



National Bureau of Fish Genetic Resources
(Indian Council of Agricultural Research)
Canal Ring Road, Dilkusha PO, Lucknow-226002, India



Name Dr. POONAM JAYANT SINGH
Designation SCIENTIST (SELECTION GRADE)
Date of birth 20 FEBRUARY 1973
Professional experience 13 Years
Qualification MSc (Biochemistry) from Lucknow University in 1996



LLM (Intellectual Property Rights) from WIPO, Geneva and University of Turin in 2009

International Internship on Intellectual Property Rights and Technology Transfer from Michigan State University, USA, 2010

Chevening Rolls-Royce Science and innovation Leadership Scholar, University of Oxford, UK 2011

Current area of Research Microsatellite development, Patinformatics, Biodiversity and IP issues

Area of Research Expertise

Genomics and De novo Microsatellite development:

Development of enriched genomic library for Genus *Tor* containing perfect repeats, imperfect repeats and Compound repeats for SSR (Microsatellite) Development of novel protocol for amplifying AFLP bands on Agarose for which normally PAGE is used. Development and Standardisation of two hour laboratory protocol for extracting DNA from ctenoid and cycloid scales of fishes

Bioinformatic Approaches: Bioinformatic analysis of GnRh protein by gene homology mining and identifying orthologs and paralogues Expertise in Patent Information mining, State of Art Search, Prior art Search for potential research areas and for institutional projects. Novelty search and Technology Search for patent landscape analysis and Patent mining for technological innovation

Fish genotoxicity assays: Studies on acute toxicity and genotoxicity, using Micronucleus assay (MNT), sister chromatid exchanges (SCE) and single cell gel electrophoresis (SCGE), in fish species and use of antigenotoxicants in amelioration of DNA damage by curcumin

International Treaties: In depth understanding and analysis of International Agreements like WTO, TRIPS, CBD specifically in relation to Genetic Resources and legal issues related to Intellectual Property Rights in Research and Academics

Access and Benefit Sharing issues: Study on Animal Genetic resources with emphasis on Access and benefit sharing issues related to Genetic Resources, have been invited to various International Forums for the same Comparison of laws in relation to Bonn Guidelines and Nagoya Protocol

Copyright issues: Analysis of legal implications of Copyright laws on Open Access and its fair use.

Awards/ Recognitions

- **CSIR-UGC Junior Research Fellowship** in 1996, from CSIR, HRD Group
- **GATE** (Graduate Aptitude Test in Engineering) Scholar 1996
- Only Indian candidate awarded WIPO fellowship in the year 2008-2009 for pursuing LLM (IPR) jointly offered by the WIPO Worldwide Academy, WIPO, Geneva and the University of Turin, Torino and International Training Centre of ILO, at United Nations Staff College Turin from September 1 to December 12, 2008
- Awarded sponsorship by World Trade Institute, Bern, Switzerland for key presentation at NCCR Trade Regulation IP-9 Workshop on "Animal Breeding, Innovation, Trade and Proprietary Rights" at WTI, Bern, Switzerland from 27 to 28th November 2008 as key speaker
- Awarded Fellowship by ITC-ILO Turin and University of Torino to participate in Senior Alumni Day, and Conference on patenting Life forms held at WIPO, Geneva, Switzerland on 1st October 2009
- Awarded prestigious "Chevening Rolls Royce Science and Innovation Leadership Programme" Fellowship from 21 March 2011 to 5th July 2011, by British Council and Rolls Royce, at the University of Oxford, UK

Publication (no.)

- | | |
|---------------------------|----|
| • Research papers | 8 |
| • Reviews | 1 |
| • Books | 2 |
| • Book Chapters | 15 |
| • Popular articles | |
| • Others | 10 |

Important Research Publications

Singh P J 2009 "*Animal Genetic resources : Sui Generis options for protection*", Collection of Research Papers, Masters of Law in Intellectual Property by University of Turin and WIPO Worldwide Academy, page no 605-625, WIPO Publication no 797E/08, ISBN **978-92-805-1868-9**

Singh P J 2010 " Sui generis protection of animal genetic resources : An initiative by the Indian Council of Agricultural Research "In Working Paper no 2010/05/May 2010 on "Rights to Animal Genetic Resources for Food and Agriculture pg 67-68 " Eds Susette Biber-Klemn and Michelango Temmerman, NCCR Trade Regulation, Swiss National Centre of Competence in Research, Swiss National Science Foundation, Berne, Switzerland

Singh P J 2011, "Legal perspectives in Genetic Resource protection: Implications of

International regime from Common heritage of mankind to the Nagoya Protocol”P-72, in symposium on Genomics and biodiversity in the 15th ADNAT Convention from 23rd to 25th Feb 2011 at CCMB, Hyderabad

Singh P J , Kumar R, Nagpure N S, Shasany A K, Lakra W S, Kushwaha B and Srivastava S K, 2007 An integrated approach for genetic characterization of an endemic fish *Pristolepus fasciatus* using conventional and molecular tools Aquaculture, doi10.1016/j.aquaculture.2007.07.184 volume **272**, supplement 1 2007, pages **310**, Supplement: Genetics in Aquaculture IX.

