Multiple Myeloma Research Foundation
2022 Research Fellow Award
Program Guidelines
2022 RESEARCH FELLOWSHIP PROGRAM

Program Description:

The Multiple Myeloma Research Foundation (MMRF) seeks proposals for the MMRF 2022 Research Fellowship Program, an initiative supporting early career researchers at the post-doctorate, medical fellow, or junior faculty levels currently active or interested in research in multiple myeloma. The goal of this initiative is to engage and support early career investigators interested in basic and clinical research focused on multiple myeloma and its precursor conditions, with the goal of advancing our understanding of myeloma disease biology, disease risk, and treatment response and relapse. This program will provide up to $150,000 of financial support over two (2) years ($75,000/year) to successful applicants. Furthermore, to encourage submission of highly innovative proposals, the MMRF may also be able to provide applicants with additional support to mitigate technical and institutional infrastructure barriers (e.g., access to technology and analytical platforms) via access to the MMRF’s partner institutions and laboratories.

Key Dates:

- Friday, March 25th, 2022 – Request for Applications (RFA) issued
- Friday, June 24th, 2022 – Deadline for Submission of Applications
- Friday, September 30th, 2022 – Applicant notification

Background:

Multiple myeloma is a plasma cell malignancy which is currently not curable but is a treatable disease. In the United States alone, approximately 30,000 new cases will be diagnosed this year and nearly 12,500 people will die from this disease.

The Multiple Myeloma Research Foundation (MMRF) was established in 1998 as a 501(c)(3) non-profit organization by twin sisters Karen Andrews and Kathy Giusti, soon after Kathy’s diagnosis with multiple myeloma. The mission of the MMRF is to drive innovation that accelerates the development of next-generation treatments to extend the lives of myeloma patients and ultimately lead to a cure. The MMRF is the world's number one funding source for basic, translational, and clinical research in multiple myeloma, and has provided over $500,000,000 in financial support for more than 400 research grants and initiatives at over 140 research institutions worldwide. As part of its continuing mission to accelerate a cure for multiple myeloma, the MMRF is committed to providing new research funding opportunities in 2022.
Significant advances in our understanding of the pathophysiology and molecular biology of multiple myeloma and precursor conditions (MGUS, SMM) have identified numerous molecular events associated with disease development and progression. These findings have led to improved understanding of disease risk and the development of new therapies for the treatment of multiple myeloma. However, to fully leverage the current armamentarium of therapeutic options and maximize clinical benefit, we still need to understand how to best optimize therapy and the sequence of therapies to tailor treatment for the individual patient and their unique disease.

It is important to note that the prevalence of myeloma and reported clinical outcomes is not equal across all racial groups. Multiple myeloma and its precursor conditions disproportionately affect the Black population relative to other racial groups. There is a 3x-higher incidence of active myeloma and a 4x-higher incidence of MGUS in the Black population compared with the White population, and the onset of disease occurs approximately 10 years earlier for Black individuals. Although there is evidence of genetic, immunological and environmental factors to explain these differences, the underlying molecular and cellular mechanisms are not fully understood.

Most myeloma patients will relapse on therapy, and consequently, undergo more aggressive therapy with the likelihood of shortened duration of clinical response. Therefore, there continues to be a need for new, novel therapies and drug combinations targeting the mechanisms that drive disease biology and drug resistance. This requires researchers to further dissect the molecular and cellular basis of disease development and progression, response to therapy, mechanisms of drug relapse, and to develop new tools and technologies to monitor for and intercept these events.

