PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

Approved by the Regents
May 20, 2010

Alice Telesnitsky, Ph.D., associate professor of microbiology and immunology, with tenure, Department of Microbiology and Immunology, Medical School, is recommended for promotion to professor of microbiology and immunology, with tenure, Department of Microbiology and Immunology, Medical School.

Academic Degrees:

1988	Ph.D.	University of California, Berkeley
1979	B.S.	University of California, Davis

Professional Record:

2001-present	Associate Professor, with tenure, Department of Microbiology and Immunology, University of Michigan
1994-2001	Assistant Professor of Microbiology and Immunology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Telesnitsky has been a strong teacher in the classroom. Her teaching has included some of the more important courses in the school; she taught the lectures on viruses in "Microbiology" or "Infectious Diseases" for first-year medical students from 1995-2006 (co-director, 2003-2004). Her teaching in those courses was uniformly praised by the students, and in 2001 she was awarded the "Teacher of the Month" Award. In addition to her teaching to medical students, Dr. Telesnitsky has lectured on virology almost every year in various courses to virtually all student populations: undergraduate, health professionals, and graduate students. Dr. Telesnitsky has been an exceptionally successful mentor. Of the five doctoral students who did their dissertation research under her direction, two have faculty positions, two are in research or administrative positions in biotechnology, and one is performing postdoctoral studies in HIV immunology. At the University of Michigan, she has served as a member of twenty dissertation committees, spanning eight departments and two schools. Her talents in graduate mentoring have been recognized externally. She was chosen as external reviewer on four dissertation committees in the U.S. (Tufts and Yale) and abroad (Israel and Norway). Dr. Telesnitsky also was invited as the keynote speaker to a UNC-Chapel Hill Training Grant Symposium.

Research: Since her promotion to associate professor, Dr. Telesnitsky has expanded her research to include work on HIV-1, primarily investigating the mechanisms of genetic variation of HIV-1. This is an extremely important topic because recombination contributes to the ability of HIV to

evade the immune response. Her laboratory has also pioneered studies on the roles of host RNAs in retroviral replication, using Moloney murine leukemia virus as a model system. Since 2001, these studies have resulted in two reviews and eight research papers on HIV-1, and seven research papers on Moloney murine leukemia virus. This work, which will have been cited over 1000 times by the end of 2009, has been well-supported by two different RO1 grants from the NIH. Like most investigators, Dr. Telesnitsky's funding suffered a little during the recent reduction in NIH paylines, yet maintained $315,437 in direct costs and $430,589 in total costs in FY09. However, support to her laboratory has remained continuous, and there is every indication that she will return to her previous funding levels, with her recent awards from the NIH and the Gates Foundation. Her accomplishments have been well-recognized nationally and internationally. She served as a standing member of the NIH AIDS Molecular and Cell Biology Study Section for five years, as an ad hoc member on NIH virology and postdoctoral fellowship panels, and as an external reviewer of the NIH intramural AIDS Vaccine Program. She is on the editorial board of the *Journal of Virology*. Since 2001, Dr. Telesnitsky presented invited lectures at seventeen universities or scientific meetings. Dr. Telesnitsky served as organizer (with Paul Spearman) of the premier international meeting in her field, the Cold Spring Harbor Retroviruses Meeting. She has recently assembled a team of four leaders in her field and will lead them in editing a successor to the 1997 "bible" of her field, Cold Spring Harbor Laboratory Press' Retroviruses.

Recent and Significant Publications:

Duggal NK, Goo L, King SR, Telesnitsky A: Effects of homology minimization on Moloney murine leukemia virus template recognition, and frequent tertiary template-directed insertions during non-homologous recombination. *J Virol* 81:12156-12168, 2007.

Takebe Y and Telesnitsky A: Evidence for the acquisition of multi-drug resistance in an HIV-1 clinical isolate via human sequence transduction. *Virology* 351:1-6, 2006.

