

CURRICULUM VITAE

Name **Promod Mehta**
Date of Birth Sept 4, 1959
Present Address New Faculty Flats # 208
MDU Campus, Rohtak-124001 (Haryana)
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Educational Qualifications

Degree	Institution	Year
Ph.D. (Microbiology)	Panjab University/ Postgraduate Institute of Medical Education and Research (PGIMER) Chandigarh, India	1988
MSc (Hons.) Microbiology	Panjab University Chandigarh, India	1983
BSc (Hons.) Microbiology	Panjab University Chandigarh, India	1981

Previous Positions

2015-Present Director, Centre for Biotechnology, Maharshi Dayanand University, Rohtak, India

2009-present Professor, Centre for Biotechnology, Maharshi Dayanand University, Rohtak, India

2006-2009 Associate Professor (Microbiology) at Swami Shradhanand (SSN) College, University of Delhi, India

1998- 2005 Reader (Microbiology) at Swami Shradhanand (SSN) College, University of Delhi, India.

May-Nov 2006 Visiting Assistant Professor at Dept. of Veterinary and Biomedical Sciences (VBS), University of Nebraska-Lincoln, (UNL) Lincoln, NE, USA

July -Dec 2005 Visiting Assistant Professor at VBS, UNL, Lincoln, NE, USA

May -Nov 2003 Visiting Assistant Professor at VBS, UNL, Lincoln, NE, USA

1999-01 Postdoctoral Research Associate at VBS, UNL, Lincoln, NE, USA

1999-02 Senior Lecturer (Microbiology) at SSN College, University of Delhi, India.
Postdoctoral Fellow at Dept. of Internal Medicine, University of South Alabama, Mobile, AL, USA from May - July, 1997.

1994-96 Postdoctoral Fellow at Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA from March 1994- March 1996.

1989-94 Lecturer (Microbiology) at SSN College, University of Delhi, India and Postdoctoral Fellow Dept. of Medicine UCSD Medical Center, San Diego, CA, USA from April - Oct, 1993.

Honors /Awards

- 1981 Received BSc degree in Microbiology with Honors from Panjab University, Chandigarh, India.
- 1983 Received MSc degree in Microbiology with Honors from Panjab University, Chandigarh, India.
- 1983-88 Received Junior / Senior Research Fellowship from Indian Council of Medical Research (ICMR), New Delhi, India to do Ph.D. at PGIMER, Chandigarh.

Membership of Academic Societies :

1. Permanent member of Association of Microbiologists of India (AMI).
2. Permanent life-member of Indian Immunology Society (IIS)

Refresher / Advanced Courses Studied

1. Biotechnology Refresher Course attended at JNU, New Delhi from April-May, 1999.
2. Life Sciences Refresher Course attended at JNU, New Delhi from Dec. 2003-Jan 2004.
3. Bioinformatics Course trained by Mascon Global Co, New Delhi in Dec 2004

Extramural funding

Number of research projects being handled at present:

- i) DBT Project '**Targeting *Mycobacterium marinum* mel2 locus with drug like compounds: its implications for in vitro host cell interaction**' (2012-16) (PI) (42.15 lakhs) (completed)
- ii) UGC sponsored Major Project (PI) '**Detection of immunodominant antigens and antibodies in biological samples of pulmonary and extra pulmonary tuberculosis patients by PCR amplified immunoassay**' (2011-14) (PI) (9.52 lakhs) (completed)
- iii) DST sponsored Project (PI) '**Detection Of Potential Mycobacterium Tuberculosis Antigens In Extrapulmonary Tuberculosis Patients By Immuno-PCR**' (2013-16) (24.5 lakhs) (running)
- iv) DBT sponsored Major project (PI) '**Detection of mycobacterial RD antigens by nanoparticle based Immuno-PCR for an early detection of pulmonary and extrapulmonary tuberculosis**' (39.8 lakhs) (2015-18) (running)
- v) DBT-Interdisciplinary Life Sciences Programme for **Advanced Research and Education (IPLS)** Project (Programme-Coordinator) (2.82 crores) (2012-17) (running)
- vi) ICMR-Detection of protein antigens by Immuno-PCR for an early diagnosis of pulmonary and extrapulmonary tuberculosis (37.12 lakhs) (2017-onwards) (sanctioned)