The MMRF is currently seeking applications for the 2022 Research Fellowship Program, and in particular, proposals addressing the following areas of research:

- **Host immunity in multiple myeloma:**
  - Role of NK and myeloid cells in the disease biology of multiple myeloma, in disease development and progression, and in the clinical response to therapy.
  - Therapy-directed modulation of the bone marrow immune microenvironment in myeloma
  - Role of infectious diseases in the natural history of multiple myeloma

- **Disease monitoring: Immune biomarkers of progression and treatment response:**
  - Novel approaches and tools for monitoring immune competence and responsiveness to immune and immunomodulatory therapies
  - Identification of immune biomarkers to monitor the development of resistance to existing therapies in bone marrow and in the periphery.
• **Disparity Research:**
  - Molecular, epigenetic and immunological drivers and events associated with differences in the biology of multiple myeloma and its precursor conditions in racial and ethnic populations
  - Identification of biomarkers of risk, response to treatment, and progression

• **Innovative Data Solutions:**
  - Development and application of novel bioinformatics solutions for integrating complex, high-dimensional global and single-cell multi-omic (immune, molecular and genomic/cytogenetic) data with clinical data to answer questions of disease risk, treatment relapse and response, host immunity and disease monitoring.

**Eligibility:**

Applications for the MMRF 2022 Research Fellowship Program are requested from investigators at academic, not-for-profit, institutions in the United States and abroad. Researchers with a Ph.D., M.D. or equivalent degree at the post-doctorate, clinical fellow, or junior faculty level are encouraged to apply. The following conditions must be met by all applicants:

- Post-doctorate and medical fellows applying for the award must work under the supervision of a research mentor in the multiple myeloma field.
- The MMRF Fellowship program is targeted to early career scientists. Applicants must have obtained their highest degree within 10 years of the application date.
- Applicants may not hold a position higher than Assistant Professor.
- Applicants who are beginning studies in the multiple myeloma field must have a research sponsor at their institution who is active in the multiple myeloma field, and who can provide guidance to the applicant in the proposed area of research.

The MMRF is committed to providing funding opportunities for Black, Indigenous, and People of Color (BIPOC) scientists and clinicians interested in multiple myeloma research. We strongly encourage BIPOC researchers to apply for the MMRF Fellowship program.

The MMRF may be able to provide applicants with additional support to mitigate technical and institutional infrastructure barriers to their research (e.g., access to technology and analytical platforms) through access to the MMRF’s partner institutions and laboratories. Requests for assistance should be discussed with the MMRF prior to submission of an application.
Process:

All applications are due on **Friday, June 24th, 2022 at 11:59 PM EST** and **must** be submitted via ProposalCENTRAL ([https://proposalCENTRAL.altum.com](https://proposalCENTRAL.altum.com)). No paper applications will be accepted.

Research Fellowship applications are reviewed by external scientists who have the appropriate area of scientific expertise. Scientific ratings use the current NIH scoring system of 1-9 with 1 demonstrating the highest scientific merit and 9 being the lowest. Each proposal will be evaluated and scored by at least two independent reviewers with appropriate subject matter expertise and the reviewer scores will be averaged for a final score. The reviewers are instructed to weigh research that appears promising with the previous accomplishments of the applicant, the probability of meaningful results from the proposed research, and the likely contributions of the research to advance the myeloma research community’s knowledge of disease biology, diagnosis, and treatment. In addition, support by a research mentor or sponsor must be adequately demonstrated. Furthermore, the objectives of the proposal must be reasonable to be performed over the course of the two-year grant period. MMRF will notify all applicants of the final outcome of their grant application in September 2022.

**Written critiques of submitted applications will NOT be provided to applicants.**

Funds Available:

Investigators may request up to $75,000 total costs, including up to 10% indirect costs, per year for a two (2) year period (total award is $150,000)

(a) **Permissible Costs.**

   (i) Salary for the Principal Investigator that has faculty appointments (i.e., Instructor, Professor, etc..), with the following restrictions:

   (1) the percent salary (with fringe benefits) cannot exceed the percent effort set forth in the Approved Budget.

   (2) the salary request (with fringe benefits) cannot exceed forty percent (40%) of the total grant request.

   (ii) Salaries for the Principal Investigator or professional staff that do not have faculty appointments and technical assistants as necessary with the following restriction:

   (1) the percent salary (with fringe benefits) cannot exceed the percent effort set forth in the Approved Budget.

