Institute of Quantitative Biology, Biochemistry and Biotechnology
School of Biological Sciences
University of Edinburgh
Roger Land Building
Alexander Crum Brown Road
Edinburgh EH9 3FF
United Kingdom
Tel +44 (0)131 650 7098
e-mail C.French@ed.ac.uk

THE UNIVERSITY
of EDINBURGH

29 April 2021

To Whom It May Concern:

Reference for Mr. Juan Felipe Aguilera Millacura

I am a lecturer and Principal Investigator in the School of Biological Sciences, University of Edinburgh. Felipe Millacura entered my laboratory as a Ph.D. candidate in January 2017, and is currently in the final stages of preparing his thesis for submission. I expect that he will complete his Ph.D, including viva examination, within the next few months.

Felipe's project was related to the development of a new class of cell free transcriptional system generating an RNA output. By generating a fluorescent RNA, this could be used directly in a simple biosensor, or it could be used for more complex biological computation by combining several individual RNA outputs to generate a new system, for example by generating guide RNAs for CRISPR/Cas12a to cleave templates in such a way as to create a new signal generator. Felipe successfully demonstrated the cell-free transcription-only biosensor system, which has now been submitted for publication, and also demonstrated a novel cell-based computation system, successfully implementing a three bit full adder and full subtractor, now published in Frontiers in Bioengineering and Biotechnology.

More generally, Felipe has always been a highly proactive and valued member of the laboratory, taking on many organizational responsibilities, including designing the website. He was also instrumental in our acquisition of an Opentrons liquid handling robot and training others in its use. He has supervised a number of undergraduate and M.Sc. students in highly successful research projects, as well as assisting other Ph.D. students, and has always been an excellent colleague and collaborator.
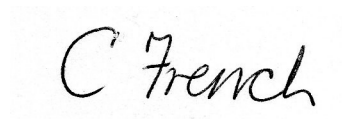
Felipe has always been very interested in computation, and more recently has undertaken extensive training in data science, including the 'Leading Digital Transformation' course offered by Massachusetts Institute of Technology. He also acted as 'Digital Research Services' ambassador in our School, advising research groups on data management. Recently he has been teaching 'Data Analysis' for the online educational organization Udacity.

Overall, Felipe is an extremely talented and innovative scientist with excellent data skills coupled with sound laboratory skills and a thorough understanding of molecular biology. I think his intelligence, energy, and creativity make him an excellent prospect for a career in

research, whether in academia or industry. I am very happy to recommend him to you in the highest terms.

I hope this is useful. If you would like any further information, please do not hesitate to contact me.

Yours Truly.

C French

Professor Christopher French.