



[link](#)

| NIH MARC-WSU Program



National Institutes of Health – Maximizing Access to Research Careers

# MARC-WSU Scholar Handbook

Washington State University

# Welcome to MARC-WSU!

## Letter from the Program Directors:

---

### Dear Scholar,

Welcome to the Maximizing Access to Research Careers (MARC) program at WSU. We are so excited to be working with you over the next two years!

We know you are excited to embark on a career in the biomedical sciences just by being in the MARC-WSU Program. You will find that by working in this program under the guidance of your faculty mentors, you will continue developing a strong academic foundation, while building research skills and one-on-one mentoring relationships that will foster your successful transition to the PhD.

The MARC-WSU program is comprehensive and can be individualized to your specific goals and needs as you build your skills and knowledge in preparation for graduate work. Your research experiences will allow you to develop-and to demonstrate your full scientific talent and potential.

The Program Directors, faculty mentors, and staff of the MARC-WSU Program are personally committed to your success. While your success ultimately depends on you: your energy, your devotion, and your drive; we will be there for you to help you achieve your goals.

Remember that nobody makes it on their own. We developed this program to help connect you with and learn from a community of like-minded individuals who are passionate about biomedical sciences and the potential for biomedical sciences research to serve humankind. As program directors, we are here to help you reach your goals, and we hope that you will come to us whenever you have concerns or questions.

Sincerely,



Mary Sánchez Lanier

Professor

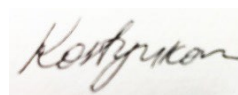
Program Director



Samantha Gizerian

Associate Professor

Program Director



Alla Kostyukova

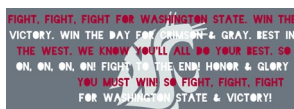
Professor

Program Director

# TABLE OF CONTENTS

MARC-WSU ADMINISTRATION.....	3
ABOUT MARC-WSU.....	4
Program Eligibility.....	4
Benefits to You .....	5
Program Requirements .....	6
KEYS TO SUCCESS IN MARC-WSU.....	7
GETTING STARTED WITH MARC-WSU.....	8
Read and Sign the MARC-WSU Contract of Commitment .....	8
Provide a Short Biography and Picture .....	8
Register for your MARC Course .....	8
Complete New Employee Paperwork.....	8
Complete the ERA Commons Registration .....	8
Attend Orientation Meeting.....	8
YOUR RESEARCH EXPERIENCE .....	9
Finding a Faculty Research Mentor .....	9
Working in the Lab .....	9
Publications and Presentations .....	9
Evaluation of Your Research Work .....	10
MARC-WSU Research Expectations Rubric.....	10
FINANCIAL MATTERS .....	12
Appointment to the Program- Register with NIH XTrain.....	12
Submission of Time Sheets.....	12
Stipend Payment.....	12
Tuition/Fees.....	12
Taxability of Stipend/Tuition Benefits.....	12

MARC-WSU CALENDAR OF EVENTS .....	13
MARC-WSU Calendar .....	13
MARC-WSU Sponsored Events .....	13
Recurring MARC-WSU Events.....	13
Fall Events.....	13
Spring Events.....	13
Speakers.....	14
Website .....	14
CONFERENCES AND TRAVEL .....	15
Required Conferences.....	15
Traveling to Other Conferences.....	15
Conference Poster Printing.....	15
SUMMER RESEARCH EXPERIENCE .....	16
Finding a Suitable Placement.....	16
Partial List of Local/National Summer Research Programs .....	17
Research Expectations .....	18
Presentation of Summer Research .....	18
APPLYING TO GRADUATE SCHOOL .....	19
Applying for PhD/Graduate Programs .....	19
Studying for and Taking the GRE.....	19
Writing your Personal Statement.....	19
Letters of Recommendation.....	19
MARC-WSU ALUMNI .....	20
APPENDICES .....	21
Appendix 1. Contract of Commitment.....	22
Appendix 2. NIH eRA Commons .....	24
Appendix 3. MARC Annual Report .....	26
Appendix 4. Poster Printing Form.....	29
Appendix 5. Summer Research Experience Form.....	30
Appendix 6. MARC Annual Alumni Survey.....	31
NOTES .....	32



# **MARC-WSU ADMINISTRATION**

## **Program Directors (PDs):**

### **Dr. Mary Sánchez Lanier**

Assistant Vice Provost and  
Professor,

School of Molecular Biosciences

Office: CUE 519D

Phone: 509-335-2320

Email: [sanchez@wsu.edu](mailto:sanchez@wsu.edu)

### **Dr. Samantha Gizerian**

Associate Dean and Associate Professor,  
Department of Integrative Physiology  
and Neuroscience

Office: VBR 207A

Phone: 509-335-0986

Email: [samantha.gizerian@wsu.edu](mailto:samantha.gizerian@wsu.edu)

### **Dr. Alla Kostyukova**

Professor,

Voiland School of Chemical

Engineering and Bioengineering

Office: Wegner 340D

Phone: 509-335-1888

Email: [alla.kostyukova@wsu.edu](mailto:alla.kostyukova@wsu.edu)

## **Contact us**

By email: [wsu.marc@wsu.edu](mailto:wsu.marc@wsu.edu)

In person: Smith CUE 403/519

By phone: 509-335-0014

Website: <https://marc.wsu.edu/>

## **Program Coordinators (PC):**

**Jaclyn Gotch**

**TBD**

Office: Smith CUE 403/519

Phone: 509-335-0014

Email: [WSU.MARC@wsu.edu](mailto:WSU.MARC@wsu.edu)



The MARC-WSU Office, located in SMITH CUE 403/519, is open Monday - Friday, 8:00 AM - 4:30 PM. Individual meetings with the program directors are always welcome and can be scheduled via email. All students have access to CUE 403 as a study/gathering space.



## **ABOUT MARC-WSU**

Congratulations and welcome to the NIH MARC Program at Washington State University (MARC-WSU)! The National Institutes of Health MARC Program provides 2 years of support for undergraduate students in their junior and senior years who come from backgrounds underrepresented in the biomedical and behavioral sciences. This program will enhance your ability to gain access to a high-caliber PhD program in the biomedical and/or behavioral fields.