   (2) the salary request (with fringe benefits) cannot exceed forty percent (40%) of the total grant request.

   (iii) Salary of other participants in the Grant Research that have faculty appointments (i.e., Instructor, Professor, etc..).
(1) the percent salary (with fringe benefits) cannot exceed the percent effort set forth in the Approved Budget.

(2) the salary request (with fringe benefits) cannot exceed forty percent (40%) of the total grant request.

(iv) Minimal but essential permanent equipment which is directly relevant to the Grant Research.

(v) Publication costs up to a maximum of one thousand dollars ($1,000.00).

(vi) Expendable supplies.

(vii) Other expenses directly related to the conduct of Grant Research.

(viii) Travel to attend scientific meetings that are directly related to the Grant Research. Such travel arrangements shall be subject to the prior written approval of the MMRF and shall not exceed one thousand dollars ($1,000.00).

(ix) Indirect operating costs incurred by the Sponsoring Institution during the Grant Term in an amount not to exceed ten percent (10%) of the total costs.

(x) Notwithstanding the foregoing, in no event shall the base salary exceed the annual Federal capitation imposed by the National Institutes of Health.

(b) Impermissible Costs.

(i) Construction, alteration, maintenance or rental of buildings or building space.

(ii) Computer equipment, office equipment and furniture.

(iii) Dues for membership in scientific societies.

(iv) Office supplies including, but not limited to, mail/postage costs, copying costs, telephone, fax, internet access or other similar costs.

(v) Tuition, books and journals.

(vi) Significant Equipment costs.

(vii) Any other costs not specifically permitted by Section 4(a).

The funds awarded shall be used solely for the purposes specified in the application submitted to the MMRF as executed by the Principal Investigator, collaborating staff and institution in compliance with the budget annexed to the application.
Application Information:

All applications must be electronically submitted through proposalCENTRAL (https://proposalCENTRAL.altum.com). All application instructions are provided below and will also be available on this site.

For scientific and administrative inquiries contact:

**Mark Hamilton, PhD**  
Associate Director,  
Research/Immunotherapy,  
Multiple Myeloma Research Foundation,  
383 Main Avenue, 5th Floor,  
Norwalk, CT 06851.  
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Email: cooka@themmrf.org
Multiple Myeloma Research Foundation
2022 Research Fellowship Program
Application Instructions

A. General Requirements

a. Required Format: Applications must be in English using single-spaced text, half-inch margins, using either Arial or Times New Roman 11 or 12 point font. Page limitations must be observed for each section as described below.

b. Good Standing: Applications will only be accepted from research investigators who are currently in good standing with the MMRF. An applicant will automatically be considered to be in good standing unless they have failed to provide progress reports on prior MMRF-funded grants.

Note: Sections B – E must be completed in the template titled “Prerequisite Information” which is provided as a downloadable file for applicants on the proposalCENTRAL application portal (https://proposalCENTRAL.altum.com). Please download the template, complete each section and save the document, and then upload as a single PDF file.

B. Abstract

This Section should contain the following:

1) A General Audience Abstract: briefly describe your proposed project in 100 words or less using non-technical language (i.e., at a level that an eighth grader would understand)
2) A Technical abstract: briefly describe your proposed project in 100 words or less using technical language.

C. Biographical Sketch

This Section should contain the biographical sketches of the Principal Investigator and all key personnel. This must include any personnel who are referenced in the budget. Do not exceed two pages per biographical sketch.
D. **Budget**

Please provide a detailed budget and budget justification fully outlining specific needs for professional and technical staff and itemized supplies by category. Please see the definition of permissible and impermissible charges in the above section on *Funds Available*.

All budget items should be explained under *Budget Justification*.

E. **Other Research Support**

Other support is defined as any specific funds or resources, whether governmental, non-governmental or institutional, available to the Principal Investigator (and the other key personnel named in the application) in direct support of their research endeavors. This should include active support and pending support.

