

Dr. SEEMA RANI

Assistant Professor, Hindu Girls College, Sonapat

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Academic qualifications

- Ph.D from Panjab University, Chandigarh (July 2018).
- M.Sc. (Hons. Zoology)-2013 (78.2% **(Gold medalist)** Panjab University, Chandigarh.
- B.Sc.-2011 (76%) Kurukshetra University, Kurukshetra.
- Senior Secondary-2008 (75.4%) Jawahar Navodaya Vidyalaya, Pabra (Hissar) (C.B.S.E.).
- Matric-2006 (84.80%) Jawahar Navodaya Vidyalaya, Pabra (Hissar) (C.B.S.E.).

Research experience:

- **Ph.D thesis title:** To investigate the role of dermal fibroblasts derived factors in vitiligo pathogenesis.
- **M.Sc Dissertation** on “Modulatory effect of *Withania Somnifera* and Vitamin E on liver and spleen of Cadmium intoxicated BALB/c mice”.

PUBLICATIONS: Original articles-

1. **Rani, S.,** Pervaiz, N., Parsad, D., Kumar, R. Differential expression of extracellular matrix proteins in the lesional skin of vitiligo patients. Arch Dermatol Res (2023). <https://doi.org/10.1007/s00403-023-02628-z>. **IMPACT FACTOR- 3.033.**
2. N. Srivastava, A. Bishnoi, S. Mehta, **S. Rani,** R. Kumar, S. Bhardwaj, M.S. Kumaran, V. Keshavamurthy, S. Gupta, D Parsad. Aberrant ETS-1 signalling impedes the expression of cell adhesion molecules and matrix metalloproteinases in non segmental vitiligo. Exp. Dermatol. 2020. 29(6):539-547. **IMPACT FACTOR- 4.511.**
3. S. Bhardwaj, **S. Rani,** M. S. Kumaran, A. Bhatia, D. Parsad. Expression of Th17- and Treg-specific transcription factors in vitiligo patients. **International Journal of Dermatology 2020.** 59(4):474-481. **IMPACT FACTOR- 3.204.**
4. **S. Rani,** U. Kumari, S. Bhardwaj, D. Parsad, V.L. Sharma, R. Kumar. Decreased expression of neuregulin1 in the lesional skin of vitiligo patients. **Int. J Dermatol 2019;** 58(2):242-249. **IMPACT FACTOR- 3.204.**

5. **S. Rani**, R. Chauhan, D. Parsad, R. Kumar. Effect of Dickkopf1 on the senescence of melanocytes: in vitro study. **Arch Dermatol Res** 2018; 310(4):343-350. **IMPACT FACTOR- 3.033.**
6. **S. Rani**, R. Kumar, P. Kumarasinghe, S. Bhardwaj, N. Srivastava, A. Madaan, D. Parsad. Melanocyte abnormalities and senescence in the pathogenesis of Idiopathic Guttate Hypomelanosis. **Int. J Dermatol** 2018; 57(5):559-565. **IMPACT FACTOR- 3.204.**
7. **Rani S**, Bhardwaj S, Srivastava N, Sharma VL, Parsad D, Kumar R. Senescence in the lesional fibroblasts of non-segmental vitiligo patients. **Arch Dermatol Res** 2017; 309: 123-132. **IMPACT FACTOR- 3.033.**
8. Razmi T M, Kumar R, **Rani S**, Kumaran SM, Tanwar S, Parsad D. Combination of Follicular and Epidermal Cell Suspension as a Novel Surgical Approach in Difficult-to-Treat Vitiligo: A Randomized Clinical Trial. **JAMA Dermatology** 2018; 154(3):301-308. **IMPACT FACTOR- 11.82**
9. S. Bhardwaj, **S. Rani**, N. Srivastava, R. Kumar, D. Parsad. Increased systemic and epidermal levels of IL-1 β promote progression of non segmental vitiligo. **Cytokine** 2017; 91: 153-161. **IMPACT FACTOR- 3.926**
10. R. Kumar, D. Parsad, **S. Rani**, S. Bhardwaj, N. Srivastava. Glabrous lesional stem cells differentiated into functional melanocytes: new hope for repigmentation. **Journal of European Academy of Dermatology and Venereology** 2016; 30(9):1555-60. **IMPACT FACTOR- 9.228**
11. **Seema Rani**, Vijay Lakshmi Sharma, Mani Chopra. Evaluating the protective efficacy of combination *Withania somnifera* and vitamin E against cadmium-induced oxidative stress-mediated hepatic histopathology and genotoxicity in murine model. **Int J Pharm Pharm Sci** 2017; 9(10): 230-235.
12. M. Chopra, **Seema**, V.L.Sharma. Protective effect of *Withania Somnifera* and Vitamin E against cadmium induced toxicity in mice spleen. **International Journal of Pharmacology & Toxicology Science**. 2013; 3(6); 32-42.

