

## Teacher Profile for NAAC Assessment

- Name **RATNUM KAUL WATTAL**



- Department **BOTANY**
- Designation **ASSOCIATE PROFESSOR**
- Phone no. **0120-2772201** Landline **9717392632** Mobile
- Email id **ratnumkwattal@gmail.com**

<b>Educational Qualifications</b>			
<b>Qualification</b>	<b>Title / Course</b>	<b>University</b>	<b>Year</b>
Undergraduate	B.Sc. (H) Botany	DELHI	1977
Postgraduate	M.Sc. Botany	DELHI	1979
M.Phil.	M.Phil Botany "Isolation and characterization of <sup>14</sup> C labeled cyclic 3', 5' Adenosine monophosphate in cultures of Moss (Funaria hygrometrica Hedw.)"	DELHI	1980
Ph.D.	Ph.D Botany "Purification and Kinetic properties of Ribulose 1, 5 Bisphosphate Carboxylase and its regulation through phosphorylation in Moss (Funaria hygrometrica 3.2)".	DELHI	1986
Any other	<b>CSIR POOL SCIENTIST</b>	AIIMS	1990-1991

<b>Career profile</b>		
<b>Teaching Experience in years</b>	<b>Area of specialization</b>	<b>Courses and subjects taught</b>
26 years (1986-87) and (1991-till date)	<b>Cell Biology, Plant Physiology and Metabolism, Genetics</b>	<b>B.Sc. (H) Botany/B.Sc. Life Sc.</b>

Research Undertaken			
Major Projects	Minor Projects	Collaborative Projects	
NONE	<p><b>An innovation project entitled "Assessment of Cytotoxicity and genotoxicity of Yamuna water on plant based bioassay on Allium cepa. Funded by Research Council, University of Delhi. ( November 2013 March 2015 )</b></p> <p><b>An innovation project entitled "Designing a mathematical model to solve upcoming water crisis in Noida/ Greater noida region." Funded by Research Council, University of Delhi (November 2015-till date).</b></p>	NONE	

Publication/s with SSN/ISBN No.	
Journals	<p><b>Ratnum Kaul &amp; R.C. Sachar(1982).</b>  "On the presence of Adenosine 3',5'- Cyclic Monophosphate in moss (Funaria hygrometrica)".  Biochem, Biophys. Res. Commune 104(1):126-132 ISSN: 0006-291X</p> <p>Daman Saluja, <b>Ratnum Kaul &amp; R.C. Sachar(1986).</b>  "Phosphorylation plays a crucial role in the Regulation of RUBPCase in Spinach."  4<sup>th</sup> Congress of Federation of Asian Oceanian Biochemists (30<sup>th</sup> November- 5<sup>th</sup> December 1986).</p> <p><b>Ratnum Kaul, Daman Saluja &amp; R. C. Sachar (1986).</b>  "Phosphorylation of small subunit plays a crucial role In the regulation of RUBPCase in moss and spinach."  FEBS Lett.2.09 (1):63-70.ISSN: 0014-5793</p> <p><b>Ratnum Kaul &amp; R.C. Sachar (1986).</b>  "Purification, Properties and Metabolic Regulation of Ribulose 1,5-Bisphosphate Carboxylase from moss ( Funaria hygrometrica)".  Abstract of National Seminar on Plant Physiology and Biochemistry for young Scientists, NBRI, Lucknow.</p>

**Ratnum Kaul & R.C. Sachar**(1991) "Regulation of Poly (A) Polymerase and Poly (A<sup>+</sup>).RNA in moss *Funaria hygrometrica* J.2." Proceedings of Ares Serono Symposia on Biotechnology of Cell Regulation Volume 4, June 20-22, 1991.

**Wattal RK**, B. Das H, Siddiqui ZH , Dinesh Raj,Rohan Kapoor, Sushma Sagar, Mansi Gogna,Pragati Shakya,Neha,Shubham,Siddharath Ghosh,Dimpleand Nisha Bhardwaj (**2014**) Genotoxic effect of Yamuna pollutants on *Allium cepa*. At UGC SAP (DRS-I) Sponsered National Seminar on Plant Biotechnology: Challeneges and Opportunities in 21st Century, Organized by Dept. of Biotechnology, Jamia Hamdard, New Delhi, India.

Debarati, Siddiqui ZH,Hareramdas B, **Wattal RK** Kapoor R, Shakya P, Bhardwaj N, Kumar P, Singh A, Neha, Shubham(2015) A plant based bioassay to assess the toxic effects of pollutants of Yamuna River in Delhi region. At Recent Trends in Biology, One day Symposium for Undergraduate Students Organised by Zoology Department, Maitreyi College, University of Delhi, New Delhi, India. February 25<sup>th</sup> 2015.