Information regarding active or pending sources of support available to the Principal Investigator (and other key personnel named in the application), whether related to this application or not, is an important part of the review and award process and must be included.

**Note:** Sections F - G should be completed in the template titled “Application Template” which is provided as a downloadable file to applicants through the ProposalCENTRAL application portal. Download the template; complete each section and save the document, and then upload as a single PDF file.

F. **Project Description**

Limited to **5 pages**, but excluding necessary supporting materials such as references, figures, and tables (*see Section G regarding submission of supporting materials*). The project description should be presented in the following sequence:

a) Specific Aims (approximately 0.5 pages)

b) Scientific Background and Clinical Significance of Proposed Studies (approximately 1.0 pages)

c) Previous Work or Preliminary Data (approximately 1.5 pages)

d) Methods, Model Systems and Assays (approximately 1.0 pages)

e) Plans for Clinical Application of Data (if applicable; approximately 0.5 pages)

f) Resources and Environment including support from research mentor/sponsor (approximately 0.5 page)

If part of the application, Clinical Research protocols must be submitted as materials in the Appendix. Include IRB/Ethical Committee approval/compliance number or indicate pending and an anticipated approval date.
G. Supporting Materials (References, Figures and Tables)

Any referenced publications in the Project Description, Figures, and Tables should be submitted but will not count against the five (5) page limit in Section F of the Project Description.

Note: There is no template provided for Sections H – K. These documents need to be uploaded as separate PDF files. Please see each section for any specific instructions or notes.

H. Request for Resource Support (Optional)

The MMRF may be able to provide access to external research resources and expertise through its network of collaborator institutions and investigators. Applicants who require access to novel or advanced research technologies and platforms, or expertise, in order to complete the research aims described in their application may request assistance from the MMRF to identify the required resources or expertise. Applicants requesting Resource Support must provide a brief description of their expected external technical or expertise needs (0.5 pages).

We strongly recommend that investigators contact the MMRF to discuss their resource needs prior to submission of their application. Investigators should contact either Dr. April Cook (cooka@themmrf.org) or Dr Mark Hamilton (hamiltonm@themmrf.org).

I. Letter of Support

As this award is also for junior level investigators including post-doctorate/clinical fellows and junior faculty members beginning their career in myeloma research, these ‘new’ investigators must include a letter of support with their application. This letter must be from a senior faculty member who is active in the myeloma field and stating that they are able to commit to mentor and/or sponsor the applicant on an as needed basis.

J. Laboratory Animals Statement

For projects which involve laboratory animals, the Institutional Animal Care and Use Committee (IACUC) Approval Date and Animal Welfare Assurance number must be given. Non-US applicants must submit approval documentation from their Animal Ethics Committee.

Note: If an applicant has Laboratory Animal documentation to submit then this documentation must be uploaded as a separate PDF file.

K. Biohazards Statement

An institutional statement and assurances regarding potential biohazards and safeguards must be included. This may not be applicable to applicants from countries outside the US.

Note: The Department of Environmental Health and Safety (or equivalent office) at most institutes and universities can provide the applicant with a letter stating that the
laboratory and/or the applicant is in compliance with applicable laws. This is the document that should be submitted.

L. **Relevant Publications**

A set of the applicant's publication reprints which are relevant to the proposed project can be included. Please be aware that any password protection feature must be removed. Many articles when downloaded from journal sites contain password protection to prevent modifications of the document. **Please note:** if the password protection is not removed, reviewers will have difficulty in downloading your application. Applicants will be limited to five (5) publication reprints. Applications with more than five (5) publications will not be accepted. Submitting numerous large files adds to the download time of your application and can add time delays to the submission site.