### **Commitment to Pursue a Graduate Degree**

MARC is a program designed to fund students pursuing biomedical/behavioral & STEM related graduate degrees. Trainees in the program make a commitment to pursue a graduate degree. During the fall, prior to graduation, trainees will apply to Ph.D. programs (or MD/Ph.D or DVM/Ph.D. programs) in biomedical/behavioral sciences. Any trainee who decides NOT to apply for a PhD, or enter a non-covered field, must withdraw from the program. Students interested in applying to Medical School or other Professional Degree programs unless they are formal MD/Ph.D or DVM/Ph.D programs, are expected to withdraw from the program.

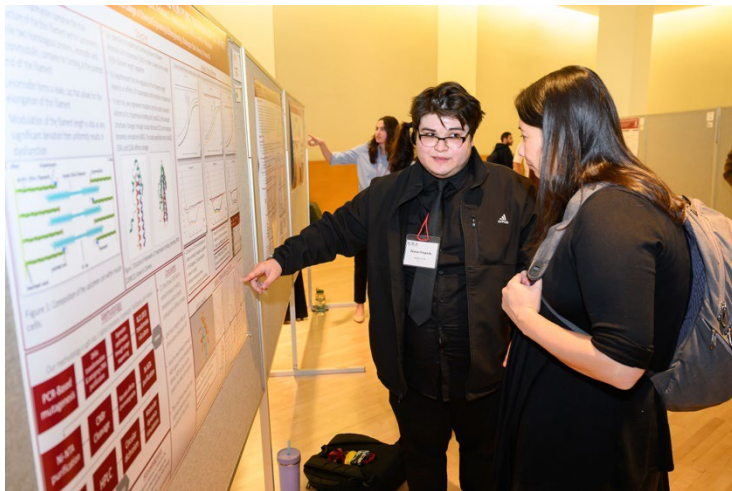
### **Program Eligibility**

- Must be an enrolled junior or senior at WSU, admitted to one of the following majors:

Biology	Genetics and Cell Biology
Biochemistry	Materials Science
Bioengineering	Mathematics
Chemical Engineering	Mechanical Engineering
Chemistry	Microbiology
Computer Engineering	Neuroscience
Computer Science	Physics
Electrical Engineering	Zoology
- Must be sophomore or junior status with two years left before graduation at the time of application submission at WSU Pullman; freshman or senior students are not eligible.
- Must be a full-time student with a minimum cumulative GPA of 3.0.
- Must be a member of a group underrepresented in biomedical graduate education and/or meet other criteria (e.g. first generation, income eligibility).
- Must have US citizenship or residency.
- Must have career goal to earn a doctoral degree (Ph.D) in biomedical and/or behavioral research.

## Benefits to You

- An annual student salary for 2 years (junior and senior years,  $\approx$  \$14,000 per year).
  - 60% of college tuition and mandatory fees paid by MARC-WSU (up to \$16,000) for the last 2 years of study at WSU (junior and senior years).
  - A paid (transportation included) 10-week summer research experience at a research-intensive institution.
  - Paid travel expenses to present research at a professional conference.
  - Participation in biomedical research.
  - Coursework and seminars on relevant topics (e.g. graduate school, careers).
  - Academic, career, and personal guidance throughout your undergraduate degree completion.
  - Mentoring from faculty, graduate students, and senior MARC scholars.
- And most importantly, *you will meet your own graduate and professional goals.*



## Program Requirements

### ***To Maintain your status in the MARC-WSU Training Program\*\*:***

- Complete your annual report ([see appendix 3](#))
- Have regular meetings with your research mentor and the MARC Program Directors.
- Discuss coursework/progress with Program Directors every semester.
- Commit to complete a PhD program in biomedical and/or behavioral fields.
- Register in Research Skills and Advanced Research Skills each semester of the program.
- Engage in a research project with a WSU faculty mentor and a summer research project.
- Present and publish your research.
- Work about 15 hours a week in designated lab.
- Attend all MARC-related events.
- Maintain a competitive GPA appropriate for application to graduate school in your discipline.
- Respond in an appropriate time frame to all email requests.
- Present a rotation report talk during your first semester as a scholar.
- Carry yourself with appropriate demeanor toward other MARC and Pre- MARC trainees, directors, staff, and guests.

**\*\*** *Students not meeting program expectations, goals, and requirements at any time will be dismissed from the program.*

### ***To be completed by the end of the MARC-WSU Training Program:***

- A research project with a WSU faculty mentor and a summer research project.
- A written and approved thesis (Honors students only) or manuscript based on the research conducted.
- Presentations of research at: (1) SURCA (2) ABRCMS and where possible (3) a National/International Conference in your discipline.
- Acceptance into a PhD program in biomedical and/or behavioral fields.

### ***After the MARC-WSU Training Program***

- Complete assessment evaluations for the required 15 years following the program.





# **KEYS TO SUCCESS IN MARC-WSU**

## **Take Three Simple Steps:**

*Making sure to always take these three simple steps will give faculty the best possible impression of who you are and how much you are committed to this program and your future success:*

1. Check your email at least once per day, and respond promptly and formally. ***Your professionalism is demonstrated by your communication and responsiveness.***
2. Be present. Attend class, attend journal clubs, seminars, and colloquia at WSU, and generally participate. Remember: you need to become known by the faculty who will write your letters of recommendation for your graduate school and scholarship applications. ***Your commitment to the program is demonstrated by your presence (or lack thereof).***
3. Work. As a general rule of thumb, you should expect to work 15-20 hours/week in the research lab. This is in addition to your academic coursework. ***Your commitment to success is demonstrated by your work ethic.***

## **Take on Opportunity:**

Think of your time in the MARC-WSU program as the opportunity to develop three things:

1. **Knowledge:** Take courses that best complement your research interests and that get you known by faculty in your area(s) of interest.
2. **Skills:** What specialized skills (e.g. confocal microscopy, CRISPR-Cas9 editing) do you need to learn to pursue your research interests at WSU and beyond?
3. **Professional Connections:** Go to your instructors' office hours and meet with your faculty mentor regularly to discuss your academic and research progress. The more they get to know you, the more likely they are to be able to write strong letters of recommendation for you or connect you to unique opportunities to expand your skills and experience.

