Bryn Mawr College Institutional Biosafety Committee Policy

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B R Y N M A W R

Bryn Mawr College

INSTITUTIONAL BIOSAFETY COMMITTEE

Policies and Procedures

I. Institutional Commitment

A. Bryn Mawr College, hereinafter referred to as Institution, requires that all teaching, research, research training, experimentation, testing, and related activities, hereinafter referred to as activities, involving recombinant or synthetic nucleic acids (rsNA) or other biohazards, such as infectious agents, biological toxins, human or non-human primate blood, tissues, or cells, hereinafter referred to as rsNA and other biohazards, be processed through the Institutional Biosafety Committee (IBC) using the IBC Protocol Registration Form and be in full conformity with the provisions of the *NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules* (NIH Guidelines) and the CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories* (BMBL) as described below.

B. Recombinant or synthetic DNA (rsNA) is defined by the NIH as either:
(i) molecules that a) are constructed by joining nucleic acid molecules and b) that can replicate in a living cell, i.e., recombinant nucleic acids;
(ii) nucleic acid molecules that are chemically or by other means synthesized or amplified, including those that are chemically or otherwise modified but can base pair with naturally occurring nucleic acid molecules, i.e., synthetic nucleic acids, or
(iii) molecules that result from the replication of those described in (i) or (ii) above.

C. The Institution acknowledges and accepts responsibility for the safety and containment plans of rsNA and other biohazards involved in activities at the Institution. As partial fulfillment of this responsibility, the Institution will ensure that all individuals engaged in activities involving rsNA and other biohazards understand their individual and collective responsibilities for compliance with this policy and applicable standards, such as the NIH Guidelines and the BMBL.

D. All activities involving rsNA and other biohazards at the Institution must comply with this document regardless of what, if any, funding is provided by federal agencies.

E. The Institution has established and will maintain a program for activities involving biosafety and other hazards in accordance with the NIH Guidelines and the BMBL. That program will be reviewed annually by the IBC.

F. The Institution agrees to ensure that all performance sites engaged in activities involving rsNA and other biohazards under consortium (subaward) or subcontract agreements have IBC approval.

G. Adherence to this policy requires that principal investigators (PIs) also comply as necessary with regulations concerning activities involving live, vertebrate animals (Institutional Animal Care and Use Committee) and activities involving human subjects (Institutional Review Board) as relevant.

II. Institutional Program for Biosafety

A. Bryn Mawr College's Institutional Biosafety Committee (IBC) is responsible for overseeing activities conducted at the College by faculty, students, or staff and by outside researchers who wish to use Bryn Mawr facilities when those activities involve rsNA and other biohazards as defined above.

B. The lines of authority and responsibility for administering the program and ensuring compliance with this policy are:

President

Provost

Director of Sponsored Research | Chair of IBC | Environmental Health and Safety Officer

Institutional Biosafety Committee

Principal Investigators

C. The Institution has established an Institutional Biosafety Committee (IBC) that is properly appointed in accordance with NIH Guidelines; is qualified through the experience and expertise of its members to oversee the Institution's biosafety program and facilities; and is registered with the NIH Office of Science Policy (OSP).

D. The IBC will consist of no fewer than 5 members, including:
   1. One chair
   2. At least one faculty member or laboratory technician with expertise in:
      a. rsNA
      b. Biosafety and physical containment
      c. Standards of professional conduct and practice

3. Members with knowledge of:
   a. Institutional commitments and policies
   b. Applicable laws
4. At least two members who are not affiliated with the Institution (apart from their membership on the IBC) and who represent the interests of the surrounding community with respect to health and protection of the environment
5. One or more of the following specialists (as necessary):
   a. Biological Safety Officer
   b. Expert in plant, plant pathogen, or plant pest containment principles
   c. Expert in animal containment principles
   d. Expert in human gene transfer
6. Ad hoc members who advise when needed.

E. IBC meetings will be conducted so that Committee members can interact with one another either in person or through a conference call.

F. A quorum is necessary to conduct an IBC meeting. A quorum is herein defined as a simple majority of IBC members including at least one unaffiliated member and also including specialists (the Biological Safety Officer and experts in plants, animals, and human gene transfer) as necessary when relevant activities are reviewed.