Zahid H Siddiqui,B. Hareram Das, **Ratnum Kaul Wattal**, Rohan Kapoor,Pragati Shakya, Nisha Bhardwaj,Prashant Kumar,Anoop Singh,Neha,Shubham and Debarati(2015) ) A plant based bioassay to assess the levels of pollution in Yamuna River (Delhi region). At National Conference on Climate Change: Impacts, Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective, Organized by Dept. of Botany, Deen Dayal Upadhyaya College, University of Delhi, New Delhi, India. March 2-3,2015.

Hareramadas, B.<sup>1</sup>, Siddiqui, Z.H.<sup>2</sup>, Neha Bhatia,Pragati Shakiya, Rohan Kapoor, Nisha Bhardwaj,Shubham Gupta,Prashant K, Anoop Singh, Debrati Chandra and **Wattal, R.K.**<sup>2,\*</sup>.2016. Health Hazards of Polluted River Yamuna Water: Correlations Drawn from a Plant-based Study. At International conference on Public Health, Issues, Challenges, Opportunities, Prevention, Awareness (Public Health: 2016) Organized by Daulat Ram College on 15-16<sup>th</sup> January 2016.

Publication/s		
Books Written	Chapters Written	Books/Chapters Edited
<p>NCERT: Biology Text Book for class XI (2006)</p> <p>ICSE class 9<sup>th</sup> &amp; 10<sup>th</sup> Biology published by Frank Educational Aids PVT Ltd.( February 2012)</p>	<p>Ratnum Kaul Wattal and Zahid Hameed Siddiqui "Effect of Elevated Levels of Carbon Dioxide on the Activity of RuBisCO and Crop Productivity" in Crop production and Global Environmental Issues ed by Khalid Rehman Published by Springer International Publishing Switzerland 2015. ISBN: 978-3-319-2316-7.</p>	<p>"Cell cycle Regulation" and "Genome Organization" to IGNOU for course on Cell &amp; Molecular Biology</p>
		<p><b>Chapters Reviewed</b></p> <p>e-content for undergraduate course on Eukaryotic Cell: An overview for ILL</p> <p>Reviewed e-content for undergraduate course on Introduction to Cell</p> <p>Reviewed e-content for undergraduate course on Nucleus</p>

Conference/Symposia/Workshops Attended/Organised				
Faculty	International Level	National Level	State Level	College Level
Attended		<ul style="list-style-type: none"> <li>"Conference on Women Scientists and Technologists For National development", March 8-9, 2002. Organized by Ministry of Science and Technology.</li> <li>National Symposium on "Biotechnology: Expanding Horizons" (October 17-18, 2003) organized</li> </ul>		

**by Acharya  
Narendra Dev College,  
University of Delhi**

- **. National conference on “Wetlands, Science and Society- An Assessment of their Integration ( December 11-13, 2007) organized by Department of Botany, University of Delhi.**

- **National Symposium: “Chemistry in Biology: The Future of Life Sciences” organized by Acharya Narendra Dev College, University of Delhi, (February 12-13, 2010).**

- **National Conference on “Climate Change: Impacts, Adaptation, Mitigation Scenario and Future Challenges in Indian Perspective”, Organized by Dept. of Botany, Deen Dayal Upadhyaya College, University of**

		<p>Delhi, New Delhi, India (March 2-3, 2015)</p> <ul style="list-style-type: none"> <li>• <b>National Symposium on “Biotechnology in Crop Improvement:</b></li> </ul> <p><b>Prospects &amp; Challenges” organized by Department of Botany Zakir Husain Delhi College, University of Delhi, New Delhi, India on April 1<sup>st</sup>, 2016.</b></p>		
Presented Papers				
Resource Persons	NONE	NONE	NONE	NONE
Organiser				<p><b>Organized a workshop on Biofertilizers (July 14-16, 2016 ) in Department of Botany Zakir Husain Delhi College.</b></p> <p><b>One day Symposium organized on “Revisiting Darwin: Organized Natural Theory Vs Social Practices”. (December 15, 2009) As a part of Darwin’s Bicentenary celebrations.</b></p> <p><b>Organized Workshops on “Water Pollution” in Department of Botany, Zakir Husain Delhi College (1992)</b></p>

				Organized Workshops on “Biotechnology” in Department of Botany, Zakir Husain Delhi College (1993)
--	--	--	--	---