Ph.D awarded: 2

Ph.D. students registered: 6

Research Publications

1. D.V Vadhra, R. Hashia, **P.K Mehta**, NK Chandan, and JK Gupta. 1984. An inhibitory substance in beet juice fermentation. International Sugar Journal 86:2003-206.
2. **P.K.Mehta** and G.K.Khuller. 1987. Immune responses to sulpholipids of *Mycobacterium tuberculosis*. Indian Journal of Medical Research 86:558-563.
3. **P.K.Mehta** and G.K.Khuller. 1988. Protective immunity to experimental tuberculosis by mannophosphoinositides of mycobacteria. Medical Microbiology and Immunology 177: 265-285.
4. **P.K.Mehta** and G.K.Khuller, 1988. Serodiagnostic potentialities of ELISA using mannophosphoinositides of *M. tuberculosis*. Medical Microbiology and Immunology 177: 285-292.
5. **P.K.Mehta** and G.K.Khuller, 1988. Suppression of macromolecular biosynthesis in *M. tuberculosis* by antimannophosphoinositides. FEMS Microbiology Letters 51:61-66.

6. **P.K.Mehta** and G.K.Khuller, 1989. Activation of mouse peritoneal macrophages by mannophosphoinositides of mycobacteria. *Medical Microbiology and Immunology* 178:21-28.
7. **P.K. Mehta** and G.K.Khuller. 1989. Comparative evaluation of diagnostic significance of circulating immune complexes and circulating antibodies to mannophosphoinositides in pulmonary tuberculosis by ELISA. *Medical Microbiology and Immunology* 178:229-233.
8. **P.K.Mehta** and G.K.Khuller, 1990. Immunogenicity of mannophosphoinositides of mycobacteria: Effect of cord factor (trehalose-6, 6' dimycolate). *Folia Microbiologica* 35:570-577.
9. **P.K.Mehta**, GH King, E.White, JJ Murtagh, Jr and FD Quinn. 1996. Comparison of in vitro models for the study of *M. tuberculosis* invasion and intracellular replication. *Infection and Immunity* 64:2673-2679 (**Citation Index of 141**).
10. E. Miltner, K. Darooghesh, **P.K. Mehta**, S.L. Cirillo, J.D. Cirillo., and L.E. Bermudez. 2005. Identification of *M. avium* genes that affect invasion of the intestinal epithelium. *Infection and Immunity*. 73: 4214-4221.
11. **P.K. Mehta**, A. Pandey, S. Subbian, S.H. El-Etr, S.L. Cirillo, M. Samrakandi and J.D. Cirillo. 2006. Identificaiton of *M. marinum* macrophage infection mutants. *Microbial Pathogenesis* 40: 139-151.
12. **P.K. Mehta**, R Karls, E.White, E Ades. and FD Quinn. 2006. Entry and intracellular replication of *M. tuberculosis* in cultured human microvascular endothelial cells. *Microbial Pathogenesis* 41: 119-124.
13. S. Subbian, **P.K. Mehta**, S.L. Cirillo, and J.D. Cirillo. 2007. *Mycobacterium marinum mel2* locus displays similarity to bacterial bioluminescence systems and plays a role in defense against reactive oxygen and nitrogen species. *BMC Microbiology* 2007 Jan 19; 7:4.
14. S.Subbian, **P.K. Mehta**, S.L. Cirillo, and J.D. Cirillo. 2007. A *Mycobacterium marinum mel2* mutant is defective for growth in macrophages producing reactive oxygen and nitrogen species. *Infection and Immunity* 75: 127-134.
15. **P.K. Mehta**, M. Kalra, G.K. Khuller, D. Behera and Indu Verma 2012. Development of ultra-sensitive polymerase chain reaction-amplified Immunoassay based on mycobacterial RD antigens, its implications in the serodiagnosis of tuberculosis. *Diagnostic Microbiology and Infectious Disease* 72: 166-174.
16. A. Raj, N. Singh and **P.K. Mehta**. 2012. **Gene Xpert** MTB/RIF Assay: A new hope for extrapulmonary tuberculosis', *IOSR Journal of Pharmacy* 2:83-86.
- 17 **P.K. Mehta**, A. Raj, N. Singh and G.K. Khuller. 2012 Diagnosis of extrapulmonary tuberculosis by PCR. 2012. *FEMS Immunology and Medical Microbiology* 66:20-36 (citation index of 64).
18. **P.K. Mehta**, A. Raj, N. Singh and G.K. Khuller. 2014 Detection of microbial antigens by Immuno-PCR (PCR Amplified Immunoassay. *Journal of Medical Microbiology* 63:627-641.
- 19.. Pradeep Kumar, **P. K. Mehta**, Nidhi and Vineeta Shukla. 2015. Histological changes in rat testis after exposure to mobile phone radiations. *International Journal of Life Sciences Research* 3: 73-79
20. Singh N, Sreenivas V, Gupta KB, Chaudhary A, Mittal A, Varma-Basil M, Prasad R, Gakhar SK, Khuller GK, **Mehta P. K.** 2016. Diagnosis of pulmonary and extrapulmonary tuberculosis based on detection of mycobacterial antigen 85B by immuno-PCR. *Diagnostic Microbiology and Infectious Disease* 83:359-64.
21. Sanjeev Parshad, Sourabh Nandi, Nisha Marwah, **Promod Mehta**, Mayank Tripathi, Netrapal, Shekhar Gogna and R. K. Karwasra. 2015. Human papillomavirus 16 and 18 in squamous cell carcinoma of oral cavity and sexual practices: A pilot study at a Tertiary Care Hospital of North India *National Journal of Maxillofacial Surgery* 6: 185-189.

