**S2\_Appendix. 2D density plots of the posterior plots for both Scenarios.** The red vertical and horizontal lines represent the true parameter values for Beta and Gamma respectively.

Graphical user interface

Description automatically generated

**Figure A. 2D density plots of the posterior plots for Scenario 1.**

Graphical user interface

Description automatically generated

**Figure B. 2D density plots of the posterior plots for Scenario 2.**