



Academies of Sciences'
Refresher Course on
“Molecular Biology of Cell”
at
Department of Biochemistry
University of Kashmir



October 23, 2017 to November 06, 2017

(BROCHURE)



Ram Ramaswamy, Ph.D

President,
Indian Academy of Sciences, Bengaluru

M E S S A G E

I am very pleased to extend a warm welcome to the participants of the refresher course on "Molecular Biology of Cell" at University of Kashmir. The first refresher course to be organized by the Indian Academy of Sciences that will be held in the state of Jammu and Kashmir, this two-week program forms an important segment of the activities of the Joint Science Education Panel of the three Science Academies. The primary focus is to enhance the quality of science education at undergraduate and graduate levels. I therefore hope that this refresher course will improve your background knowledge, teaching and practical skills which will eventually help you to be more effective in the classroom and thereby benefit your students.



We are grateful to the University of Kashmir for their generosity in hosting this refresher course. I wish all the participants an exciting learning process, and hope that this is just the first of many such programs to be held in the state of J&K. All the best!

(Prof. Ram Ramaswamy)



Khurshid I Andrabi, Ph.D
VICE CHANCELLOR

MESSAGE

To promote excellence in scientific research and teaching, University of Kashmir is laying emphasis on building and nurturing the new talent among its faculty, research scholars and students. In this regard, we are consistently organizing different workshops, symposia and conferences throughout the year in our campus.



This helps our faculty, research scholars and students to update their knowledge with the current trends in their respective fields of study.

It is a feeling of immense pleasure to host Indian Academy of Sciences refresher course "Molecular Biology of Cell" at University's Department of Biochemistry. I strongly believe this refresher course would be of immense help to selected participants who will acquaint themselves with current trends in the fields of Biochemistry, Molecular and Cellular Biology, Immunology, Bioinformatics and Molecular Modeling and others. Moreover, the mix of local and outstation candidates participating in this refresher course would provide them a great opportunity for intellectual and scientific interaction and sharing of knowledge.

We are thankful to Indian Academy of Sciences for conducting this first ever refresher course in our state of Jammu and Kashmir at University of Kashmir and we wish many more of such courses and workshops from the Academy to be held in our campus in future.

My best wishes to all participants, organizers and resource persons who are part of this refresher course.

A handwritten signature in purple ink, reading 'Khurshid I Andrabi'.

Prof. Khurshid I Andrabi

University of Kashmir, Hazratbal, Srinagar - Kashmir J&K, India

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Suman Kumar Dhar, Ph.D

Course Director
Special Centre for Molecular Medicine
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M E S S A G E

It gives a wonderful feeling to conduct Indian Academy of Science's refresher course "Molecular Biology of Cell" in coordination with Department of Biochemistry, University of Kashmir. It will be a great opportunity for the participants to get recent and updated information in the specific areas of Molecular Cell Biology. In addition to theoretical lessons, the participants will be able to learn several of the molecular biology techniques that have been included in the practical sessions.



My best wishes to all the participants, resource persons, organizers for a successful refresher course.

Suman Kumar Dhar

(Prof. Suman K. Dhar)



Akbar Masood, Ph.D

Head, Department of Biochemistry
University of Kashmir

M E S S A G E

We are very excited to host the Indian Academy of Sciences refresher course "Molecular Biology of Cell" at our Department. Hosting the participants from across the country is a great pleasure for us. We have tried to develop the program in such a way that



the selected candidates get an opportunity to acquaint themselves with the recent trends in the field of Molecular and Cellular Biology research.

I extend a warm welcome to you all and wish a fruitful and comfortable stay at University of Kashmir.

A handwritten signature in black ink, appearing to read 'Akbar Masood', with a horizontal line underneath.

(Prof Akbar Masood)



Mohd Ashraf Dar, Ph.D

Course Coordinator
Department of Biochemistry
University of Kashmir

M E S S A G E

It is a great pleasure to act as course co-ordinator for Indian Academy of sciences sponsored refresher course "Molecular Biology of Cell" at University of Kashmir. This refresher course has both theoretical and practical components and covers a wide range of topics in molecular and cellular biology. The course content has been designed to foster the needs of both college and university level teachers engaged in teaching or research in the areas of molecular and cellular biology.