G. Attached is a list of the chairperson and members of the IBC and their names, degrees, profession, titles or specialties, and institutional affiliations (see Appendix I: Membership of the IBC).

H. The IBC assesses the safety of research involving rsNA and other biological materials and identifies potential risks to public health and safety. It will:

   1. Review at least annually the Institution's program for biosafety, using the NIH Guidelines as a basis for evaluation. The IBC procedures for conducting program reviews are as follows:

      The Chair calls a meeting of all members at least once each semester. Additional meetings will be scheduled as needed if there are proposals to review. Researchers already approved by the IBC will report on their activities involving rsNA and other biohazards as needed. IBC members discuss and revise as necessary emergency plans (see Appendix II: Emergency Plans), any changes to standards or regulations, procedures for hiring student assistants (if applicable), and training procedures for all involved in activities.

   2. Review and approve or withhold approval from protocols that are new, ongoing, requiring significant changes, or reaching the end of their approval period and requiring new review. The procedures are as follows:

New protocols, proposed significant changes in protocols, and protocols requiring new review are submitted to the IBC Chair via a Protocol Registration Form signed and dated by the PI.

Ongoing protocols are resubmitted annually to the IBC Chair for continuing review by the IBC via the Continuing Review Form.

Protocol and Continuing Review Forms are circulated electronically by the IBC Chair to all IBC members at least **1 week prior to a scheduled meeting** and reviewed by all IBC members except in the following circumstances:

> No member of the IBC may be involved (except to provide information requested by the IBC) in the review or approval of a project in which he/she has been or expects to be engaged or has a direct financial interest.

All activities must be reviewed as described below for compliance including an assessment of:

a. The containment levels required for the research (see Appendix III: Definitions of Risk Groups and Biosafety Levels);
b. The facilities, procedures, practices, and training and expertise of personnel involved in the research; and
c. Biosafety issues (e.g., administration, shedding) for research involving human research participants.

No activities covered under Section III-F, Exempt Activities are exempt until the IBC has reviewed them and declared them exempt. Activities covered under Sections III-E and III-F require that the IBC be notified of activities simultaneous with initiation of the work.

Activities covered under Sections III-A through III-D of the NIH Guidelines **must receive IBC approval before research may begin**. Additional approval before initiation is required for activities covered under Sections III-A, Experiments that Require NIH Director Approval and IBC Approval Before Initiation, and III-B, Experiments That Require NIH OSP and IBC Approval Before Initiation.

The IBC may not authorize initiation of experiments that are not explicitly covered by NIH Guidelines until the NIH establishes the containment requirement.

Reviews may take place remotely. All members must submit comments to the Chair before a protocol is approved. Final approval may be conducted by real-time conference call or by videoconference (e.g., Skype).

IBC members may ask questions and suggest proposal changes as appropriate. IBC members conduct voice votes at meetings. Possible outcomes include "Approval," "Request for Clarifications or Modifications," "Approval Withheld,"

or "Exempt." The Chair communicates the IBC's decision in writing to the PI who then submits a revised protocol if necessary. The revised protocol is then reviewed by the IBC and voted on for approval.

Protocols are approved for up to 3 years or at shorter intervals decided by the IBC, or until the protocol changes, or when required for grant renewals, whichever comes first, if the PI annually submits a Continuing Review Form that the IBC approves. The IBC's decision to grant or withhold approval of protocols and the duration of the approval will be communicated in writing to the PI by the Chair.

The IBC ensures that PIs have appropriate training (see Section II.I below of this document). That training is required for all involved in the activities. It is the responsibility of PIs to ensure that all who work on the PIs' projects receive appropriate training. Consultation with the Environmental Health and Safety Officer is conducted as appropriate. The Chair follows up on any matters of concern with relevant campus personnel.

3. Notify PIs in writing of its decision. The procedures for notification are as follows:

   The Chair communicates to the PI in writing the approval, request for clarification or modification, exemption, or withholding of approval. If the IBC requests clarification or modification, the PI must submit a revised protocol and any requested material prior to approval of the research protocol. If the IBC withholds approval, the Chair will notify the Institutional Official (Provost) of the IBC's decision.

4. Coordinate joint purview or collaborative review with IRB or IACUC as necessary. The IRB and IACUC policies are thus incorporated herein.

