

CURRICULUM VITAE

VINEET KUMAR MAURYA, PhD.

SERB-National Postdoctoral Fellow (NPfD)

Department of Obstetrics & Gynecology, King George's Medical University, Lucknow-226003, Uttar Pradesh (India).

Research Interests:

- My current research focus is to study the molecular mechanism responsible for miscarriage/recurrent pregnancy loss and to study molecular determinants in embryo implantation and decidualization.

Post Doctoral Profile

- Currently working as Postdoctoral Fellow (SERB-NPDF) in Department of Obstetrics & Gynecology, King George's Medical University, Lucknow, Uttar Pradesh (India).

Academic Profile:

- PhD from Endocrinology Division, CSIR-Central Drug Research Institute, Lucknow (India) in the area of embryo implantation signaling pathways. (Awarded from Jawaharlal Nehru University, New Delhi, May 2016).

Supervisor: Dr. Rajesh Kumar Jha (Scientist), Endocrinology Division, CSIR-Central Drug Research Institute, Lucknow (India)

Thesis title: **Deciphering “Transforming Growth Factor β -Activation Signaling” during Uterine Tissue Remodeling Process.**

- M.Sc. (Applied Biochemistry) in 2006 from Veer Bahadur Singh Purvanchal University, Jaunpur (India), with 70.5%.

Research Summary:

Presently our research is focuses on to explore the crucial molecular determinants responsible for unexplained miscarriages and recurrent miscarriages in Woman's. During my doctoral research I have worked on activation of Transforming Growth Factor beta1 (TGF- β 1) and it's signaling during uterine tissue remodeling event which are involved during reproductive cycle, embryo implantation and decidualization process. By working with mice model, we for the first time reported increased level of active TGF- β 1 and its downstream signaling molecule SMAD3 and pSMAD3 expression at implantation sites

of peri-implantation stage uterus. Higher expression level of these proteins may directly associate with uterine receptivity for embryo implantation. We also investigated the downstream targets of TGF- β 1 after inhibition of its liberation at pre-implantation stage and identified that SMAD3 and pSMAD3 were down regulated. Furthermore, in response to TGF- β 1 liberation inhibition, we also found decreased level of embryo implantation and decidualization markers pSTAT3, BMP-2 and prolactin, which indicates the positive role of active TGF- β 1 in embryo implantation and decidualization.

Awards and Fellowships:

- Awarded a **Larry Ewing Memorial Trainee Travel Fund (LEMTTF)**-2017 by Society for the Study of Reproduction, USA.
- **National Post Doctoral Fellowship 2016** from Science and Engineering Research Board (SERB), Department of Science and Technology, New Delhi.
- **Awarded 2nd Best Poster Award** in International Conference on Reproductive Health: ISSRF-2014 held at Indian Veterinary Research Institute, Izatnagar, India (Feb 6-8, 2014).
- **Junior Research Fellowship (2010)** from Council of Scientific and Industrial research New Delhi.
- Qualified **ARS-NET** conducted by Agricultural Scientists Recruitment Board, New Delhi in 2010.
- Qualified **ICMR-JRF** under project category conducted by Indian Council for Medical Research, New Delhi in 2010.
- Qualified in Graduate Aptitude Test in Engineering (**GATE**) 2007, (GATE SCORE 286).

Technical Expertise:

- **Molecular Biology:** Western blotting, Immunoprecipitation, Immunohistochemistry, Immunofluorescence, ELISA, RT-PCR, Knockdown study.
- **Animal handling:** Development of rodent models through surgical procedures used to study embryo implantation biology and polycystic ovaries syndrome. Oral route, intra-peritoneal, sub-cutaneous and intra-luminal drug administration- in vivo models.
- **Cell Culture:** Isolation and characterization of Mice uterine endometrial epithelial cells, primary culture of uterine endometrial epithelial cells, Co-culture of embryo and ishikawa cells and cell line cultures (Ishikawa cell, Bewo, Jar, RL95).
- **Microscopy:** Light and Fluorescent.

- **Clinical Sample:** Collection of blood and endometrial biopsies, serum and PBMCs isolation.

