

THE UNIVERSITY OF ALABAMA
2018 APPLICATION FOR
 RESEARCH EXPERIENCE FOR UNDERGRADUATE (REU) IN CHEMISTRY
 MAY 29 – AUGUST 3, 2018
 APPLICATIONS DUE FEBRUARY 28, 2018

1. Full name: Ms./Mr. _____ Date: _____

Preferred name: _____ E-mail address: _____

2. Address: (present): _____

(permanent): _____

Permanent home phone number: _____

College phone number where you can be reached in March/April/May: _____

3. Date of Birth: _____ 4. Citizenship: _____

5. College(s) and University(ies) attended, with dates:

6. Academic Status: Sophomore _____ Junior _____ Senior _____

7. Expected graduation date _____ Overall GPA _____ Chem. GPA _____

8. List courses taken in college and grades. (Indicate those you are taking at present).

Course	Grade	Course	Grade
General Chemistry I	_____	General Chemistry II	_____
Organic Chemistry I	_____	Organic Chemistry II	_____
Organic Laboratory I	_____	Organic Laboratory II	_____
Physical Chemistry I	_____	Physical Chemistry II	_____
Other Chemistry name:	_____	Other Chemistry name:	_____
Mathematics I	_____	Mathematics II	_____
Mathematics III	_____	Mathematics IV	_____
Physics I	_____	Physics II	_____
Biology I	_____	Biology II	_____

Other Science: _____ Language: _____

9. Earliest date you could begin research: _____

10. Do you plan to attend graduate school? _____ Yes _____ No
 If "yes" in chemistry (_____) or biochemistry (_____)? Other _____?
 Does medical school figure in your plans? _____ Yes _____ No

11. Names, titles and addresses of two persons whom you have asked to write letters of recommendation. Include at least one person who can comment on your laboratory skills.

Name Address

Name Address

These letters should be sent to: Ms. Monika Swanger, Dept. of Chemistry, Box 870336
The University of Alabama, Tuscaloosa, AL 35487-0336

12. Enclose with this application a short, one-page letter in which you summarize your career goals. Indicate how you think that participation in this program will assist you in attaining these goals.

13. Indicate your top four (or more) choices of research projects or areas in order of preference:

_____ First Choice _____ Second Choice _____ Third Choice
_____ Fourth Choice _____ Other Choice

- 1 Amine-Quinone Polymers and the Protection of Aluminum Aircraft Alloys against Corrosion
- 2 Antibiotic Resistance of Gram-Positive Pathogens
- 3 Asymmetric Reaction Methodology
- 4 Beyond Raney Nickel: Next Generation Hydrogenation Catalysts
- 5 Binding of Potential Drugs to Cytochrome P450
- 6 Biochemistry of Chromium
- 7 Biochemistry of RNA methyltransferases regulating meiosis
- 8 Building a Targeted, Magnetically Triggered Drug Delivery System for Cancer Chemotherapy
- 9 Carbon Dioxide Capture, Reactivity and Sequestration
- 10 Catalysts for Activation of C-H Bonds
- 11 Chemical Bonds for Storing Energy via Catalysis
- 12 Chemical Ordering in Binary Alloy Nanoparticles
- 13 Chemical Sensing of Biologically Relevant Carboxylates using Fingerprinting Techniques
- 14 Cocrystals - Designing Molecular Pairs to Assemble together in a Cocrystal and X-ray Crystallography of Cocrystals
- 15 Computational Approaches to Advanced Energy Systems - Actinide and Lanthanide Chemistry
- 16 Computational Biochemistry: Acid/Base Properties and Thermochemistry of Peptides
- 17 Computational Modeling of Complex Scattering Data
- 18 Computational Studies of Homogeneous and Heterogeneous Catalytic Reactions
- 19 Concentration, Solubilization, and Detection of Polycyclic Aromatic Hydrocarbons (PAHs)
- 20 Designer Alloys Built by the Self-Assembly of Metal Alloy Nanoparticles
- 21 Designing Metal Based Drugs that Target Cancerous and Bacterial Cells
- 22 Development of Catalytic Diversity in an Enzyme Scaffold
- 23 Development of Chemical Sensors for Airborne Pollutants
- 24 Development of Novel Catalytic Reaction Methodology
- 25 DNA Origami without the DNA
- 26 Dye-Sensitized Solar Cells: Designing Molecules to Move Electrons Around
- 27 Electrochemical and Optical Sensors
- 28 Electron Transfer in DNA Processing Enzymes
- 29 Environmentally Friendly Methods for Converting Carbon Dioxide to Useful Products
- 30 Ethics in Chemistry
- 31 Fluorescent Nucleosides for DNA and RNA
- 32 Investigation of Protein Dynamics using Mass Spectrometry
- 33 Mass Spectrometry Ionization of Biomolecules
- 34 Mass Spectrometry Studies of Peptides
- 35 Measurements of Potential Single-Molecule Rectifiers
- 36 Medium Ring Carbocycles and Cytotoxic Xenia Diterpenoids

- 37 Metal and Metal Oxide Nanoparticle Catalysis
- 38 Metallotherapeutics
- 39 Metals and Free Radicals in Proteins
- 40 Nanoelectrochemistry for Ultrasensitive Detection
- 41 Nanomaterials for Batteries
- 42 Nanoparticle Synthesis for Solar Cell Applications
- 43 New Catalysts for Environmentally Benign Synthesis
- 44 New Reagents for Organic Synthesis
- 45 Novel Antiinflammatory and Anticancer Agents
- 46 One-Pot Heterogeneous Catalysts for Green Chemistry
- 47 Organic Solar Cells
- 48 Organometallic Catalysts in Organic Synthesis
- 49 Polymer-based Phosphate and Nitrate Sensors for Environmental Applications
- 50 Porous Carbon-Based Catalysts for Fuel Cells
- 51 Searching for Better Perovskite Solid Solar Cells
- 52 Separating Carbon Nanotubes by Derivatized End-Groups Followed by Ion-Exchange Chromatography
- 53 Structure and mechanism of antibiotic resistance rRNA methyltransferases
- 54 Synthesis of Agents for the Treatment of Diabetes
- 55 Synthesis of Inorganic Materials Using Biological Templates
- 56 Synthesis of Nanostructured Thermoelectrics: Materials that Convert Heat into Electrical Power
- 57 Synthesis of Novel Separation Geometries
- 58 Synthesis of Novel, Geologically-Inspired Oxides for Magnetic Applications
- 59 Synthesizing New Organic Molecules Capable of Reversible Photo-Electro-Stimulated Flexing
- 60 Synthesizing Organic Molecules that Reversibly Change Shape and Color upon Redox Change
- 61 The Design and Synthesis of Conjugated Polymers for Solar-cell Applications
- 62 The Synthesis of Charged, Ultra-high-performance Polymers
- 63 The Synthesis of Polyimines: Polymers for CO₂ Capture and Drug Delivery
- 64 Thin Film Synthesis of Novel Oxide Materials Using Pulsed Laser Deposition
- 65 Total Synthesis of Natural Products

EVALUATION REPORT
SUMMER RESEARCH EXPERIENCES FOR UNDERGRADUATES (REU) PROGRAM
IN CHEMISTRY

ATTN.: Ms. Monika Swanger
Summer Undergraduate Research Program
Department of Chemistry, Box 870336
The University of Alabama
Tuscaloosa, AL 35487

Student Name _____

Instructions to Reference: Please comment on the applicant's background and achievement in chemistry, his or her laboratory skills, and his or her potential for independent study. Please mail this form to Dr. John Vincent at the above address. Thank you for your help.

Evaluation of Student	Excellent					Poor
Work habits	1	2	3	4	5	No basis to judge
Ability to follow directions	1	2	3	4	5	No basis to judge
Scientific curiosity	1	2	3	4	5	No basis to judge
Maturity	1	2	3	4	5	No basis to judge
Chemical knowledge for college level	1	2	3	4	5	No basis to judge

Name: _____ Date: _____

Position or Title: _____