

The Basic Concepts of Scientific Research and Scientific Communication

14 and 15 December 2011

(A pre conference workshop to the 63rd Indian Pharmaceutical Congress,
Bengaluru)

Get a solid grip on research process, learn to write an effective study protocol/research proposal, get a handle on data analysis, master basic elements and logistics of writing a scientific paper/thesis — and climb the ladder of success in your research career!

Scientific research must follow standard processes and norms. Understanding these processes is a key step in scientific enterprise and essential to success in one's scientific career. Beginners in research with a passion to discover need guidance. This workshop provides that guidance through topics such as creativity, critical thinking, the generation of multiple ideas, searching biomedical literature, review of literature, protocol and proposal development, data analysis and the ethical and responsible conduct of research. Finally, successful work is wrapped up in the form of a thesis or publication. The writing tells the story of the project undertaken, right from the thought process to the answer one finds to the key question. All of these areas are often unfamiliar to young researchers; thus, the purpose of this workshop is to teach them to progress successfully from the critical steps involved in the development of an idea to its execution and eventual publication.

The two-day workshop is formatted to include key lectures and interactive breakout sessions such as writing a protocol in different subjects in pharmaceutical sciences, statistical analysis, writing results and discussion. Thus, the aspiring researcher training is two-pronged. **The first step** is to teach the basic concepts of scientific research: how to formulate a problem, how to develop a study protocol or research plan and to describe the *what*, *why*, and *how* of the protocol, literature search and review, study designs, statistical issues, result analysis and data interpretation. What we envision at the beginning of a study largely defines what we will do, how we will do it, how we will analyze it, how we will interpret it and what its impact is on society. **The second step** tells the success story of the project in the form of a written communication. The basic elements and logistics of writing a scientific paper or thesis will be taught systematically.

In two fast-moving days, the attendee will:

1. Have an understanding of the sequential steps in developing a study protocol: from choosing a research topic to developing research questions and a hypothesis
2. Understand the typical format and elements of a study protocol and their importance in driving the study to completion
3. Know how to prepare study protocols on different topics in their subject of specialization
4. Know why and how to review literature for a research project
5. Know how to perform electronic literature searches
6. Be able to correctly cite sources of information
7. Appreciate the importance of statistics in designing the study and analysis of results
8. Know what goes into a thesis protocol and how to make an impact on the thesis
9. Be familiar with the writing system and components of a research paper (IMRaD)

10. Recognize the value of good title, abstract, key words, etc., that maximize the retrieval potential to a number of people who may be searching similar articles through web-based databases
11. Comprehend the importance of Tables and Figures in Results, and their importance in describing findings
12. Value the evidence-based Discussion in a research paper
13. Be acquainted with language and style in writing a paper and the rules to get published
14. Have knowledge of scientific ethics that they will face in their career
15. Know how to present research findings in a conference (oral and poster)

Course content

Section A. Research process

1. Steps involved in developing a research protocol: from choosing a research topic, identifying the research question to writing a study protocol
2. The typical format and elements of a study protocol and their importance in driving the study to completion
3. To prepare study protocols on different topics in 5 different subjects in pharmacy (attendees selection of a subject is required)
4. Review of the literature
5. Searching the biomedical literature
6. Reference style, bibliography
7. Biostatistics: descriptive statistics, inferential statistics- hypothesis testing, ANOVA, sample size calculation, design of an experiment, etc.
8. Research and publication ethics

Section B. Scientific writing

1. How to write a good scientific paper
2. Structure of a research paper: IMRaD style
3. Writing different components of a paper: emphasis on **results** and **discussion** sections of a paper
4. Thesis writing
5. Writing style, grammar, common errors
6. Working with journals: writing cover letter, peer review process, impact factor, etc.
7. How to prepare posters or do oral presentations at conferences

Who should attend?

1. This training is critical for young researchers, M. Pharm, Ph.D. & Pharm D students.
2. Pharmacy teaching faculties and research scholars.
3. Industry professionals working in R&D, QA/QC and Regulatory Affairs.

It's ideal for faculty at all levels who:

- Have never received formal training in these core skills
- Have been out of touch for a while and need to brush up
- Wish to achieve academic improvement and professional excellence

It's also great for anyone who wishes to become skilled mentors for their PG students.

Reference book: BIOMEDICAL RESEARCH: From ideation to publication. Jagadeesh, Murthy, Gupta and Prakash (Eds). Wolters Kluwer, LWW., 2010.

If you have any suggestions or concerns on the topics covered in this workshop, kindly address them to:

Dr G Jagadeesh

Senior Expert Pharmacologist
Division of Cardiovascular and Renal Products
US Food and Drug Administration
10903 New Hampshire Avenue
Silver Spring, Maryland 20993, USA.
Preferably by email: jagadeesh49@yahoo.com.

Venue: Al-Ameen College of Pharmacy

Hosur Road, (Near Lalbagh Main Gate)
Bengaluru- 560 027, Karnataka, India.

Preconf workshop registration fees:

Registration deadline: **October 30, 2011**.

For Students and Teaching Faculties Registration Fee Rs. 1000/-

For Industrial Professionals Registration Fee Rs. 3000/-

(Complementary lunch and tea will be provided during the workshop)

No Spot Registration

Registration is limited to first 120 participants only.

Registration form along with the registration fee should reach on or before registration deadline.

Mail your Preconf workshop registration forms to:

Dr Mohammed Naseeruddin Inamdar
Professor & Head, Department of Pharmacology
Al-Ameen College of Pharmacy,
Hosur Road, (Near Lalbagh Main Gate),
Bengaluru- 560 027, Karnataka, India.
Mobile Number: 9448302549,
Tel: 91 80 2211 3861 (direct) 2223 4619 (ext. 227)
Fax: 91 80 2222 5834.
E Mail: inamdarn@gmail.com

Please super scribe the envelope with **“Preconf workshop 14-15 Dec 2011”**.

**Preconf workshop Registration Form
(Photocopies can be used)**

1. Name:
(in capital)

2. Designation:

3. Qualification:

4. Age:

5. Sex:

6. Official Address:

7. Phone: (Off)

(Mobile)

8. Email address:

9. Please tick a subject of your preference:

Day 1: Subject Preference (Please write 1 and 2):

Subject	Write your preference here
Pharmacology	
Pharmaceutics	
Pharmaceutical Chemistry	
Pharmacognosy and Phytochemistry	
Pharmacy practice	

Reservations are made on a first-come-first-serve basis. Registration closes as soon as all seats are filled. Preference for registration will be given in the order: MPharm., PhD., Junior, Senior faculties and Industry Professionals.

Registration fee details:

Duly filled registration form & DD/ Pay order in favor of "**63rd INDIAN PHARMACEUTICAL CONGRESS**", BANGALORE. (BANK: STATE BANK OF MYSORE. S.B. A/C NO. 64075732678) is to be submitted before the deadline.

Date:

Signature of the participant: