology</b>	/10	
<b>Execution</b>	/10	
<b>Creativity</b>	/10	
<b>Poster (slides)</b>	/10	
<b>Introductory Video</b>	/10	
<b>Interview</b>	/10	

# Physical poster board





# Virtual Poster (Slide Deck)

## Required Materials

### PROJECT PRESENTATION

- Project Presentation must be a single PDF document of no more than 12 pages.
- Page size must not exceed 8½" x 11" and should be in Landscape orientation.
- The PDF document must not include any animations or active hyperlinks (except for original source material in the references).
- The information on each page must be readable.
- The PDF document must open with the default magnification set to "Fit Page" so that the entire page is visible at the same time.
- All Project Presentation elements must conform to the same Display & Safety rules as the in-person fair. See page 4 for details.

### DESIGNING YOUR SLIDES:

We recommend starting with one of the following pre-made templates:

- Science Projects  
[PowerPoint Template](#) | [Google Slides Template](#)
- Engineering Projects  
[PowerPoint Template](#) | [Google Slides Template](#)
- Math/Computer Science Projects  
[PowerPoint Template](#) | [Google Slides Template](#)

If using provided templates, do not change the page settings on the template - they are set up so that the template will print to pdf with the correct page size (8½" x 11") and orientation (Landscape).

You may add more slides as needed to the template, up to a maximum of 12 printed pages

Please be aware that if your progress to future competitions, your presentation may need to be adapted to fit their (stricter) requirements, such as black font on a white background.

At DMRSEF, however, you are encouraged to use your creativity to engage your audience in your project as long as you remain mindful of both professionalism and readability.

[CLICK HERE](#) to visit the 2021 DMRSEF Virtual Project Showcase for inspiration!



**DMRSEF Staff will be hosting a Presentation Preparation call on 1/19/2022 over Zoom, you can register [HERE](#) to join!**

Page 1

## Quantitative Methods to Analyze the Synergism of Digestive Enzymes for Gluten Breakdown: A step closer to making Glu-relief pills.

Voiceover



**Presenter(s)(s)**

Aditi Avinash

**Project Number**

SR-MED-006

**Optional: Supplementary Materials**

<https://docs.google.com/document/d/1nHnzbyvkFsHyYASLUBRvyq-pY6YP0-l1TEXx8SI2T3c/edit?usp=sharing>

**Abstract or Description**

Millions of people in the USA alone suffer from celiac disease or gluten intolerance. In previous work, I identified three fruit-derived enzymes that when combined have an efficient effect in gluten breakdown (Papain, Bromelain, and Actinidin). This year, I pursued quantitative identification of a

The screenshot shows a Google Slides presentation with the following content:

- Conclusion**
  - All of the below factors are important to take into consideration when manufacturing a pill:
    - The combination of Papain, Actinidin, and Bromelain **synergistically** increased the breakdown the gluten in wheat flour in the **ratio 1:2:3 (P:B:A)**
    - These enzymes failed to function in the in the presence of alcohol
    - Preservatives such as citric acid inhibited the activity bromelain in gluten breakdown
  - This data addresses my *hypothesis* because this newly identified combinatorial ratio of the 3 enzymes informed us of the enzyme mixture formulation.
  - This data addresses my *research question* because it confirmed the three enzymes have proteolytic enzymes and able to find specifications of the combination such as the breakdown of gluten was enhanced when the three enzymes worked together synergistically, and the ratio.
- WHY ARE THESE CONCLUSIONS IMPORTANT**

This may be a possible remedy for those with gluten intolerance. The idea of the combination of Papain with Bromelain and Actinidin synergistically breaking down gluten proteins is a novel finding.
- Future Work and Other Factors**
  - FUTURE WORK**
    - I want to move this project **from bench to bedside**. I will achieve this goal by
      - Learning more about manufacturing a pill.
      - Contacting drug developing companies or labs to discuss my idea of creating a **"Glu-Relief"** pill.
      - Manufacturing GMP grade pill
      - To conduct clinical trials to see if **"Glu-Relief"** pill, alleviates symptoms of gluten intolerance in affected patients.
    - I want my research to **make a difference in these patients life**.

[Online: Student Materials Guide](#)

DENVER SCIENCE FAIR

# Introduction Video

## PROJECT VIDEO

### What to include in your video?

Introduce Yourself:

- State your full name
- You may include your school and/or town if you wish
- Rather than reciting your project title, consider explaining your project in one or two sentences.

Explain Your Project:

- Summarize your research:
  - What did you do?
  - What did you find?
  - What conclusions did you draw?
- You may use props or visuals as long as they are within the Display & Safety guidelines (see page 4).

### Tips for Filming:

- Film in a well-lit and non-distracting environment
- For best results, film your video horizontally (landscape).
- Keep the camera still and in place during filming.
- Speak clearly and loudly enough that the recording is able to pick up every word you say.
- Avoid long pauses and filler phrases
- Listen to your video after recording to ensure your voice is clear and audible, and that the video has not picked up too much background noise.

