

CONACYT Graduate Fellowship Program for Mexican National Students Admitted to UIC PhD Programs

The University of Illinois System ([UIC](#), UIUC, UIS) has entered into an agreement with CONACYT (the National Science Foundation of Mexico) to support up to 10 Mexican nationals who have been admitted into PhD programs at one of the three UI System universities.

CONACYT has agreed to support these PhD students for the first four years of their study and the host UI System campus will support the fifth year, if needed. This is a competitive program and the student must apply for the CONACYT award after they have been accepted into a UI System PhD program (see application details below).

Specifics of the Funding Agreement:

- CONACYT will provide tuition funding to the level of \$20,000 per PhD student per each CONACYT-funded year. The receiving university of U of I System will waive any additional tuition costs above \$20,000.
- CONACYT will provide each PhD student an annual stipend “equal to CONACYT’s standard award for living expenses” for each CONACYT-funded year.
- CONACYT will provide each PhD student with financial support for the health insurance fee for each CONACYT-funded year.

LADU LAB

UNIVERSITY OF ILLINOIS AT CHICAGO (UIC)

We are currently recruiting students for PhD programs in Neuroscience (GPN) (<https://neuro.uic.edu/>) or Graduate Education in Medical Sciences (GEMS) (<http://chicago.medicine.uic.edu/education/masters-and-doctorate-programs/graduate-education-in-medical-sciences/>) at the University of Illinois at Chicago and via the CONACYT international scholarship program. Specifically, we seek students who are academically outstanding and highly motivated to become part of our research effort. Information on the application process and requirements is available upon request. Our lab focuses on the structural and functional properties and interactions between two proteins that are genetically, pathologically, and biochemically linked to Alzheimer’s disease (AD): amyloid-beta peptide (AB) and apolipoprotein E (apoE). To study these interactions *in vivo*, we developed a novel AD transgenic mouse (the EFAD mice) that mimics the genetics and pathology of the human disease by expresses both human AB and the human APOE genotypes. As APOE4 is the greatest risk factor for AD, increasing risk up to 15-fold over the common APOE3 genotype, the EFAD mice allow for the study of therapeutic strategies for AD, currently focusing on understanding and targeting the interaction between AB and the different APOE genotypes (<https://ladu.lab.uic.edu/>). Available projects are diverse, including basic drug discovery and *in vitro* compound screening, biomarker validation in human AD and control subjects, and therapeutic treatment of mice using novel anti-neuroinflammatory targets, and re-purposing cardiovascular drugs to increase the lipidation of specifically apoE4-CNS lipoproteins. Research methods include primary cell culture, mouse behavior, extensive biochemistry using reagents and assays developed in our lab, and immunohistochemistry of mouse and human brain sections.

Contacts: Mary Jo LaDu (PI: mladu@uic.edu) and Ana Valencia Olvera (senior postdoc: valenana@uic.edu)

Relevant publications:

- Tai LM, Balu D, Avila-Munoz E, Abdullah L, Thomas R, Collins N, Valencia-Olvera AC, and **M.J. LaDu**. EFAD Transgenic Mice as a Human APOE Relevant Preclinical Model of Alzheimer's Disease. Journal Lipid Research. **2017** April 7. pii: jlr.R076315. doi: 10.1194/jlr.R076315. PMID: 28389477.
- Koster, K.P., Smith, C., Valencia-Olvera, A.C., Thatcher, G.R.J., Tai, L.M., and **M.J. LaDu**. *Rexinoids as therapeutics for Alzheimer disease: Role of APOE*. Current Topics in Medicinal Chemistry. **2016**, Vol. 16, No. 30. PMID: 27320328.
- Tai, L., Ghura, S., Koster, K., Liakaite, V., Maisenschein-Cline, M., Kanabar, P., Collins, N., Ben-Aissa, M., Zhengdeng Lei, A., Bahroos, N., Green, S., Hendrickson, W., Van Eldik, L.J., and **M.J. LaDu**. APOE modulated AB-induced neuroinflammation in Alzheimer’s disease: current landscape, novel data and future perspective. Invited review Journal of Neurochemistry. **2015** May 13. doi: 10.1111/jnc.13072. PMID: 25689586. PMCID: PMC4400246.