I wish all selected participants exciting sessions with well-experienced resource persons during the entire program. Besides this exciting academic activity, I hope participants will have an opportunity to witness the colorful fall season of Kashmir valley.

A handwritten signature in black ink, appearing to read 'Ashraf'.

(Dr. Mohd Ashraf Dar)

The Three Academies of Sciences



Indian Academy of Sciences

(www.ias.ac.in)

Founded in 1934 by Sir C V Raman the Indian Academy of Sciences, Bangalore was registered as a Society on 27 April, 1934 with the main objective of promoting the progress and upholding the cause of science. The Academy began functioning with 65 Founding Fellows and the formal inauguration took place at the Indian Institute of Science. On the same afternoon its first general meeting of Fellows was held during which Sir C V Raman was elected President and the draft resolution of the Academy was adopted. In the same month of 1934, the first issue of the Academy's earliest publication was published.

The Academy from its very beginnings has taken great interest and initiative in publishing science research and today publishes 10 science journals in different disciplines, uses an online submission and review management system that's trackable, papers are peer reviewed and published content is made available online and open access. The Academy's contribution to science and society is also reflected through its policies, values and its range of activities which include: ● The Academy Fellowship ● Annual and Mid-Year Meetings ● Science Education Programmes ● Sponsorship of Discussion Meetings ● The Women in Science Panel ● Repository of Scientific Publications of Academy Fellows ● Oral History Archives ● Committee on Scientific Values ● Raman Chair Professorship ● Jubilee Chair Professorship ● Publications of the Academy ● Contributions to Science Policy.

National Academy of Sciences, India

(www.nasi.org.in)

The National Academy of Sciences, India was founded in the year 1930, with the objectives to provide a national forum for the publication of research work carried out by Indian scientists and to provide opportunities for exchange of views among them.

The National Academy of Sciences envisions the cultivation and promotion of Science & Technology in all its branches through:

- promoting scientific and technological research related to the problems of societal welfare
- publication of proceedings, journals, memoirs, transactions and other works as may be considered desirable
- organising meetings and hold discussions on scientific and technological problems
- undertaking, through properly constituted committees and bodies, the scientific work(s) of technological or public importance
- co-operating with other organizations in India and abroad, having similar objects, and to appoint representatives of the Academy to act on national and international bodies
- securing and managing funds and endowments for the promotion of science and technology
- organising a Science Library
- performing all other acts, matters and things that may assist in, conduce to, or be necessary for the fulfillment of the above mentioned aims and objects of the Academy
- creating an adequate impact of the Academy all over the country, by opening Chapters of the Academy in other cities in the country, where reasonable number of Fellows and Members are available.

Indian National Science Academy

(www.insa.nic.in)

A premier science Academy in the country, it plays crucial role in promoting, recognizing and rewarding excellence. An important task of the Indian National Science Academy is to publish journals, organize scientific discussions and bring out monographs and other publications. The Academy promotes public awareness and understanding of science. Acting as a link between the scientific community and planners, it advises the government on critical issues relating to science and technology. It also serves as a forum for interactions among scientists within and outside the country. It recognizes outstanding young scientists, engineers and technologists through award of medals/prizes and by providing modest financial support for pursuing research. Senior scientists are honoured through election to its Fellowship. Academy also provides different awards/medals and the prestigious Research Professorships. Superannuated fellows of the Academy can be supported through Senior Scientist and Honorary Scientist schemes. The Academy has established exchange programmes with different overseas Academies to facilitate visits of Indian scientists' to research institutions abroad and of foreign scientists to India for lectures/scientific discussions.