### Posting and sharing your video

Your introductory video **must be linked from YouTube**, demos and optional materials may be uploaded into google drive. See below for full instructions.

- In YouTube, your video may be uploaded and posted as "unlisted" so that only those with a direct link can access it. Unlisted videos are not searchable or available to the public. You can choose to list your video publicly but should check with your parent or guardian before doing so.

- Google Drive is also a sharing option. Remember to set permissions so that anyone with the link can view your video.

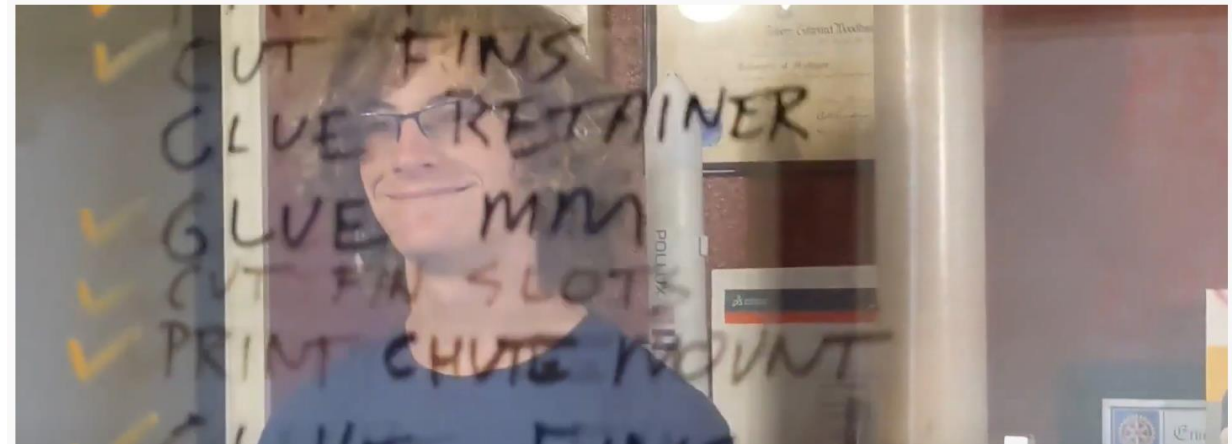
### Please Remember:

- **Videos should be no longer than 2-3 minutes and should broadly summarize your project.**
- **Students are the only individuals allowed to appear in the video, however, they are not required to do so.**



DMRSEF Staff will be hosting a Video Preparation call on 1/26/2022 over Zoom, you can register [HERE](#) to join!

Page 2



Rhys Hanson- To Ap



[Online: Student Materials Guide](#)

DENVER SCIENCE FAIR

*This is what a Scientist looks like*

**2024 DMRSEF**

February 23rd 2024

Want to participate in the DMRSEF?  
Need funds for your science fair project?

# Grants Available!

Funding is available for student mini-grants for the 2023 Denver Science Fair. Apply by October 21st for grants of up to \$100 to complete your research project for this year's fair!

**We want to fund your science!**



Apply by:  
5 PM on Friday  
October 21th



Awards:  
Up to \$100  
per project



Participate:  
Learn more and  
apply at  
<https://bit.ly/dmrsefgrants>

*This is what a Scientist looks like*

# 2023-2024 Important Dates

- **Registration Opens:** Sunday, October 1, 2023 (TODAY)
- **Early Bird Reg. Closes (\$40):** December 15, 2023
- **Registration Closes (\$50):** Friday, January 12, 2024
- **Virtual Material Submissions Open:** January 22, 2024
- **Virtual Material Submissions Closed:** February 9, 2024
- **Paperwork Corrections Due:** February 16, 2024
- **Virtual Materials Corrections Due:** February 16, 2024
- **DMRSEF:** Friday, February 23, 2024
- **Awards Ceremony:** Sunday, February 25, 2024

*This is what a Scientist looks like*

# Questions?

<https://clas.ucdenver.edu/denversciencefair/>  
[Denversciencefair@ucdenver.edu](mailto:Denversciencefair@ucdenver.edu)

FROM START TO SCIENCE FAIR	
LEARN MORE AT: CLAS.UCDENVER.EDU/DENVERSCIENCEFAIR	
<b>START NOW!</b> IT'S NEVER TOO EARLY!	<b>Plan &amp; Prepare</b> <ul style="list-style-type: none"><li>• Identify your research question</li><li>• Find out what is already known</li><li>• Talk to subject matter experts</li></ul>
<b>SEPTEMBER</b>	<b>Get Involved</b> <ul style="list-style-type: none"><li>• Attend a kickoff event</li><li>• Register to participate</li><li>• Learn about fair rules and paperwork</li></ul>
	<b>Design Your Project</b> <ul style="list-style-type: none"><li>• Finalize your research question</li><li>• Plan your experimental procedures</li><li>• Obtain necessary pre-approvals</li></ul>
	<b>Start Experimenting</b> <ul style="list-style-type: none"><li>• Gather your materials</li><li>• Conduct your experiment</li><li>• Take thorough notes as you go</li></ul>
<b>JANUARY</b>	<b>Complete Your Project</b> <ul style="list-style-type: none"><li>• Analyze your findings</li><li>• Double-check and submit your paperwork</li><li>• Reach out to DMRSEF staff with questions</li></ul>
<b>FEBRUARY</b>	<b>Get Fair-Ready</b> <ul style="list-style-type: none"><li>• Revise forms, if required</li><li>• Create and submit presentation materials</li><li>• Attend <i>Competition Ready Series</i> events</li></ul>
CELEBRATE YOUR SCIENCE AT THE DENVER REGIONAL SCIENCE AND ENGINEERING FAIR!	