## **Take Advantage of Your Resources:**

- Work with your peer mentors; they have been through most of what you're going through!
  - If you're having difficulty in your courses, get help early! We can help you find tutors, etc.
  - Apply for external fellowships and scholarships. The Program Directors can help you find opportunities and work with you on the applications.
  - Join a professional club or society (e.g. Society of Women Engineers, Undergraduate Research Club, Molecular Biosciences Club) to increase your professional network.
  - Participate in social events organized by/for MARC-WSU students.
-

# **GETTING STARTED WITH MARC-WSU**

## **Read and Sign the MARC-WSU Contract of Commitment**

([see Appendix 1](#)). All scholars will read and sign a Contract of Commitment which outlines the MARC-WSU Program requirements to be completed during the training.

## **Provide a Short Biography and a Picture**

All new scholars will send a short biography (100-200 words) and a headshot picture to the program assistant within two weeks of being selected as a MARC scholar. The short biography and the picture will be used for our website. Follow the same format you see on the [website](#).

## **Register for your MARC Course**

As a first year MARC student you will register for Univ 394: Research Skills. During your second year of the MARC program you will register for Univ 494: Advanced Research Skills.

## **Complete the New Employee Paperwork**

You will need to provide verification of citizenship and complete paperwork

## **Complete the eRA Commons Registration**

([See appendix 2](#)). After receiving an email invitation, you will set up your National Institutes of Health ERA Commons account and complete your biographic information required there.).

## **Attend Orientation**

At the beginning of every fall semester during WSU's Week of Welcome, the MARC Program organizes an orientation workshop that serves to inform current and new scholars and their faculty mentors about the plans and MARC events for the new academic year. This meeting is also a place where scholars, faculty, and staff share their suggestions on improving the program. The official ceremony inducting new scholars into the program will be held at the end of the orientation program each year in August.



# **YOUR RESEARCH EXPERIENCE**

## **Finding a Faculty Research Mentor**

Once you are appointed as a MARC scholar, you and MARC PDs will work on finding a faculty mentor with whom you can work during school year on a research project.

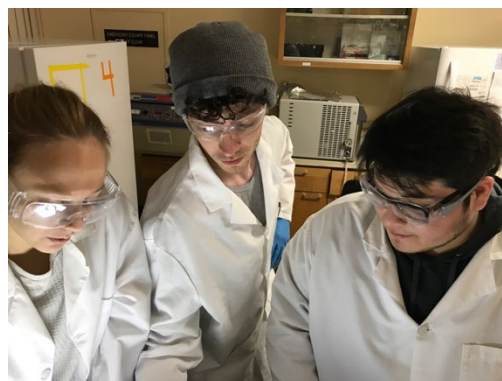
MARC PDs make every effort to match your research interests with those of the faculty mentor. You will complete 3 two-week mini-rotations in different laboratories to help you find your “best fit” lab. These rotations are not intended to be enough time to complete a project, rather it is a chance for you to meet and work with the lab members and be introduced to their research and techniques

## **Working in the Lab**

MARC scholars are required to work about 15 hours per week on their research project once they are paired with a research mentor. The hours on a project do not always involve lab bench work. This time includes the time you will spend searching for information, reading the literature, preparing to present at a conference, analyzing data, etc. All of these activities are considered part of your research and should be recorded onto the MARC-WSU Research Timesheet in WorkDay. You will develop a compact with your research mentor that sets out expectations for both of you throughout your MARC-WSU research experience.

## **Publications and Presentations**

You are expected to present and publish your research. Any publication or documents about your research should acknowledge your MARC support and include a disclaimer “*Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number T34GM141971. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health*”. Prior to releasing any press releases concerning your research the Grant PIs must be notified and they will then notify NIH for coordination.



## Evaluation of Your Research Work

Your research mentor will evaluate your work regularly and share the results of that evaluation with the Program Directors. The rubric that will use for that evaluation is below:

### MARC-WSU Research Expectations Rubric\*

<b><u>Indicator</u></b>	<b><u>Meeting Expectations</u></b>	<b><u>Approaching Expectations</u></b>	<b><u>Below Expectations</u></b>
<b>Basic research concepts</b>	Fully grasps basic concepts underlying research project.	Can understand concepts involved in research project with some assistance.	Has little grasp of basic concepts underlying research.
<b>Technical skills</b>	Is capable of quickly adopting technical skills necessary to complete project.	Masters techniques with supervision and assistance.	Needs continual supervision to perform lab work or use tools required in research.
<b>Independent thinking</b>	Independently analyzes data, generates conclusions and hypotheses.	Contributes to project planning and analysis with moderate guidance.	Little contribution to project design or direction, data interpretation or troubleshooting.
<b>Professional conduct</b>	Consistently behaves in a professional manner.	Usually behaves in a professional manner. Does not repeat errors.	Frequently fails to behave in a professional manner.
<b>Meets deadlines</b>	Consistently meets deadlines.	Misses some deadlines despite reasonable effort.	Routinely misses deadlines or asks for extensions.
<b>Defines research objectives</b>	Is actively involved in defining achievable objectives that thoroughly address fundamental project needs.	Aids in defining objectives. Some may be too simplistic or unrealistic.	Takes little initiative in defining the project.
<b>Communication skills</b>	Written and oral communication is of high quality; student clearly expresses the questions and findings in his/her research.	Written work is clear and adequately presented, but may lack precision and/or concision.	Has difficulty elucidating research questions or adequately presenting data.

\*Adapted from Newell et al 2002, 2004, and Fisk-Vanderbilt Masters to PhD Program Handbook 2014-2015.



