

Dr. AJIT SINGH BHATNAGAR

Website: <http://ajibha.wix.com/drasbhatnagar>
<http://ajibha.wix.com/saideewane>

Phone: +916265696978
Email: ajibha@gmail.com



EXPERIENCED FOOD TECHNOLOGIST - R&D ♦ Educationist

Track record of successfully executing various projects within defined cost & time parameters

Proactive decision maker, targeting challenging senior level assignments in Academic Teaching & Research in Food Science & Technology - Food Science/Technology/Processing subjects, viz., Food Chemistry, Food Safety & Quality, Oils & Fats Technology, Agricultural Waste & By-products Utilization, Statistical Methods with reputed Universities/Colleges, utilizing creativity and imagination with reputed R&D Organizations.

Proactive and results oriented professional, Food Technologist, qualified M.Sc., Ph.D. with specialization in Edible Oils & Fats, extending distinguished career of over 10 years in Academic Teaching & Research in Food Science & Technology. Experience also includes 7 years in Food/Lipid Research at CSIR-CFTRI and 1 year of Edible Oil Industry experience. Currently spearheading efforts as Asst. Professor (Contractual) in Dept. of Home Science (Food & Nutrition), Govt. Dr. W.W. Patankar Girls' PG College, Durg, Chhattisgarh, India.

- ✓ Possessing valuable insights, keen analysis and team approach to implement best practices, adept at working in high pressure environments with strict deadlines and multiple deliverables. Credited with accomplishing several research projects and publication of research papers in renowned international and national journals.
- ✓ Rich exposure to research across oil extraction [mechanical (Ghani, expeller, hydraulic)/chemical (different polarity solvents)]; oil processing (refining, blending, interesterification); oil oxidative stability and lipid antioxidant/nutraceutical concentrates, Extracts of Rosemary and Green Tea.
- ✓ Completed Ph.D. in Food Science on the topic „Studies on Processing of Oil & Extraction of Bioactive Molecules, Indian Niger Seeds (*Guizotia abyssinica* (L.f.) Cass.)” . Experience of R&D, NPD, GLP, GMP of Natural Food Additives (preservatives, antioxidants, colors, antimicrobials) with Prasan Solutions, Kochi Tenure.
- ✓ Well versed with handling the development of technology for the production of healthier and cheaper blends of coconut oil with other vegetable oils (Accomplished during CSIR-CFTRI Tenure).
- ✓ Hands on teaching experience of Food Chemistry, Food Safety & Quality, Oils & Fats Technology, Agricultural Waste & By-products Utilization, Design & Management of Food Storage Structures, Statistical Methods, Communication Skills, Nutrition & Health Education, Food & Nutrition.
- ✓ Exceptional administrative and organizing capabilities with strong analytical skills and an ability to collaborate with interdisciplinary team of scientists. Superior communication and interpersonal skills.

Core Competencies: Teaching/Lecturing ♦ Research & Development ♦ Chemical Analysis ♦ Capacity Enhancement Functions ♦ Food Science & Technology ♦ Food Processing ♦ Quality Control/ Quality Assurance ♦ Inspection ♦ Cross Functional Coordination ♦ Team Player ♦ HEI - IQAC & NAAC - AQAR, IIQA, SSR

EMPLOYMENT CHRONICLE

Executive Highlights

- ✓ Holds to his credit 25 research papers, 5 review papers and 1 book chapter published in various International/National scientific journals. (Accomplished during CSIR-CFTRI Tenure).
- ✓ Track record of successfully troubleshooting during commissioning and trial or validation campaigns of new products. Well versed with planning and scheduling for new products.
- ✓ Independently carrying out Technology transfer for various products Lab to pilotplant.
- ✓ Commended for the selection of most feasible route by conducting small scale laboratory experiments.
- ✓ UGC-NET (LS) qualified, contributed effectively as Academic Counsellor (empanelled from March 2014 to April 2016) with IGNOU, Durg, Chhattisgarh, India for DNHE and CFN courses.
- ✓ Contributed as Guest Faculty Lecturer in UTD of FP&T, Bilaspur University, Bilaspur, Chhattisgarh, India.
- ✓ Recognized for effectively conducting technological R&D work related to natural nutraceuticals / antioxidants / bioactives namely sesame lignans, rice bran oyzanol, niger phylloquinone, palm β -carotene, coconut medium chain triglycerides, soy isoflavones, phytosterols, tocopherols, phospholipids, glycolipids, MUFA and PUFA.
- ✓ **Awards & Accolades:**
 - Awarded CSIR-Senior Research Fellowship from CSIR, New Delhi, India for Three Years (April, 2010 to March, 2013).
 - Awarded/Qualified UGC-NET (Lectureship), UGC, New Delhi, India, Dec 2012
 - Google Scholar: Citations-535, h-index = 9, i10-index = 9 (<https://scholar.google.co.in/citations?hl=en&user=kPO2feQAAAAJ>) as on 24/03/2021
 - ResearchGate Scholar: https://www.researchgate.net/profile/Ajit_Bhatnagar2/info
 - RG Score of 17.08 and Total Citations = 446 with h-index = 11