Resource Persons



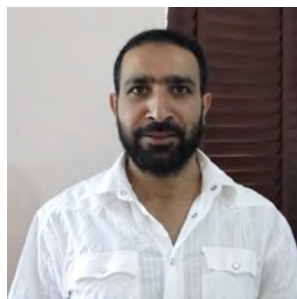
**Dr. Suman Kumar Dhar
(Course Director)**

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Fellow, Indian Academy of Sciences



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Dr. Abdul Wajid Bhat
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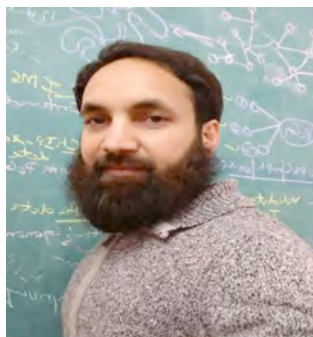
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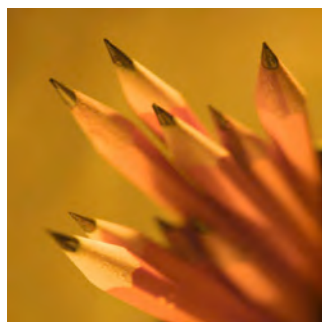
Dr. Ajazul Hamid Wani

Scientist D/DBT-Wellcome Trust Fellow
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Dr. Shabir A. Ganaie

DST-Young Scientist
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Dr. (Miss) Roohi Mushtaq

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Topics with Respective Resource Persons

1.DNA Replication and Cell Division:

(Prof. Suman K. Dhar; Special Centre for Molecular Medicine, Jawaharlal Nehru University, New Delhi/Prof. Khalid Majid Fazili, Department of Biotechnology, University of Kashmir)

2.Protein Structure-Function, Protein-Protein Interaction:

(Dr. Pawan Malhotra, ICGEB, New Delhi and Dr. Asif Mohammed ICGEB, New Delhi/ Dr. Ajazul Hamid Wani, Department of Biotechnology, University of Kashmir)

3. Epigenetic Control of Gene Regulation:

(Dr. Mohd. Altaf Bhat, Department of Biotechnology, University of Kashmir)

4.Recombinant DNA Technology (Genetic engineering):

(Dr. Mahboob ul Hussain, Department of Biotechnology, University of Kashmir, Srinagar/Dr. Abdul Wajid Bhat,Department of Clinical Biochemistry, University of Kashmir, Srinagar)

5.Advanced Biochemical Techniques (Theory):

(Dr. Ajazul Hamid Wani, Department of Biotechnology, University of Kashmir)

6. Basic Molecular Biology Experiments (Lab Course):

(Dr. Mohd Ashraf Dar, Department of Biochemistry, University of Kashmir)

7. Cell Signalling Pathways:

(Dr. Firdous A. Khanday, Department of Biotechnology, University of Kashmir/Dr. Amitabh Mukhopadyay, NII, New Delhi)

8. Cellular Immunology:

(Prof. Mohd Afzal Zargar, Central University of Kashmir / Dr. Nazir A. Dar; Department of Biochemistry, University of Kashmir)

9. Basics in Bioinformatics and Molecular Modeling:

(Dr. Roohi Mushtaq, S.P. College, Srinagar/ Dr. Shabir A. Ganaie, Department of Biotechnology, University of Kashmir)

Program Details

(23/10/2017 TO 06/11/2017)

23/10/2107

- 9: 30 A.M **Registration**
- 9: 45 A.M **Welcome address by Course Director**
- 9: 50 A.M **Welcome and Introduction
to Department of Biochemistry
by Head of Department**
- 9: 55 A.M **Vote of Thanks by
Course Coordinator**
- 11:15 A.M **Interaction with Kashmir
University Vice-Chancellor**

(23/10/2017 to 06/11/2017)

