

With the advent of Vesalius and the development of human anatomy one might have hoped for rapid improvement in therapy, but this improvement was not immediately forthcoming. Even Harvey's discovery of the circulation of the blood and Malpighi's studies of physiology and pathology were not immediately fruitful in a therapeutic way. Paracelsus alone stands out as a reformer in internal medicine and therapeutic effort. He bravely opposed the authority of Galen, recognized the fallacy of trusting to knowledge obtained from books and relied rather upon personal observation and experience. Analysis shows, however, that even Paracelsus did but little to advance the actual knowledge of therapy.

About this time there was a wide-spread awakening in all the natural sciences. Descriptive natural science and systemization ruled the thought of the day. During the period which followed a series of medical systems developed, based upon one-sided theories and badly based generalizations; Haller's doctrine of irritability, Brown's doctrine of stimuli, Hahnemann's homoeopathy, Gall's phrenology, along with many other schools came at this period to their development.

Real progress in therapy dates from the time when natural science became an exact study. Rigidly accurate observation followed by mature reflection has led to experimentation. Medicine of this sort is only a century old. It was almost synchronous with the widening of chemical discovery and of the working out by physicists of the principles which underlie many natural phenomena which up to the time had been entirely obscure, that microscopic studies began to be prosecuted seriously. Histology developed with Bichat; the cell doctrine with Schleiden and Schwann, pupils of the celebrated Johannes Müller. The French and Germans became enthusiastic for pathological anatomy. Rokitansky counted his autopsies by thousands. The older physicians like Sydenham and Boerhaave, found worthy successors in Louis, Schönlein, Traube, and Wunderlich.

Virchow's cellular pathology established an entirely new view-point whence disease-processes could be observed. Charles Darwin's work on the "Origin of Species," Herbert Spencer's philosophy and Huxley's researches in comparative anatomy stimulated investigators in all sciences to examine into the evolution of phenomena, to consider the order of events in organic processes. Enormous strides continued to be made in physics and chemistry, and the new facts discovered in these branches permitted of the development of physiology by Ernst Brücke, Carl Ludwig, Emil Du Bois Reymond, Helmholtz and Claude Bernard. Caspar Fr. Wolff, Karl von Baer, Balfour, and His unravelled the mysteries of embryonic development. Improvements in the microscope and in microscopic technique led to a deeper penetration into the mysteries of histology and microscopic anatomy, normal and abnormal, than the most enthusiastic could have hoped for a few years earlier. New instruments of all sorts were devised. Auenbrugger's percussion and Laennec's auscultation revolutionized physical diagnosis. The ophthalmoscope, the laryngoscope and the speculum, had much to do with the establishment of the specialties of ophthalmology, laryngology and gynecology