<b><u>Indicator</u></b>	<b><u>Meeting Expectations</u></b>	<b><u>Approaching Expectations</u></b>	<b><u>Below Expectations</u></b>
<b>Use of literature</b>	Clearly demonstrates an awareness of the works of others and establishes a context for the project. Shows an understanding of information from multiple sources.	Shows limited understanding of the work in the field. Knowledge is primarily from faculty provided materials.	Fails to demonstrate an awareness of the works of others and the significance of their project.
<b>Organized project</b>	Effectively organizes project tasks to minimize wasted time and effort.	Identifies relevant tasks but may struggle with setting priorities and planning.	Has difficulty converting broad objectives to specific tasks.
<b>Obtains appropriate results</b>	Obtains meaningful results with minimal wasted effort.	Produces some results but not enough. May have difficulty overcoming setbacks.	Generates few meaningful results.
<b>Interprets data appropriately</b>	Provides thorough and correct analysis of data.	Provides analysis but partially incorrect or not sufficiently thorough.	Little meaningful analysis of data or blatantly incorrect.
<b>Formulates supportable conclusions</b>	Formulates and adequately supports meaningful conclusions.	Needs help in formulating meaningful conclusions or lacks sufficient support for their conclusions.	Conclusions are absent, wrong, trivial, or unsubstantiated.
<b>Maintains safe Practices</b>	Develops and follows procedures that account for safety and clean-up. Lab space is clean and neat.	Develops and follows procedures consistent with safe practices but sometimes misses minor safety issues or fails to clean-up	Fails to develop and follow safe procedures and/or clean up.
<b>Keeps detailed records</b>	Keeps detailed records easily followed by others, including a laboratory notebook, computer files, purchase records and others	Keeps a lab notebook but records lack organization or contain omissions	Keeps poor, sketchy or no records

## **FINANCIAL MATTERS**

***\*\*Your Commitment to the MARC program, your research, and your academics is considered your job. You should not have additional employment. Please discuss this with the PDs if you have questions.***

### **Appointment to the Program- Register with NIH XTrain**

The official appointment as a MARC scholar is done through the NIH eRA Commons Portal ([see appendix 2](#)). You will receive an email asking you to create an account on eRA Commons. Once the account has been created, you will receive another email usually titled “xTrain: Trainee Appointment Form”. This xTrain form will have information on the duration of the appointment and stipend information. The xTrain appointment ends on July 31, and scholars are re-appointed on xTrain on August 1 for their second year of training.

### **Submission of Timesheets**

Your time sheets are completed through WSU WorkDay where you will enter your time worked. These must be submitted well before the deadline. Stipend payments for late timesheets will not be processed until the next round of timesheets is due. Payments occur only during the academic year (August to May)

### **Stipend Payment**

Stipend payment will be processed after the timesheet has been submitted through WorkDay. Payday is normally the 10<sup>th</sup> and 25<sup>th</sup> of each month. Work from the 1<sup>st</sup> to the 15<sup>th</sup> of a month is paid on the 25<sup>th</sup>, and work from the 16<sup>th</sup> to the 31<sup>st</sup> is paid on the 10<sup>th</sup>. You will have the option to receive mailed checks or have checks direct deposited to your bank accounts. You will only be paid from August 16 to May 15.

### **Tuition/Fees**

After meeting with your academic advisor to plan your course schedule for the next semester, you must submit a list of your chosen classes to the Program Directors for approval. Once the list of classes is approved, the Financial Aid office can apply the MARC tuition award to your account for the next semester. 60% of tuition and fees is covered up to \$16,000.

### **Summer Research**

You are required to spend at least one summer in a research training program at an external research-intensive institution (such as institutions with T32 programs). The MARC program will provide per diem and travel funds but cannot duplicate what a host institution might provide. We have some funds, provided by WSU, to support research at WSU over the summer, or help with the support provided when going to another institution. You must talk to the MARC program directors about your planned summer research experiences.

# **MARC-WSU CALENDAR OF EVENTS**

## **MARC-WSU Calendar**

All MARC-related events will be sent to you via e-mail. Please check your email regularly. You must use your WSU email to respond to calendar invitations to MARC events. It is extremely important that you respond to calendar invitations within 1 business day.

## **MARC-WSU Sponsored Events**

MARC scholars are expected to participate in all MARC-sponsored events, unless timing conflicts arise, in which case you must notify the PC or the Program Directors of such conflicts as soon as possible.

## **Recurring MARC-WSU Events**

Below is a list of recurring MARC events throughout the year:

### **Fall Events:**

- Week of Welcome Workshops for new scholars
- Orientation Workshop with MARC faculty mentors, program directors, and staff
- New MARC Scholars Induction Ceremony
- Mid-semester Scholar's Progress Meeting with MARC faculty mentor and PDs
- Annual Biomedical Research Conference for Minority Students (ABRCMS)
- MARC Fall Seminar/Skills workshop with invited speaker
- Computational Skills Workshop (yr 1)/ Graduate School Applications Workshop (yr 2)
- MARC End-of-Semester Celebration

### **Spring Events:**

- Mid-semester Scholar's Progress Meeting with MARC faculty mentor and PDs
- WSU's annual Faculty Showcase
- WSU's annual Showcase for Undergraduate Research & Creative Activities (SURCA) - all scholars are expected to give a poster presentation
- Professional Etiquette Workshop
- MARC Spring Seminar/Skills workshop with invited speaker
- Annual meeting with Program Evaluation Team
- MARC-WSU Year-End/Graduation Celebration

## Speakers

MARC-WSU scholars are expected to attend all events during the day that MARC-invited speakers are on campus. Such events may include the scholar giving a lab tour to the speaker in the morning, having lunch with the speaker, and attending the speaker's research seminar. Speakers are usually invited on a Thursday and give their research seminar at 12:00pm. You will have the opportunity to work with the other members of their cohort to choose 2 seminar speakers for the following year during the spring semester of their junior year. As a group, you will help the MARC-WSU PDs and the relevant university departments to plan each speaker's visit throughout the rest of the spring and summer, and will act as hosts to your chosen speakers at the time of each speaker's visit during your senior year.

## Website

Our website contains information about the MARC-WSU program, biographies of scholars/faculty/staff, scholars' achievements, events and recent news, contact details for the MARC team, as well as downloadable forms. Please let us know your comments/suggestions on how to improve our website and make it more accessible to you.

<https://marc.wsu.edu>

---





# **CONFERENCES AND TRAVEL**

## **Required Conferences**

All MARC scholars are expected to present their research at one National Conference (usually Annual Biomedical Research Conference for Minoritized Scholars, ABRCMS, in the Fall) per year while they are in the training program, subject to availability of MARC funds. MARC scholars are also expected to present a poster at SURCA in the spring.

## **Traveling to Other Conferences**

You may be reimbursed for costs of attending/presenting at a conference (other than the mandatory conferences), provided that you first get the approval of the Program Directors in writing. The Program Coordinator will guide you in completing the paperwork needed for travel to conferences as per WSU's travel policies. Presentation at disciplinary conferences is encouraged.