10:00 A.M to 4:15 P.M Academic Sessions

Time Table for sessions

DATE	10:00 AM- 11:15 AM	11:15 AM- 11:30 AM	11:30 AM- 12:45 PM	12:45 PM- 1: 30 PM	1:30PM- 2:45 PM	2:45 PM- 3:00 PM	3:00 PM- 4:15 PM
23-10-2017	S.K.D	TEA	S.K.D	LUNCH	M.U.H	TEA	M.U. H
24-10-2017	F.A.K		F.A.K		M.A.B		M.A.B
25-10-2017	K.M.F		K.M.F		N.A.D		N.A.D
26-10-2017	A.W.B		A.W.B		A.M.M		A.M.M
27-10-2017	R.M		R.M		M.A.B		M.A.B
28-10-2017	M.A.Z		M.A.Z		S.A.G		S.A.G
29-10-2017	SUNDAY						
30-10-2017	F.A.K	TEA	F.A.K	LUNCH	A.H.W	TEA	A.H.W
31-10-2017	A.D (Experiment)		A.D (Experiment)		A.D (Experiment)		A.D (Experiment)
01-11-2017	A.D (Experiment)		A.D (Experiment)		A.D (Experiment)		A.D (Experiment)
02-11-2017	N.A.D		N.A.D		A.H.W		A.H.W
03-11-2017	P.M		P.M		A.M		A.M
04-11-2017	A.H.W		A.H.W		K.M.F		K.M.F
05-11-2017	SUNDAY (PICNIC)						
06-11-2017	Concluding Remarks and Certificate Distribution	TEA	R.M	LUNCH	S.A.G	TEA	S.A.G

- S.K.D Prof. Suman K. Dhar, Jawaharlal Nehru University, New Delhi. **(IAS Fellow)**
M.U. H Dr. Mahboob ul Hussain, Department of Biotechnology, University of Kashmir, Srinagar.
A.W.B Dr. Abdul Wajid Bhat, Department of Clinical Biochemistry, University of Kashmir.
F.A.K Dr. Firdous A. Khanday, Department of Biotechnology, University of Kashmir, Srinagar.
K.M.F Prof. Khalid Majid Fazili, Department of Biotechnology, University of Kashmir, Srinagar
M.A.Z Prof. Mohd Afzal Zargar, Registrar, Central University of Kashmir
A.H.W Dr. Ajazul H. Wani, Department of Biotechnology, University of Kashmir, Srinagar.
A.D. Dr. Mohd Ashraf Dar, Department of Biochemistry, University of Kashmir, Srinagar.
N.A.D Dr. Nazir A. Dar, Department of Biochemistry, University of Kashmir, Srinagar.
M.A.B Dr. Mohd Altaf Bhat, Department of Biotechnology, University of Kashmir, Srinagar.
A.M.M Dr. Amitabh Mukhopadhyay, NII, New Delhi. **(IAS Fellow)**
R.M Dr. (Miss) Roohi Mustaq, S.P. College, Srinagar.
S.A.G Dr. Shabir A. Ganaie, Department of Biotechnology, University of Kashmir, Srinagar.
P.M Dr. Pawan Malhotra, ICGEB, New Delhi. **(IAS Fellow)**
A.M. Dr. Asif Mohammed, ICGEB, New Delhi.

Participants

S.No	Name	Institution of Affiliation
1.	Dr. K. Sundar	PRIST University, Pondicherry
2.	Waseem Shahri	Govt. College for Women, Srinagar, J&K
3.	Deepu Pnadita	Department of School Education, Jammu, J&K
4.	Dr. Ramkumar TR	Department of Botany, Punjab University, Chandigarh
5.	Dr. Seema Singh	Department of Botany, University of Kashmir, Srinagar, J&K
6.	Deveeka Zamare	Department of Biotechnology, Sreenidhi Institute of Science and Technology, Hyderabad
7.	Ganesh Prakash Vikhe	Center of Biotechnology, Pravara Institute of Medical Sciences, Loni
8.	Johny Ijaq	Department of Biotechnology, Osmania University, Hyderabad
9.	Dr. Bharat Solanki	M.B.Patel Science College, Gujrat
10.	Dr. Prabhash Kumar Panday	CDRI, Lucknow, U.P
11.	Muneeb Ahmad Wani	Division of Floriculture, SKUAST-K, Srinagar, J&K
12.	Dr. Masarat Bashir	Temperate Sericulture Research Institute, SKUAST-K, Srinagar, J&K
13.	Dr. Insha Zahoor	Bioinformatics Centre, University of Kashmir, Srinagar, J&K
14.	Azra Khan	Division of Genetics and Plant Breeding, SKUAST-K, Srinagar, J&K