**Note:** Applicants may either include all publications in one document as a Publication Appendix or submit each publication as a separate Appendix. Include in the name of the document(s) or Appendix(s) the following: 1) Applicant’s last name and 2) description of the document or appendix. For example: Smith Publication Appendix. PDF (one document with all publications) or Smith Paper on Mouse Model X. PDF and Smith Paper on Myeloma Drug Y. PDF, etc.

L. **Signatures:**

The signature page is provided as a printable document and is the last step before submitting the application. Applicants should print the signature page, sign (applicant) and then have the appropriate institutional representatives sign the document; e.g., the Institute Signing Official and Finance Officials. **Please check with your institute’s Office of Sponsored Programs to ensure you are obtaining the appropriate signatures.** Once signed, the document needs to be scanned, converted to a PDF and uploaded with the grant application.

**Note:** This signature page needs to upload as a PDF file. See Section M: Complete and Submit the Application for instructions.

M. **Complete and Submit the Application:**

All applicants and their institutes’ grants and contracts offices must register with proposalCENTRAL (https://proposalCENTRAL.altum.com). All applicants must submit a complete application using this portal.

**NOTE: PAPER APPLICATIONS WILL NOT BE ACCEPTED. ALL APPLICATIONS MUST BE ELECTRONICALLY SUBMITTED BY 11:59 PM EST ON JUNE 24th, 2022 THROUGH THE ProposalCENTRAL APPLICATION PORTAL. APPLICATIONS RECEIVED AFTER JUNE 24th WILL NOT BE CONSIDERED.**

N. **Publicity, Exhibits and Publication.**

**Announcement and MMRF Publication of Award.** The Sponsoring Institution and Principal Investigator will cooperate with MMRF in announcing the award of the
Fellowship. Such cooperation shall include submission of an abstract of the research to be conducted with the Grant Funds that the parties agree can be publicly disclosed at the time the award is announced.

(a) MMRF shall not (a) issue a press release or make any other public statement that references this Agreement or discloses the research results, or (b) use the names, logos or trademarks (or derivatives thereof) of The Sponsoring Institution, or its staff and sub-contractors, for publicity or advertising purposes, except with the prior written consent of the Sponsoring Institution, which shall not be unreasonably withheld, conditioned, or delayed. However, MMRF is hereby granted the right to publicly announce that it has provided Sponsoring Institution, Principal Investigator, Subsites, and Subsite investigator an Fellowship and the amount of the grant. MMRF shall provide all such materials to the Sponsoring Institution for review at least two (2) weeks in advance of expected release and the Sponsoring Institution shall use reasonable efforts to respond in writing within two (2) weeks. All requests for the Sponsoring Institution’s approval shall be directed to the Sponsoring Institution’s Office of Communications. The Sponsoring Institution shall not use the names, logos or trademarks of MMRF, or its staff or sub-contractors, for publicity or advertising purposes, except with the prior consent of MMRF.

(b) Program Marketing. The Sponsoring Institution and Principal Investigator hereby agree, as a condition to receiving these Grant Funds, to participate in publicity activities, including, but not limited to, being interviewed for MMRF newsletters, press releases, and video as requested by the MMRF as well as acknowledgement of the grant award in Sponsoring Institution’s donor marketing materials.

(c) Prior Notification of Promotion, Presentation or Exhibition. The Sponsoring Institution and Principal Investigator shall give MMRF written notice at least thirty (30) days prior to any publication, exhibition or presentation relating to Grant Information (which notification shall include a copy of the materials intended for release, as well as the details of the information to be disclosed and the time, place and manner of such disclosure).

(d) Right to Publish. The Sponsoring Institution and the Principal Investigator shall have the right to publish, present or otherwise disclose Grant Information, subject to Section 16 hereof and the following:

(i) MMRF Review for Possible Patentable Subject Matter. The Principal Investigator will provide MMRF written notice at least thirty (30) days prior to any advertising, promotion, publication, exhibition or presentation relating to Grant Information as well as advance copies of any Grant Information submitted for publication, exhibit or presentation during the Grant Term (which notification shall include
the details of the information to be disclosed and the time, place and manner of such disclosure). Notwithstanding anything to the contrary contained in this subsection, MMRF may delay, up to an additional sixty (60) days, the Principal Investigator from publishing, exhibiting or presenting Grant Information if it determines in its sole discretion that there is patentable subject matter present.

