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Chairman, Department of Molecular and Systems Biology

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Dr. Luis Larrondo

Departamento de Genética Molecular y Microbiología

Facultad de Ciencias Biológicas

Pontificia Universidad Católica de Chile

Alameda 340, Casilla 114-D

Santiago, Chile

Dear Dr. Larrondo, and To Whom It May Concern:

Through this letter, I am pleased to express my interest to participate as a “**Senior Investigator**” at the **Millennium Institute for Integrative Systems and Synthetic Biology (MISSB)** that you direct.

As a Senior Investigator I will providing counseling and scientific & technical support to help steering the MISSB in its scientific mission, such that it can succeed locally and internationally.

As a **Senior Investigator** I am also happy to continue the collaboration between my laboratory at Geisel School of Medicine at Dartmouth, U.S.A, with yours at the P. Universidad Catolica de Chile. As you know, our lab has over 30 years of experience in the study of *Neurospora* circadian biology, and has published over 190 manuscripts on this topic. Additionally, for much of the past decade we have been the lead institution in the consortium of groups carrying out the *Neurospora* functional genomics project in which we have systematically disrupted one by one all the genes of this model organism as well as pursuing a variety of other genome manipulations. The last version of this National Institutes of Health funded Program Project grant on *Neurospora* functional genomics supports the use of high throughput next generation DNA sequencing, ChIPseq and RNAseq to systematically map out the transcriptional regulatory pathways underlying the organism’s response to light. Given this, our lab will provide you with access to cutting edge technologies as well as further support for experiments you contemplate in your pending research grant(s).

Your progress within the past funding (MN-FISB) has been superlative. The Synthetic Biology approaches (the hybrid oscillator project) is pushing the limits of melding theory with experimentation in the circadian field. The optogenetic art- living canvas – project is startling in its level of innovation; this is potentially a foundational concept that could find use in fusion with new technologies allowing construction of computers from living cells. This level of creativity is exceptional as evidenced by the high profile publications, including for instance the Larrondo *et al.* Research Article in *Science* and Hevia *et al.* published in the *Proceedings of the National Academy of Sciences*, supported by this your previous grant.

I will be pleased to host your students for the pertinent experiments in our laboratory, as I anticipate that this will remain a very productive collaboration with MISSB as a whole. I look forward to working with you.

Sincerely,

Jay C. Dunlap

Nathan Smith Professor of Genetics

Chairman, Molecular and Systems Biology

Member, National Academy of Sciences