

IFCC Task Force for Young Scientists Educational Symposium  
ACBICON-2014, Jodhpur, India



“Research Design & Methodology—Identification of Need”

*by Dr. Pradeep Kumar Dabla  
Chair IFCC-TF YS*

...r, Rajasthan, India - 11th December 2014.  
...ch in common parlance refers to a search  
...nowledge. One can also define research as a  
...ic and systematic search for pertinent infor-  
...on a specific topic. Thus, the purpose of re-  
...is to discover answers to questions through  
...plication of scientific procedures.

...sk Force Young Scientists (IFCC-TF YS) in col-  
...ion with Association of Clinical Biochemists  
...a (ACBI) conducted a 5th Symposium on 11th  
...ber 2014 for young colleagues from labora-  
...edicine.

...gramme was well attended by more than one  
...d participants from India & abroad including

...senior members from the IFCC, APFCB & ACBI. The  
...event was hosted by organising committee **ACBI  
...Conference (ACBICON) 2014 & Dr. Praveen Sharma**  
... (Organising Secretary). It was organised at the All  
...India Institute of Medical Sciences (AIIMS), Jodhpur,  
...India.

...This workshop covered the research process, an  
...overview of qualitative and quantitative methods,  
...data collection, recording and analysis and final  
...output of a research proposal. It helped students to  
...understand the basics of research process including  
...the identification of a topic, preparation of a research  
...proposal and final research report, assessment  
...criteria for this and associated timelines.

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Participants at the ACBICON-2014 symposium, including IFCC president, Dr. Graham Beastall and IFCC president-elect, Prof. Maurizio Ferrari

The concept of these activities is to encourage interactions & networking between young scientists along with education in the field of laboratory medicine & research. In India, with collaborative efforts of ACBI & IFCC, the IFCC-TFYS has organised educational workshops/symposium every year in the National Conference, meaning in 2010, 2011, 2011, 2013 & 2014.

Addressing the conclave, **Dr. Graham Beastall** (President-IFCC) praised the Task Force initiatives and stressed upon the need to share experiences and strong networking activities. **Dr. Jayashree Bhattacharjee** (President ACBI) gave a welcome addresses and summarised the ACBI initiatives for the young biochemists. **Dr. Pradeep Kumar Dabla** (Convener and Chair IFCC-TF YS) summarized the Task Force

objectives, members & activities conducted. He assured the commitment of focused training and education to strengthen the future prospects of young laboratorians.

The first session was chaired by **Dr. Maurizio Ferrari** and **Dr. Howard Morris**. **Dr. Graham Beastall** initiated the session by sharing his academic experience in UK & worldwide as researcher & granting authority. He explained the increasing role of Health authorities in medicine. The future specialist in Lab Medicine will require a strong background in the basic medical sciences as well as highly developed clinical skills. It is needed to develop the robust Laboratory Medicine and clinical research programmes to improve health care and wellness of the population.

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Next, **Dr. Pradeep Kumar Dabla** (Chair IFCC-TFYS) gave a basic *Introduction to Research Design*, explaining what research is and its various steps in brief. Research process consists of series of actions or steps necessary to effectively carry out research and the desired sequencing of these steps. Research comprises of defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organising and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis. **Prof. Venkat Parameswaran** (School of Medicine, Univ. of Tasmania) continued detailing *Literature Review using the Internet Support & Theoretical Approaches*. He said "One of the most difficult steps when considering research is to choose a right topic of interest". This job of locating the background information through systematic literature review nowadays has been made easier through web-based "virtual library" facilities. Experimental approaches and analysis defines the information that is obtained.

Second session was chaired by **Dr. Endang Hoyaranda & Dr. Jayashree Bhattacharjee**. **Dr. Archana Singh** (Asst. Prof., Biochemistry, AIIMS Delhi) described various quantitative and qualitative methods in detail. Generally, health science research follows the empirical approach, i.e. based upon observation and experience and deals with information of a quantitative nature. In either approach, statistical reasoning using the laws of probability guides the inferential process. Based on these calculated probabilities, the hypothesis is accepted or rejected.

In the end, **Dr. Graham Beastall** guided how to draft a research proposal and fine details required. He

said: "The way in which a research proposal is structured and worded will have a significant impact on its likely acceptance". He stressed on allowing plenty of time to prepare the submission. Formulate your research proposal into a hypothesis or series of questions informing the 'Aims, Objectives and Outcomes' of your proposal to submit in time.

To summarize, the workshop has provided attendee's sufficient understanding of the major paradigms of qualitative and quantitative research and to provide a basis for further examination using preferred method. This session has provided a vision to understand the research process including the identification of a topic, preparation of a research proposal and final research report and associated assessment criteria to prepare research proposal. Following the success of this symposium the IFCC Executive Board is considering a new project to support YS to become involved with clinical and scientific research.

**For more information and queries:**

**Dr. Pradeep Kumar Dabla, MD**  
Assistant Professor  
Head, Department of Biochemistry  
Chacha Nehru Bal Chikitsalya  
Associated to Maulana Azad Medical College  
and Assistant Professor  
Department of Biochemistry  
G.B. Pant Hospital & Institute of Postgraduate  
Medical Education Research  
Delhi, India  
Email: [pradeep\\_dabla@yahoo.com](mailto:pradeep_dabla@yahoo.com)  
091-9643308236



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