Review paper:

1. Ridam Kapoor, Sunil Kumar Dhatwalia, Ravinder Kumar, **Seema Rani**, Davinder Parsad: Emerging Role of Dermal Compartment in Skin Pigmentation: Comprehensive Review. Journal of the European Academy of Dermatology and Venereology 2020. 34(12):2757-2765. **IMPACT FACTOR- 9.228**

Chapters:

1. Radhika Sharma and **Seema Rani** (2022). Chapter entitled- Bioluminescence, Pheromones, Nervous Integration, Diapause, Mimicry and Insect Behaviour. In: Insect Physiology for MSc Final year for MPB Open University, Bhopal. Pp 173-228, Publishers- Vikas publications, New Delhi. ISBN978-93-5453-934-3.
2. Sharma R., Sinha R., Kaur R., **Rani S.** (2022) Drug-Induced Nephrotoxicity and Use of Biomarkers. In: Patel V.B., Preedy V.R., Rajendram R. (eds) Biomarkers in Toxicology. Biomarkers in Disease: Methods, Discoveries and Applications. Springer, Cham. Online ISBN 978-3-031-07391-5.
3. R. Kumar, **S. RANI**, N. Pervaiz, D. Parsad. Cellular grafting techniques. In: Comprehensive Textbook on vitiligo. Eds: Vineet Relhan, Vijay Kumar Garg, Sneha Ghunawat, Khushbu Mahajan. CRC press. pp , 2020. ebook ISBN- 9781315112183.
4. R. KUMAR, D. PARSAD, **S. RANI**. Melanocyte migration and repigmentation. In: Handbook of vitiligo: Basic science and clinical management. Eds: Iltefat Hamzavi, Bassel H. Mahmoud and Prescilia N. Isedeh. Jaypee Brothers Medical Publishers Private Limited. pp 53-64, 2016. ISBN 9781907816963.

Book authored:

CELL BIOLOGY M.Sc. [Zoology] Second Year Paper – IX: Lalit Narayan Mithila University (Directorate of Distance Education): 2019. ISBN- 9789353389048.

Abstract published online:

1. **Seema Rani**; Davinder Parsad; Vijay Lakshmi Sharma; Ravinder Kumar. Dickkopf-1 expression in vitiligo patients and its in vitro effect on the cultured melanocytes. **Pigment cell and melanoma research**. 2017: 30; e34.

2. **S. Rani**, D. Prasad, S. Bhardwaj, N. Srivastava, V.L. Sharma, R. Kumar. Senescence in dermal fibroblasts and its implication in the pathogenesis of vitiligo. **British Journal of Dermatology** (2016) 175 (Suppl. S1), pp58.
3. N. Srivastava, S. Bhardwaj, **S. Rani**, R. Kumar, D. Parsad. Study of transcription factor Ets-1 and adhesion molecules in vitiligo. **British Journal of Dermatology** (2016) 175 (Suppl. S1), pp53-54.

Membership:

- Member of International Federation of Pigment Cell Societies (IFPCS- no. 2052).
- Member of European Society of Pigment Cell Research (ESPCR no.- 865)
- Permanent member of Panjab University Zoological Society (PUZS).

International oral presentations:

- Travel Award by the Asian Society for pigment cell research for **oral presentation** in the 8th ASPCR held on November 12-13, 2016 in Kaohsiung, **Taiwan**.
- Travel Award by the Asian Society for pigment cell research for **oral presentation** in the 7th ASPCR held on August 27-30, 2015 in Shanghai, **China**.

International poster presentation:

- **Poster presentation** in the 96th Annual Meeting of the British Association of Dermatologists held on July 5-7, 2016 in Birmingham, **United Kingdom**.