5. Set and lower containment levels in accordance with the NIH Guidelines and the BMBL.

6. Be authorized to suspend an activity involving rsNA or other biohazards. The procedure is as follows:

   In the event of a breach of guidelines, a special meeting of the IBC is called to review the incident and determine appropriate responses. The IBC will vote whether or not to suspend activities. A quorum, as defined above, must be present for this vote to take place. Should it be deemed necessary to suspend activities, the Chair communicates that in writing to the Institutional Official (Provost) and the PI, outlining the details of the breach of guidelines and recommending suspension of activities until appropriate remediation is completed. The Institutional Official has the responsibility to assure that the PI abides by the IBC decision. The IBC will report within 30 days significant problems or violations of

the NIH Guidelines and significant research-related accidents or illnesses to both the Institutional Official and NIH OSP unless the PI has already filed a report.

7. Take minutes at meetings, make written recommendations, keep records, prepare reports, and distribute minutes as described in this document, Sections V and VI below.

I. The risk-based Occupational Health and Safety Program (OHSP), for personnel working or having frequent contact with rsNA and other biohazards, is developed in consultation with the College's Environmental Health and Safety (EHS) Officer. The EHS Officer updates the Committee about new regulations or when changes in current facilities or training are under consideration. The OHSP is based on identification of known hazards and development of procedures to avoid them. PIs have primary responsibility for overseeing laboratory staff and students and ensuring compliance within the laboratory. The EHS Officer has secondary responsibility for laboratory compliance through annual inspections. The IBC has responsibility, through regular inspections, to assure that all components of the OHSP program are consistent with policy.

J. The training or instruction available to IBC members, PIs, laboratory staff, and students is as follows:

Bryn Mawr College subscribes to CITI's Biosafety and Biosecurity (BSS) courses that cover the principles of biosafety and biosecurity. The College requires PIs, laboratory staff, and students to complete training prior to beginning protocol activities.

Other training provided by the PI or the EHS Officer should be documented, including date and names of personnel who received the training.

III. Responsibilities of the IBC chair and the PI

A. The IBC chair will:

1. Recruit IBC members whom the Provost will appoint to the Committee;
2. Circulate Protocol Registration and Continuing Review Forms to IBC members at least one week prior to IBC meetings;
3. Run IBC meetings;
4. Determine, in consultation with NIH OSP as necessary, whether PI's activities are exempt or require IBC review and what type of review is required;
5. Communicate with the chairs of the IRB and IACUC to establish joint purview or collaborative review for activities involving transgenic or cloned animals, use of rsNA or other biohazards in animals, or pre-clinical studies and data assessment for human gene transfer protocols;
6. Communicate to PIs IBC concerns and results of IBC review;
7. Work with College administration to appoint (if necessary) specialists to the IBC;
8. Report in writing within 30 days PI's significant problems related to the operation and implementation of containment practices and procedures, violations of NIH Guidelines, or significant research-related accidents or illnesses to the IBC, the Institutional Official (Provost), the NIH OSP, the Biological Safety Officer and

Greenhouse/Animal Facility Director (where applicable), and other appropriate authorities (if applicable); and

9. Make available to the public upon request all IBC meeting minutes and any documents submitted to or received from funding agencies which the latter are required to make available to the public. The IBC may redact private and proprietary information.

