Indian J Physiol Pharmacol 1991; 35(1): 1

Editorial

The heart to heart stuff

It was the Easter Sunday night in 1921. Otto Loewi, then Professor of Pharmacology at Graz, got out of bed to scribble the plan of an experiment. Next morning, he neither remembered the plan, nor could he read his sleepy scrawl. One can imagine what a restless Monday he had. On Monday night, his thoughts presumably continued to scan his brain for the lost idea, and the search was fruitful. He woke up around three in the morning, and instead of risking another sleepy note, he proceeded to the lab to perform the experiment. By 5 a.m. on Tuesday, he had made a discovery (1).

His experiment, well known to medical scientists, was briefly as follows. He stimulated the vagus nerve of an isolated frog heart, which inhibited the heart beat. Then he transferred the Ringer solution from the heart to another isolated heart. This step inhibited the heart beat of the second heart as well. He proposed that vagal stimulation led to the release of a chemical which inhibited the heart. He tentatively named the chemical 'vagusstoff', or vagus substance. His subsequent experiments, performed with his colleague, E. Navratil, employed physostigmine, and led to the identification of vagus substance with acetylcholine. The importance of the discovery lay in that it was the first conclusive demonstration that nerves mediated their effect through the release of a chemical substance.

Otto Loewi was born in 1873 at Frankfurt. As a medical student, he missed many medical lectures to attend those at the philosophical faculty (2). Soon after graduation, he worked as a clinician. But the high mortality of patients with tuberculosis and pneumonia due to limitations of medical knowledge prompted him to switch over to basic medical sciences. Besides cardiac physiology, he also made significant contributions to nutritional and renal physiology. Although he discovered vagustoff in 1921, he received the Nobel Prize only in 1936, which he shared with his lifelong friend, Sir Henry Dale. Soon after that, in the evening of his career, he was the victim of the German invasion of Austria in 1938. He was forced to leave, and compelled to transfer the Nobel Prize money to a Nazi-controlled bank. After spending some time in Brussels and then Oxford, he finally settled in USA in 1940 as Research Professor of Pharmacology in George Wallace's lab at New York University. His eventful life came to an end in 1961. On the 30th anniversary of his death, and the 70th anniversary of his discovery, we are proud to pay him a tribute with a quotation from Tom Wolfe: "The inventor needs only one thing, which is as free as the air: a terrific idea."

REFERENCES

1. Singer C, Underwood EA. A Short history of medicine. Oxford: Clarendon, 2nd Edition, 1962: 568.
2. Nobel Lectures. Physiology or medicine. 1922-1941. Amsterdam: Elsevier, 1965: 430.

Indian J Physiol Phamacol 1991; 35(1): 2

CONFERENCE REPORT

SYMPOSIUM ON HERBAL DRUGS, JAMIA HAMDARD, NEW DELHI, MARCH 15, 1991

The Conference, attended by about 200 scientists, was co-sponsored by the Indian Pharmacological Society, University Grants Commission and Hamdard National Foundation.

Pharmacological studies carried out at CDRI, Lucknow on PICROLIV, a potential hepato-protective drug obtained from a plant source, were presented by the Chief Guest, Prof. B.N. Dhawan. Prof. P. Sen, University College of Medical Sciences, Delhi, spoke on the adaptagenic effects of Indian indigenous drugs which increase non-specific resistance in a subtle manner. He specifically pointed out that *Ocimum sanctum* (Tulsi) possessed potent adaptagenic activity. Prof. P.C. Dandiya, from the host Institute, reviewed the work done on CNS drugs in the country incorporating his own findings and proposed future strategies to explore their potential. He provided evidence of the presence of pain relieving properties in "Nimbidin" fractions from *M. azaderach*, the Neem tree. Dr. Rajendra Gupta from Indian Agricultural Research Institute and Prof. Quadry from Jamia Hamdard highlighted the problems of evaluation and quality improvement in raw materials and pharmaceutical formulations repectively.