<b>Staff Development Programmes: Attended and Organised</b>	
Refresher Courses / Orientation Programmes	<ul style="list-style-type: none"> <li>• 4- Week Refresher Course in “Biotechnology”- April 20 - May 15, 1998, Academic Staff College, Jawahar Lal Nehru University, New Delhi.</li> <li>• 3- Week Professional Development Programme, Refresher course in Life Sciences, entitled “Microbial Biotechnology”- December 23, 1998- January, 12 1999.</li> </ul>
HRD Programmes	NONE
UGC-Faculty Improvement Programmes	NONE
Staff training by University/other Institutions	<ul style="list-style-type: none"> <li>• ILL Workshop Tier II (April 8-15, 2010) an ICT Workshop for capacity building of Delhi University Faculty.</li> </ul>
Faculty Exchange Programmes	NONE
Summer/Winter School Workshops	<ul style="list-style-type: none"> <li>• Workshop on “Separation Techniques in Biomedical Research” October 30- 31,1980 at V.P. Chest Institute Organized by the Delhi Branch of Society of Biological Chemists.</li> <li>• “Techniques in Molecular Biology” ( Protein Workshop) - September 9-10 1991 at Polyfield Training Centre limited, Hatfield Polytechnic, U.K.</li> <li>• 3- Week Multi Disciplinary Workshop on “Environment and Quality of Life: Canada and India” Organized by centre for Canadian Studies,University of Delhi. (April 1-21, 2003)</li> <li>• Workshop on “The New Botany Syllabus- Challenges Ahead” (March 29- April 8 2004).Organized by Centre for Science Education and Communication,University of Delhi.</li> <li>• Workshop on “Genetics, Molecular Biology and</li> </ul>

	<p><b>Biotechnology” (January 14-16, 2006) organized by Department of Botany, University of Delhi.</b></p> <ul style="list-style-type: none"> <li>• <b>National Workshop, entitled “Evolutionary Perspective in Modern Biological Teaching and Research”. (May 9 -10, 2011), jointly organized by ILL, Centre for Science Education and Communication and Acharya Narendra Dev College, University of Delhi.</b></li> <li>• <b>Workshop on Microscopy: Techniques and Applications (September 27-28, 2011) organized by Miranda House University of Delhi.</b></li> <li>• <b>National workshop on “Innovative Green Techniques for Safe potable water in villages” (January 10-11, 2013) Organized by Zakir Husain Delhi College, University of Delhi</b></li> </ul>
Research Guided	Guided student for M. Phil dissertation, submitted to Annamalai University.(2007-2008)

<b>Areas of Interest</b>	
<b>Academic</b>	<b>Cell Biology , Plant Physiology and Metabolism, Genetics</b>
<b>Non Academic</b>	<b>Exploring new destinations and reading</b>

### Participation in Curriculum Restructuring Committees

- **Member of courses Committee, University of Delhi, (2001)**
- **Member of the Curriculum Development Committee for Botany (2004) University of Delhi**
- **Member of the textbook development committee of NCERT: Biology Text Book for class XI (2006).**
- **Member of Course Writer’s Committee for the course titled: Cell and Molecular Biology (LSE-01)Indira Gandhi National Open University, Delhi. (2009)**

### Corporate Participation at the College Level

- **Convener- Committee for Memorial Lecture Series(2008-till date)**
- **Convener- Annual Day (2013)**
- **Member- Convocation extended committee (2008-till date)**
- **Convener-Media committee (2009 –2016 )**
- **Convener- Quiz Society (2011-12 )**
- **Convener, Editorial board of Science magazine (1997-2002)**
- **Deputy Superintendent Examinations (2007- 2015)**
- **Member of proctorial board (2005-2006)**
- **Secretary Staff Council (2015-till date)**
- **College automation committee (2011-2016)**



- **Coordinator Antardhvani committee (2014)**
- **Greening and Eco concerns/Nature and Environment club (2005-2008)**
- **Girls Association (2002-2007)**
- **Member Quiz Society(2014-till date)**
- **Coordinator Theory examination (2015-2016)**

### **Corporate Participation at the Departmental Level**

- **Teacher Incharge of Department of Botany**
- **Dy Suprintendant Botany Practical examinations**
- **External examiner for B.Sc Biotechnology Practicals in Jamia Millia Islamia(2010).**

### **Members of Professional Association/s**

**Life Member of Botanica**

### **Consultancy and Scholarships**

- **Merit Award of Indian Council of Agricultural Research for two years. (1977)**
- **Merit Award of Council of Scientific and Industrial Research for five years. (1980)**
- **Merit Award of Research Associate ship of Council of Scientific and Industrial Research.(1987)**
- **Merit Award of Pool Officer of Council of Scientific and Industrial Research (1990- 1991), Department of Biochemistry, AIIMS, New Delhi.**

### **Awards**

**Recipient of Women Achiever award by the National Commission for Women  
on 20<sup>th</sup> March, 2014.**