

## Editorial

### Declining Experimental Skills Among Physiologists

The practice of Clinical Physiology requires some basic physiological facts that can be translated into application. Maintaining a continuous development of Clinical Physiology would require regular experimentation on basic issues involving animals. With reference to the value of animal research an important statement has been published by Indian Council of Medical Research (ICMR) (1) – “It must be emphasised that use of animals in research is inevitable and cannot be abandoned in the interest of human and animal welfare. Animal experimentation is necessary at the current level of knowledge for studying the pathogenesis of different disease, undertake drug trials, and generate a variety of biologicals such as immuno-diagnostics, vaccines to alleviate suffering in the human and animals themselves”. Thus, it is needless to say that the animal experimentation is important for generating basic knowledge.

What has been observed over several decades that there is a serious decline in animal experimental research in general. This fact is obvious when we see the scenario in medical institutions/colleges as well. An analysis of publication of articles in Indian Journal of Physiology and Pharmacology (IJPP) is an eye opener. We analysed all article published over last 4 decades (decade wise). The analysis shows that over four decades the number of articles pertaining to animal research were 72% (354/491 during 1975-1984), 58.2% (296/508, 1985-1994), 51.8% (318/613, 1995-2004), and 27.4% (140/511, 2005-2014). The analysis of the publication trends in our journal for last decade (from 2005 to 2014) shows maximum decline in publication emanating out of animal experimentation. Further, the comparative study of first five years and last five years (during last decade, 2005-2014) reveals about 50% decline (from 92 articles to 48 articles) which is quite alarming. We are aware of the fact that our journal includes research articles from pharmacology, and this might dilute our conclusion. Although it is the analysis of single (yet widely circulated) Indian Physiology journal, we believe that it is reflecting the general trend of declining basic physiological research involving animal experimentation.

Two important factors that may be responsible for the decline are- animal activism and growing trend of clinical physiology. It is not certain whether these two factors have evolved independently or potentiated each other. There might be another reason for this decline. There is no doubt that clinical physiology has instant benefits and much more rewarding- professionally and socially as well. It is a fact that it has been given a push some decades ago (2, 3). The funding too is being facilitated to applied sciences.

The direct impact of declining integrative experimental Physiology may have resulted in the reduction in core research competence in animal experimentation. In larger perspective the country is unlikely to make headway in science in absence of basic research.

There is need to ponder on this issue and re-build the capacity across our country to pursue fundamental research in the field of Physiology. We must pursue research which should have long lasting impact in medical sciences. Thus, we need to work out a balanced approach for sustaining holistic growth of skills used in Physiology in our country.

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### References

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