## **Conference Poster Printing**

Free poster printing service is provided for scholars that are going to present at conferences. Scholars can print their posters in the IPN department office, VBR 205. Poster printing will be available on the days/times announced via email by Program Coordinator. Posters have to be reviewed by both the scholar and their research mentor and must be the final, approved version in order to be printed. A Poster Printing Form (Appendix 3) must be completed and signed by both you and your research mentor before coming to the office to print the poster.

Posters must be formatted to fit the poster printer's dimensions with a maximum height of 42" on one side. Scholars that print posters smaller than 42" in height will have to cut the flanking edges themselves. Poster tubes can be borrowed from the MARC-WSU office and returned after the conference.



# **SUMMER RESEARCH EXPERIENCE**

## **Summer Research**

MARC scholars are required to complete a Summer Research Experience (SRE) at an external research-intensive university for 10 weeks following their first year in the program. Summer research support at WSU is not supported by the MARC grant, although other funds may be available. MARC students who are unable to complete an SRE at another university and plan on continuing their research at WSU should notify the program directors no later than March. On occasion, research funding from non-MARC sources may be available to students for WSU summer research. In all cases, students should be at least partially supported by their research mentor.

## **Finding a Suitable Placement**

MARC scholars before their second year in the program are required to complete a Summer Research Experience (SRE) at a research-intensive university for 10 weeks. Finding a placement for this experience will be a joint effort between you and the Program Directors. You will be able to discuss your research interests and your preferences for where you would like to go for your research experience when you meet with the Program Directors mid-fall semester. You can also ask the Program Directors for a list of potential laboratories to apply to. Usually, applications for summer research programs open late in the fall semester and have deadlines in January and February.

Finding a placement for your SRE can be time consuming. In an effort to make the process easier and for your records, you should make a list of preferred summer programs and send it to Program Directors before you meet with them so they know where your interests lie.

Usually, travel expenses, room and board, and stipends will be paid by MARC and not the host institution, unless another arrangement has been made between the Host(s) and MARC Program Directors. MARC Scholars cannot typically accept the financial support from the host institution because they will receive their stipend from MARC. If you are not in an extramural summer internship, you are expected to continue doing research in the laboratory of your faculty mentor.

Summer pay through the MARC program will only be provided to students who are completing an SRE at an institution other than WSU.

## **Partial List of Local/National Summer Research Programs**

We have compiled this list of summer research programs to help you start navigating your options. Please click on each of the hyperlinks below to visit the program's website:

[Stony Brook University INDUCER program](#)

[Stony Brook University Explorations in STEM Summer Research Program](#)

[RPI Research Experience for Undergraduates Bioengineering and Biomanufacturing](#)

[Fred Hutchinson Cancer Research Center Summer Undergraduate Research Program](#)

[Harborview Injury Prevention and Research Center INSIGHT Summer Research Program](#)

[Institute for Stem Cell and Regenerative Medicine Undergraduate Summer Fellows Program](#)

[Institute for Stem Cell and Regenerative Medicine Research Experience for Undergraduates](#)

[Stipends for Training Aspiring Researchers \(STAR\)](#)

[Pharmacological Sciences Summer Diversity Program](#)

[Howard Hughes Medical Institute \(HHMI\) Exceptional Research Opportunities Program \(EXROP\)](#)

[Institute for Protein Design \(IPD\) Undergraduate Summer Research Fellowship](#)

[UW Genome Sciences Summer Research Program for Undergraduates](#)

[UW GenOM Project: Genomics Outreach for Minorities](#)

[University of Arizona Undergraduate Biology Research Program](#)

[KBRIN Summer Undergraduate Biomedical Research Program](#)

[Undergraduate Summer Program in Cardiovascular Research](#)

[NCI Cancer Education Program at the University of Louisville](#)

[Lillehei Heart Institute Summer Research Program](#)

[University of Minnesota Health Disparities and Cancer Research Summer Internship](#)

## Research Expectations

Once you are offered a placement, it is your responsibility to start communicating with your summer research mentor at the host institution as soon as possible. It is good practice to ask your mentor for reading materials about the research topic you are going to be working on and to have completed the reading by the time you arrive at the host institution to start your SRE. You are typically required to work 40 hours/week for 10 weeks during the SRE. Once you start your SRE, you and your summer mentor must complete the Summer Research Experience Form ([Appendix 5](#)) and send it to the Program Coordinator.

## Presentation of Summer Research

It is common for the SREs to end with a Summer Research Showcase where each researcher gives either an oral or poster presentation. You may also be able to present your summer research at one of the required conferences or meetings, as well, with written permission from your summer mentor.

-----





# **APPLYING TO GRADUATE SCHOOL**

## **Applying for PhD/Graduate Programs**

In your second year of appointment, you will be required to work on your Graduate School Application. This includes preparing to take and taking the GRE, creating a personal statement, making a list of all the programs that you wish to apply to, sharing that list with the Program Directors and your research mentor, and contacting faculty to request for letters of recommendations. Please note that most Graduate School applications have deadlines between December 1<sup>st</sup> and January 1<sup>st</sup> each year.

## **Studying for and Taking the GRE**

Most graduate programs no longer require the GRE. If required, you will begin preparing to take the GRE during the spring of your junior year, with the aim of taking the exam during the summer before or early fall of your senior year (and not later than October of your senior year).

## **Writing your Personal Statement**

Writing your personal statement will be a collaborative effort between you, your faculty mentor, and the MARC-WSU Program Directors. The Program Directors and your mentor will read your drafts and make suggestions to help you improve your writing and show off your skills to potential graduate programs. You will have an opportunity to work on your personal statement in the Advanced Research Skills II class, as well as one-on-one editing sessions with faculty. Please have a first draft of your personal statement ready in October of your senior year so you can send it to your faculty mentor and the Program Directors in time to get good feedback. You will most probably have many drafts before your final one, so it is important to start early.

## **Letters of Recommendation**

You will also need to identify faculty from whom you can obtain letters of recommendation for the graduate school application. Each person who writes your letters must 1) know you well and 2) be enthusiastic about writing you a strong letter. It is recommended that you set up appointments with the faculty to discuss your letter of recommendation and that you have a personal statement, CV, and a list of the programs you are applying to handy to give to them. Please give your recommender enough notice to write your letter, preferably 1 month before the application due date.

