

CURRICULUM VITAE

Prof. Dr. Ravi Bhushan

(Dec 2007)

1. **Name and Qualification** : **Ravi Bhushan**, PhD, CChem FRSC, FNASc
2. **Designation** : Professor
- Department, Address** : Department of Chemistry
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3. **Date of Birth** : 12th April 1953

4. **Administrative Experience** (wef 2001)

(A) **Head, Chemistry Department**, 01 Jan 2005 – 31 Dec 2007

- Creation of new infra structure, establishment of new laboratories,
- Development of curricular structure and syllabi for the new five year integrated MSc,
- Revision of curricular structure and syllabi of two year MSc program.

(B) **Professor-In-Charge Finance**, 22 Apr 2003 – 28 Feb 2006,

- handled directly accounts and financial matters including balance sheet and audit.
- Investment of Institute funds and their control and management
- Preparation of the first balance sheet in the history of the UOR after becoming IIT
- Submission of AIR and SAR replies wef 1998 (UOR period) to 2005 followed by obtaining clear certificates for IITR,
- Submission of bound audited accounts to MHRD for tabling in the Lok Sabha,
- Revision of purchase rules.
- Member Finance Committee, IITRoorkee, Apr 2003- Feb 2006

(C) **Professor-In-Charge Planning**, 1st April 2002 – 31 Dec 2004

- (i) Preparation of budget (plan and non-plan) for IIT Roorkee, presentation before Budget Committee, Finance Committee, Board of Governors, and MHRD.
- (ii) Responsible for allocation of plan and non-plan budget to all the limbs of the Institute and monitoring expenditures in monthly meetings of Budget Committee chaired by the Director.
- (iii) Developed a performance based **Model** for allocation of non -plan grant to academic departments
- (iv) Prepared a data base, required for planning process, on
 - ♦ **Faculty Page**: brief bio-data of every Faculty member
 - ♦ Teaching Commitment with respect to every faculty member (department wise) during the years 2001-02, 2002-03, 2003-04 and 2004-05.
- (v) Formulation and execution of various **MoUs** with Universities / Institutes in India and abroad
- (vi) Member Secretary, Strategic Planning Group, IITR, Jan 2002 – 31 Dec 2004: organized two meetings (25 Feb 2003 and 19 Feb 2004). Prepared **Perspective Plan** of the Institute

- (vii) Started in June 2002, publishing and editing monthly news bulletin of the Institute, **Samvaad**, and contd as Chief Editor till Jan 2005;
contd. Member, Editorial Board
- (viii) Formulated Faculty Appraisal Form (being used by the Director for rating performance of the faculty on a five point scale)
- (ix) Prepared two theme papers and presented before IIT Review Committee during 26-27 July 2003.

(D) Coordinator, Intellectual Property Rights Cell, Sept 2000 – Mar 2004

- Prepared **IPR Policy Document** for IIT Roorkee, Oct 2003

Organised

- 06 Sep 2001 : one day workshop on **Patent and IPR Awareness**
- 16th-17th Feb 2002 : National Conference on **IPR Issues and Opportunities in Research and Education**
- 26 Apr 02 and 26 Apr 03 : World Intellectual Property Day
- 13 Dec 2002 : one day Workshop on **Drafting a Patent Application**
- 04 Mar 2003 : one day Workshop on **Enhancing Awareness on IPR Issues in Tech. Instt.**

(E) Aug 2001 - Sep 2002: Convener, Ph.D. Programme

Drafted / formulated Ordinances and Regulations for Ph.D. program at IIT Roorkee, implemented w.e.f .Jan 2002

(F) 06 Sep 2001 – 31st Mar 2002 : Officer on Special Duty

(G) Associate Coordinator, QIP-Centre (April 1989 to May 2006.)

The Quality Improvement Programme Centre is one of the seven centres in the country established by the Ministry of Human Resource Development. The main activities are to organise short term courses, monograph writing, and curriculum development, and to coordinate for admissions of teachers from various engineering colleges to MTech and Ph.D. programmes.