# DMRSEF



@DenverScienceFair



@DMRSEF



@DenverScienceFair



@Denver Science Fair (DMRSEF)



@DMRSEF

#DMRSEF #DenverScienceFair

*This is what a Scientist looks like*

# DENVER SCIENCE FAIR

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

This form must be completed **AFTER** experimentation by the adult supervising the student research either virtually or on site, 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.)

Research was supported 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. If this project is under a grant and needs to be acknowledged, please list the grant statement here.

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

See next page for  
more questions

If any of the research was done at a standard research facility (college, pharmaceutical company, environmental testing facility, etc..) or a facility where advanced research is allowed (certain high schools or local labs) the 1C form IS required.

If the project is to be a data analysis only and the data is publicly available, then nothing else is needed

If data is covered by privacy rules/laws (ex. Patient data) or from a private source (ex. Proprietary data), then the student must show documentation of how the data became available and how/why they were allowed to view it and study it.

The best thing to do is have the mentor send a short letter on their letterhead explaining that there were no HIPAA violations. This is even if the data was de-identified.

(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)?

I attest that the student(s) performed the work as indicated above and that any required review and approval by institutional regulatory bodies (IRB, IACUC/IBC) has been obtained. Copies are attached to this report. I acknowledge that the student(s) will not be presenting this work publicly in competition and will comply with the student research ethics requirements for my review and/or restriction.

Supervising Adult's Printed Name	Signature	Title
Institution	Date Signed (must be after experimentation) (mm/dd/yy)	
Address	Email/Phone	

**This should be the Mentor NOT the teacher**

**This must be dated AFTER the "End Date" on form 1A**



## 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):

- 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 start of experimentation) (mm/dd/yy) \_\_\_\_\_

#### To be completed by Veterinarian:

- I have reviewed this research and animal care protocol with the student before the start of experimentation.
- I have approved the use and dosages of drugs and/or nutritional supplements.
- I will provide veterinary medical and emergency care in case of illness or emergency. (Fees \_\_\_\_\_)

Printed Name \_\_\_\_\_ Email/Phone \_\_\_\_\_  
Signature \_\_\_\_\_ Date of Approval (mm/dd/yy) \_\_\_\_\_

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

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

Printed Name \_\_\_\_\_ Email/Phone \_\_\_\_\_  
Signature \_\_\_\_\_ Date of Approval (mm/dd/yy) \_\_\_\_\_

This must be dated BEFORE the "Actual Start Date" on form 1A

This must be dated BEFORE the "Actual Start Date" on form 1A

## Vertebrate Animal Form (5B)

Required for all research involving vertebrate animals that is conducted 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 \_\_\_\_\_

You MUST include a copy of the actual IACUC form with the protocol number

### 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.

<b>Qualified Scientist/Principal Investigator</b>	
Printed Name _____	
Signature _____	Date (mm/dd) _____

This must be dated AFTER the "End Date" on form 1A

## 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, 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 Review Board prior to experimentation; institutional approval forms are attached.  
Origin of cell lines: \_\_\_\_\_ SRC/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 Institutional Review Board approval for this type of study. The SRC has seen and approved the research plan and supporting documentation. The SRC has reviewed the research plan and supporting documentation and acknowledges the accuracy of the responses above.

### 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 by the local SRC 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/yy) \_\_\_\_\_

### SECTION 4: CERTIFICATION - To be SIGNED by the LOCAL SRC

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

SRC Printed Name \_\_\_\_\_ Date of review (mm/dd/yy) \_\_\_\_\_

This must be dated BEFORE the "Actual Start Date" on form 1A

Do NOT write anything in this space

## 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 copy 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 by \_\_\_\_\_ or qualified personnel from the laboratory; and that if vertebrate animals were euthanized they were \_\_\_\_\_ 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 \_\_\_\_\_ Blood Borne Pathogens.

This must be dated BEFORE the "Actual Start Date" on form 1A

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
1. Title		
2. Change in goal/purpose/objective		
3. Changes in methodology		
4. Variable studied		
5. Additional changes		

If the project has been carried out (partially) before the start of 2021

Continuation projects **MUST** include this form and the previous year(s) Abstract and Research Plan.  
**FOR ALL projects that were conducted /began before January 1<sup>st</sup> 2021**

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                      Date of Signature (mm/dd/yy)