

# **DETAILED CURRICULUM VITAE**

## **DR. SHIV KUMAR**

**Designation:** Assistant Professor (Since 11, April 2017)  
**Deptt & College:** Zoology, Govt. Degree College, Kathua  
**Specialization:** Molecular Biology  
**Research Area:** Diabetes and Inflammation

### **Academic Responsibilities**

- Head Department of Fishries (HoD).
- Nodal Officer, Red Ribbon Club of the College.
- Members of many college committees

### **Academic Qualification**

- 1) **2020 - Ph.D. in Biological Sciences** entitled “Mechanistic role of Phloretin and Phloridzin in type 2 diabetes mellitus and colon inflammation” from CSIR- Institute of Himalayan Bioresource Technology, Palampur through AcSIR.
- 2) **2012 - M.Sc.(Hons.) Zoology with 78.49 %** from Guru Nanak Dev University Amritsar, India
- 3) **2010 - B.Sc. Medical with 64.00%** from Govt. Degree college Kathua, University of Jammu, India
- 4) **2010 - Diploma in Ophthalmic Assistant (Session 2007-2009) with 75.42 %** from Jammu and Kashmir State Medical Faculty, India
- 5) **2005 - (10+2) with 57.83%** from Govt. Higher Secondary School Basohli, JKBOSE, India
- 6) **2003 - Matriculation with 64.40%** from Govt. High School NagrotaPrehta, Basohli, JKBOSE, India

### **Research Experience:**

- 1) **Senior Research Fellow** (August 2015 to August 2019) at CSIR- Institute of Himalayan Bioresource Technology, Palampur
- 2) **Junior Research Fellow** (August 2013 to August 2015) at CSIR- Institute of Himalayan Bioresource Technology, Palampur

### **Awards, Experiences and Achievements:**

- 1) **UGC Senior Research Fellowship** (2015) awarded by University Grants Commission, New Delhi, India

- 2) UGC **Junior Research Fellowship** (2013) awarded by University Grants Commission, New Delhi, India
- 3) Awarded with **Rajiv Gandhi National Fellowship** for PhD program, 2012-13
- 4) Teaching experience in **Jammu and Kashmir, Higher Education Department** from 08-10-2012 to 31-07-2013
- 5) Qualified **Joint UGC-CSIR National Eligibility Test for Lecturership** in December 2013
- 6) **3<sup>rd</sup> Topper in M.Sc. (Hons.) Zoology**, 2010-12 session, Guru Nanak Dev University Amritsar, India
- 7) Awarded with **Best Teacher Award 2023 by Rotary Internationals and Govt. SPMR College, Jammu**

## **Research Skills**

### *In vivo experimentation*

Experimental ethics, Animal modeling, Animal handling (rats and mice), drug dosing, retro-orbital puncture, experimental design, staining procedures (H&E and IHC) etc.

### *In vitro experimentation*

Cellular viability assays, Clonogenic assay, caspase determination, Nitric oxide determination, Oil-Red-O staining of lipids, differentiation of adipocytes and myocytes.

### *Cell lines Handled*

3T3L1, L6, THP-1, HepG-2, A549, MCF-7, KB, SiHa, RAW 264.7, J774, CHOK1, C-6, U87MG, HeLa, HT-29, Colo-205, HCT-116.

### *Molecular Biology Techniques*

Isolation of RNA, DNA and Proteins, SDS PAGE, ELISA, Western blotting, qRT-PCR, Flowcytometry etc.

### *Instrument handled*

Laminar Air Flow Chamber, CO<sub>2</sub> Incubator, Microplate Reader, Phase Contrast Microscope, Confocal Microscope, Hematology Analyzer, Microtome, AmnisFlow Cytometer etc.

## **Scientific Publications (Total Impact factor: 36.675)**

1. Shalika Rana, **Shiv Kumar**, Nikita Rathore, Yogendra Padwad and Shashi Bhushan. Nutrigenomics and its impact on life style associated metabolic disorders. *Current Genomics*. 2016, 17(3):261-278. **(Impact factor- 2.236)**
2. Shalika Rana, **Shiv Kumar**, Ajay Rana, Vivek Sharma, Preeti Katoch, Yogendra Padwad, Shashi Bhushan. Phenolic constituents from apple tree leaves and their *in vitro* biological activity. *Industrial crops and Products*. 2016, 90:118-125. **(Impact factor- 5.645)**
3. **Shiv Kumar**, Vikram Patial, Sourabh Soni, Supriya Sharma, Kunal Pratap, Dinesh Kumar, Yogendra Padwad. *Picrorhiza kurroa* enhances  $\beta$ -cell mass

proliferation and insulin secretion in streptozotocin evoked  $\beta$ -cell damage in rats. *Frontiers in Pharmacology*. 2017, doi: 10.3389/fphar.2017.00537. **(Impact factor- 5.810)**