22. Singh N, Sreenivas V, Sheoran A, Sharma S, Gupta KB, Khuller GK, **Mehta PK** 2016. Serodiagnostic potential of immuno-PCR using a cocktail of mycobacterial antigen 85B, ESAT-6 and cord factor in tuberculosis patients. *Journal of Microbiological Methods* 120: 56-64.
23. Raj A, Singh N, Gupta KB, Chaudhary D, Yadav A, Chaudhary A, Agarwal K, Varma-Basil M, Prasad R, Khuller GK, **Mehta PK**. 2016. Comparative evaluation of several gene targets for designing a Multiplex-PCR for an early diagnosis of extrapulmonary tuberculosis. *Yonsei Medical Journal* 57:88-96.
- 24 **P.K. Mehta**, Singh N, Dharra R, Dahiya B, Sharma S, Sheoran A, Gupta KB, Chaudhary D, Mehta N, Varma-Basil M. 2016. Diagnosis of tuberculosis based on the detection of a cocktail of mycobacterial antigen 85B, ESAT-6 and cord factor by immuno-PCR. *Journal of Microbiological Methods* 127:24-27.
- 25 **P.K. Mehta**. 2016. Immuno-PCR: its role in serodiagnosis of tuberculosis. *Mycobacterial Diseases* 6: 219. doi:10.4172/2161-1068.1000219.
26. Suman Sharma, Ankush Raj, Netrapal Singh, Bhawna Dahiya, Abhishek Sheoran, Krishna B. Gupta, **P. K. Mehta**. 2017. Development of real-time immuno-PCR for the quantitative detection of mycobacterial PstS1 in tuberculosis patients. *Journal of Microbiological methods* 132:134-138.
- 27 **Promod K.Mehta**, BhawnaDahiya, SumanSharma, NetrapalSingh^a, RenuDharra, ZoozealThakur ,NeeruMehta, Krishna B.Gupta, Mahesh C.Gupta, DhruvaChaudhary. 2017. Immuno-PCR, a new technique for the serodiagnosis of tuberculosis. *Journal of Microbiological methods* 139: 218-229.
28. Renu Dharra,. M. kulharia and **Promod K Mehta** (2017). Rational design of drug-like compounds targeting *Mycobacterium marinum* mel2 locus. *Plos One* 12(9): e0183060.
29. **Promod K Mehta**, Renu Dharra and Zoozeal Thakur (2017). Cattle as experimental model to study immunopathogenesis of tuberculosis. *Mycobacterial Diseases* 7-3
30. **Mehta PK**, Dahiya B, Sharma S, Singh N, Dharra R, Thakur Z, Mehta N, Gupta KB, Gupta MC, Chaudhary D. (2017). Immuno-PCR, a new technique for the serodiagnosis of tuberculosis. *J Microbiol Methods*. 139:218-229
31. Sharma S, Raj A, Singh N, Dahiya B, Sheoran A, Gupta KB, **Mehta PK**.(2018) Development of real-time immuno-PCR for the quantitative detection of mycobacterial PstS1 in tuberculosis patients. *J Microbiol Methods* 132:134-138
32. Sharma S, Dahiya B, Sreenivas V, Singh N, Raj A, Sheoran A, Yadav A, Gupta KB, **Mehta PK**.(2018). Comparative evaluation of GeneXpert MTB/RIF and multiplex PCR targeting mpb64 and IS6110 for the diagnosis of pleural TB. *Future Microbiol. Mar*;13:407-413.
33. Ahlawat, S, Dabla S, Kumar, V, Singh M, Bala, K and Mehta PK. (2018). Role of immune-PCR in resolving diagnostic dilemma between tuberculoma and neurocysticercosis. *Am J Case Reports* (in press)