Onafuwa-Nuga A, Telesnitsky A, King SR: 7SL RNA, but not the 54 kd signal recognition particle protein, is an abundant component of both infectious HIV-1 and minimal virus-like particles. *RNA* 12:542-546, 2006.

Flynn JA, An W, King SR, Telesnitsky A: Non-random dimerization of murine leukemia virus genomic RNAs. *J Virol* 78:12129-12139, 2004.

Onafuwa A, An W, Robson N, Telesnitsky A: HIV-1 genetic recombination is more frequent than that of Moloney murine leukemia virus despite similar template switching rates *J Virol* 77: 4577-4587, 2003.

Service: Dr. Telesnitsky's extensive service within the University has reflected her interest in education. For example, in Microbiology and Immunology, she has chaired the Graduate Studies Committee for three years. She oversaw a complete revision of the curriculum for departmental graduate students during that time. She currently serves on the Rackham MERIT and non-traditional fellowship committee. Dr. Telesnitsky established the Michigan Infectious Diseases

International Scholars program (MIDIS) in 2004. She authored the proposal and fostered Rackham Graduate School approval (4/3/09) for a dual degree program for graduate students interested in pursuing the public health relevance of their molecular infectious disease research. Dr. Telesnitsky also founded a career development award for postdoctoral fellows in the field of retrovirology (the Andy Kaplan Prize). She raised the endowment for this award via personal contributions from more than 90 scientists, and currently chairs the selection committee.

External Review:

Reviewer A: "Her work has been characterized by a combination of well-thought-out hypotheses and clever experimental design. Within the field of retrovirology, Alice has achieved a strong reputation as an important and productive contributor, not only for her science, but also for her leadership in other areas."

Reviewer B: "Alice Telisnitsky's clever, focused work on the mechanism of recombination in retroviruses is well-known. Her rigorous and logical dissection of the steps of this process have dispelled various popular and incautious notions in the field."

Reviewer C: "She is an excellent speaker, and [I] imagine that she is also an excellent teacher, confirmed by her teaching awards. She has also served the virus community well with her participation in journal reviews, study sections and chairing meetings and meeting sessions…It is also important to note that her former trainees have done well and two of them are assistant professors…Science needs more 'out of the box' thinkers like her. Her enthusiasm for her research is unquestionable, and her research is on an upward trajectory."

Reviewer D: "…Alice has acquired a well-deserved and strong international reputation in the retrovirus and RNA virus field…I have always found her to be scholarly, collegial and helpful, and would therefore anticipate that she would not only be an outstanding colleague, but also an excellent role model – particularly for less senior female colleagues and trainees. Indeed, as her CV documents in some detail, Alice is an active contributing member of both local and national academic communities."

Reviewer E: "Alice is passionate about her work and she is a very exacting and meticulous scientist. Although viral evolution and the generation of retroviral variants is an important area of research, the study of retroviral recombination is a relatively small one and it is one that Alice dominated, nationally and internationally."

Reviewer F: "Her new work with small cellular RNAs packaged into the virion represents a careful approach that is yielding new insights and opening the door to new opportunities. These are all solid contributions that will withstand the test of time…She is viewed as a senior and established member of the virology community, one who makes solid contributions with thoughtful insights."

Reviewer G: "Her chairing sessions at various conferences and co-organizing the 2008 Cold Spring Harbor Meeting on Retroviruses, and her regularly being called as well to sit on grant review and theses committees attest to her credit amongst her peers."

Summary of Recommendation:

Dr. Alice Telesnitsky is a productive investigator whose work has gained high regard and substantial citations from the community of scientists studying retroviruses and HIV in particular. Her classroom teaching has been recognized by a prestigious award and consistently high ratings in the Medical School, and her mentoring has resulted in successful careers for the junior scientists she has trained. Nationally and internationally, she has been involved in a multitude of service functions. Her outstanding service with the University has resulted in an international program and a new joint degree program. I enthusiastically recommend Dr. Telesnitsky for promotion to professor.

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

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