Proteome

The word ‘proteome’ is derived from ‘Proteins expressed by a genome’. It refers to the entire set of proteins expressed and modified by a specific cell, tissue, or organism at a certain time, under defined conditions. The proteome changes constantly in response to intra- and extracellular environmental signals; health or disease; stage of cell development; and effects of medicinal treatments. Thus, the human body may contain more than 2 million different proteins, each having different functions such as cell reproduction, growth, development, and defence against disease.

In addition, each protein can undergo a variety of modifications that further influence its shape and function. Researchers are working on developing a map of the human proteome – much like that of the human genome – that identifies novel protein families and interactions.