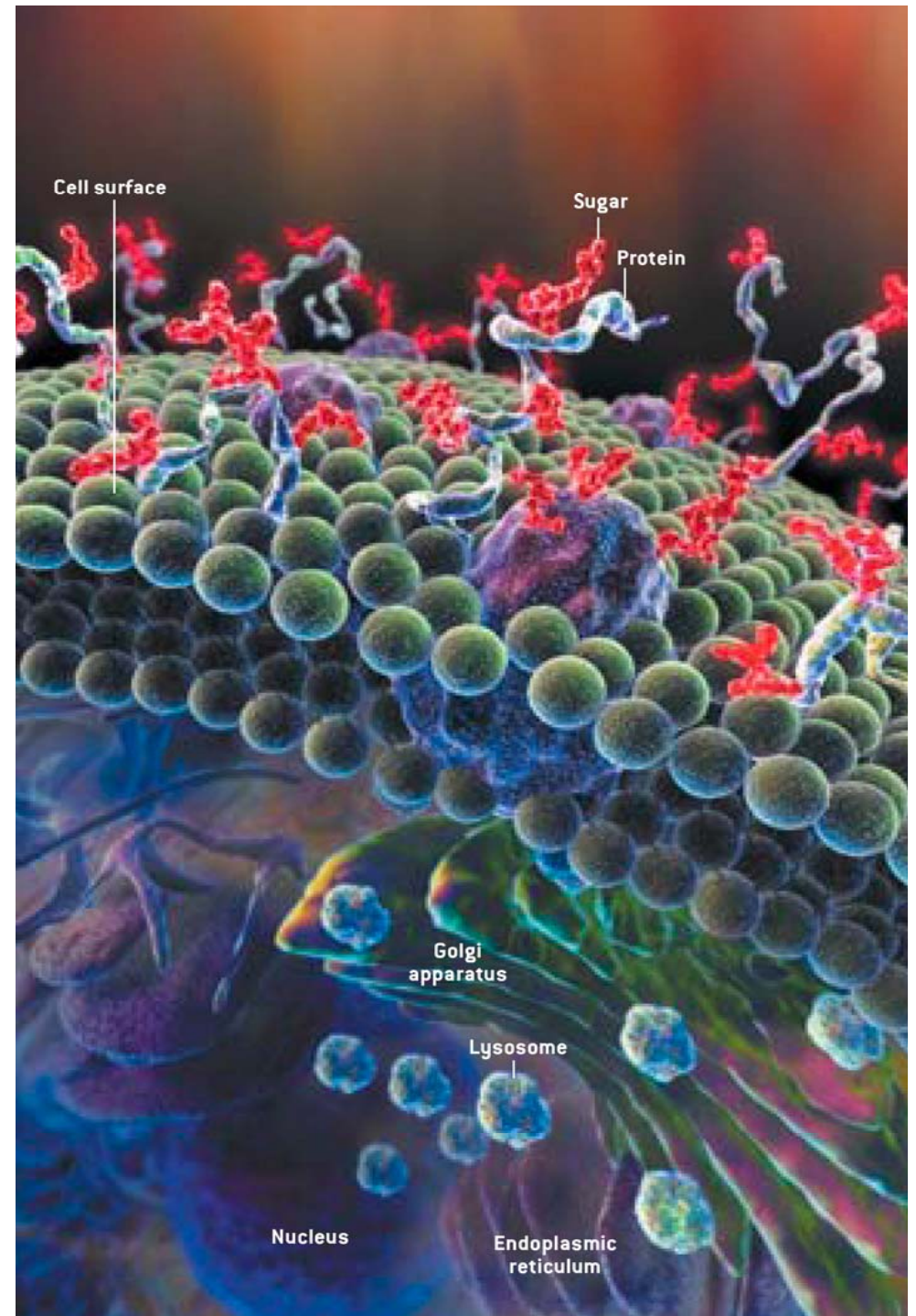
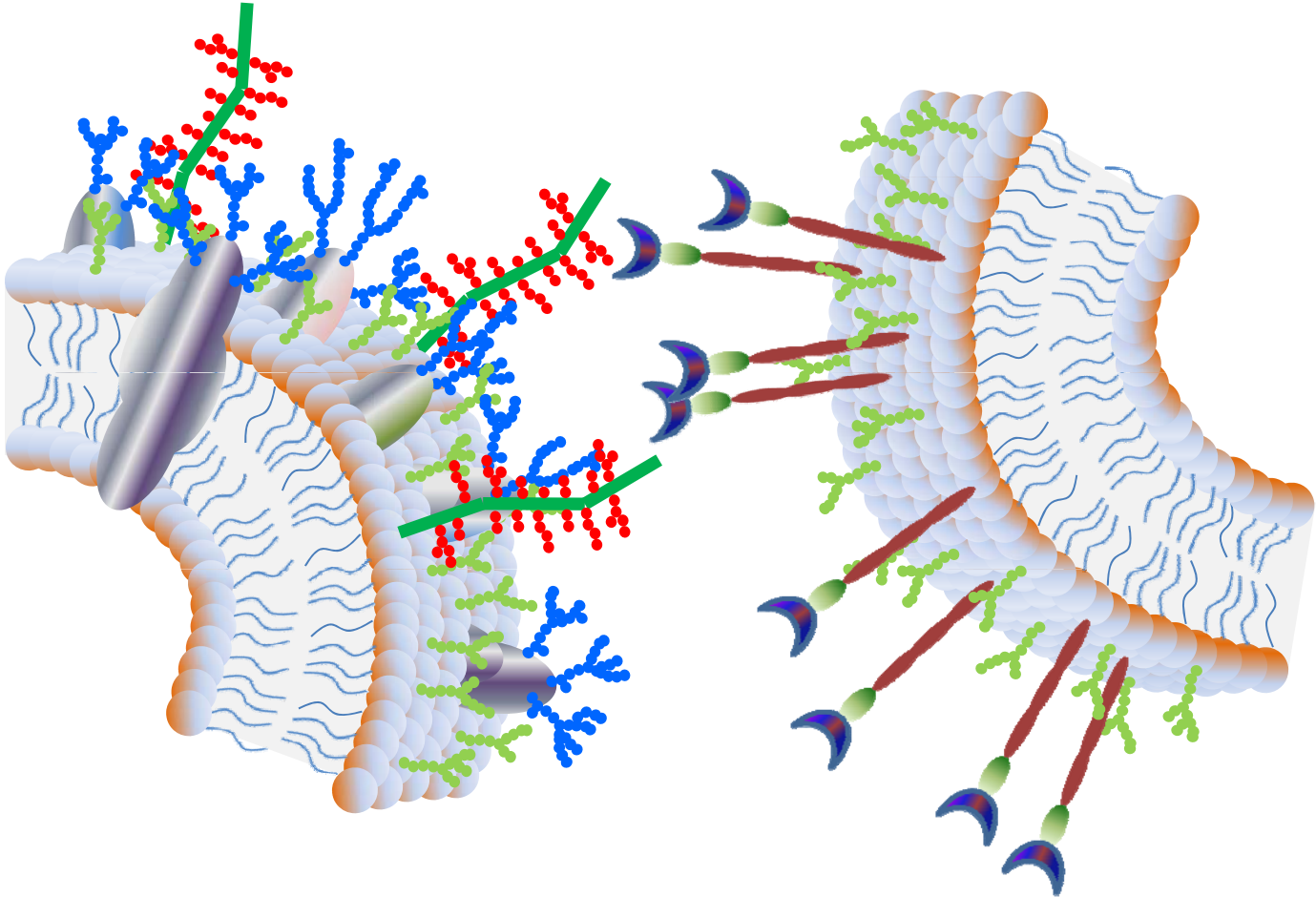






