

Université Claude Bernard Lyon 1
University of New Orleans
National Science Foundation
International Research Experiences for Students

**RESEARCH IN CATALYSIS AND PHOTOCATALYSIS
IN LYON, FRANCE – SUMMER 2020**

EXCITING RESEARCH POSITIONS FOR UNDERGRADUATES ARE AVAILABLE IN CATALYSIS AND PHOTOCATALYSIS IN LYON, FRANCE. THE UNIVERSITÉ CLAUDE BERNARD LYON 1 AND L'INSTITUT DE RECHERCHES SUR LA CATALYSE ET L'ENVIRONNEMENT DE LYON, IRCELYON (THE INSTITUTE OF RESEARCH ON CATALYSIS AND THE ENVIRONMENT OF LYON) ARE ESTABLISHED EUROPEAN CENTERS OF EXCELLENCE FOR CATALYSIS AND PHOTOCATALYSIS RESEARCH. SELECTED UNDERGRADUATE STUDENTS WILL PARTICIPATE IN PRE-TRAVEL VIRTUAL ORIENTATION PROGRAMS, AN ON-SITE ORIENTATION IN LYON, RESEARCH IN CATALYSIS OR PHOTOCATALYSIS IN LYON, AND ADDITIONAL ENRICHMENT ACTIVITIES IN LYON. POST-PROGRAM FOLLOW UP ACTIVITIES WILL ALSO OCCUR, AND TRAVEL FUNDS WILL BE AVAILABLE FOR PRESENTING RESEARCH RESULTS AT A REGIONAL OR NATIONAL CONFERENCE IN THE US.



FULL TIME POSITIONS BEGIN MAY 24, END JULY 24, 2020,* AND ARE ACCOMPANIED BY A STIPEND OF \$5000. HOUSING, MEAL, AND TRAVEL COSTS ARE ALSO INCLUDED.

College students entering the sophomore, junior, or senior year in Fall 2020 or students beginning graduate studies in Fall 2020 are eligible. Strong preference will be given to students with prior research experience. No French language skills are required, but a willingness to learn is necessary. Consideration of applications will begin by Jan. 24, 2020. To apply, submit the materials listed below. Program open to US citizens and permanent residents without graduate school enrollment prior to Aug. 1, 2020. Notification of acceptance to the program will be made via e-mail as early as Feb. 14, 2020. To apply, submit these items:

- [Application Form](#) (preview provided below)
- Three letters of recommendation
- An unofficial college transcript (official transcript will be required if accepted to the program)

Have letters and transcripts sent to be received by **Jan. 24, 2020** to the e-mail address below.

Liz Sigler
Center for Undergraduate Research
University of New Orleans
2000 Lakeshore Drive, ADA 1005
New Orleans, LA 70148
cur@uno.edu

This program is supported by the National Science Foundation

The University of New Orleans is an Equal Opportunity/Affirmative Action Employer

*All program dates are tentative

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IN LYON, FRANCE – SUMMER 2020

Program Participants Will Receive:

- \$5000 Stipend
- Round-trip transportation from US to Lyon
- Housing in Lyon
- Meal allowance
- International health insurance
- French cell phone during program
- Lyon metro pass
- Funding to present research findings at a US conference (contingent on sufficient research progress)

Program Participants Must Commit To:

- Three afternoon virtual training sessions (Mar. 7, Apr. 4, May 9*)
- Obtaining a valid US passport prior to March 15 (expiration date no earlier than Jan. 31, 2021)
- Completing 30 minutes per week of French familiarization with Duolingo February through May
- Arriving in Lyon on May 25* (departing US on May 24)
- Attending all orientation programs in Lyon, France
- Participating in full time research activities on site at UCBL
- Participating in all scheduled enrichment activities in Lyon
- Presenting an end of program poster at UCBL on July 24*
- Participating in a post-program virtual workshop (afternoon of Aug. 15*)
- Completing program evaluation forms
- Sharing your experience with fellow students

