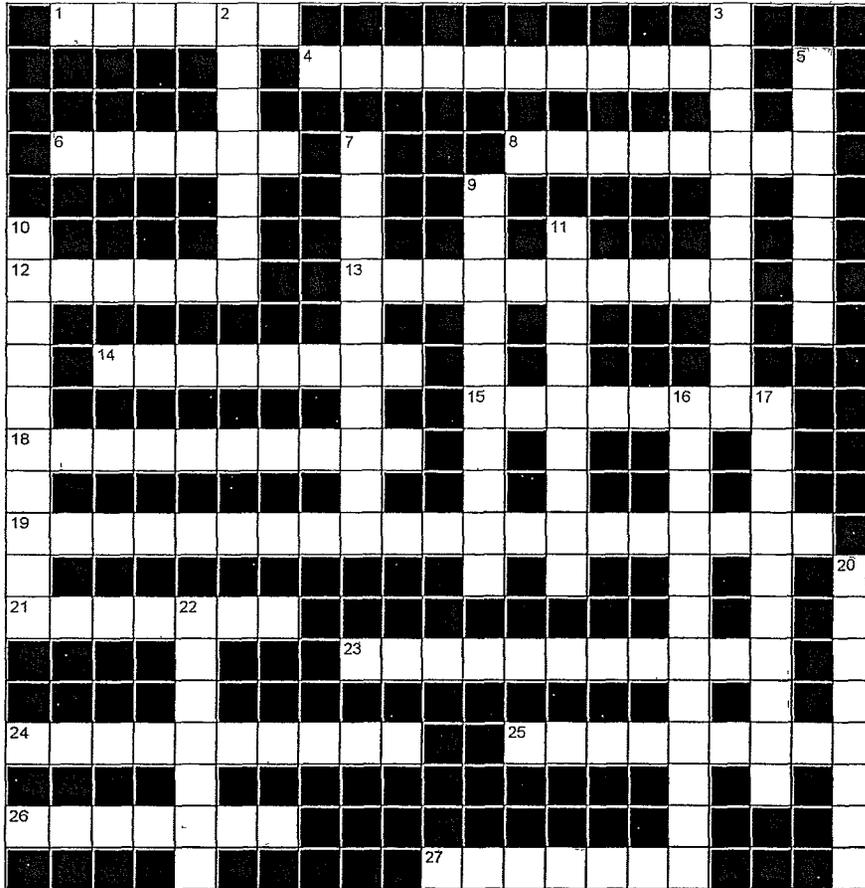


## crossword puzzle



### Across

- 1 A protein that functions as a catalyst
4. Pertaining to molecules that attract water or dissolve in it because of their polar nature
- 6 A chemically distinct subunit of a macromolecule, such as the heme and globin moieties of hemoglobin or the lipid and carbohydrate moieties of a glycolipid
8. The clinging of identical molecules such as water to each other
12. An enzyme that hydrolyzes a triglyceride into fatty acids and glycerol
- 13 Small organic molecules with an amino group and a carboxyl group, the monomers of which proteins are composed
14. A metal ion that binds to an enzyme and activates its catalytic function
- 15 A glucose polymer synthesized by liver, muscle, uterine, and vaginal cells that serves as an energy-storage polysaccharide
18. A small organic acid produced as an end product of the anaerobic fermentation of pyruvic acid, a contributing factor in muscle fatigue
19. The ability of an enzyme to bind only one substrate or a limited range of related substrates

21 A lipid molecule that consists of four interconnected carbon rings, cholesterol and several of its derivatives

23. A steroid that functions as part of the plasma membrane and as a precursor for all other steroids in the body

24 A chemical that reduces the surface tension of water and enables it to penetrate other substances more effectively. Examples include pulmonary surfactant and bile salts

25. A chemical that is acted upon and changed by an enzyme

26. Any chain of two or more amino acids

27. A hormone produced by  $\beta$  cells of the pancreatic islets in response to a rise in blood glucose concentration, accelerates glucose uptake and metabolism by most cells of the body, thus lowering blood glucose concentration

### Down

2. A disaccharide composed of two glucose monomers

3. The region of a protein that binds to a ligand, such as the substrate-binding site of an enzyme or the hormone-binding site of a receptor

5. One of the identical or similar subunits of a larger molecule in the dimer to polymer range, for example, the glucose monomers of starch, the amino acids of a protein, or the nucleotides of DNA

7. Any chemical produced by metabolism

9. A state in which one organic compound is bound to another compound of a different class, such as a protein conjugated with a carbohydrate to form a glycoprotein

10. A series of anaerobic oxidation reactions that break a glucose molecule into two molecules of pyruvic acid and produce a small amount of ATP

11. An organic molecule composed of a chain of an even number of carbon atoms with a carboxyl group at one end and a methyl group at the other, one of the structural subunits of triglycerides and phospholipids

16. A protein molecule with a smaller carbohydrate covalently bonded to it, found in mucus and the glycocalyx of cells, for example

17 A triglyceride

20. A viscous three-carbon alcohol that forms the structural backbone of triglyceride and phospholipid molecules, also called glycerol

22 Pertaining to compounds of carbon