Research & Development

- ✓ R&D work in the area of lipids, with particular reference to extraction technology of edible oils, refining technology of edible oils, processing/modification of edible oils through blending and interesterification
- ✓ Physico-chemical analysis of edible oils, essential oils, medicinal oils and oilseeds, viz; Fatty acid composition, Triacylglycerol composition, glycolipids, phospholipids, phytosterols compositions, FFA, Colour, Saponification value, Peroxide Value, Iodine Value, Unsaponifiable lipids, Di-ene and Tri-ene value, viscosity, DSC, FTIR analysis of edible oils.
- ✓ R&D work related to Nutraceuticals, Natural Antioxidants, Bioactive compounds, viz., fat soluble vitamins, phenolics, Sesamin, Sesamol, Sesamol, Oryzanol, Isoflavones, phylloquinone, Tocopherols, Tocotrienols, Carotenoids, Extracts of Rosemary and Green Tea.
- ✓ R&D work related to evaluation of vegetable oils and fats for oxidative deterioration during storage and frying, Differential scanning calorimetry (DSC) analysis for evaluation of melting and crystallization properties of edible oils, Fourier Transform Infra Red (FTIR) spectroscopic studies of edible oils, and innovative method development for sesame lignans analysis, Radical scavenging activity.
- ✓ R&D, NPD, GLP, GMP of Natural Food Additives (preservatives, antioxidants, colors, antimicrobials)
- ✓ Familiar with all Lab equipments and its operation, viz., GLC, HPLC, TLC, UV-visible Spectrophotometer, Spectrofluorometer, Tintometer, DSC, FTIR, Viscometer, Rancimat.
- ✓ Sound knowledge of Research manuscript, Report, Patent preparation and presentation. Fully conversant with HACCP; ISO: 22000; FSSAI; Codex; USFDA; EC; FSANZ; HEI - IQAC & NAAC - AQAR, IIQA, SSR

Career History

ASSISTANT PROFESSOR - Contractual **August 2017 - Present**

Dept. of Home Science (Food & Nutrition), Govt. Dr. W.W. Patankar Girls' PG College, Durg, Chhattisgarh, India

- ✓ Involved in teaching Nutritional Biochemistry, Physiology, Food Chemistry, Advanced Nutrition, Methods of Investigation, Nutrition for Health & Fitness.
- ✓ Actively performing in College's IQAC for HEI - IQAC & NAAC - AQAR, IIQA, SSR preparations.

ASSISTANT PROFESSOR - Expatriate **Nov 2016 - July 2017**

Dept. of Food Engineering & Post-Harvest Technology, Ambo University, Ambo City, Oromia, Ethiopia

GUEST FACULTY (LECTURER) - **Aug 2016 - Oct 2016**

UTD of Food Processing & Tech., Bilaspur University, Bilaspur, Chhattisgarh, India

- ✓ Involved in teaching Food Chemistry, Food Safety & Quality, Oils & Fats Technology, Agricultural Waste & By-products Utilization, Statistical Methods and Business Communications.

RESEARCH ASSOCIATE **May 2016 - Aug 2016**

Prasan Solutions (India) Pvt. Ltd. Cochin for R&D, NPD, GLP, GMP of Natural Food Additives (preservatives, antioxidants, colors, antimicrobials).

ACADEMIC COUNSELLOR (Code: 35296980) **Mar 2014 - May 2016**

IGNOU for Diploma in Nutrition and Health Education (DNHE) and Certificate in Food and Nutrition (CFN) courses at Govt. Science & Arts College, Durg, C.G. India

SENIOR RESEARCH FELLOW-CSIR - Ph.D. in Food Science **Apr 2010 - Oct 2014**

LSTF Dept., CSIR-CFTRI, Mysore, India.

