**MEMORANDUM**

Date: September 18, 2022

To: STEM Professor, PhD

From: Briana Pomales

Regarding: Requested letters of recommendation

Below is the list of programs that will be contacting you to submit a letter of recommendation on my behalf. Please note that there are 6 PhD programs and 3 fellowship programs.

My deadlines for the submissions are:

* PhD programs are due December 1, 2022

As a reminder:

* I was enrolled in GRAD 492 Directed Research as an undergraduate student researcher as part of the Ronald E. McNair Achievement Program in Summer 2022 where I received an A.
* I completed an original research project on the modification of modern electrolysis cells to produce hydrogen. I compiled a complete literature review, performed multiple electrochemistry experiments studying metallopolymer in flow cell and its effect of hydrogen production. Gathered previous data to compare to, developed conclusions, and created an original research report as well as an original research presentation.

Thank you for your continued support, mentoring, and guidance in my pursuit of graduate education. If you need any additional information, please feel free to contact me at any time.

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| **Personal Information:** | |
| **Student Name:**  Briana Pomales  **Home Address:**  4658 S. 19th Ave, Tucson, AZ 85714 | **Email:**  Pomales@arizona.edu  **Cell Phone:**  (520) 488-1835 |
| **Current Major:**   * Chemistry | **Cum GPA: 3.86** |
| **Long-term Career Goals:**  Work in a National Laboratory or become involved in Academia conducting/teaching in Universities | **Intended Graduate Degree:**  PhD |

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| **Background Information** | |
| First individual in family to pursue a PhD: Mother has a bachelor’s degree and father has high school diploma.   * Father’s side has one bachelor’s degree, but no one has received a PhD. * Mother’s side has various degrees, but no one has received a PhD. | Father’s family immigrated from Puerto Rico, so the focus was more on work rather than an education. Thus, my family fostered an environment which allowed me to fall in love with learning and develop into the committed and enthusiastic scholar I am today. |
| Part of the Ronald E. McNair Achievement Program within the Undergraduate Research Opportunities Consortium (UROC) | This program solidified my technical research skills as well as my confidence in the field. It has solidified my desire to move forward as a graduate student and researcher. |
| Latina/Hispanic: Father’s side migrated from Puerto Rico and Mother’s side is from New Mexico. | My Hispanic identity is important to me because in my future academic career, I want to ensure members of my community have access to knowledge and resources. |

**Graduate Program Information:**

The tables below include information on the fellowships, schools, and respective programs I am applying to. Additionally, they provide information on how each program will advance my academic career based on aligned research interests with affiliated faculty members.

**General Research Interests:**

I am interested in studying polymer chemistry as well as sustainable chemistry. The topics I wish to investigate in graduate school include plastic degradation, clean fuel sources, carbon dioxide capturing (using Metal-Organic Frameworks), catalysis, and new materials that are biodegradable.

**Submitting Letters:**

All schools have an online system where I will insert your email as the recommender, and you will be emailed instructions regarding the completion of the letter of recommendation.

**Fellowship Applications are due October 22th, October 28th and October 31st 2022**

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| **Graduate Fellowships:** | **Deadline** |
| **National Science Fellowship**  Graduate Research Fellowship Program  2415 Eisenhower Ave, Alexandria, Virginia 22314 | October 22, 2022 |
| **National Defense Science and Engineering Graduate Fellowship**  Graduate Research Fellowship Program  1020 Woodman Drive, Dayton, Ohio 45432 | October 31, 2022 |
| **Hertz Foundation Fellowship**  Graduate Research Fellowship Program  2300 First Street, Suite 250  Livermore, CA 94550 | October 28, 2022 |

**PhD Applications:**

**All PhD Applications Due December 1st, 2022**

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| **School & Dept Address** | **Program** | **Primary Faculty** | **Research Match** |
| 1.) Stanford University  School of Humanities and Sciences  364 Lomita Drive Stanford, CA 94305 | PhD in Chemistry | 1.) Robert Waymouth, PhD  2.) Matthew Kanan MD, PhD  3.) Yan Xia | 1.) Polymer chemistry, degrading plastics using inorganic complexes  2.) Chemical reactions for applications in renewable energy conversion and CO2 utilization  3.) |
| 2.) Cornell University  Department of Chemistry & Chemical Biology  103 Baker Laboratory  Ithaca, NY 148353-1301 | PhD in Chemistry) | 1.) Song Lin, PhD  2.) Erin Stache, PhD  3.) Brett P. Fors, PhD | 1.) Design of catalysts for electrochemistry to use CO2 and abundant natural products to make other materials.  2.) Develop new polymerization techniques for development of stainable polymers (degradable).  3.) Development of new catalyst systems to control polymer architecture, composition, and function. Open a way to control polymerization for more environmentally friendly processes. |
| 3.) University of Michigan  Department of Chemistry  930 North university Ave Ann Arbor, MI 48109-1055 | PhD in Chemistry | 1.) Anne McNeil, PhD  2.) Zhang Chen, PhD  3.) Charles McCrory, PhD | 1.) Sustainable polymers and focuses on materials for electrochemical energy storage.  2.) Understanding molecular surface tension structures of polymers for adhesion in packaging. Proteins for biofuel production.  3.) Electrochemical reduction of CO2 and H2O for conversion into energy sources for fuel. Reduction of NO3- salts for remediation of agriculture wastewater |
| 4.) University of Pittsburg  Dietrich School of Arts and Sciences  Department of Chemistry  Chevron Science Center  219 Parkman Avenue Pittsburgh, PA 15260 | PhD in Chemistry | 1.) Jennifer Laaser, PhD  2.) David Waldeck, PhD  3.) Tara Meyer, PhD | 1.) How molecular-scale chemistry of polymers connects to their macroscopic properties. Potentential applications in electronic devices.  2.) Electron transfer in semiconductor nanoparticle assemblies.  3.) Catalysis in the synthesis of both small molecules and polymers for biomedical applications. |
| 5.) University of Washington  Department of Chemistry  109 Bagley Hall Box 351700 Seattle WA 98195-1700 | PhD in Chemistry | 1.) David Ginger, PhD  2.) Brandi Cossairt, PhD  3.) Matthew Golder, PhD | 1.) Solar energy and electronic materials for characterizing organic semiconductors and quantum dots.  2.) Building inorganic nanostructures for applications in light emission, energy harvesting, and catalysis.  3.) Development of reconfigurable polymers/polymer networks and upcycling commodity plastics. |
| 6.) Pennsylvania Arts & Sciences  Department of Chemistry  231 S. 34 Street  Philadelphia, PA 19104-6323 | PhD in Chemistry | 1.) David Chenoweth, PhD  2.)Patrick Walsh, PhD | 1.) Synthesis of new materials with sensing and self-assembly properties.  2.) Merges catalysis, organic, and inorganic synthesis to achieve new catalytic and stoichiometric transformations. |

**All schools will send a notification when your name has been submitted on my part.**

**All letters are due through an online portal.**