

Dr. ARTI BARTWAL

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PROFILE SUMMARY

Research and Academics professional with 9 years of rich experience with expertise in

- Intellectual property rights - To Provide technical expertise in the area of life sciences patent applications.
- Research in Nutritional Biochemistry/analytical biochemistry/Tissue culture techniques/Histology/Abiotic stress/molecular biology/Biotechnology and biochemistry
- Experiment design, execution, interpretation and validation
- Laboratory set-up, equipment selection, equipment procurement and maintenance
- Root cause analysis
- Virtual tools: WinISI, Unscrambler, SPSS, AI based tools
- Project planning and execution
- Defining project milestones
- Report generation, SOP, Technical publications, Data collection
- Stakeholder management/Workforce management /Budgeting
- Education and Training

WORK HISTORY

- ❖ **Organization:** K & S Partners (Law Firm), Gurugram **Duration:** Nov 2021 - Present
Role : Consultant (IPR - Bio-sciences)
Key Responsibilities :
 - Technical review of patent application/ documents and research of various inventions/Determine novelty, inventive step/Technical review of prior art documents and specifications/Prior art search/Drafting patent document/Analysis of claims/Providing technical expertise/Prepare FER responses/FER reporting to client(s)/Pre-filing opinion for PCT applications/Addressing and arguing on Non-patentability issues/Prepare hearing responses and strategies/Prosecution review and prepare strategy for response to Office objections in various jurisdiction such as Japan, China, US, Korea and India/Misc.
- ❖ **Organization:** National Bureau of Plant Genetic Resources, New Delhi **Duration:** 2015 - 2021
Role : Research Fellow
Key Responsibilities :
 - Thoughtfully design projects end to end and related experiments /Successful execution of experiments and trouble shooting /Data analysis and interpretation.
 - Timeline development/ Progress measurement & Progress reporting.
 - Project management/Stakeholder management/Budget management/Work force and work load management/Mentoring and training students/interns.
 - Standardization of protocols/SOP preparation/data collection and management/Writing manuscripts and project reports.
 - Maintenance/preservation of germplasms by in-vitro conservation (tissue culture techniques) and cryopreservation.
 - Laboratory set-up/Equipment selection/Equipment procurement, consumable and non-consumable procurement/Equipment maintenance, trouble shooting and calibration.
 - Research Project I (Nationally Co-ordinated) - Characterization, Evaluation of genetic resources and Improvement of minor pulses.
 - Research Project II (Nationally Co-ordinated)- Towards understanding the C3-C4 intermediate pathway in *Poaceae* and functionality of C4 genes in rice.

❖ **Organization:**

GB Pant University of Agriculture and Technology, Pantnagar
Baba Farid Institute of technology

Duration : Aug 2014- May 2015

Duration : Aug 2012 - Aug 2014

Role : Teaching Personnel/Assistant Professor

Key Responsibilities :

- Incharge of the Department of biochemistry/biotechnology.
- Monitoring all departmental activities (academic/non-academic)/Involved in teaching/guiding graduates/post graduates/Establishment and management of laboratory/Examination related duties (examination duties, preparation of question papers, evaluation of answer sheets, grading, conducting practical external examination etc.).
- Taking/supervising laboratory sessions/other academic duties.
- Supervision of Ph.D scholars in research based courses.
- Guiding students in manuscript writing and publication.

INTERNSHIP

❖ **Organization**

Ruchi Hospital and Diagnostics, Gangtok, Sikkim

Duration : Jun'03- Dec'03

Key Responsibilities

- Medical Laboratory Technology/ regular OPD duties.
- Performed various hematological/serological/ microbial tests/blood banking/sample collection.
- Laboratory management.
- Preparation of patients' report and interpretation.

KEY SKILLS

- **Biochemical laboratory experiments:** Standard curve preparation, qualitative and quantitative Estimation of various biochemical parameters, titration etc.
- **Intellectual property rights** - To Provide technical expertise in the area of life sciences patent applications, Patentability search , Preparing FER responses, Non-patentability issues, Claim analysis, Preparing responses to Office Actions in other jurisdictions such as US, Japan, China, Korea etc. Pre-filing opinions, attending and responding to client's queries
- **Microbiological techniques :** Culturing, isolation & screening, sterilization process, cultural and biochemical studies of various microorganisms, growth curve study, microscopy etc.
- **Molecular biology techniques :** Isolation, purification and quantification nucleic acid and proteins, Polymerase chain reaction, restriction digestion and ligation, preparation of competent cell etc.
- **Analytical techniques :** Electrophoresis, chromatography, centrifugation, spectroscopy etc.
- **Enzyme assays :** Enzyme characterization, isozyme analysis using Ingel assay.
- **Plant tissue culture and cryopreservation :** Media preparation, callus regeneration, embryo culture, germplasm preservation), cryopreservation, vitrification, encapsulation, artificial seed preparation, droplet freeze method.
- **Histological techniques :** Microtomy, sample preparation for electron microscopy.
- Trouble shooting and standardization of various research based protocols. Collaborative work with other researchers, good interpersonal skills.
- Scientific writing- Scientific publications - Linkedin - <https://www.linkedin.com/in/dr-arti-bartwal>
- Frontiers member since: 18 Mar 2021 as a reviewer.

EXTRA CURRICULAR ACTIVITIES

- Actively participated and bagged awards in cultural, literary and sports competitions at school and college level.
- Participated in various social and charitable activities, organized rallies and social awareness programs.
- Active member of Outside Class Learning Committee at Institute (BFIT) and in charge of cultural committee.
- Voluntary participation in organizing Blood Donation Camp organized by State Blood Transfusion

Council and Uttarakhand State AIDS Control Society, 29.03.2014.

- Organizing member of Biologic 13 National Symposium on Role of Biotechnology in Infectious Diseases 7-8 March 2013.

SOFTWARE(S)

WinISI, Unscrambler, SPSS, Python basics , Bioinformatic tools, LSAV 4.2 for florescence microscope

EDUCATION

2008-2012	Ph.D Biochemistry, GB Pant University of Agriculture and Technology Pantnagar (Thesis: Dynamics of drought tolerance in two contrasting genotypes of finger millet)
2004-2006	MSc Biochemistry, Dolphin PG Institute of Biomedical and Natural Sciences (HNB Garhwal Central University) (Dissertation Title: Antioxidative and hepatoprotective activity of <i>Terminalia arjuna</i>)
2000-2003	BSc. Medical Laboratory Technology (Pathology), SBS PG Institute of Biomedical Sciences and Research (CCS University Meerut)