4. Manju Bala, **Shiv Kumar**, Kunal Pratap, Praveen kumar Verma, Yogendra Padwad, Bikram Singh. Bioactive isoquinoline alkaloids from *Cissampelos pareira*. *Natural Product Research*. 2017, <https://doi.org/10.1080/14786419.2017.1402319>**(Impact factor- 2.861)**
5. Anamika Sharma, Robin Joshi, **Shiv Kumar**, Rohit Sharma, Rajneesh, Yogendra Padwad, Mahesh Gupta. *Prunus cerasoides* fruit extract ameliorates inflammatory stress by modulation of iNOS pathway and Th1/Th2 immune homeostasis in activated murine macrophages and lymphocytes. *Inflammopharmacology*. 2018, <https://doi.org/10.1007/s10787-018-0448-2>**(Impact factor- 4.473)**
6. **Shiv Kumar**, Kajal Sinha, Rohit Sharma, Rituraj Purohit, Yogendra Padwad. Phloretin and phloridzin improve insulin sensitivity and enhance glucose uptake by subverting PPAR $\gamma$ /Cdk5 interaction in differentiated adipocytes. *Experimental cell Research*. 383 (2019): 111480 **(Impact factor- (3.905)**
7. Shalika Rana# **Shiv Kumar**#, Ajay Rana, Yogendra Padwad and Shashi Bhushan. Biological Activity of Phenolics Enriched Extracts from Industrial Apple Pomace. *Industrial crops and Products*. **(Impact factor- 5.645)**
8. Kajal Sinha, **Shiv Kumar**, Bindu Rawat, Rahul Singh, Rituraj Purohit, Dinesh Kumar, Yogendra Padwad. Kutkin, iridoid glycosides enriched fraction of *Picrorrhiza kurroa* promotes insulin sensitivity and enhances glucose uptake by activating PI3K/Akt signaling in 3T3-L1 adipocytes. *Phytomedicine* **(Impact factor- 6.6)**
9. **Shiv Kumar**, Jyoti Chhimwal, Suresh Kumar, Rahul Singh, Vikram Patial, Rituraj Purohit, and Yogendra S. Padwad. "Phloretin and phlorizin mitigates inflammatory stress and alleviate adipose and hepatic insulin resistance by abrogating PPAR $\gamma$  S273-Cdk5 interaction in type 2 diabetic mice." *Life Sciences*, 2023. **(Impact factor: 6.1)**
10. Edited a book entitled "Vishwasthali My Pride" released by Honorable Lt. Governor, Sh. Manoj Sinha ji on 13th May 2023.

### **Conferences/workshops attended/Paper presented**

1. Presented paper entitled "Anti-inflammatory effect of *Prunus cerasoides* fruit extract in LPS and IFN- $\gamma$  stimulated macrophages and lymphocytes" through oral presentation in the National Level Seminar on Science and Technology for

the unreached: Notion, Values and Applicability organized by GDC, Samba on 20<sup>th</sup>-21<sup>th</sup> April, 2018.

2. Presented paper entitled "***Picrorhiza kurroa* enhances  $\beta$ -cell proliferation with antihyperglycemic, antioxidant and hepatoprotective activities in streptozotocin induced diabetic rats**" through oral presentation in the "Two day's National Science Conference" on "Science, Society and Sustainable Development" organized by P.G. Department of Sericulture, Poonch Campus, University of Jammu on 25<sup>th</sup> - 26<sup>th</sup> November, 2017.
3. Presented paper entitled "***Prunus cerasoides* fruit extract suppresses nitric oxide and cytokine production in LPS and IFN- $\gamma$  stimulated macrophages**" through oral presentation in the "Two day's National Conference" organized by GDC, Thannamandi on 19<sup>th</sup> -20<sup>th</sup> March, 2018.
4. Presented research work entitled "**Phloretin and phloridzin improve insulin sensitivity and enhance glucose uptake by abrogating PPAR $\gamma$ /Cdk5 interaction in differentiated adipocytes**" in the form of oral presentation at 8 Annual Meeting of IABS at CSIR-NIIST, Thiruvananthapuram, Kerala, 25<sup>th</sup> to 27<sup>th</sup> February, 2019
5. Presented paper entitled "**Role of phloretin and phloridzin in the amelioration of insulin resistance by activating PPAR $\gamma$  in differentiated 3T3L1 cells**" through poster presentation in the 3<sup>rd</sup> National Conference" organized by P.G. College, Rajouri on 19<sup>th</sup> -20<sup>th</sup> January, 2019.
6. Delivered an oral presentation on "**Impact of Child Labor on the Physical and Mental Health of Children**" in One Day International Seminar on Child Rights: Issues and Challenges held at GDC Basohli on 20<sup>th</sup> April 2023.
7. Delivered an oral presentation on "**Climate change and disaster risk reduction: Making sustainability a way of Life**" in One Day National Conference held at GCW, Kathua on 19<sup>th</sup> May 2023.
8. Delivered an oral presentation on "**Role of Physical Exercise in Ameliorating Insulin Resistance through Regulation of Adiponectin Levels**" in Two Day International Conference on Health, Fitness, Yoga & Sports Science held at GDC, Kathua (Boys) on 5<sup>th</sup> -6<sup>th</sup> March 2024.

### **Invited/Guest Lectures**

1. Delivered a talk on "**PPAR $\gamma$  serine273: An emerging target in the therapeutics of diabetes**" as an invited speaker in a **One Day State Level Seminar on Science and Technology** at GDC, Billawar on 23<sup>rd</sup> March 2021.

2. Acted as a Resource person and delivered a talk on “**The Science Behind Diabetes Mellitus**” at GDC, Basohli on 15<sup>th</sup> Nov. 2021 to celebrate World Diabetes Day.
3. Delivered a talk on **World Hepatitis Day at GDC, Basohli** on 28<sup>th</sup> July, 2022.

### **Professional Development Activities**

1. Attended IP Awareness/Training program under National Intellectual Property Awareness Mission organized by GDC, Kathua in collaboration with Intellectual Property Office, India under the aegis of GoI, Ministry of commerce and industry, Department of Promotion of industry and Internal trade on 25th January 2023.
2. Attended One Day workshop on “MOOCS Designing and E-Learning Techniques” organized by Department of Zoology in collaboration with HRDC, University of Jammu on 14th March 2023.

**(Dr. Shiv Kumar)**  
**Assistant Professor in Zoology**  
**GDC, Kathua (JKUT)**