Thesis: Studies on Processing of Oil & Extraction of Bioactive Molecules from Indian Niger Seeds (*Guizotia Abyssinica* (L.f.) Cass).

Guide: Dr. A. G. Gopala Krishna, Chief Scientist, LSTF Dept., CSIR-CFTRI, Mysore, India

RESEARCH PROJECT ASSISTANT LEVEL-II, Research Project: Grant in Aid project funded by Coconut Development Board, Kochi, India.

Mar 2007 - Jun 2009

Project: Development of technology for the production of healthier and cheaper blends of coconut oil with other vegetable oils.

Principal Investigator: Dr. A. G. Gopala Krishna, Chief Scientist, Department of Lipid Science and Traditional Foods, CSIR-Central Food Technological Research Institute (CFTRI), Mysore, Karnataka, India, 570020.

Key Responsibilities:

- ✓ Tasked with the preparation of oil blends on lab scale and analysis of their physico-chemical characteristics conforming to the FSSAI/ISI norms.
- ✓ Actively involved in the scale up of oil blends on pilot scale and analysis of their physico-chemical characteristics conforming to the FSSAI /ISI norms.

- ✓ Carrying out the packaging and storage studies of oil blends. Frying studies of oil blends. Nutritional labeling of oil blends.

QC/QA Chemist (Trainee), Adani Wilmar Ltd., Bundi, Rajasthan

Jan 2007 – Mar 2007

- ✓ Routine chemical analysis related to Quality control. Finished Good Inspection related to Quality Assurance. Packaging Material Inspection.

R&D CHEMIST (TRAINEE)

Oct 2006 – Jan 2007

Dewas Soya Limited: *A well known ISO 9000:2001 Oil division of Hind group of companies, Dewas, (M.P.), India.*

- ✓ Involved in R&D work related to Soy protein concentrates, High-protein soybean meal, Identification, Isolation, Extraction of Isoflavones.

QC/QA CHEMIST, Jayshree Solvex Pvt. Ltd., Durg, (C.G.), India

Jan 2006 – Aug 2006

Dissertation cum Investigation work entitled “Nutraceuticals in sesame seed and oil” of four months” tenure (March-June 2005), under the guidance of Dr. A.G. Gopala Krishna, Chief Scientist, in Lipid Science and Traditional Foods Department, Central Food Technological Research Institute (CFTRI), Mysore, India.

EDUCATION CREDENTIALS & PROFESSIONAL DEVELOPMENT

Ph.D - Food Science, CSIR-CFTRI and University of Mysore, Mysore, India, 2015

M.Sc - Food Technology, Jiwaji University, Gwalior, M.P., India, 2005

B.Sc. Microbiology, Pt. Ravi Shankar Shukla University, Raipur, C.G., India, 2003

Certifications:

- ✓ One-year Diploma in Medical Lab Technology (2002), 62.0%, AIMLTA, New Delhi, India.
- ✓ Diploma in Computer Application (Honours) (2010), B+, NAC-MIT Academic Council, Bhilai, C.G., India.
- ✓ Qualified UGC-NET, Dec.2012, Home Science, Roll No. 74120065.
- ✓ Research Manuscript, Report, Patent preparation and presentation.
- ✓ **Self-Creation of two websites namely:** <http://ajibha.wix.com/drasbhatnagar> & <http://ajibha.wix.com/saideewane>

Details of Published Research Papers, Published Review Articles, Book Chapter, Posters Presented/ Abstracts Published mentioned below in ANNEXURE A

Computer Credentials: Proficient with the use of MS Office, Microsoft Word and Excel

PERSONAL DETAILS

Date of Birth: 18th Feb.1981

Passport Details: Valid up to Jul 2026

Languages Known: English, Hindi & Kannada

Citizenship: Indian

LinkedIn Account: [in.linkedin.com/pub/ajit-bhatnagar/7b/b27/190/en](https://www.linkedin.com/pub/ajit-bhatnagar/7b/b27/190/en)

