



**E-ZINE OF BIOLOGICAL SCIENCES**

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**TOPIC: A HIGH-END SOPHISTICATED LABORATORY IS ESSENTIAL TO UNDERTAKE GOOD SCIENTIFIC RESEARCH**

**View Point 1**

In science education, laboratory experience is the most crucial part of learning where students experience the pros and cons of every single study they undertake. Practically visualizing, experiencing and analyzing the study are what science is known for. In this 21<sup>st</sup> century, growing technology is a boon to the researchers. With the advent of advanced technology, studies are nowadays more accurate and less time-consuming. In science, explanations are required to be correlated with the observed data obtained from the study; this is where the laboratory plays the most important role. A high-end sophisticated laboratory is what a researcher needs at this point of time.

To understand and step into the advanced science education, a sophisticated laboratory experience is the key source. To interact directly with the material world, laboratory experiences provide opportunities for the researchers using the tools, data collection techniques, models and theories of science. Earlier due to inadequate laboratory facilities, researchers faced many problems regarding contamination of samples, inaccuracy of the data (due to whatever the errors may be) as a result of which the studies were prolonged, as they consumed much time to correlate the data with the study and the expected outcomes. Nowadays, due to the sophisticated laboratory facilities, the errors are extremely less due to computerized automated devices, as a result of which researchers can use their valuable time in some other important studies. Hence we get more accurate results in less time with improved data. Hence, I believe we should save the most expensive thing in the world "TIME" using the sophisticated, high-end laboratory facilities in the field of science.

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## **View Point 2**

It is said that to do the right thing, you need the right tool and it applies to everything. For example, to take a good photograph, you need a good camera; then only a good quality image can be produced. Same thing goes for a scientific research also. A good scientific research always needs a high-end sophisticated instrumentation facility. In science experiments, failure is evident and without failing an experiment, we hardly know anything new but in every step, the results depend on the performance and handling of the instruments. Also, the lab must be equipped with proper instrumentation facilities so as to smoothly run the experiments. Every scientific research undergoes multiple steps and the final outcome depends on the very basic steps. Every experiment in science demands unbiased results for a research to be successful. If the results are biased, then there's no point that it can be called a 'good result' which leads to wastage of time and resources. So, there is more chance that a high-end sophisticated lab would yield better and less bias results. Moreover, one just can't go beyond a certain limit in a lab which has limited instrumentation facilities which may stand as a barrier in accomplishing a good scientific research.

Now-a-days, numerous cutting edge technologies have emerged which is helping us in understanding the science behind every aspect of life. These techniques have led us to carry out research in a very sophisticated way even in subatomic level in physical or chemical sciences, or be it in biological sciences. So, without sophisticated instruments, it will not be possible to carry out good scientific research. However, a good scientific research always depends on correct handling of the instruments also. Lesser the human error more appropriate the results will be. Therefore, a high-end sophisticated facility is always an integral part of a good scientific work.

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Topic for the next issue is “**Biodiversity of a state can be best preserved through Protective Area Regulations.**”

BABRONE