-----

## **MARC-WSU ALUMNI**

NIH mandates that we keep track of our scholar alumni and have records of their current professional status for 15 years. As such, once you graduate from the MARC Program and WSU, we will send you an Alumni Survey ([Appendix 6](#)) every year so that you can update your information.

It's very important that you take a few minutes each year to complete the survey and stay in touch with MARC-WSU and tell us about your accomplishments. Your success helps MARC-WSU demonstrate to NIH that this program is doing what it set out to do and allows us to continue the program to help more students be successful in their pursuit of a graduate degree and a career in the biomedical sciences.

As an alumnus, you may also interact with current MARC-WSU students as a mentor or as part of a professional networking event. These interactions will not only give MARC-WSU scholars a chance to hear from you about your career path, but can also demonstrate to your employers or future employers that you are committed to giving back and increasing diversity in your field.



Please note that this handbook will be updated periodically. However, most changes in policies or rules that affect this handbook's provisions will be made available to scholars through emails sent to their WSU email address.

Most recent edit: May 2023

## **APPENDICES**

The forms below are for reference only. The most recent documents can be found on our website or in the MARC office.





## Appendix 1. Contract of Commitment

### MARC Scholar Commitment

Congratulations! Your application to the MARC-WSU program has been reviewed and we are excited to be able to offer you a position in the program. You have expressed an interest in earning a Ph.D. If you accept this offer, you will be entering a partnership with the MARC program. The MARC leadership, and its faculty/staff, will lead you through training and experiences that will help you to gain admission to a Ph.D. program and to be highly successful in top schools in the nation. There are many activities associated with the MARC program. If you are not serious about the Ph.D. then you do not want to be in the MARC program because gaining this experience is time consuming.

Why is the United States willing to invest significant resources in *your* future? Simply put, we need the “best and the brightest” from diverse backgrounds who can bring unique perspectives to the many challenges we face in the United States. Your success will contribute to the United States being able to maintain its leadership in research and development in the biomedical fields. We look forward to embarking on this adventure with you.

#### Student Agreement

My goal is to apply to and enter a program in the biomedical/behavioral sciences or engineering (Ph.D., MD/Ph.D., DVM/Ph.D.). I understand and agree with the following:

1. **Commitment to pursue a graduate degree:** MARC is a program designed to fund students pursuing biomedical/behavioral & STEM related graduate degrees and I have made a commitment to pursue a graduate degree. During the fall, prior to graduation, I will apply to enough Ph.D. programs in biomedical/behavioral sciences to include application to “aspirational” graduate programs, T32 graduate programs, programs that I am likely to be accepted to, and programs that I am very likely to be accepted to. If needed, I will work with the program PDs to obtain application fee waivers. I will share the list of programs that I apply to with the Program PDs. If I decide NOT to apply for a PhD, or enter a non-covered field, I must notify the program directors and withdraw from the program. I will not apply to Medical School or other Professional Degree programs unless they are formal MD/Ph.D or DVM/Ph.D programs, and if I have not received on-site interview requests by December I will consider post-bacc programs.
  - a. I will write a draft of my personal statement and CV and solicit feedback by October 1 of my senior year.
  - b. I will apply for graduate programs by December 1 of my senior year.
2. **Academic Success:** I will maintain a GPA in my STEM major that will allow me to enter a competitive biomedical/behavioral graduate program.
3. **Academic Year Research:** Research, and associated letters of recommendation, are critical for doctoral program admission. Although the exact lab schedule and number of hours required in the lab will be agreed to in consultation with my faculty research mentor, I understand that the MARC program encourages each student to spend about 15 hrs/wk working in the lab setting during the academic year. (Please don't go overboard and harm your grades!).
  - a. I will work in my research laboratory about 15 hours per week.
  - b. I will meet with my research mentor regularly.



4. **Summer Research:** I will apply for and participate in a summer research experience at another institution outside of WSU for at least one summer as a MARC scholar (preferably the summer between junior and senior year and hopefully at a school you want to attend for your doctorate!). Your goal is to be the best undergraduate they've had and to cultivate a second reference letter. (If I need an exception, I must talk to the MARC program leadership)
5. **Building Critical Scientific Communication Skills:** Presentation at as many local, regional, and national conferences as possible builds communication and networking skills. Publication is also important.
  - a. I will present my research at the Showcase for Undergraduate Research and Creative Activity (SURCA) at WSU and the Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS). I may also present at PNW LSAMP Conference and/or disciplinary conferences.
  - b. I will acknowledge the NIH grant as in the following *“Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number T34GM141971. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health” or “Funded by a grant from the National Institute of General Medical Sciences of the National Institutes of Health (T34GM141971).*
6. **MARC-WSU Program Events:** I will attend all MARC-WSU program events. If I have a conflict, I will contact the MARC-WSU program directors.
  - a. I will enroll and be an active participant in the MARC Research Skills course during each of the 4 semesters that I am part of the MARC-WSU program (Univ 394 & Univ 494).
  - b. I will attend all other MARC programming.
  - c. I will respond to requests from MARC-WSU in a timely fashion.
7. **Communication with MARC-WSU:** I will keep the MARC office aware of my career progress and permanent address/e-mail address for documentation of program activities.
  - a. As an alumnus/a, I will keep in touch with WSU, fill out surveys, provide my CV, and update my contact information annually for 15 years.

I will always behave in an honorable and ethical manner and display respect and sensitivity to the persons around me.

*Additional information can be found in the MARC handbook which is updated annually.*

Scholar name (print): \_\_\_\_\_

Scholar signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix 2. NIH eRA Commons

The MARC-WSU program is funded by the National Institutes of Health (NIH). This money is awarded to WSU and your paychecks will come from WSU. As such, you will need to follow the standard WSU policies that will set you up as an employee in the WSU system.

In addition, you must register in the [NIH eRA Commons](#) system. NIH must approve you as a participant in one of their funded programs. This must happen for you to be paid. Based on your application, we know that you meet the qualifications of this program and so you should have no concerns about this process, other than making sure it is done in a timely fashion.

### What happens first?

1. You will make sure that we have your updated curriculum vitae (CV).
2. The PD's will submit your CV to the WSU Office of Research Support and Operations (ORSO). ORSO is the WSU sponsored research office.
3. ORSO will assign you an NIH eRA Commons user ID. This is your user ID for as long as you are at WSU. If you move to another university, you will have to re-register through a similar process at your new university.
4. You will receive an invitation to complete the registration process on the NIH website.