Research Gate Account: https://www.researchgate.net/profile/Ajit_Bhatnagar2/info

Permanent Residence: S/o Mr. M.K. Bhatnagar, SM C - 21, Old Shiv Mandir Colony, Vaishali Nagar, Post-Supela, Bhilai - 490023, District-Durg, Chhattisgarh, India

ANNEXURE A -

PUBLISHED RESEARCH PAPERS

- ✓ Bhatnagar AS, Gopala Krishna AG (2015) . Stability of Cold-Pressed Oil from Commercial Indian Niger (*Guizotia Abyssinica* (L.f.) Cass.) Seed as affected by Blending and Interesterification. Journal of the American Oil Chemists Society, DOI: 10.1007/s11746-015-2723-3.
- ✓ Bhatnagar AS, Hemavathy J, Gopala Krishna AG (2015) . Development of a rapid method for determination of lignans content in sesame oil. Journal of Food Science and Technology. 52(1):521-527, DOI 10.1007/s13197-013-1012-0.
- ✓ Bhatnagar AS, Gopala Krishna AG (2015). Bioactives Concentrate from Commercial Indian Niger (*Guizotia Abyssinica* (L.f.) Cass.) Seed and its Antioxidant and Antiradical activity. American Journal of Food Science & Health. 1(1):10-20.
- ✓ Bhatnagar AS, Gopala Krishna AG (2014). Lipid Classes and Subclasses of Cold Pressed and Solvent Extracted Oils from Commercial Indian Niger (*Guizotia Abyssinica* (L.f.) Cass.) Seed. Journal of the American Oil Chemist's Society. 91:1205-1216, DOI: 10.1007/s11746-014-2461-y.
- ✓ Bhatnagar AS, Prabhakar DS, Prasanth Kumar PK, Raja Rajan RG, Gopala Krishna AG (2014). Processing of commercial rice bran for the production of fat and nutraceutical rich rice brokens, rice germ and pure bran. LWT-Food Science and Technology. 58:306-311, DOI: 10.1016/j.lwt.2014.03.011.
- ✓ Bhatnagar AS, Prasanth Kumar PK, Suresh Kumar G, Gopala Krishna AG (2014). Development of a process for preparation of low silica stabilized rice bran for use as a food supplement. Beverage and Food World, 41(1):50-53.
- ✓ Bhatnagar AS, Gopala Krishna AG (2013). Effect of extraction solvent on oil and bioactives composition of commercial Indian Niger (*Guizotia abyssinica* (L.F.) Cass.) seed. Journal of the American Oil Chemist's Society. 90:1203-1212, DOI: 10.1007/s11746-013-2263-7.
- ✓ Bhatnagar AS, Gopala Krishna AG (2013). Natural antioxidants of Moringa oleifera seed oil Jaffna variety of Indian origin compared to other vegetable oils, Grasas y Aceites. 64(5): 537-545, DOI: 10.3989/gya.010613.
- ✓ Bhatnagar AS, Hemavathy J., Gopala Krishna AG (2012) . Study on extractability of lignans from sesame seeds with different solvents. Journal of Lipid Science and Technology. 44(1):10-16.
- ✓ Bhatnagar AS, Gopala Krishna AG (2012). Physicochemical characteristics, bioactive molecules, stability and radical scavenging activity of Indian Niger (*Guizotia abyssinica* (L.f.) Cass.) seed oil. Proceedings of National Conference on Functional Foods in Health and Well Being, held on 2nd June 2012, Karnataka state higher education council, Bangalore, Tumkur University, Tumkur. ISBN: 978-81-923151-7-1, page no. 51-63.
- ✓ Bhatnagar AS, Prasanth Kumar PK, Hemavathy J, Gopala Krishna AG (2009). Fatty acid composition, oxidative stability and radical scavenging effect of vegetable oil blends with coconut oil. Journal of the American Oil Chemists' Society. 86(10):991-999, DOI: 10.1007/s11746-009-1435-y.
- ✓ Gopala Krishna AG, Bhatnagar AS, Prasanth Kumar PK, Indira TN, Subramanian R, Indramma AR (2013). Technology for cheaper and healthier coconut oil blends. Indian Coconut Journal. OII(2):41-42.
- ✓ Ogunsina BS, Bhatnagar AS, Indira TN, Radha C (2012). The proximate composition of African Bush mango kernels (*Irvingia gabonensis*) and characteristics of its oil. Ife Journal of Science. 14(1):177-183.
- ✓ Gopala Krishna AG, Bhatnagar AS, Prabhakar DS, Anil Kumar HG, Prasanth Kumar PK (2011). Use of low temperature for the production of nutritionally superior and oxidative stable rice bran oil. Journal of Lipid Science and Technology. 43(3):102-110.
- ✓ Prasanth Kumar PK, Bhatnagar AS, Hemavathy J, Gopala Krishna AG (2009). Changes in physico-chemical characteristics of some vegetable oils upon blending with coconut oil. Journal of Lipid Science and Technology. 41(4):136-142.
- ✓ Prasanth Kumar PK, Bhatnagar AS, Indira TN, Indramma AR, Gopala Krishna AG (2010). Storage stability of packed coconut oil blends with other vegetable oils. Indian Coconut Journal, LIII (2):7-14.
- ✓ Ogunsina BS, Indira TN, Bhatnagar AS, Radha C, Debnath S, Gopala Krishna AG (2014). Quality characteristics and stability of *Moringa oleifera* seed oil of Indian origin. Journal of Food Science and Technology. 51 (3) : 503 - 510 .