5. Academic:

(A) Educational

Examn.	Div.	Year	Board/ Univ.
Secondary	1 st	1968	Raj. Board of Sec. Educ., Ajmer
P.U.C.	1 st	1969	University of Jodhpur
B.Sc.	1 st	1972	University of Jodhpur
M.Sc. (Chy.)	1 st	1974	University of Jodhpur
Ph.D. (Chy.)		1978	University of Jodhpur
Proficiency in German Language		Jul-Aug, 1988	Goethe Institute, Bremen, Germany

(B) Teaching

<u>Designation</u>	<u>Place</u>	<u>Period</u>	<u>Pay Scale, Rs</u>
Lecturer	University of Roorkee	Oct. 1979 to Jan 1986	700 - 1600
Reader	University of Roorkee	Jan 1986 to Apr. 1996	3700 - 5700
Professor	University of Roorkee/ IIT Roorkee	Apr 1996 to date contd	18400- 22400

(C) Research

Research :	33 Years	<i>Supervised</i>	
		M.Sc. Thesis :	38
Teaching :	28 Years	M.Phil. :	04
		Ph.D. :	18 (+4 in progress)

(D) Publications

Total: 136 research papers; 23 in last five years
 Book (published) = 01; Popular Science Articles Published = 04
 Education T.V. Films Produced = 08

6. Awards/ Honours

2007: Best teacher award, IIT Roorkee
 2001: Fellow National Academy of Sciences India
 1993: Fellow Royal Society of Chemistry, London
 1992: European Economic Community Fellowship
 1988: Alexander von Humboldt Fellowship, Germany
 1987: Khosla Research Silver Medal Plus Cash Prize

Fellow/ Member of Academic Societies

- Fellow Indian Chemical Society (F/257)
- Life Member Indian Science Congress (LM 777)
- Life Member Indian Society of Desert Technology
- Fellow, Indian Society for Biochem. & Biotech. (L 169)
- Life Member, Indian Council of Chemists (LF 111)

7. Member Editorial Board (From Jan 1996 to this date continued)

Biomedical Chromatography, published by John Wiley & Sons, UK

Guest Editor, Special Issue of Biomed. Chromatogr. on Chiral Resolutions

- ♦ Sep 1997 ♦ May 2001 ♦ July 2005.

8. Contributed invited chapters to

- ***Advances in Protein Chemistry, Vol. 39***, Academic Press Inc., London, 1998, Chemistry of Peanut Proteins,
- ***Handbook of Thin Layer Chromatography***, (Eds, J. Sherma and B. Fried), Marcel Dekker, New York, 1991; **Amino Acids and Derivatives** : pp 353 – 387; **Proteins and Peptides** : pp 389 – 406.

- **2nd Edition, 1996.** Amino Acids and Derivatives : pp. 389-425; Proteins and Peptide: pp 427-444.
- **3rd Edition, 2003.** Amino Acids and Derivatives : pp. 373-415; Proteins and Peptide: pp 749-766.
- **Seed proteins** (Editors, R. Casey and P.R. Shewry), Kluwer Academic Pubs., London, 1999, **Groundnut Globulins**, pp. 355-388.
- **Encyclopedia of Separation Science**, (Editors: I.D. Wilson, T.R. Adlard, C.F. Poole, and Michael Cook) Academic Press, London, 2000; Two Chapters:
Vol. 5: Amino acids and Derivatives: pp 2012-2033;
Vol.8: Proteins and Peptides: pp 3626-3636.
- **Thin Layer Chromatography in Chiral Separation and Analysis**
(Eds. T. Kowalska and J. Sherma), Taylor & Francis, Boca Raton, (2007),
Chapter 13, Chiral Separation of Non Steroidal Anti-Inflammatory Drugs, pp 323-355;
Chapter 15, Chiral Separations Using Marfey's Reagent, pp 383-407;

9. Keynote Address/ State of Art Lecture (a few), at

- University of Jodhpur; University of Oldenburg, Germany; Max Planck Institute of Molecular Biology, Berlin, Germany; University of Giessen, Interdisciplinary Research Centre (IFZ), Germany; Long Ashton Res. Station, Univ. of Bristol, U.K.

Areas

- Liquid chromatography
- Resolution of racemic pharmaceuticals
- Peanut proteins

10. Academic/ Scientific Visits Abroad

- **As Humboldt Fellow:**
- University of Oldenburg, Germany, 1988, 1991, 1993, 1994, 1996, 1997, 2000, 2002, 2006 (normally for two to six months);
- University of Giessen, 2004 (two months); Nov-Dec 2007.
- **As Fellow of Commission of European Communities:** University of Bristol, Long Ashton Research Station, U.K., Mar to Aug 1992 (~six months).
- Washington State University, USA, Sept – Nov 1982
- National University Singapore (Exchange program), Mar 2004, Dec 2005.

