Approved by the Regents
May 15, 2008

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
DEPARTMENT OF PHARMACOLOGY

Jorge A. Iñiguez-Lluhi Ph.D., Assistant Professor of Pharmacology, Department of Pharmacology, Medical School, is recommended for promotion to Associate Professor of Pharmacology, with tenure, Department of Pharmacology, Medical School.

Academic Degrees:

Ph.D.	1994	University of Texas Southwestern Medical Center
B.Sc.	1987	National Autonomous University of Mexico

Professional Record:

2000-Present	Assistant Professor of Pharmacology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Iñiguez-Lluhi has made major contributions to teaching in the Department of Pharmacology and Medical School. He assumed Co-Directorship of Pharmacology 610-Receptor Pharmacology in 2003, and Co-Directorship of Pharmacology 617-Endocrine Pharmacology in 2005. He has also taught in Clinical Pharmacology for senior medical students, Pharm 660, Biochem 650 (Mechanisms of eukaryotic transcription), and Chembio 602 (Critical Analysis II). He has also participated in numerous student seminar courses, including the Department of Pharmacology Seminar program, and has mentored graduate students in the Department of Pharmacology Student Seminar program. Dr. Iñiguez-Lluhí has earned very high "marks" in terms of his organization; his ability to make the material interesting; his enhancing of student understanding; the provision of useful handouts; and for the respect and professional behavior he exhibits to students.

Dr. Iñiguez-Lluhi has also played a prominent role in graduate education in the Department and in the Medical School, where he is a member of the Genetics Training Program, the Medical Scientist Training Program, and the Pharmacological Sciences Training Program. He has served on 13 thesis committees and 14 preliminary examination committees, six of which he has chaired. He has excelled in graduate student mentoring and has supervised three Ph.D. candidates and three postdoctoral fellows. His students have been highly productive with numerous publications in high quality journals.

Research: Dr. Iñiguez-Lluhi has made significant contributions to the fields of signal transduction involving steroid hormone action and transcriptional regulation. His research has focused on understanding the biochemistry, cell biology, and pharmacology of hormone action and cellular signaling allowing him to explore scientific problems at their most fundamental level. His latest studies have resulted in the identification of synergy control motifs as a novel class of regulatory function and the discovery of a new functional domain of steroid hormone nuclear receptors.

Dr. Iñiguez-Lluhi is in the forefront of the developing field of SUMO regulation of transcription factor function and was one of the first researchers in the world to uncover SUMO's ability to modulate transcription. The work he has published while at Michigan is carefully performed and each paper is a substantial contribution. Since 2000, Dr. Iñiguez-Lluhi has authored 11 research papers in high quality, competitive journals, such as the *Journal of Biological Chemistry, Molecular Endocrinology*, and *Proceedings of the National Academy of Science*. He has also contributed chapters to three highly regarded books over the past few years.

The SUMOylation work constitutes the major focus of Dr. Iñiquez-Lluhi's laboratory, and is supported by a RO1 grant from the National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health. He has also received funding from the National Science Foundation through a subcontract with the Illinois Institute of Technology to develop a combined, multidisciplinary, theoretical, computational, and experimental approach to multiscale modeling of concentrated macromolecules, strand networks, and concentrated block copolymers, and is waiting to learn of his funding of a new R21 proposal that was scored very high in the most recent round of NIH grant reviews.

Dr. Iñiguez-Lluhi has been invited to present his work in visits to other universities and in numerous presentations at national symposia (e.g., the 2006 Third International Conference on Ubiquitin, Ubiquitin-Like Proteins, and Cancer, a 2005 Cold Spring Harbor meeting, and the 2004 annual meeting of the Endocrine Society.) He is seen as an outstanding scientist who has established a very exciting and independent research program, and is extremely well organized, always ready with insightful ideas, and is very capable of expanding upon all of his accomplishments thus far.

Recent and Significant Publications:

Benson MD, Kieckhafer K, Li Q-J, Dudek D, Whorton MR, Sunahara RK, Iñiguez-Lluhi JA, Martens JR: SUMO modification regulates inactivation of the voltage-gated potassium channel Kv1.5. *Proc Natl Acad Sci USA* 104:1805-1810, 2007.

