Sir Henry Dale, The Great Investigator

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Henry Dale (1875-1968), a Londoner by birth, was one of the most productive scientists in contemporary England, and was endowed with extraordinary and active longevity. He completed his medical training from St. Bartholomew’s Hospital. After choosing to work in basic investigations, he joined the Physiology Department of University College and worked under Starling and Bayliss, and had at that time met Otto Loewi.

In 1904, an unusual offer was made to Dale by the Welcome Physiological Research Laboratory, and sponsored by an industrial entrepreneur. He was made director of research, but his freedom to pursue basic research, unrelated to pharmacological product was respected at all times. Welcome’s suggestion, on investigation of a fungus called ergot, during the 1910s, made Dale isolate a compound called ergotoxine, which had a sympatholytic action. Dale’s studies showed that it produced effect on organs, similar to those brought about by nerves that belonged to parasympathetic system and he considered it to be a humoral agent. Once he heard of Loewi’s vagusstaff, it was possible for him to show, that it was acetylcholine. He shared the1936 Nobel Prize in Physiology for with Otto Loewi, for their related investigations of the chemical nerve impulse transmission.

Dale showed the action of the extract of ox pituitary posterior lobe on the uterus. The oxytocic action of pituitrin was resolved, in a communication comparing the activity of pituitary and suprarenal extracts. He identified the compound released by cells, when injured, or when exposed to foreign proteins. This was histamine, and he showed it to be responsible to allergic reactions.

After a decade with Welcome, he joined National institute for Medical research. He was Fullerion professor of chemistry, Director of Royal Institute, and a member of MRC from 1942-46. While in his “retirement years”, his counsel on committees and programmes, kept his alert mind as active, as in the decades of great investigative fervor. He had remarkable clarity of mind, great intellectual curiosity and contagious enthusiasm. An excellent teacher, his capacity to turn detailed laboratory drudgery into a delightful intellectual exercise, was noteworthy. He was knighted in 1944.

Dale’s research and scientific communications cover a wide range of subjects and identify him as one of the outstanding physiologist and pharmacologist of the first half of 20th century.

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