Lectures delivered at National / International meetings

1. Delivered a talk 'Association of mycobacterial *mel2* locus with enhanced TNF-alpha production and increased intracellular survival in murine macrophages'. International Symposium on Frontiers in Tuberculosis Research at International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India on Dec 2, 2006
Delivered a lecture 'Role of mel2 locus on mycobacterial pathogenesis' at 3rd Winter Symposium-Molecular Medicine at Translational Crossroads, PGIMS, University of Health Science, Rohtak. On Dec 15, 2009.
2. Delivered a lecture 'ELISA and Immuno-PCR assay for the diagnosis of pulmonary tuberculosis patients' National seminar on Biotechnology and Health: prospects and perspectives in 21st Century (sponsored by ICMR) organized by Dept of life Sciences, Institute of Allied Sciences and Computer applications, ITM Universe, Gwalior on 19th-20th March, 2010.

3. Organizing Secretary, National Conference on Medical Biotechnology-Vision 2020 held at CBT, MDU, Rohtak on 16-18th April, 2010. Spoke introductory speech as well as delivered deliberations and actively participated in several activities.

4. Delivered a lecture 'Diagnosis of Tuberculosis by molecular methods' Colloquium on Microbial Technology organized by CBT, MDU and Microbiology Dept, MDU, Rohtak on 7th Aug 2010.

5. Delivered a lecture 'Detection of Mycobacterium tuberculosis protein antigens by immune-PCR (PCR amplified immunoassay) for an early diagnosis of tuberculosis' Target Meeting's 2nd World Clinical Diagnostics Online conference Dec 10-11, 2013, St Bellaire, TX, USA.

6. Delivered a Lecture 'Diagnosis of tuberculosis by multiplex PCR and Immuno-PCR (PCR amplified immunoassay) at an International conference 'Genomics and Proteomics Research' at Radisson Blue, New Delhi organized by Select Biotech on 12-13th June, 2014.

7. Delivered a Lecture 'PCR as a diagnostic tool' at CBT, MDU, Rohtak on 14th Oct, 2014 organized by DBT-sponsored short term training course on 'Plant transgenic technologies' (Oct 1 to Oct 16, 2014).

8. Delivered a lecture 'Comparing several gene targets of *Mycobacterium tuberculosis* for designing multiplex-PCR: It's implications for diagnosis of extra pulmonary tuberculosis' in 3rd International Congress on Bacteriology and infectious Diseases held at Valencia, Spain on Aug 4-6th, 2015 (Video presentation) organized by Omics International.