B. Prior to initiating research, the PI will:
   1. Consult the IBC before beginning or modifying research involving rsNA and other biohazards;
   2. Make an initial determination of the required levels of physical and biological containment (see Appendix III: Definitions of Risk Groups and Biosafety Levels);
   3. Select appropriate microbiological practices and laboratory techniques to be used for the research in consultation with NIH Guidelines, Appendix G-II-A or Appendix G-II-B;
   4. Submit information to NIH OSP for certification of new host-vector systems;
   5. Submit a signed and dated Protocol Registration Form and any subsequent changes via the same form to the IBC Chair for IBC review and approval;
   6. Petition NIH OSP, with notice to the IBC, for proposed exemptions to the NIH Guidelines and for determination of containment for experiments requiring case-by-case review and experiments not covered by the NIH Guidelines;
   7. Petition IRB and IACUC for approval of activities as necessary;
   8. Petition NIH OSP, with concurrence of the IBC, for approval to conduct experiments as required by NIH Guidelines;
   9. Make available to all laboratory staff and students the protocols that describe the potential biohazards and the precautions to be taken;
   10. Instruct and train laboratory staff and students in the practices and techniques required to ensure safety and the procedures for dealing with accidents;
   11. Keep records of who received laboratory-specific training with dates of training;
   12. Inform laboratory staff and students of the reasons and provisions for precautionary medical practices advised or requested (e.g., vaccinations or serum collection);
   13. Remind laboratory staff and students of option to voluntarily disclose medical conditions and medical history that are relevant to responsibilities relating to rsNA;
   14. Determine Personal Protective Equipment (PPE) for laboratory staff and students;
   15. Review with the EHS Officer the laboratory checklist, waste disposal policy, and autoclave verification program;
   16. Ensure proper signage, including
       a. Door signs labeled with the word “Biohazard” or the universal biohazard symbol, biosafety level, emergency contact information (names and phone numbers) for the PI, lab manager, and emergency response officials, any immunizations, training, and PPE required for entry, and other restrictions, such as populations that may be at increased risk of exposure;
       b. Equipment, such as freezers, that house the agent labeled with the universal biohazard symbol and biohazard identity;
       c. Transport containers labeled with the universal biohazard symbol, the biohazard identity, and contact information for the laboratory; and

17. Collaborate with the EHS Officer on creating and implementing emergency plans and advising the IBC on those plans as necessary.

C. During the conduct of research, the PI will:
   1. Supervise the safety performance of laboratory staff and students to ensure that the required safety practices and physical and biological containment are employed;
   2. Immediately report to IBC Chair significant problems related to the operation and implementation of containment practices and procedures, violations of NIH Guidelines, or significant research-related accidents or illnesses;
   3. Adhere to IBC approved emergency plans for accidental spills and personnel contamination;
   4. Correct work errors and conditions that may result in the release of rsNA and other biohazards;
   5. Ensure the integrity of physical containment (e.g., biological safety cabinets) and biological containment (e.g., purity and genotypic and phenotypic characteristics);
   6. Comply with shipping requirements for rsNA;
   7. File annual Continuing Review Forms with the IBC as necessary;
   8. File a new Protocol Registration Form after 3 years, or at shorter intervals decided by the IBC, and/or when significant changes to protocols are proposed, and/or when required for grant renewals;
   9. Remain in communication with the IBC throughout the conduct of the project; and
   10. Submit the Continuing Review Form to the IBC Chair to indicate termination of activities.

IV. Institutional Program Evaluation and Accreditation

All of the Institution's programs and facilities (including satellite facilities) for activities involving rsNA and other biohazards have been evaluated by the IBC within the last year and will be reevaluated by the IBC at least once a year. Reports are prepared as described in this document, Section VI below.

The Institution is equipped to host activities at the BL1, BL2, and BL2+ levels. As noted in this document, Section V.B below, minutes of IBC meetings (program reviews and facility inspections) will be made available to the public upon request.

V. Record-keeping

A. The Sponsored Research Office will maintain for at least 3 years and, where applicable, for an additional 3 years after completion of the activity:
   1. Minutes of IBC meetings, including records of attendance, activities of the IBC, and Committee deliberations;
   2. Records of applications, proposals, proposed changes in activities, and whether IBC approval was granted or withheld; and
   3. Records of IBC reports and recommendations (including minority views).

B. Upon request, the Chair will make available to the public all IBC meeting minutes and any documents submitted to or received from funding agencies which the latter are

required to make available to the public. The IBC may redact private and proprietary information.

VI. Reporting Requirements

A. The Sponsored Research Office, in conjunction with the Chair, will submit electronically, using IBC-RMS, an annual report to NIH OSP one year after the approval date of the last report submission. The report will include:
   1. A Committee roster indicating each member's role (see Appendix I: Membership of the IBC); and
   2. Biosketches for each new Committee member (see Appendix IV: Sample Form).

B. Throughout the year, the Sponsored Research Office will update the NIH OSP via IBC-RMS about membership changes that may occur.

C. If public comments are made on IBC actions, the Sponsored Research Office in conjunction with the Chair will forward to the NIH OSP both the public comments and the IBC's response.