Glycoproteins constitute a large and heterogeneous class of glycoconjugates: most secreted or membrane bound/associate proteins are glycosylated



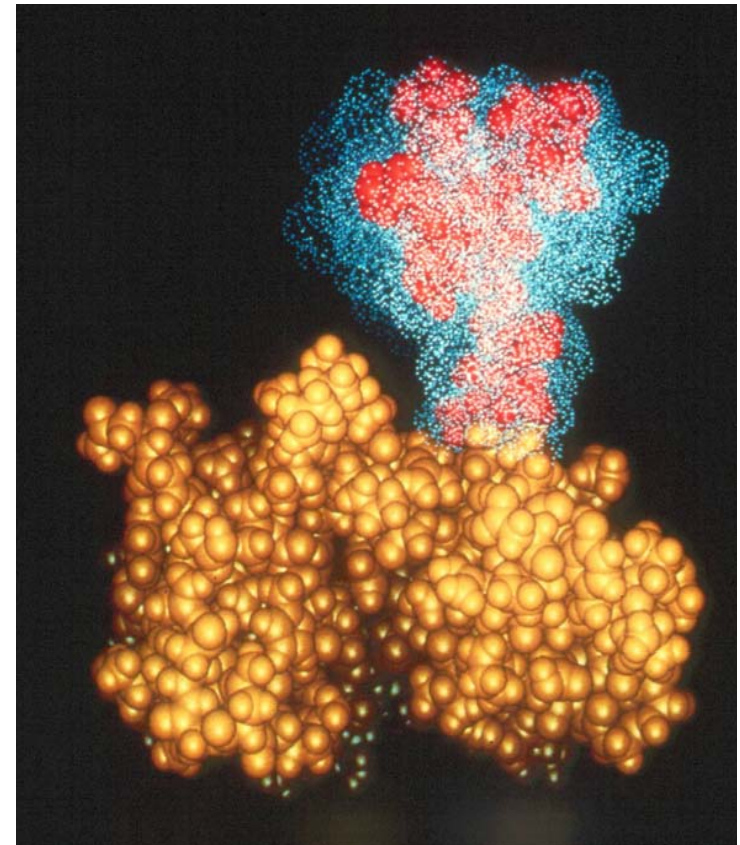
Cell-cell interactions are mediated through glycan-protein binding



-  Mucin-type *O*-glycans
-  *N*-glycans
-  Glycosphingolipid glycans
-  Glycan binding protein

Importance of the Carbohydrate Chains attached to Glycoproteins

- 50-90% of proteins are glycosylated
- Often required for biological activity
- Required for proper protein folding
- Protect against proteolysis and thermal denaturation
- Participate in the immune response
- Change with condition of the cell/tissue



Space filling model of ribonuclease B
Demonstrating the large size of the
N-linked glycan