9. **Promod Mehta**. Invited talk " Multiplex-PCR and Immuno-PCR for the diagnosis of TB" on 7th Oct, 2016 at Govt. College of Girls, Gurgaon, India.

10. **Promod Mehta**. Invited talk "Molecular tools for the diagnosis of TB" on 14th Oct, 2016 at Dept of Biotechnology, Kurukshetra University, India.

11. **Promod Mehta**. Invited talk "Tuberculosis Research" on 25th Oct, 2016 at CBL University, Bhiwani, India sponsored by DST-Inspire Programme.

12. **Promod Mehta**. Invited Talk "Nanoparticle based immune-PCR for detection of mycobacterial antigen 85B and ESAT-6 in tuberculosis patients" in National conference on trends in Nanobiotechnology (NCTN-2016) held from Nov 29-30, 2016 at CCS Haryana Agriculture University, Hisar and also co-chaired a session

13. **Promod Mehta**. Invited Talk "Nanoparticle based immune-PCR assay for detection of mycobacterial antigen 85B and ESAT-6 in tuberculosis patients in the International Conference on Nanomaterials & Nanotechnology from March 1-3rd, 2017 at the Vinobha Bhave Research Institute, Saidabad, Allahabad.

National/International Conferences / Symposia attended and Abstracts published:

1. **Mehta P.K.**, and Khuller, G.K. (1992) Induction of resistance to tuberculosis in mice with mannophosphoinositides of mycobacteria. 'World Congress on tuberculosis'. Bethesda, Maryland, USA.

2. **Mehta, P.K.**, King C.H., Birkness, K. Murtagh, J.J. Jr., and Quinn, F.D. (1995). Comparing in vitro models to study *M. tuberculosis* virulence. J.Cell. Biochem. supplement 19B 24th Annual Keystone symposia held at Tammeron, Colorado, USA.

3. **Mehta, P.K.**, King, G.H., Birkness, K, Murtagh, J.J.Jr., and Quinn, F.D (1995) In vitro models to study virulence of *M. tuberculosis* 95th American Society for Microbiology (ASM) General meeting, Washington, D.C., USA.

4. **Mehta, P.K.**, King, C.H, Birkness, K., Murtagh, J.J. Jr and Quinn, F.D (1995). Comparing in vitro models to study invasion and intracellular replication of *M. tuberculosis*. 18th IUTALD-ER (International Union against tuberculosis and lung diseases-Eastern Region) Conference, Dhaka, Bangladesh.(oral presentation).