Chupreta S, Brevig H, Bai L, Merchant JL, Iñiguez-Lluhi JA: Sumoylation-dependent control of homotypic and heterotypic synergy by the Kruppel-type zinc finger protein ZBP-89. *J Biol Chem* 282:36155-36166, 2007.

Chupreta S, Holmstrom S, Subramanian L, Iñiguez-Lluhi JA: A small conserved surface in SUMO is the critical structural determinant of its transcriptional inhibitory properties. *Molecular and Cellular Biology* 25:4272-4282, 2005.

Subramanian L, Benson MD, Iñiguez-Lluhi JA: A synergy control motif within the attenuator domain of CCAAT/enhancer-binding protein α inhibits transcriptional synergy through its PIASy-enhanced modification by SUMO-1 or SUMO-3. *J Biol Chem* 278:9134-9141, 2003.

Holmstrom S, Van Antwerp ME, Iñiguez-Lluhi JA: Direct and distinguishable inhibitory roles for SUMO isoforms in the control of transcriptional synergy. *PNAS* 100:15758-15763, 2003.

Service: Dr. Iñiguez-Lluhi has contributed significantly in the area of departmental service. He is currently serving very ably on the Departmental Advisory Committee, the Graduate Programs Committee, and Faculty Recruitment Committees. He has also served on the PIBS Admissions Committee and the Biomedical Research Council in the Medical School. Additionally, he has contributed to student activities such as the annual Midwest Pharmacology Colloquium, the annual Pharmacology Retreat, the Department Seminar Program, and the Charles Ross Summer Student Fellowship program for under-represented minorities.

External Review:

Reviewer A: "He has and will make many significant contributions to several exciting areas of research. His work in the SUMO field is truly original, and of excellent quality....Dr. Iniguez-Lluhi is strongly engaged in teaching as well as public services, including editorial board duties, conference organization, grant reviewing and other relevant activities."

Reviewer B: "I believe he has established himself at the level of an Associate Professor, and ranks well among his peers. As such, I support his promotion at your Institution....His work is highly cited and significant to the field...he was one of the pioneers that uncovered SUMO's ability to modulate transcription. He has persevered in this newly developed area of SUMO research, and has contributed several significant publications..."

Reviewer C: "In my estimation Dr. Iniguez-Lluhi is an innovative and productive investigator, who holds much promise in the years to come. By the standards of my institution, there is no question that he would be promoted to associate professor with tenure....Should the Michigan committee rule otherwise, please advise me immediately, as we have a position ready to be filled."

Reviewer D: "...Jorge has established an important niche in the transcription and nuclear receptor fields with his excellent work on transcriptional synergy. In particular, he is probably one of the leading figures in the field of SUMO modification in transcription factor and cofactor regulation. He has an outstanding research pedigree and his productivity with regards to high quality published manuscripts and grant support has been consistent."

Reviewer E: "...I view Dr. Iniguez [sic] as a superb scientist, who has already made repeated, multiple important contributions in many diverse areas of transcriptional regulation. He is a star performer, and an individual whose work has had great impact on the field of transcriptional regulation. He is significantly more advanced in his career than most of his peers, and has extremely high potential for still greater success in the future."

Summary of Recommendation:

Dr. Iñiguez-Lluhi is a sincere, articulate, and well respected teacher as well as an innovative and outstanding scientist. He is a nationally recognized expert in signal transduction mechanisms and has made significant contributions to the study of steroid hormone action and transcriptional regulation. He has emerged as a leader in the area of SUMOylation of

transcription factors and cofactors, and is recognized for his talents in biochemistry, cell biology, and pharmacology. I am very pleased to recommend Dr. Iñiguez for promotion to Associate Professor of Pharmacology, with tenure, in the Department of Pharmacology.

James O. Woolliscroft, M.D.
Dean
Lyle C. Roll Professor of Medicine

May 2008