

Editorial

Pursuing original research in Medicine

Most of the research published by Indian physiologists is gradually shifting focus to 'application' domains. Such as effect of 'X' intervention on 'Y' disease or 'Z' state. Here the 'X' is a known intervention. Therefore, such research cannot be called as original. Even if 'X' and 'Y' or 'Z' are new to each other, I would hesitate myself to call this as original research.

Being in an important position in research domain, the physiologists occupy a unique position and therefore have both, the opportunity and the responsibility to indulge in original research. Original research means, the discovery of fundamental mechanisms that explain physiological phenomenon. For example Prof. A.S. Paintal, a celebrated Indian physiologist, discovered the mechanism of cardio-respiratory response to interstitial fluid pressure/volume in lungs of anaesthetized cats, resulting in the discovery of 'J' receptors. This, is original research in the truest of notions. He, later, characterized the 'J' receptors, resulting in the advancement of science. This brought laurels to Prof. A.S. Paintal, Patel Chest Institute, Indian physiology community and to our country. This is the concept of original research which each one of us needs to contemplate deep inside.

The time has come to put a system in place to encourage original research in physiology. Currently any physiology lab has the material potential to become better than what Prof. A.S Paintal created by himself, and the funding is much more than what existed in mid 60's in the country.

For original research, we need to nurture the curiosity in young scientists and help them in developing the art of scientific questioning. We need to encourage them to pursue goals to the limit. This is the very thought that brings originality in research.

The original research provides a significant impact to the development of medical sciences in the country and to the world at large. The funding of original research provides the ammunition for translational research. Without original research, the translational research will be futile. In a complex manner, innovation and original research are connected to the country's economy.

The original question may take birth in Physiology during ongoing research for it may be generated during interaction with clinical colleagues. Therefore, the department and senior colleagues need to create such opportunities for youngsters, who should be equally alert and receptive to catch them. To encourage original research, brainstorming sessions may be conducted by experts in the department or during conferences or public defense. Innovation through challenges is another active mode of original research.

On a happy note, Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Council of Scientific and Industrial Research (CSIR) and *Department of Biotechnology (DBT)* have defined mandate to support fundamental and original research. Anybody who has a brilliant idea alongwith necessary research skills is surely on the path of success.

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