(ii) **Credits.** All published works (including on-line publications), exhibitions, presentations or other disclosures of Grant Information or summaries thereof by Sponsoring Institution or Principal Investigator must display the designation, "Supported by a Research Grant from the Multiple Myeloma Research Foundation (MMRF)."

(iii) **Penalty.** Failure to comply with subsection (i) or (ii) of this paragraph (c) shall obligate Sponsoring Institution and Principal Investigator to return ten percent (10%) of the Grant Funds to MMRF within ten (10) days after demand therefor by MMRF.

(e) **MMRF Publication of Results.** MMRF shall have the right to include published Grant Information results on its website or in other MMRF materials. The Principal Investigator (or other research personnel designated by the Sponsoring Institution) shall have the right to review MMRF's proposed website content solely for scientific accuracy and shall furnish any comments to MMRF in writing within ten (10) business days of his/her receipt of such proposed web content.

(f) **CureCloud.** MMRF shall have the right to include experimentals, data, and results of the Grant Research in the CureCloud. Sponsoring Institution and Principal Investigator shall provide experimentals, data, and results of the Grant Research to MMRF in a mutually agreeable digital format for incorporation into CureCloud along with the Interim Progress Report and the Final Report. MMRF may incorporate into CureCloud experimentals, data, and results of the Grant Research received with the Interim Progress Report and/or the Final Report at the earlier of twelve (12) months from receipt, or upon publication of the Grant Research by Sponsoring Institution or Principal Investigator. Sponsoring Institution and Principal Investigator agree that once MMRF has incorporated such experimentals, data, and results into the CureCloud, MMRF will have the unrestricted right to use, distribute, share, and publish the experimentals, data, and results.
EXHIBIT A

Patent, Intellectual Property and Technology Transfer Policy of the
Multiple Myeloma Research Foundation, Inc.

The primary purpose of The Multiple Myeloma Research Foundation, Inc. ("MMRF") in funding scientifically meritorious research is to advance its mission to eradicate multiple myeloma as a life-threatening disease. MMRF recognizes, however, that Inventions having public health, scientific, business or commercial application or value may be made in the course of research supported by MMRF. It is the desire of MMRF that such Inventions be administered so that they are brought into public use at the earliest possible time. MMRF recognizes that this may be best accomplished through patenting, copyrighting and/or licensing of such Inventions.

This Exhibit D is made part of the Grant Agreement. Unless otherwise indicated in this Exhibit, all capitalized terms shall have the meanings provided in the Grant Agreement.

1. Disclosure and assignment of Invention by the Principal Investigator; Report to MMRF.
   a. Disclosure and Assignment of Invention by Principal Investigator. The Sponsoring Institution shall require the Principal Investigator and all other persons engaged in the Grant Research to promptly:
      1) disclose all Inventions to the Office of Technology (or the equivalent) of the Sponsoring Institution;
      2) assign to the Sponsoring Institution all of their right, title and interest in and to all Inventions which are conceived, discovered or conceived or reduced to practice by such person during the course of the Grant Research at the Sponsoring Institution;
      3) require all such persons to cooperate fully with the Sponsoring Institution in pursuing legal protection for any Inventions or improvements thereto, including but not limited to providing assistance in filing and presenting any patent applications for or copyrights on such Inventions or improvements.
   b. Reporting to MMRF. All Inventions shall be reported to MMRF in writing within three (3) months after their disclosure to the Sponsoring Institution.

