

Week 2:

3. Coronaviruses have the ability to infect new hosts which has the capacity for the virus to evolve. What is the cause of the diversity of coronaviruses? Is this diversity related to the large size and replication method of the coronavirus genome?

Week 11:

4. A recent clinical trial* for bone marrow transplantation found a low engraftment level of mesenchymal stem cells. This may have been caused by immune rejection of MSCs that express foreign antigens. Should removal of the neo-gene help with this issue and increase engraftment levels of MSCs?

* **Citation:** Horwitz, E.M. et al. (2002). Isolated allogeneic bone marrow-derived mesenchymal cells engraft and stimulate growth in children with osteogenesis imperfecta: Implications for cell therapy of bone. *Proceedings of the National Academy of Sciences*, 99(13),8932-8937.