Publications:

1. Vijay Kumar, Upendra Kumar Soni, **Vineet Kumar Maurya**, Kiran Singh, Rajesh Kumar Jha. "Integrin beta8 (ITGB8) activates VAV-RAC1 signaling via FAK in the acquisition of endometrial epithelial cells receptivity for blastocyst implantation." *Sci Rep.* 2017 May 15;7(1):1885. doi: 10.1038/s41598-017-01764-7.
2. Vaibhave Ubba, Upendra Kumar Soni, Sangappa Chadchan, **Vineet Kumar Maurya**, Vijay Kumar, Ruchika Maurya, Himanshu Chaturvedi, Rajender Singh, Anila Dwivedi and Rajesh Kumar Jha. RHO G-DOCK1-RAC1 signaling axis is perturbed in DHEA induced polycystic ovary in rat model. *Reprod Sci.* (2016) 1-15. DOI: 10.1177/1933719116669057.
3. Sangappa Basanna Chadchan, Vijay Kumar, **Vineet Kumar Maurya**, Upendra Kumar Soni, Rajesh Kumar Jha. Endoglin (CD105) coordinates the process of endometrial receptivity for embryo implantation. *Mol Cell Endocrinol.* 425 (2016) 69-83. doi: 10.1016/j.mce.2016.01.014.
4. Vijay Kumar, **Vineet Kumar Maurya**, Anubha Joshi, Syed Musthapa Meeran, Rajesh Kumar Jha Integrin beta8 (ITGB8) regulates embryo implantation potentially via controlling the activity of TGF-B1 in mice. *Biol Reprod.* 2015 Apr;92(4):109. doi: 10.1095/biolreprod.114.12283.
5. Anubha Joshi, Sahil Mahfooz ,**Vineet Kumar Maurya**, Vijay Kumar, Sangappa Chadchan, Gurupreet Kaur, Kashif Haneef, Dr. Rajesh Kumar Jha. Determination of uterine POLY(ADP-RIBOSE)POLYMERASE-1 association with embryo implantation and its regulation by the ovarian steroids in mice. *Reproduction.* 2014 Jun;147(6):765-80. doi: 10.1530/REP-13-0588.
6. **Vineet Kumar Maurya**, Sangappa Chadchan, Vijay Kumar, Sahil Mahfooz, Archana Singh, Singh Rajender and Rajesh Kumar Jha. Expression and activity of Rac1 is negatively affected in the dehydroepiandrosterone induced polycystic ovary of mouse *J Ovarian Res* 2014 Mar 14;7:32. doi: 10.1186/1757.
7. **Vineet Kumar Maurya**, Rajesh Kumar Jha, Vijay Kumar, Anubha Joshi, Sangappa Chadchan, Jasna Jagan Mohan, Malini Laloraya. Transforming growth factor-beta 1 (TGF-B1) liberation from its latent complex during embryo implantation and its regulation by estradiol in mouse. *Biol Reprod.* 2013 Oct 10;89(4):84. doi: 10.1095/biolreprod.112.106542. Print 2013 Oct. Erratum in: *Biol Reprod.* 2014Dec;91(6):147.

Abstracts Presented in Conferences:

- Poster presented in International Conference on Reproductive Health (ISSRF-2016) held at NIOH, Ahmedabad, Gujrat, India, February, 18-20, 2016.
- Poster presented in International Symposium on Reproductive Biology and Comparative Endocrinology (ISRBCE-2015) held at BHU Varanasi (Feb25-27, 2015).
- Poster presented in International Conference on Reproductive Health (ISSRF-2014) held at Indian Veterinary Research Institute, Izatnagar, India (Feb 6-8, 2014). **Awarded second best poster award.**


Membership of Professional bodies:

- Trainee membership from Society for the Study of Reproduction (SSR), USA, in 2017 (SSR member number-018129).

REFERENCES

<u>Dr. Rajesh Kumar Jha</u> Scientist Division of Endocrinology CSIR-Central Drug Research Institute Jankipuram Extn., Sect-10, Sitapur Road, Lucknow-226 031, U.P. India E-Mail: rajesh_jha@cdri.res.in	<u>Dr. Pushp Lata Sankhwar</u> Professor Department of Obstetrics & Gynecology King George's Medical University, Shah Mina Road, Chowk, Lucknow, U.P. India E-Mail: pushpasankhwar@gmail.com	<u>Dr. Gopal Gupta</u> Senior Principal Scientist Division of Endocrinology CSIR-Central Drug Research Institute Jankipuram Extn., Sect-10, Sitapur Road, Lucknow-226 031, U.P. India E-Mail: g_gupta@cdri.res.in
---	--	---

DECLARATION: I, hereby declare that all the statements made in this C.V. are true and correct to the best of my knowledge.



Dr. Vineet Kumar Maurya