2. Sponsoring Institution's Duty to Decide on Protection of Invention and Notify MMRF. Sponsoring Institution shall determine whether it will seek patent or other statutory protection for each Invention promptly after such Invention is disclosed to the Sponsoring Institution, and it shall promptly notify MMRF of its decision. Upon MMRF's request, Sponsoring Institution shall notify MMRF when documentation relating to the filing or assertion of rights have published and are publicly available.

3. Licensing of Invention by Sponsoring Institution.
   a. Notice to MMRF of Possible Revenue-Generating Agreement. If the Sponsoring Institution contemplates entering into a license, assignment or other revenue-generating agreement relating to the Invention, the Sponsoring Institution
shall give MMRF notice thereof prior to execution. If any such agreement relates to MMRF or subjects MMRF to potential liabilities or responsibilities, MMRF shall have the right to approve such related sections in the agreement prior to execution.

b. **Requirements for Such Agreement.** Any agreements referred to in Section 3a of this Exhibit D relating to Inventions shall be entered into by the Sponsoring Institution and/or the Principal Investigator on an arm's-length basis with the licensee, assignee or transferee as the case may be.

4. **Sponsoring Institution's Established Intellectual Property Policy.** If the Sponsoring Institution has an established and applicable patent, intellectual property or technology transfer policy and procedure for administering Inventions, MMRF will defer to that policy so long as the Sponsoring Institution adheres to the following terms.

a. **License for Research.** MMRF shall be granted, to the extent that the license does not conflict with Sponsoring Institutions prior obligations to third parties, or with Sponsoring Institution’s obligations under 35 U.S.C. § 200 et. seq. or 37 C.F.R. § 401, an irrevocable non-exclusive perpetual worldwide royalty-free license (with or without the right to sublicense) to practice the Invention for non-commercial research purposes.

b. **Participation in Income.** MMRF shall have the right to participate in the income derived from any Invention, unless MMRF explicitly waives such right in writing, and the parties hereby agree that no provision of Exhibit D shall constitute such a waiver. This right to participate shall include the sharing of licensing fees and royalties and any other consideration derived from an Invention by Sponsoring Institution and/or Principal Investigator, which shall be calculated as Ten percent (10%) of Net Revenue derived from an Invention by Sponsoring Institution and/or Principal Investigator. Net Revenue shall mean Gross Revenue less unreimbursed patent prosecution expenses and licensing expenses associated with a particular license agreement. Gross Revenues shall mean all income received by the Sponsoring Institution under a license agreement. Excluded from income shall be maintenance fees received under the license agreement.

MMRF's participation in income hereunder shall be paid on a calendar yearly basis and shall be accompanied by copies of all invoices sent by Sponsoring Institution to its licensees, assignees and/or transferees as the case may be. MMRF shall have the right to audit Sponsoring Institution's books with advance written notice and records no more frequently than one time per year to verify the payments hereunder, with the understanding that access to such information shall be limited by any obligations of confidentiality that the Sponsoring Institution has to its licensees, assignees or transferees.

5. **Abandonment of Intellectual Property by the Sponsoring Institution.** No patent or patent application, copyright or other intellectual property protection in any Invention shall be abandoned without:

a. **MMRF Notice.** Prior notification to MMRF (such notification not to be less than
thirty (30) days before the expiration of the response period required by the applicable patent office); and

b. **MMRF Exclusive License.** Giving MMRF the opportunity for an exclusive worldwide, perpetual, royalty-free sublicensable license to the Invention (with respect to the applicable geographic territory) subject to and to the extent not inconsistent with the Sponsoring Institution's obligations to the United States federal government or applicable foreign government or another funder, collaborator, Invention owner, licensee, or optionee; Sponsoring Institution shall give MMRF written notice of any such obligations concurrently with the aforesaid notification.