Kumar R, **Singh P J** , Nagpure N S, Kushwaha B, Srivastava S K And Lakra W S A non invasive technique for rapid extraction of DNA from fish scales, Indian journal of experimental biology, volume **45**, November 2007, pp 992-997

Nagpure N S, Kumar R, Srivastava S K, Kushwaha B, **Singh P J** , Gopalakrishnan A & Basheer V S (2005) A report on high number of chromosomes in three endemic fish species from the Western Ghats of India. *The Nucleus*, **48(3)**: 165-170.

Sharma S, Nagpure N S, Kumar R, Pandey S, Srivastava S K, **Singh P J** and Mathur P K “Studies on genotoxicity of endosulfan in different tissues of fresh water fish *Mystus vittatus* using the comet assay” *Achieves of Environmental contamination and Toxicology*, **53(4)**:617-623

Mahanta P C, **Singh P J** , Patiyal R S, (2004) “Interlinking of Sustainability In Fish Germplasm Resource Conservation With Commercial Aquaculture “. In: Ayyappan, S[et al] (eds.) Fish Biodiversity in Protected Habitats, 8-vol **2**: 85-93, Nature Conservator Publication

Singh P J , Tyagi L K and Lakra W S 2008 “Baudhik sampada prabandhan ke paripekshya mein bhartiya krishi anusandhan avum praudhaugiki hastantaran ka badalta paridrishya” pg 69 to 72 Review Article in Matsya Lok

Kushwaha B, Nagpure N S, Kumar R, Srivastava S K, **Singh P J** and Lakra W S (2008), *Parvitya Mahaseer Ki Prajityon Mein Koshanuvanshkita Vibhinnata* in book chapter *Utar Parvitya Rajyon Ki Matsya Vividhta: Sanrakshan Avum Prabandhan*, pages 302-306, In Fish Diversity of Northern Hill States: Conservation and Management, Edited by W S Lakra and L K Tyagi,

N S Nagpure, **Singh P J** , S K Srivastava And W S Lakra “2007 A Report on Mass Mortality of Fishes from Gomti River in Lucknow, *Fishing Chimes*, **26**: **46-48**”

Singh P J, 2011” Global Genetic resource Commons:Conflicting regulatory framework in Intellectual Property Regime” ID: 614 at 13th Biennial Conference of the International Association for the Study of the Commons at 13 th IASC International Conference under the theme sustaining commons: sustaining our future from 10 to 14 Jan 2011 at Hyderabad

Singh P J 2011”Leveraging Patent mining information in the field of nano biotechnology for strategic disease management and diagnosis in agriculture”, DHM-6 PG NO 190-191,in X Agricultural science congress on soil, plant and animal health for enhanced and sustained agricultural productivity, at NBFGR from 10-12 February, 2011

Dinesh Kumar, P S Panwar, **Singh P J** and B K Joshi “Sovereignty of indigenous AnGR from IPR Perspective:Case studies and lessons”page 69, in National Conference on new horizons in animal breeding Technologies for Accelerating Livestock Production and Health, organized by ISGAB and IVRI from Jan 20-21, 2011

Singh P J 2010, Invited by Centre for genetic resources, the Netherlands, as a panel session expert in the “International Technical Expert Workshop on exploring the need for specific measures for access and benefit sharing of animal genetic resources for food and

agriculture" , sponsored by Ministries of Agriculture of the Governments of the Netherlands, Norway and Switzerland at Wageningen, the Netherlands from 8-10 December 2010

Singh P J , 2009, participated in the "Conference on Patenting Life Forms" organised by WIPO World wide academy, University of Tornio, and International Training Centre of ILO, at Geneva, on 2ND October 2009

Singh P J , 2009, Invited to participate in Senior Alumni Day of 2009 Edition of Master of Laws in Intellectual Property , organised by University of Torino-Faculty of Law, WIPO World Wide Academy, and International Training Centre of the International Labour Organisation for sharing professional experiences with students, Sponsored By the International Training Centre of International Labour Organisation. at WIPO, Geneva, on 2nd October 2009

Singh P J, 2008 Participated in "Conference on Intellectual property and development" at WIPO, Geneva, Switzerland, on 1st October 2008 jointly organized by TORINO University Law School, International Training Centre Of ILO, And WIPO Worldwide Academy.