Conferences (a few)

- July 1985: **International Research Congress on Natural Products**, University of North Carolina, Chapel Hill, U.S.A., presented a paper.
- May 1993: **17th International Symposium on Column Liquid Chromatography**, Hamburg, Germany, presented a paper.

- 11–13 July 2001: ***International Conference on Intellectual Property Education and Training***, organized by WIPO, MHRD, and IIT Delhi, IIT Delhi.
- 24 – 25 Sep 2002: ***Training Program on Patenting in India and Abroad*** organized by Confederation of Indian Industries, at New Delhi.
- 26-27 Mar 2004: ***PAN IIT Workshop on Management of Intellectual Property in Academia***, IIT Bombay.

11. Administrative Experience (prior to 2001)

- (A) **Aug 2000 – Sep 2001: Departmental Coordinator, Quality Circle**
- (B) **Jan 1999: Compiled and Edited, University Calendar** a document of the Act, Rules and Regulations of the University of Roorkee, updated for the period after Jan. 1990 to Jan 1999.
- (C) **Aug 1999: Formulation of A to Z for *Purchase, Imports and Advance*:** Designed systematic schedule of steps and various forms/ proformas, a document of more than 100 pages of A4 size
- (D) **Jan 1998: Prepared, *Expertise and Facilities*** (a 100 page document)
- (E) **Sept. 1998 :** Justification for faculty positions, (a document of about 40 pages of A4 size), based on teaching load for all the University Department
- (F) **1998-99 : Member PG Education Review Committee, UOR**
 - Involved in the preparation of a concept paper on post-graduate and research programmes of the University for implementation from July 1999.
 - Ten point ***grade system*** of evaluation and ***credit system*** of courses was introduced.
- (G) **1996 – 97 : Active involvement in preparation of the following**
 - **Mar 1996 The Sustained High Performer :** Summary of facts indicating quality, cost and the sustained high performance of the University.
 - **Nov. 1997 VISION 2020 :** A document containing the vision of the University in the global scenario, national needs, and the likely role of the University in technological development and technical education.
- (H) **(02 Mar 1993 to 30 Apr 1997) Associate Dean, Research & Industrial Liaison**
Some of the major activities and jobs undertaken
 - To implement, review and frame the university policies/ regulations with regards to research and consultancy.
 - To coordinate all the research and industrial activities of the university through interaction and liaison with different funding agencies and industries in the govt., public and private sectors and the university faculty.
 - Revised Purchase Regulations.
 - Prepared **Annual Report**, of the University of Roorkee, for the years 1992-93, 1993-94, 1994-95 and 1995-96.

- Assisted the Vice Chancellor in formulation and implementation of ***Flexible Cadre Structure*** for faculty in 1995 -1996, along with implementation of roster.
 - Formulation of **A to Z** for ***Faculty Selections***: designed systematic schedule of steps and various forms/ proformas.
 - Prepared : **Tradition of Excellence** (Jan 1996): A four fold leaflet with brief account of research and consultancy activities of the University of Roorkee.
 - **Oct. 1990 to June 1993 : Dy. Chief Staff Advisor, Hobbies Club**
Hobbies club is a unique activity at the campus for the students of engineering and other disciplines. Coordination with the student members and staff advisors of all the seven sections for various hobby activities and organization of an Annual Exhibition have been the main works. In Mar 1993, organized an All India Hobbies Festival – Panorama'93.
- (J) **Feb 1984 to June 1988 Additional Coordinator, Audio Visual Centre (AVRC)**
Audio Visual Research Centre (AVRC) was one of the few centres established by the University Grants Commission of India for producing educational TV films (at *University of Roorkee*) for national telecast.
- A studio and a recording room were established. U-matic cameras, editing machine, recorder, audio/video mixers and other related equipment and accessories were procured. Besides, involved in the production work. Also written and produced more than half a dozen Educational TV films which have been televised on national network under UGC's countrywide class room.

12. Sep1999: Elected Member Senate of the University of Roorkee

13. Oct 1999: Elected Member Syndicate of the University of Roorkee