National oral and E-poster presentations:

- **Poster presentation** entitled "**Role of senescence in the pathogenesis of vitiligo**" in 1-day National conference on "PROMOTING IPR IN UNIVERSITY SYSTEM" scheduled on 3rd June 2023, organized by the Centre for IPR Studies in Collaboration with Department of Zoology, M.D.University, Rohtak.
- **Oral presentation** entitled "**Expression of adhesion molecules in non-segmental vitiligo patients**" in 1-day ESPCR online meeting held on 9 November 2022, Organized by ESPCR Board (Program prepared by Lucia Panzella, Muriel Cario-Andre and Lionel Larribere).
- **Oral presentation** entitled "**Involvement of senescent fibroblasts in the pathogenesis of vitiligo**" in 3 Days online national conference on Indian Scientific Heritage (ISH 2022),

Sponsored by Haryana State Council for Science, Innovation and Technology from 26-28 February 2022 by Department of Mathematics, Hindu Girls College, Sonapat.

- **Oral presentation** entitled “**Effect of Narrowband Ultraviolet B on the levels of matrix metalloproteinases in the cultured fibroblasts**” in DBT & CSIR Sponsored Biological Innovations & Computational Exploration for Pandemic Challenges (BICPAC'22) Virtual International Conference on February 24-25, 2022 organized by Department of Biotechnology and Bioinformatics, Bishop Heber College (Autonomous), Tiruchirappalli, Tamil Nadu.
- **Oral presentation** entitled “**Expression of DKK1 and NRG1 in vitiligo patients and their *in vitro* effect on cultured melanocytes**” in 1-day 2021 ESPCR online meeting held on 3 December 2021, Organized by ESPCR Board (Program prepared by Cedric Delevoeye and Lluís Montoliu).
- **Oral presentation** entitled “**Role of novel fibroblasts derived factor DKK-1 in vitiligo pathogenesis**” in International Online Conference on “**Scientific Developments in the Current Era (ICSDE-2021)**” held on April 9-10, 2021 (Approved by: Director General Higher Education, Panchkula, Haryana) organized by Faculty of Science, Research Development Cell & Internal Quality Assurance Cell I. B. (PG) College, Panipat.
- **Oral presentation** entitled “**Role of fibroblasts in vitiligo pathogenesis**” in 2nd capacity building national webinar cum workshop on “**Ethics in biomedical research and GCP guidelines**” held on March 15, 2021 organized by Department of Zoology and Human ethics committee MDU, Rohtak, Haryana.
- **Oral presentation** entitled “**Synergistic effect of *Withania Somnifera* and Vit. E against Cd induced toxicity**” held on September 6th-7th, 2019 at SGT university, Gurugram.
- **First Oral presentation award** by the “**ZOOCON-2018**” Titled “**Differential expression of fibroblasts derived factors in vitiligo patients**” held on March 21-22, 2018 in Department of Zoology, Panjab University, Chandigarh.
- **First Oral presentation award** by the “**ZOOCON-2016**” Titled “**Senescence in the lesional fibroblasts of vitiligo patients**” held on November 17-18, 2016 in Department of Zoology, Panjab University, Chandigarh.

- **E-Poster presentation** in Genomic Medicine in Skin Research (GENMEDSKIN) held on June 24-25, 2016 in CSIR-Institute of Genomics and Integrative Biology, New Delhi.
- **Oral presentation** at Master Class in Vitiligo & Pigmentary Disorders & 2nd Pigment Meeting held in Amritsar (INDIA) from November 28-30, 2014.

ACHIEVEMENTS

- **First Oral presentation award** by the “ZOOCON-2018” held on March 21-22, 2018 in Department of Zoology, Panjab University, Chandigarh.
- **Travel Award** by the Asian Society for pigment cell research for **oral presentation** in the 8th ASPCR held on November 12-13, 2016 in Kaohsiung, **Taiwan**.
- **First Oral presentation award** by the “ZOOCON-2016” held on November 17-18, 2016 in Department of Zoology, Panjab University, Chandigarh.
- **Travel Award** by the Asian Society for pigment cell research for **oral presentation** in the 7th ASPCR held on August 27-30, 2015 in Shanghai, **China**.
- **M.Sc Zoology (Hons. School) Gold Medalist** in session 2011-2013 from Panjab University, Chandigarh.
- **DST-INSPIRE fellowship for doctoral programme** and qualified **CSIR- NET (lectureship)** held on 22-12-2013.

References:

Prof. Vijay Lakshmi Sharma (Deptt of Zoology, Panjab University, Chandigarh)

Prof. Davinder Parsad (Deptt of Dermatology, PGIMER, Chandigarh)

Dr. Ravinder Kumar (Deptt of Zoology, Panjab University, Chandigarh)