### What do you need to do now?

1. Use the provided link to go to the [eRA Commons website](#). You will need to set up your password and your two-factor authentication.
2. Use Login.Gov. at the top left of the eRA Commons webpage. Do not use the "login with eRA credentials" which is also on the left and is the more obvious of the two.  
Note that you will need to change your password annually and you will receive no warning that your password needs changing except you will not be able to get into the website.
3. Once you are logged into the system you will need to do several things. You can access these through the square in the upper left-hand corner that looks like it has 9 little squares arranged in a square. You can access your personal profile from the menu on the left as well.
  - a. Complete your personal profile. In the process of setting up your personal profile please make sure that you obtain an ORCID ID. This ID is important when you start publishing. This means that you will have a person ID AND an ORCID ID.
  - b. You will need to then select xTrain from the menu at the top of the page or from that white box at your landing page. This is your actual appointment form that you are completing. You will likely have to answer several questions in xTrain.

Please know that we cannot see any of your answers to questions with personal information. We will only be able to see that you answered the question as it will say "completed". We will NOT be able to see your answer as in the two examples below. Your answers will not be associated with your name.

3. SEX ☒ Completed

☐ M ☐ F

☐ Do Not Wish to Provide

12. What's your racial background? Mark (X) one or more

☒ Completed

☐ American Indian or Alaska Native

☐ Native Hawaiian or other Pacific Islander

☐ Asian

☐ Black or African American

☐ White

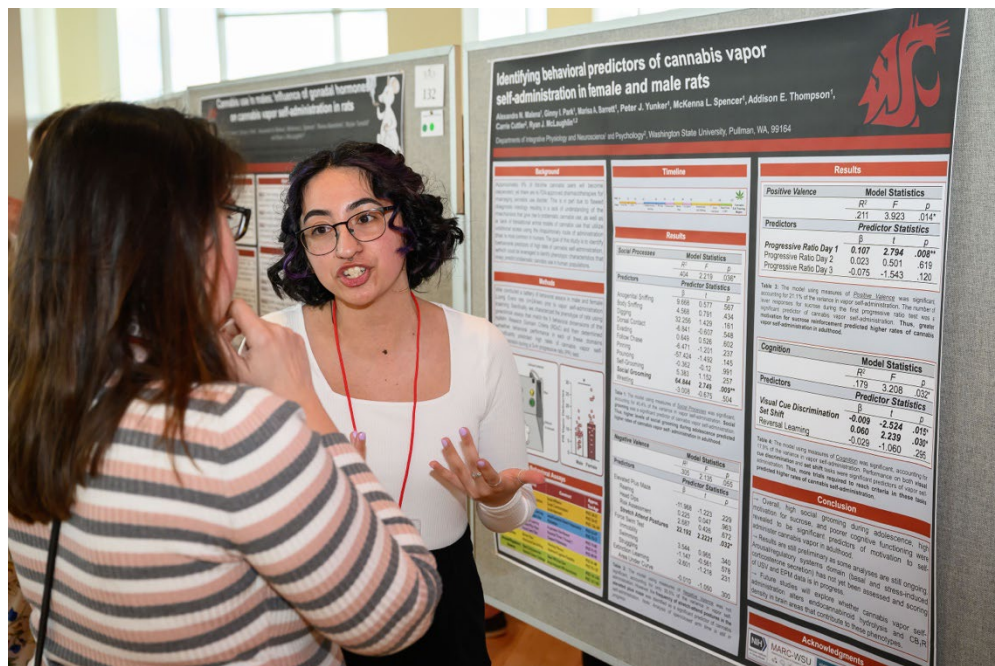
☐ Intentionally Withheld

Most of the questions are self-explanatory, some are not. One of the questions may be “Are you from a disadvantaged background”? All students in the MARC or MIRA programs must meet eligibility requirements. As such, you cannot check “not applicable” for this question because it is, in fact, applicable to both the MARC and MIRA grants. There are many criteria by which NIH judges individuals to be from “disadvantaged backgrounds”. These include being low income, being from a rural area or an area with inadequate schools, being a first-generation student, having a disability, etc. **For this question you must select either “yes”, “no”, or “do not wish to provide”. Do not select “not applicable”.**

Under “Education/Career Level” you should select “undergraduate student”.

- The last thing you will need to do is submit the form to the principal investigator. That means that the form then goes to the grant PI's/PDs. Please do not forget this step. The grant PI's/PDs will then submit the form to NIH. NIH will approve the form and we will then be able to pay you.

If you have questions, please ask.



## **APPENDIX 3. Annual Report**

Your Annual Report with the following information is due by August 1 each year. For new MARC students the form is due on September 15 each year.

Please address each of the items below. If you have nothing applicable under a category, please indicate that by saying, for example, "I have no publications, no papers that have been submitted, and no manuscripts in preparation". Please do not just leave it blank.

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

**eRA Commons Username:** \_\_\_\_\_

**Major(s) and Minor(s):** \_\_\_\_\_

**Expected date of graduation** \_\_\_\_\_

**Long term professional goal** (i.e. Ph.D.; MD/Ph.D.; DVM/Ph.D.): \_\_\_\_\_

**Please attach a CV or résumé**

### **1. Publications**

Provide a list of all publications for which you were an author or co-author. Put a star next to those that were published since last March (that is, in the last year).

List Authors (Last name, first name), Year, Title, Journal, Volume, Inclusive Pages, in that order as per below

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. J Virol. 22:35-40

*Remember that any publication or documents about your research should acknowledge your MARC support and include a disclaimer "Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number T34GM141971. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health".*

### **2. Provide a list of all publications which are submitted (submitted, but not yet accepted) or in the process of being written (manuscript in preparation) or in which you have or will receive(d) an acknowledgement.**

Use the formats in the examples below.

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. (manuscript in preparation)

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. (manuscript in preparation, listed in acknowledgements)

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. J Virol. 22:35-40 (listed in acknowledgements)

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. (submitted)

### 3. Presentations

Provide a list of ***all*** presentations. Put a star next to those presentations made since last March (that is, in the last year). Please include both formal and informal presentations including conference presentations, presentations to a department advisory board, research presentations given to a class or to a club, research presentations given in lab meeting as well as any other presentations made. Please use formal citations for your presentations list Authors (last name, first name – authors typically include your research mentor(s)), Year, Title, name of where you are presenting, such as a conference, location of the presentations – city, state.