15.	Amreen Naqash	Department of Pharmaceutical Sciences, University of Kashmir, Srinagar, J&K
16.	Iram Ashaq	Department of Biochemistry, University of Kashmir, Srinagar, J&K
17.	Mudasar Nabi	Department of Biochemistry, University of Kashmir, Srinagar, J&K
18.	Shayaq ul Abeer	Department of Biotechnology, University of Kashmir, Srinagar, J&K
19.	Dr. Aashiq Hussain	Department of Clinical Biochemistry, University of Kashmir, Srinagar, J&K
20.	Dr. Sheikh Mohd Shaffi	Department of Biochemistry, University of Kashmir, Srinagar, J&K
21.	Dr. M Ramar	Department of Zoology, Bharathiar University, T.N
22.	Dr. Asima Gazal	Division of Genetics and Plant Breeding, SKUAST-K, Srinagar, J&K
24.	Ashaq Hussain Bhat	Govt. Degree College for Women, Anantnag, J&K
25.	Dr. Manzoor Ahmad Mir	Department of Bioresources, University of Kashmir, Srinagar, J&K
26.	Dr. Tabasum Qadri	Department of Botany, S.P. College, Srinagar, J&K
27.	Tariq Ahmad Bhat	Devision of Vegetable Sciences, SKUAST-K, Srinagar, J&K
28.	Dr. Yasreel Mustafa	Govt. Degree College, Ganderbal, J&K
29.	Dr. Shabir Bhat	Temperate Sericulture Research Institute, SKUAST-K, Srinagar, J&K
30.	Rouf Maqbool	Department of Biochemistry, University of Kashmir, Srinagar, J&K

Vote of Thanks

First of all, let me congratulate you for being among this group of 30 selected participants from near about 100 applicants. So you are the luckiest 30 to get benefited from the excited sessions of this refresher course. Some of the participants have travelled as far as from deep Southern places of Pondicherry, Tamil Nadu, A.P and Maharashtra. I appreciate your will and enthusiasm to choose University of Kashmir for Indian Academy of Sciences sponsored Refresher course " Molecular Biology of Cell"

I sincerely thank Indian Academy of Sciences for extending this Refresher Course as part of their educational and scientific training out reach program to the state of Jammu and Kashmir for the first time. The current Academy president, Prof. Ram Ramaswamy extended his personal Support in addition to official support for organization of this course at University of Kashmir. I sincerely thank him.

The actual idea of conducting this refresher course was conceptualized by Prof. Suman Kumar Dhar few months back. Prof. Dhar is the Course Director of this whole program. For the last few months he has been working tirelessly for the logistics for this program and acting as a bridge between the Academy and host Department of Biochemistry. I thank you Sir.

The person who has been playing a very crucial role in successful implementation of this program is my HOD, Prof. Akbar Masood. Prof. Masood threw his strong support on my back and was by my side all the time during the administrative processes and procedures for this program. Thank you Prof. Masood.

I thank Hon'ble Vice Chancellor of the Kashmir University, Prof. Khurshid Andrabi for his encouragement and

making it administratively easy for us to use the university facilities and infrastructure for organization of this course.

I thank in advance all the resource persons who will have very exciting and coherent sessions with you for the next two weeks. I would be extremely grateful to Prof. Rais Qadri, Head, Department of Biotechnology for agreeing to have an informal grant writing session with participants and for facilitating their visit to his Department of Biotechnology. Last but not least, I thank my colleagues at Department of Biochemistry for their help and support.

So thank you all and wish you a great and wonderful time at University of Kashmir.

October 23,2017
Srinagar, J&K

Dr. Mohd Ashraf Dar
Course Coordinator
Department of Biochemistry
University of Kashmir



Spring at University of Kashmir