No Prior French Language Skills Required

Preference Given to Students with Previous Research Experience and Demonstrated Responsibility

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Potential Research Projects:

- 1) Professor Corrine Ferronato: Photocatalytic degradation of organic micro-pollutants and identification of carboxylic acid based intermediates using HSTrap/GC/MS
- 2) Professor Jean-Marc Chovelon: Photocatalytic degradation of furosemide and identification of its main intermediates
- 3) Professor Anne Giroir-Fendler: Cobalt oxide catalyst for propane oxidation
- 4) Professor Claude Descorme: Adsorption of micropollutants in water
- 5) Professor Pascal Fongarland: Non-destructive extraction of hemicelluloses in ionic liquids for catalytic valorization
- 6) Dr. Chloé Thieuleux: Development of bimetallic nanoparticles: looking for synergetic effects in catalysis
- 7) Professor Peter Goekjian: Fluorous Solvent Droplet Catalysis in Fluorous Tag Oligosaccharide Synthesis
- 8) Professor Peter Strazewski: Phospholipids and Designed Fluorophores for the Detection of Peptides Synthesized on and within Giant Vesicles
- 9) Dr. Chantal Guillard: Photocatalytic Efficiency of Luminous Textiles for Pesticide Removal
- 10) Professor Didier Leonard: Analysis of physical and chemical properties of surface functionalized materials, especially with ToF-SIMS and XPS characterization

Due to shifts in personnel and funding, available projects may change.

Université Claude Bernard Lyon 1, University of New Orleans, National Science Foundation International Research Experiences for Students (IRES)

Application for RESEARCH IN CATALYSIS AND PHOTOCATALYSIS IN LYON, FRANCE: Summer 2020

* Required

1. **Citizenship ***

Only U.S. citizens and permanent residents are eligible.
Mark only one oval.

- ☐ U.S. Citizen
- ☐ U.S. Permanent Resident (provide documentation)
- ☐ Other (not eligible for this program)

2. **Have you already started a graduate program? ***

Those who have already started a graduate program are not eligible.
Mark only one oval.

- ☐ No
- ☐ Yes (not eligible to apply)

3. **Last Name ***

4. **First Name ***

5. **Date of Birth ***

Example: December 15, 2012

6. **Address ***

7. **City ***

8. **State ***

9. **Zip Code ***

10. **Phone Number ***

11. **Email address ***

12. **Gender ***

Mark only one oval.

☐ Male

☐ Female

☐ Other

13. **College ***

Indicate what college you currently attend. If transferred/transferring, indicate both schools.

14. **In Fall 2020 I will be a/an: ***

Mark only one oval.

☐ Sophomore

☐ Junior

☐ Senior

☐ Entering graduate student

15. **My expected bachelor's degree graduation date is ***

Example: December 15, 2012

16. **Undergraduate GPA ***

(Indicate college GPA on a 4.0 scale)

17. **Race ***

(select one or more)

Check all that apply.

- ☐ Black
- ☐ Native American
- ☐ Asian
- ☐ Pacific Islander
- ☐ White

18. **Ethnicity ***

(select one)

Mark only one oval.

- ☐ Hispanic
- ☐ Not Hispanic

19. **Undergraduate Major ***

(Current undergraduate major)

20. **Career Goals ***

Briefly describe your career goals and motivation. If you plan to attend graduate/professional school, indicate what type of program and why.

21. **Personal Statement ***

Describe your background and your interest in this program (~1 page). Address how your background fits with this program and how the program will enhance your career and its impact.

22. **Describe Prior Research Experience, if any:**

23. **Work Experience, if any (firm, position, dates, duties):**

24. **How did you learn about this program? ***

In addition to this application form, submit to cur@uno.edu:

1. Three letters of recommendation sent directly from references
2. An unofficial college transcript

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