

ID No.	K3003
Project Title	Impact of human endogenous retroviruses on virus infections, human diseases, and evolution
Principal Investigator	Robert Gifford (Senior Research Fellow, MRC-University of Glasgow Centre for Virus Research)
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Report	
<p>In FY2020, we performed bioinformatics analysis using the genome sequences of 160 mammalian species including human with <b><u>Dr. Gifford</u></b>. <u>Project 1</u>: we described the co-evolutionary history of ERVs and mammals. This study was published in PNAS (<b>It o, Gifford, Sato, PNAS, 2020</b>). We also conducted "<u>Project 3</u>: evolutionary analysis of ERVs and human diseases" with <b><u>Dr. Sasaki</u></b> and revealed the role of human ERVs on human spermatogenesis (<b>Hwang et al, Nat Commun, 2020</b>).</p> <p>Because of the emergence of SARS-CoV-2 at the beginning of this year, we started the international collaboration on SARS-CoV-2 as well. By the collaboration with <b><u>Drs. Gifford and Sauter</u></b> (the framework of <u>Project 2</u>), we revealed a role of SARS-CoV-2-encoding protein on antiviral immunity. This study was published in Cell Reports (<b>Konno et al, Cell Rep, 2020; Kimura et al, Cell Rep, 2021</b>).</p>	