CREATION EVOLUTION AND MOLECULAR BIOLOGY -- PROTEINS

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Comparative studies of similar proteins produced by different organisms may be thought of as comparative anatomy at the molecular level, for we may consider comparative anatomical research to be macroscopic, microscopic or molecular. Also we may evaluate various physiological phenomena as having resulted from interactions among structures having particular chemical configurations ("molecular anatomy"). We consider proteins to be homologous, in the classical sense of the term, if they demonstrate essential "anatomical" similarity.

Comparative studies on proteins have included use of blood serum and extracts of various organs from a variety of living things. Inferences have been made about degrees of similarity of the proteins depending upon quantities of precipitation obtained when different proteins reacted with a particular antiserum. In the earliest of such experimentation, investigators visually determined the amount of flocculation. Procedures have been refined to include the ring test, photoelectric quantitation of light scattered by the precipitate, diffusion in solid media (as agar and cellulose acetate), and agglutination of protein-coated particles.

In time other available analytical tools for carrying out comparative studies on whole and degraded proteins have included electrophoresis, immunoelectrophoresis, chromatography, isoelectric focusing, and radioimmunoassay. In addition, for a variety of organisms we now know the sequences of amino acids used in construction of many of the smallest homologous proteins, cytochrorne c being the most popular of these.

Studies on the molecular anatomy of proteins from various organisms generally have been in accord with data obtained from research on these organisms at microscopic and macroscopic levels. In integrating data from all levels, a creation model embodying limited changes (microevolution or diversification) has fewer difficulties than a macroevolutionary model. Rather than conceiving the world of life as terminal branches on one giant evolutionary tree, this model considers extant forms of life as belonging on a forest of trees having no physical connections. Each tree may be thought of in terms of kinds as conceptually presented in Genesis 1. Among reasons for preferring a limited-change creation model are the following

1. The Bible presents God as the Creator of life without giving details of how He did the creating. While encouraging expansion of frontiers in science, we may be relieved of the compulsion to explain everything mechanistically.
2. There are obvious reproductive barriers among groups of plants and animals, currently and historically.
3. Even though plants and animals similar at one anatomical level generally will be similar at the other two levels, there are enough exceptions to cause us seriously to question a macroevolutionary model. With a microevolutionary model we more easily can accommodate exceptions because we are obligated neither to bridge gaps nor to expand to supernumerary models of parallelism or convergence.
4. Most groups of organisms appear in the fossil record without obvious intermediates connecting them to other groups. With the limited-change model a researcher is relieved of the necessity of postulating a series of intermediate forms. When apparent intermediates become available, they readily may be incorporated into this creation model.