PUBLISHED REVIEW ARTICLES

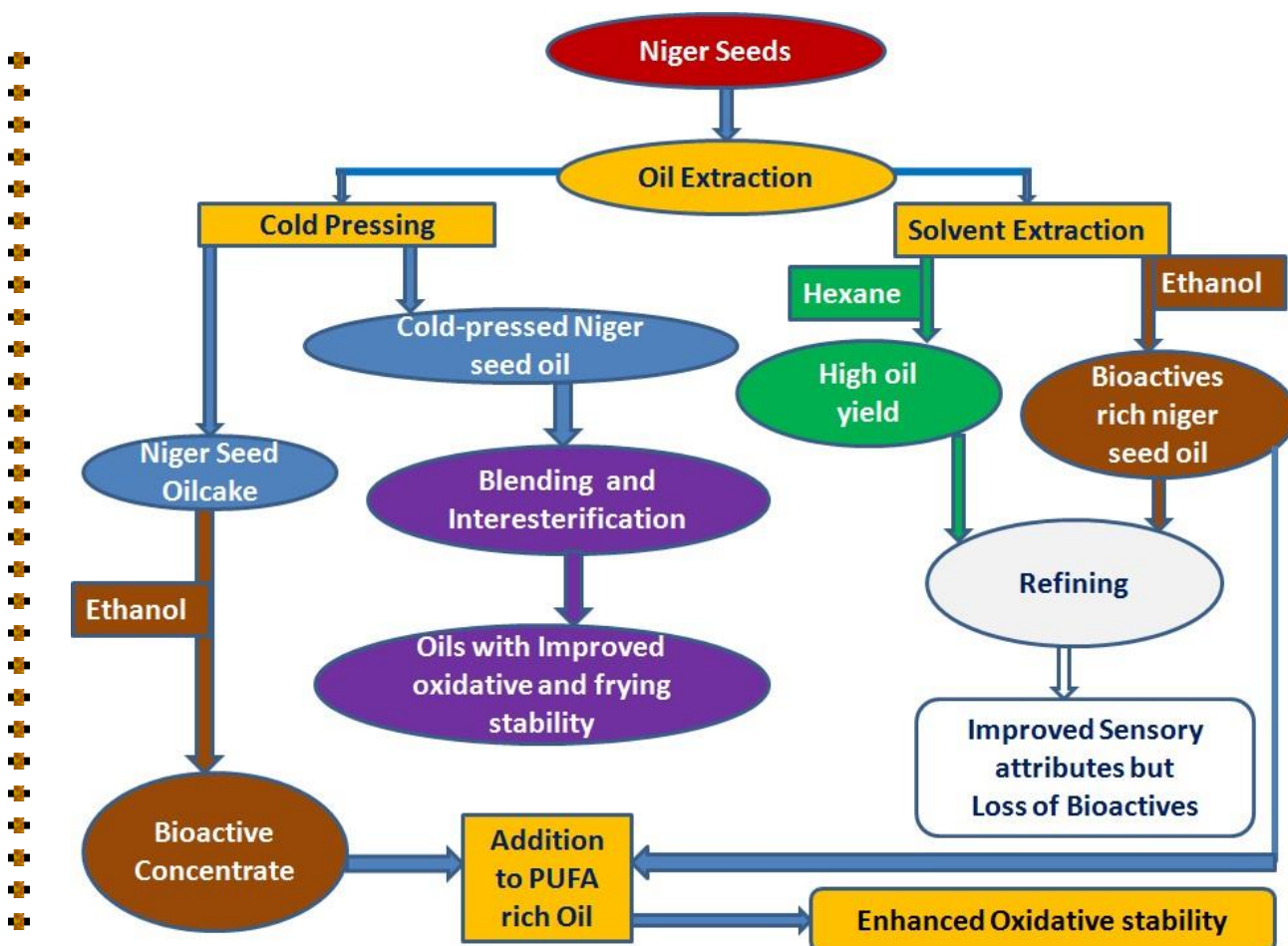
- ✓ Bhatnagar AS, Gopala Krishna AG (2009). Nutraceuticals in sesame seeds and oil - A review, Beverage & Food World, 36(5), page no. 19-23.
- ✓ Gopala Krishna AG, Gaurav Raj, Bhatnagar AS, Prasanth Kumar PK, Preeti Chandershekar (2010). Coconut oil: Chemistry, production and its application- A review. Indian Coconut Journal. LIII(3):15-27.
- ✓ Gopala Krishna AG, Raja Rajan RG, Bhatnagar AS (2012). Rice bran oil and its by- products: chemistry, production and applications - A review. Beverage & Food World. 39(1):27-33.
- ✓ Gopala Krishna AG, Raja Rajan RG, Bhatnagar AS (2012). Rice bran: chemistry, production and applications - A review. Beverage & Food World 39(5):31-36.

