

Chronicles of Young Scientists, April 2011



It is a great pleasure for me to introduce to you the second issues of *Chronicles of Young Scientists* (CYS). As you are aware, *CYS* is a journal focusing on various areas of biomedical research that directly impact healthcare. The focus of biomedical researchers, though diverse, aims to answer questions that will lead to translation of research into clinic and improve the quality of life of the general population. Research ideas are derived from various branches of science including biochemistry, molecular and cellular biology, pharmacology, physiology, genetics, biomedical engineering, public health and epidemiology, to name just a few.

Over the last decade, the world has undergone a huge amount of transformation. The explosion of information and the access to it via technological advances has transformed the way we perceive and do things. Technology has provided us a medium to reach out to the global audience to share our thoughts and work and at the same time provide an opportunity to learn from others. One more area that has seen explosive growth is the increase in population. It is estimated that by 2020, the world population will be about three times of what it was in 1950. The supply of nonrenewable resources at our disposal is finite. We will have these limited resources to improve the living standard of the people of the world. The population growth trend has far-reaching consequences. The need for food, water, energy and materials is going to increase dramatically, but we will also have to find alternatives to safeguard the supply of these ever precious and fast depleting resources for the distant future.

Innovation will lead the way toward this goal. The demand for innovative solutions to sustainable energy and food production will continue to rise. As the population grows, healthcare cost will also continue to rise. Demand

for diagnostics, medicines and therapies will increase substantially. To this end, research and development will provide affordable solutions for prevention, diagnoses, and treatments of diseases and improved healthcare. Easy access to information will allow the public health communities to raise public awareness of issues such as food and environmental safety, disease management, healthy lifestyles and behaviors. Scientists, through their innovative work and with the aid of technology, can serve as a bridge to the society and contribute to the betterment of humankind.

To this effect, the current issue of *CYS* presents articles from a wide spectrum of scientific fields. The review article “Chronological development avenues in biotechnology across the world” provides a fascinating timeline of the development and emergence of the field of biotechnology as a mainstream science from a prehistoric period to the 21st century. The second article focuses on “Strategy and scenario for wetland conservation in India”, emphasizing how important the ecosystems are to the well-being of mankind, and efforts aimed at their conservation will create an ecologically sustainable future. In addition, the research papers on pharmaceutical analysis and excipient evaluation for drug delivery are fascinating. To reduce the toxic effects of drugs, delivery of the drug to the site of action is critical. The research paper “Pectin-based colon-specific drug delivery” specifically looks into approaches of achieving targeted drug delivery to the colon for treatment of local colonic, as well as systemic diseases like Crohn’s disease, colorectal cancer, etc. Quantitative estimation of active pharmaceutical ingredients in bulk drugs and dosage form is very important to ensure accurate dose and purity. Three research papers discuss the estimation of various drugs in bulk and pharmaceutical dosage forms using spectroscopic and chromatographic techniques. Another area of research that is touched upon is how disease or risk for disease can be detected. This is especially true for lifestyle diseases such as diabetes and cardiovascular diseases. Blood glucose in diabetes and blood pressure in hypertension are considered classical biomarkers for these two diseases, respectively. The need to identify additional biomarkers for similar conditions is critical. The research paper “Hemoglobin: Emerging marker in stable coronary artery disease” discusses one such approach. The paper talks about how hemoglobin and its decrease in stable coronary artery disease can be a biomarker for the disease.

Access this article online	
Website: http://www.cysonline.org	Quick Response Code 
DOI: 10.4103/2229-5186.82967	

As mentioned, this issue presents an opportunity to explore a wide array of topics in area of biomedical research. I hope you will find the reading intellectually stimulating. I also encourage all our readers and authors to keep submitting research ideas. With the support of our reviewers, editors and publication staff, we will strive to provide our readers with the highest quality of research articles. With your help, we can expand the horizon of the reach of this journal.

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How to cite this article: Deshmukh R. Chronicles of Young Scientists, April 2011.
Chron Young Sci 2011;2:69-70.