Remember, all poster presentations should acknowledge your MARC support “*Research reported in this publication was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number T34GM141971.*”

Citation examples:

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. Showcase for Undergraduate Research and Creative Activity, Pullman, WA

Smith, Jane. 2022. The role of E6 in cervical cancer. Invited presentation to Introductory Biology Class, Pullman, WA.

Smith, Jane; Evan, John; Brown, Mary. 2022. The role of E6 in cervical cancer. Presented at lab meeting.

### 4. Significant products developed (e.g., website, computer programs, software, GenBank gene sequence)

### 5. Research Project and Progress

\*This information will be part of an NIH annual report. Please have your research mentor review this prior to submitting.

**a. Provide the title of your research project:** \_\_\_\_\_  
(This title should look like what you would put at the top of a published paper)

**b. Provide the overall long-term goal of your research – the big picture**  
(this is not a description of your project but the overall goal of your lab. It might be something like “the long-term goal of my lab is to understand how memories influence drug relapse so that we can help prevent or interfere with the process of relapse in recovering addicts”)

**c. Provide a one or two sentence description of your research – this should include the goal or hypothesis for your research**  
(this should read something like “the goal of my research is to \_\_\_\_\_, my specific hypothesis is \_\_\_\_\_”)

**d. Describe your research, your specific contributions, and progress of the research.**  
(this section should be at least a full paragraph or more)



e. Provide the date(s) you were working on the research project(s)

**If you have had more than one research project since last March you must describe each project. This should include any work you did over the summer.**

6. **List your mentor(s) and their role in your work** – example below

Note that you will almost always have several mentors

Name of research mentor, PI

Name of research mentor, graduate student

Name of research mentor, Research Associate

**If you have had more than one research project since last March you must list your mentors for each project and which project you worked with them on.**

7. **List your Honors and Awards.** This should include any fellowships, scholarships, or other support you are receiving. Indicate why you are receiving the support. This might be a scholarship for your academics or a scholarship or fellowship for your research. Do not include loans.
8. **List workshops you have attended that have anything to do with research.** This would include lab safety training, radiation safety, animal research training, training in ethics, publications, presentations, etc. Please include workshops from conferences you attended. These should each be listed with the name of the workshop, month and year attended and number of hours. If you were at a conference, indicate which conference and whether it was virtual or in person.
9. **List career or professional development activities.** This should include any workshops you have attended such as creating a CV, attending graduate school, creating a poster, giving a presentation, career fairs, etc. Please include any workshops you attended at conferences. These should each be listed with the name of the workshop, month and year attended and number of hours. If you were at a conference, indicate which conference and whether it was virtual or in person.
10. **List ALL conferences attended.** Indicate if they were national, regional, or local conferences and whether they were virtual or in person.
11. **Please list/describe any clubs, volunteer activities, leadership activities, or other extracurricular activities that you have been involved in.**
12. **Have you attended regular lab meetings, and if yes how often, and what was your contribution?**
13. **Have you completed summer research since last March? If so, where? What was your research on? Have you presented your summer research? Was your research part of an REU?**
14. **Please list your lab rotations, what you did (even if it was observational) and the dates of the rotations.**

## **Appendix 4. Poster Printing Form**



MARC-WSU Scholars Program

### **MARC-WSU Poster Printing Form**

Please complete this form and submit to IPN staff in VBR 205 at the time of printing

Presenter (Student) Name:	
Title of Poster:	
Name of Conference:	
Date of Presentation:	
Final Poster Dimensions:	
Poster file name:	
Poster file type*:	PPT <input type="checkbox"/> *only these file types will be accepted PDF <input type="checkbox"/>

The undersigned student and research mentor have reviewed the poster and approve the submitted file as the final version to be printed.

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mentor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **Appendix 5. Summer Research Experience Form**



MARC-WSU Scholars Program

### **MARC-WSU Summer Research Experience Information Form**

MARC-WSU Student Name: \_\_\_\_\_

MARC-WSU Mentor Name: \_\_\_\_\_

Duration of Internship \_\_\_\_\_ Start Date: \_\_\_\_\_ End Date: \_\_\_\_\_

Host Institution: \_\_\_\_\_

Host Program/Department: \_\_\_\_\_

Host Street Address: \_\_\_\_\_

Host City, State, ZIP code: \_\_\_\_\_

SRE Mentor Name: \_\_\_\_\_

SRE Mentor email address: \_\_\_\_\_

Room and Board covered by: \_\_\_\_\_ Travel covered by: \_\_\_\_\_

Hours working in the lab expected per week: \_\_\_\_\_

Give a brief description of the SRE project:

I agree that I have read the NIH MARC Summer Research Experience Policy (<https://www.nigms.nih.gov/training/T34/Pages/sre.aspx>) and I will not accept a stipend from the host institution for my Summer Research Experience.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

Summer Research Experience Mentor Signature \_\_\_\_\_ Date \_\_\_\_\_

MARC Program Director Signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix 6. MARC Annual Alumni Survey



MARC-WSU Scholars Program

### MARC-WSU Annual Alumni Survey

Please complete this survey and return it to Dr. Gizerian at [samantha.gizerian@wsu.edu](mailto:samantha.gizerian@wsu.edu).

Name: \_\_\_\_\_ Date graduated from WSU: \_\_\_\_\_

1. Are you pursuing or have you completed a graduate degree? \_\_\_\_\_

If yes, what degree (e.g. PhD)? \_\_\_\_\_

Which institution? \_\_\_\_\_

Which field (e.g. Biology) is your degree in?: \_\_\_\_\_

2. If you are still in graduate school, what year of graduate school are you in? \_\_\_\_\_

3. If you are not pursuing graduate education, do you plan to? \_\_\_\_\_

If yes, Please provide when, where, and which program \_\_\_\_\_

4. What are some of your recent accomplishments? \_\_\_\_\_

5. Please provide us with any updates to the following:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_

6. Your Job Title and Employer: \_\_\_\_\_

7. How has your participation in the MARC-WSU program helped you over the last year?

## **Notes:**



**Notes:**