BOOK CHAPTER

- ✓ Book Chapter entitled "Natural Antioxidants: Occurrence and Their Role in Food Preservation by *Ajit Singh Bhatnagar and Rewa Kulshrestha* in **Natural Antioxidants: Applications in Foods of Animal Origin** Eds: **R Banerjee, AK Verma, MW Siddiqui**. E-Book ISBN: 9781771884600, **Hard ISBN: 9781771884594**, Publisher: Apple Academic Press, Distributor: CRC Press, **Publication Date: Oct, 2016**.
<http://www.appleacademicpress.com/title.php?id=9781771884594>

POSTERS PRESENTED/ ABSTRACTS PUBLISHED

- ✓ Studies on Preparation of Vegetable Oil Blends for Coconut Oil and Non-Coconut Oil Consumers. National Symposium - ICFOST (2007). Kharagpur, 31st Dec 2007- 2nd Jan 2008. Jointly Organized by AFST(I), CSIR-CFTRI, DRDO-DFRL, IIT-Kharagpur.
- ✓ Oxidative Stability and Radical Scavenging Effect of Some Coconut Oil Blends. International Symposium - IFCON (2008). Mysore, 15-19th Dec. 2008. Jointly Organized by AFST (I), CSIR-CFTRI, DRDO-DFRL.
- ✓ Quality, stability and antioxidant characteristics of *Moringa oleifera* Jaffna variety seed oil. National Symposium - ICFOST (2012). Pune, 20-21st Jan. 2012. Jointly Organized by AFST (I), CSIR-CFTRI, DRDO-DFRL, MoFPI, FSSAI.
- ✓ Physicochemical characteristics, bioactive molecules, stability and radical scavenging activity of Indian Niger (*Guizotia Abyssinica* (L.f.) Cass.) seed oil. National Conference on Functional Foods in Health and Well Being. Bangalore, 2nd June 2012. Jointly Organized by Karnataka state higher education council and Tumkur University.
- ✓ Development of a rapid method for determination of lignans content in sesame oil. National Symposium - ICFOST (2012). Mysore, 6-7th Dec. 2012. Jointly Organized by AFST (I), CSIR-CFTRI, DRDO-DFRL, MoFPI.
- ✓ Lipid classes and subclasses of cold-pressed and solvent extracted oils from commercial Indian Niger (*Guizotia abyssinica* (L.F.) Cass.) Seed. International Symposium - IFCON (2013). Mysore, 18-21st Dec. 2013. Jointly Organized by AFST (I), CSIR-CFTRI, DRDO-DFRL, MoFPI-NIFTEM.



GIST OF THE WORK DONE AND RESULTS ACHIEVED IN Ph.D. RESEARCH WORK