- Tai, L.M., Koster, K.P., Luo, J., Lee, S.H., Wang, Y-T, Collins, N.C., Ben Aissa, M., Thatcher, G.R.J., and **M.J. LaDu**. Amyloid-B pathology and *APOE* genotype modulate retinoid x receptor agonist activity *in vivo*. Journal of Biological Chemistry, doi: 10.1074/jbc.M114.600833. **2014**. PMID: 25217640. PMCID: PMC4215234.
- Tai, L.M., Bilousova, T., Jungbauer, L., Roeske, S.K., Yu, C., Estus, S., Bu, G., Van Eldik, L., Gylys, K., and **M.J. LaDu**. Soluble apolipoprotein E/amyloid-B (apoE/AB) complex levels are reduced in Alzheimer's disease patients and further with *APOE4* in AD transgenic mice and human samples. Journal of Biological Chemistry, 288(8):5914-26. **Paper of the Week**, February 22, **2013**. PMID: 23293020. PMCID: PMC3581407.
- Youmans, K.L., Tai, L.M., Nwabuisi-Heath, E., Jungbauer, L.M., Kanekiyo, T., Gan, M., Kim, W., Eimer, W.A., Estus, S., Rebeck, G.W., Weeber, E., Bu, G., Yu, C., and **M.J. LaDu**. *APOE4*-specific changes in AB accumulation in a new transgenic mouse model of Alzheimer's disease. Journal of Biological Chemistry, 287(50):41774-86, **2012**. PMID: 23060451. PMCID: PMC3516726.

To apply as a graduate school in the LaDu lab:

1. The students are selected via interviews with Dr. LaDu and Dr. Valencia-Olvera.
2. Once selected, the student applies for admission to the graduate program in neuroscience (GPN) <https://neuro.uic.edu/> or medical sciences (GEMS) <http://chicago.medicine.uic.edu/education/masters-and-doctorate-programs/graduate-education-in-medical-sciences/> and the Department of Anatomy and Cell Biology at the University of Illinois at Chicago <http://anatomy.uic.edu/>.
 - a. **TOEFL, GRE, and GPA:** TOEFL transcripts with 550 points in the paper version (PBT), or its equivalent, 79-80 Internet version (IBT) or IELTS of 6.0 <https://www.ets.org/>. Due to competitive nature of the PhD positions, preference will be given to students who have grade point averages greater than 3.2/4.0 and verbal + quantitative GRE scores greater than 1200, corresponding to ~308 with the revised exam. The five-year averages of students accepted: 3.53 GPA and 1266 [~ 312] GRE.
 - b. Online applications will be available at designated times at: <http://chicago.medicine.uic.edu/education/masters-and-doctorate-programs/graduate-education-in-medical-sciences/application-process/> or <https://neuro.uic.edu/apply/>
 - c. Students who apply to the Program must have a solid foundation in general biology and biochemistry. Students who do not have this background will be expected to take Biochemistry in addition to the other required courses during their first year of graduate study.
 - d. LaDu lab will provide tutoring for the admission process.
3. **Once accepted, the student receives a letter of admission from the University of Illinois at Chicago indicating “acceptance to the Ph.D. program pending proof of funding”.**
4. The student visits the CONACYT website for international scholarships: <http://www.conacyt.mx/index.php/becas-y-posgrados/becas-en-el-extranjero>
5. The call for applications will open sometime in February 2018. The student will receive tutoring for the application process. Briefly, the student requires to:
 - a. Complete the on-line form to request the scholarship: "Formato de Solicitud".
 - b. Provide the letter of acceptance from University program (see 3 above).
 - c. In collaboration with Dr. LaDu, write a description of the research project that will be undertaken during doctoral degree, signed by the student applicant and Dr. LaDu.
 - d. Provide information on the specific doctoral degree program to which the student has been admitted (duration, language requirements, tuition cost, fees).
 - e. Submit three letters of recommendation using the CONACYT format designed for this purpose.
 - f. Obtain an official transcript from your previous degree, documenting an average of 8.00 in the scale 1 to 10 used in Mexico.
 - g. Provide copies of your diploma or transcript of previous degree, passport or another document that proves Mexican nationality and CURP (Clave Única de Registro de Población).
 - h. Previous CONACYT scholarship holders must present the letter from CONACYT that gives recognition to the applicant "Carta de Reconocimiento".
6. *Applicants can contact the following if they have additional questions:*
Subdirección de Asignación de Becas al Extranjero: asignacionbextx@conacyt.mx
 - Enrique Guillén de la Cruz, Jefe de Departamento de Asignación de Becas en el Extranjero
 - Marcela Cruz Caballero, Subdirectora de Asignación de Becas en el Extranjero. Responsable del Programa
 - Pablo Rojo Calzada (projo@conacyt.mx), Dirección de Becas