Fig.S1

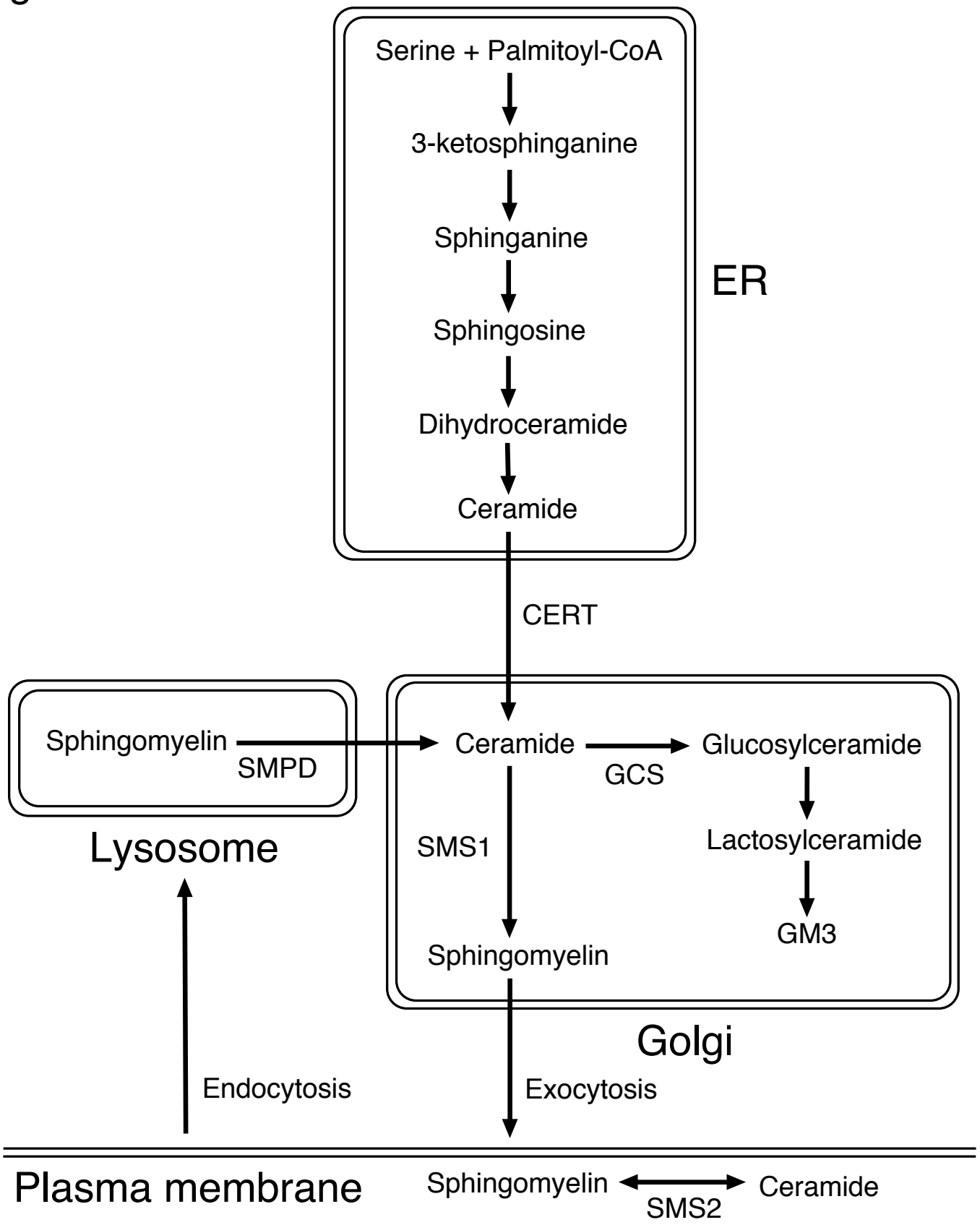

FIGURE S1. **Scheme of sphingolipids synthesis.** Sphingolipids are synthesized vectorially in cells. The initial step is condensation of serine and a fatty acyl Co-A, generating ceramide in the endoplasmic reticulum (ER), followed by a series of reactions. Ceramide is then transported into Golgi complex by CERT, a ceramide transport protein. Ceramide in Golgi complex is further metabolized into sphingomyelin by SMS1, or metabolized into glycosphingolipid such as GM3. Sphingomyelin in Golgi complex is further transported into plasma membrane, and then is converted into ceramide by SMS2. Sphingomyelin possibly flow into lysosome by endocytosis, and is converted into ceramide by sphingomyelin phosphodiesterase (SMPD).