Appendix I: Membership of the IBC

Michelle Wien	Chair, Faculty
Adam Williamson	Expert, Faculty
Jennifer Skirkanich	Expert, Faculty
Don Abramowitz	Environmental Health and Safety Officer
Dan Kincade	Unaffiliated community member
Elizabeth Zodda	Unaffiliated community member
Samuel Magdovitz	Ex officio, College Counsel
Vanessa Davies	Ex officio, Compliance Manager, Contact person

Appendix II: Emergency Plans

Laboratory Emergency Response Summary

ALL EMERGENCIES AND URGENT CONCERNS: Immediately report emergencies and imminent hazards to **Campus Safety at Extension 7911** (610-526-7911 from a non-campus or cellular phone).

For questions/concerns about handling hazardous materials, unsafe conditions, waste disposal, or related matters on a non-emergency basis, contact **Environmental Health and Safety (EHS)** at Extension 5166, or via e-mail at dabramow@brynmawr.edu. After hours, contact Campus Safety to have EHS paged.

MAJOR INJURY OR ILLNESS:
Immediately notify Campus Safety of any major injury or illness that requires emergency assistance or immediate transport to medical treatment.

CHEMICAL OR BIOLOGICAL EXPOSURES IN THE EYES

- *IMMEDIATELY* rinse eyeball and inner surface of eyelid with water for 15 minutes, continuously. Hold eyelids open, forcibly if necessary, to ensure effective wash behind eyelids.
- Obtain medical attention as needed.
- Call Campus Safety immediately thereafter.

SPLASH TO SKIN

- Flood exposed area with running water from faucet, drench hose, or safety shower.
- Remove contaminated clothing.
- Flush exposed skin with running water.
- Make sure chemical has not accumulated in shoes.
- There is a conventional hot and cold shower facility located in Park Room 153A. Once initial flushing has been achieved, move the individual to Room 153A to continue showering for 15 minutes, and have them change into the emergency clothing present there.
- Obtain medical attention as needed.
- Call Campus Safety immediately thereafter.

HAZARDOUS MATERIAL SPILL:

- Do not attempt to clean up any spill that is too large or too hazardous for you to manage yourself. Evacuate the lab and call Campus Safety.

CLOTHING OR HAIR ON FIRE

- Immediately get the person flat on the ground. Do not allow them to run.
- Extinguish the flames by rolling the person on the ground. A lab coat, jacket, or blanket may be used to help smother the flames if immediately available.
- Douse the person with water as soon as possible, to remove heat.
- Call Campus Safety immediately thereafter.

IF YOU HEAR A FIRE ALARM:

- Stop all laboratory operations, turn off energy sources and leave the building by the nearest exit.

SMALL LABORATORY FIRE:

- IF a fire is small and not spreading AND: an extinguisher is readily available, you are familiar with its operation, and it appears safe to do, THEN attempt to extinguish the fire.
- Fire Extinguisher Use:

  Pull the pin.

  Aim the extinguisher at the base of the flame (the fuel).

  Squeeze the handles.

  Sweep side to side until extinguished.
- If you are unable to extinguish a fire with one extinguisher, you have a LARGE FIRE. Leave immediately, and see the instructions below.

LARGE LABORATORY FIRE:

- Direct everyone out of the room and out of the building, assisting persons as necessary.
- Close the door behind you to keep smoke and flames out of the hall.
- Sound the fire alarm by activating the nearest pull station, and leave the building by the closest exit.
- Call Campus Safety from a safe location and report the fire.

See the full **Bryn Mawr College Laboratory Emergency Guide**
for more detailed information about all emergencies.

Campus Safety: Extension 7911

(610-526-7911 from a non-campus or cellular phone)

Appendix III: Definitions of Risk Groups and Biosafety Levels

Researchers should carefully consider the hazardous nature and possible health risks (real and theoretical) of biological agents. The following definitions of Risk Groups and Physical Containment (Biosafety Levels) are taken from NIH Guidelines, Appendices B, Classification of Human Etiologic Agents on the Basis of Hazard, and G, Physical Containment, and *Biosafety in Microbiological and Biomedical Laboratories*, 5th edition (HHS Publication No. (CDC) 21-1112). Proper attention to physical containment of organisms containing rsNA molecules reduces the potential for accidental exposure of research staff, the general public, and the environment. Physical containment is achieved through laboratory practices, containment equipment, and special laboratory design.