Singh P J, 2008, Participated in International conference on Design- Driven Innovation: New Challenges to Intellectual Property Protection, organized by, WIPO in cooperation with Italian Patent and Trademark Office (UBIM) and Chamber of Commerce , Industry, Handicraft and Agriculture of Turin at Turin, Italy from October 28 to 29 2008

Singh P J, 2010" Sui generis protection of animal genetic resources : An initiative by the Indian Council of Agricultural Research "In Working Paper no 2010/05/ May 2010 on "Rights to Animal Genetic Resources for Food and Agriculture pg 67-68 " Eds Susette Biber-Klemn and Michelango Temmerman, NCCR Trade Regulation, Swiss National Centre of Competence in Research, Swiss National Science Foundation, Berne, Switzerland

Singh P J, 2008 "*Sui generis* registration of animal Genetic Resources in India An initiative by ICAR" for the technical session on " Changes to legal framework" at NCCR Trade regulation IP-9 workshop, on "Animal Breeding, Innovation , Trade And Proprietary Rights", at World Trade Institute, Hallerstrasse, Berne, Switzerland, From 27 To 28th November 2008 "

Singh P J, 2009, *Strategic Research Planning for Enhancement of Productivity in Aquaculture by Patent Landscaping*, under the theme "Roles of aquaculture genetics in addressing global food crisis" in 10th International Symposium on Genetics in Aquaculture (ISGA 2009), JUNE 22-26, 2009, Bangkok, Thailand Abstract number PP103

Singh P J, 2009, Invited for presenting paper on "Copyright Issues in Open Access" in the workshop on E – Publishing and Knowledge System in Agricultural Research (E-PKSAR) at NASC Complex, New Delhi, organised by Directorate of Information and publications of Agriculture (DIPA), New Delhi on 14th November 2009

Singh P J 2009 Invited to Brain Storming workshop on" OA in Agriculture: prospects, opportunities, advantages and challenges" to share insight on IPR issues in Open Access during 6-7th September 2009 at ICRISAT

Singh P J, Srivastava P P, Singh D P, W. S Lakra (2008) "*Protecting traditional knowledge: issues to address*" for presentation at plenary session VI , on theme, Traditional Knowledge Protection/ Documentation, (TK-56), In National Conference on Traditional Knowledge Systems, Intellectual Property Rights and their Relevance for Sustainable Development, 24-26 November 2008, Organised By National Institute Of Science Communication And Information Resources (Niscair), New Delhi, AT National Agriculture Science Complex (ICAR) New Delhi,

Singh P J (2009) "*Intellectual Property Rights, Genetic Resources, Indigenous and Traditional*

Knowlegde: Does India Need a Suigeneris Protection Mechanism" paper accepted for 4th World Congress on Conservation Agriculture under the theme Innovations for improving efficiency, equity and environment, pg 296-298 from 4-7 February 2009

Singh P J, Singh D P and Lakra W S (2009): "*Legal issues from developments in animal breeding : Scope of Patent Rights*" paper accepted in National Symposium on Livestock Biodiversity Conservation & Utilisation from past and future perspectives , 12-13 February 2009, NBAGR, ORGANISED BY Society for Conservation of Domestic Animal Biodiversity(SOCDAB)

P S Panwar, B K Joshi, **Singh P J** and Kumar D 2010: "Scope of IPR/TK Protection Studies related to AnGR in Andaman & Nicobar Islands" paper accepted in VII National Symposium on "Challenges to Domestic Animal Biodiversity and Action Plan for its Management and Utilisation" , 10-11 February 2010, AAU, Anand , Organised by Society for Conservation of Domestic Animal Biodiversity (SOCDAB)

Singh P J 2009 "Utilising Patent Information As Data Mining Tool For Research In Agricultural Sector" at 26th National Convention 9-12 DEC 2009"Conference On Recent Trends In Pat informatics" organised by SIS (Society for Information Science) and CSIR's URDIP (Unit for Research and Development of Information Products).

Singh P J, (2007): "Intellectual Property Rights : Basic FAQ's"., NBFGR Publication. Pg **1-20**