6. **Commercialization to Accelerate the Benefit to the Public.**

a. **Public Benefit: If no Commercialization in Two Years.** Sponsoring Institution shall use reasonable efforts to commercialize an Invention within two (2) years from the date that a patent covering the Invention is issued. If, at the conclusion of the two (2) years period, Sponsoring Institution has not executed or is not in active negotiations for an exclusive license to a third party for such patent, then MMRF has the option to extend the two (2) years period in increments of six (6) months to a maximum of five (5) years. Then, subject to third-party rights to the applicable Invention, MMRF shall have the right (but not the obligation), upon written notice to the Sponsoring Institution, to require Sponsoring Institution to negotiate with MMRF in good faith for the grant of an exclusive license to MMRF to all right, title and interest in and to the Invention, including, without limitation, all patents, patent applications and other intellectual property rights.

b. **Public Benefit: Reporting to MMRF.** Sponsor shall report once per calendar year the status of an Invention under subsection 6(a) of this Exhibit D.

c. **Government Sponsor.**

i. **Deferral to Governmental Policy.** If an Invention is made with the joint support of the MMRF and an agency or department of the United States government, MMRF shall defer to the patent, intellectual property or technology transfer policy of that agency or department upon receipt of a written statement by Institution of the appropriate agency or department.

ii. **Sponsoring Institution Does Not Elect Title; Notice to MMRF.** Notwithstanding the foregoing, if the Sponsoring Institution decides not to elect title to an Invention that is subject to the rights of the United States government, Sponsoring Institution will so notify MMRF and if MMRF wishes to file for patent protection or pursue commercialization of such Invention at its own expense, the Sponsoring Institution agrees to elect title and upon such election, shall grant a license, under terms to be negotiated in good faith, to the subject Invention to MMRF on an irrevocable basis for research and commercial purposes, with rights to sublicense the Invention, which license shall be exclusive except with respect to the rights of the United States government and Sponsoring Institution’s retained rights.
b. **Related Materials.** To the extent it is legally able, the Sponsoring Institution shall grant a non-exclusive license, under terms to be negotiated in good faith, in the Related Materials to MMRF to the extent necessary for such commercialization, where the MMRF commercializes an Invention pursuant to Sections 5 or 6 of this Exhibit D.

d. **Notice of Alleged Infringement of Invention.**

   a. Each party shall give the other party written notice of any alleged infringement(s) of any Invention, and shall keep the other party reasonably apprised of all developments related to such legal action(s).

   b. Where a party has actual knowledge of any infringement(s) or alleged infringement(s) of any third party intellectual property that will prevent the performance of the Grant Research or require substantial modifications to the Grant Research, the party with the actual knowledge shall give the other party written notice of such alleged infringement(s) within thirty (30) days of learning of such alleged infringement.

e. **Sponsoring Institution with No Established Intellectual Property Policy.** If the Sponsoring Institution has no established and applicable patent, intellectual property or technology transfer policy and procedure for administering inventions, MMRF shall have the sole right to determine the disposition of the Invention rights. In such cases, MMRF may, in its sole discretion, elect to do one or more of the following:

   a. Have a patent and/or copyright application filed, and decide to whom it shall be assigned. In such case, the Sponsoring Institution and Principal Investigator shall execute all documents necessary to assist in the filings and the assignment.

   b. Release the Invention to the Principal Investigator or Principal Investigator's designee.

   c. Submit the Invention to a qualified organization for administration and licensing.

   d. Determine by negotiation the fair share of royalty income to be paid to the Principal Investigator, the Sponsoring Institution, MMRF and any other parties who contributed funds that supported the Invention.

   e. License or make other arrangements for the application and use of the Invention on an exclusive or non-exclusive, royalty-free basis as seems reasonable in the circumstances.

f. **Licenses.** Licenses elected, negotiated, and that are to be granted under this Agreement to MMRF or a license granted to a New Institution may be subject to third-party rights and shall be effective as of the date the relevant parties sign a separate license agreement, which will contain indemnity, insurance, revenue sharing, and no-warranty provisions, in addition to other customary terms and conditions that are based on standards current in the industry. MMRF and Sponsoring Institution agree that all such licenses will be subject to all applicable laws and regulations.