In deciding on appropriate containment, the first step is to assess the risk of the agent. Agents are classified into Risk Groups (RG) based on an assessment of their ability to cause disease in humans and the available treatments for such disease.

RG1 agents are not associated with disease in healthy adult humans.

RG2 agents are associated with human disease that is rarely serious and for which preventive or therapeutic interventions are often available.

RG3 agents are associated with serious or lethal human disease for which preventive or therapeutic interventions may be available.

RG4 agents are likely to cause serious or lethal human disease for which preventive or therapeutic interventions are not usually available.

Once the Risk Group has been identified, a thorough consideration should be made of how the agent will be manipulated, including agent factors such as:

virulence, pathogenicity, infectious dose, environmental stability, route of spread, communicability, operations, quantity, availability of vaccine or treatment, and gene product effects such as toxicity, physiological activity, and allergenicity.

This evaluation of Risk Group and agent factors will be used to determine the appropriate Biosafety Level, as listed below.

Physical containment of pathogenic organisms for standard laboratory experiments is described as Biosafety Levels (BSL).

BSL-1 is appropriate for agents that are not known to cause disease in normal, healthy humans or to cause hazard to the environment (no or low individual and community risk).

BSL-2 is appropriate for handling moderate-risk agents that cause human disease of varying severity by ingestion or through percutaneous or mucous membrane exposure. It differs from BSL-1 in certain training, access, and procedural issues (moderate individual risk, low community risk).

BSL-3 is appropriate for agents with a known potential for aerosol transmission, for agents that may cause serious and potentially lethal infections and that are indigenous or exotic (high individual risk, low community risk).

BSL-4 is appropriate for exotic agents that pose a high individual risk of life-threatening disease by infectious aerosols and for which no treatment is available (high individual and community risk).

BSL-3 and BSL-4 work is not permitted at this institution.

Appendix IV: Sample Form

Biographical Sketches of IBC Members

OMB No. 0925-0001 and 0925-0002 (Rev. 09/17 Approved Through 03/31/2020)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME:

ROLE ON IBC:

(e.g., Chair, Biological Safety Officer, plant expert, animal expert, human gene therapy expertise, ad hoc consultant, unaffiliated community member, and contact person)

BUSINESS ADDRESS:

BUSINESS PHONE:

BUSINESS EMAIL:

PROFESSION:

POSITION TITLE:

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY

IBC Members may substitute a CV or résumé for the sections below.
Note: Font size must be 11 points or larger, black color, and in Arial, Helvetica, Palatino Linotype, or Georgia typeface.

A. Personal Statement

Briefly describe why you are well-suited for your role(s) in this project. Relevant factors may include: aspects of your training; your previous experimental work on this specific topic or related topics; your technical expertise; your collaborators or scientific environment; and/or your past performance in this or related fields. You may cite up to four publications or research products that highlight your experience and qualifications for this project.

If you wish to explain factors that affected your past productivity, such as family care responsibilities, illness, disability, or military service, you may address them in this "A. Personal Statement" section. Indicate whether you have published or created research products under another name. You may mention specific contributions to science that are not included in Section C. Do not present or expand on materials that should be described in other sections of this Biosketch or application. Figures, tables, or graphics are not allowed.

B. Positions and Honors

List in chronological order the positions you've held that are relevant to this application, concluding with your present position. List any relevant academic and professional achievements and honors. In particular: students, postdoctorates, and junior faculty should include scholarships, traineeships, fellowships, and development awards, as applicable. Clinicians should include information on any clinical licensures and specialty board certifications that they have achieved.

C. Contributions to Science

Briefly describe up to five of your most significant contributions to science, using no more than one half page, including citations. For each contribution, indicate the following:

the historical background that frames the scientific problem;
the central finding(s);
the influence of the finding(s) on the progress of science or the application of those finding(s) to health or technology; and
your specific role in the described work.

For each contribution, you may cite up to four publications or research products that are relevant to the contribution.

D. Additional Information: Research Support

List ongoing and completed research projects from the past three years that you want to draw attention to. Briefly indicate the overall goals of the projects and your responsibilities. Do not include the number of person months or direct costs.