- 5 **Mehta, P.K.**, King, C.H, Adesh, E, Murtagh, J.J. and Quinn F.D. (1998). Invasion and intracellular replication of *M. tuberculosis* in a human lung microvascular endothelial cell line. 10th International Congress on Immunology, New Delhi (India)
6. **Mehta, P.K.**, Cirillo, S.L., Samrakandi, M, El Etr, S, and Cirillo, J.D. (2002). Use of transposon mutagenesis to identify novel *M. marinum* entry loci. "International Symposium on Current Developments in Drug Discovery for Tuberculosis". Astra Zeneca Research Foundation, India.
7. **Mehta, P.K.**, Sahar El Etr, Samrakandi, M, and Cirillo, J.D. (2002). Efficient mutagenesis of *M. marinum* and its use to identify putative virulent loci. 4th World Congress on TB, Washington, D.C., USA.
8. Attended and participated in "International Symposium on Recent Trends in Tuberculosis Research" (2004) at ICGEB, New Delhi.
9. S.L. Cirillo, **P.K. Mehta**, A. Pandey, S. Subbian, B. Park, S.H. El-Etr, M. Samrakandi and J.D. Cirillo (2005) Identification of mycobacterial genes that affects interactions with macrophages. US-Japan Cooperative Medical science program. 40th Tuberculosis and Leprosy and Research Conference. pp77-81., held in Japan.
10. S. Subbian, **P.K. Mehta**, S.L. Cirillo, and J.D. Cirillo.(2006). The mycobacterial *mel2* locus displays similarity to bioluminescence system s and affects survival in macrophages. American Society for Microbiology (ASM) 106th General meeting held at Orlando, FL, USA.
11. **P.K. Mehta**, S. Subbian, S.L. Cirillo and J.D. Cirillo (2006) Association of mycobacterial *mel2* locus with enhanced TNF-alpha production and increased intracellular survival in murine macrophages. International Symposium on Frontiers in Tuberculosis Research held at International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India (oral presentation) Dec 2006.
12. **P. Mehta**, S.Pacheco, M. Konkel and G.E. Duhamel (2008). The cytolethal distending toxin of macaque *Campylobacter jejuni* is required for proinflammatory CXCL8 chemokine response of human intestinal epithelial cells in vitro. Keystone Symposia on 'Pathogenesis and Control of Infectious Diseases and Drug Resistant Organisms' at Bangkok, Thailand.
13. **P. Mehta**, M. Kalra, D.,Behra, G.K. Khuller and I. Verma (2009) Ultra sensitive development of Immuno-PCR for the detection of RD antigens and antibodies to these antigens in biological samples of TB patients. Keystone Symposia Overcoming the crisis of TB and AIDS, Arusha, Tanzania, Africa
14. **P Mehta** and GE Duhamel Attachment of pathogenic *Brachyspira pilosicoli* intestinal spirochete but not *Brachyspira aalborgi* correlates with human intestinal epithelial INT 407 cells CXCL8 chemokine response in vitro at American Society for Microbiology (ASM) 110 General Body meeting at San Diego, CA, USA in May, 2010
15. **P. Mehta**, M. Kalra, D.,Behra, G.K. Khuller and I. Verma (2010) Detection of RD antigens and antibodies in active pulmonary and extra pulmonary TB by Immuno-PCR. International Symposium on TB diagnostics: innovative to make an impact. held at ICGEB, New Delhi in Dec, 2010
16. **P Mehta** (2011) Attended and participated TB research meeting at St. John's Research Institute, Bangalore August 24-26th 2011.
17. **P Mehta** (2011). Attended and participated International Conference on Microbial Biotechnology for sustainable development. 52nd Annual conference of Association of Microbiologists of India (AMI) held at Panjab University Chandigarh on 3rd-6th Nov, 2011.
18. NP Singh, A Raj and **PK Mehta** (2013). Detection of *Mycobacterium tuberculosis* protein and glycolipid antigens by Immuno-PCR (PCR amplified immunoassay) for an early diagnosis of tuberculosis. National Symposium on Biotechnology: Present Status and Future Prospectus, 15th-16th March 2013, held at Department of Biotechnology, DCRUST, Murthal (Haryana), India.

19. Renu Dharra, Mahesh Kulharia, Sakshi Talwar, Amit Kumar Pandey and **Promod Mehta** (2013). Virtual screening as a tool to identify antagonists for *Mycobacterium marinum* Melf protein. 54th Annual Conference of Association of Microbiologists of India (AMI-2013) and International Symposium on 'Frontier Discoveries and innovations in Microbiology and its Interdisciplinary relevance' (FDMIR-2013) to be held at MDU, Rohtak on 17th-20th November, 2013
20. Netra Pal Singh, Ankush Raj and **Promod Mehta** (2013). Detection of *Mycobacterium tuberculosis* 30KDa and ESAT-6 protein antigens by Immuno-PCR (PCR amplified immunoassay) for an early diagnosis of tuberculosis. 54th Annual Conference of AMI-2013 and International Symposium on 'Frontier Discoveries and innovations in Microbiology and its Interdisciplinary relevance' (FDMIR-2013) to be held at MDU, Rohtak on 17th-20th November, 2013.
21. Suman Sharma, Ankush Raj, Bhawna Dahiya, Krishna B Gupta and **Promod Mehta**. Development of real-time immuno-PCR based on PstS1 detection for the diagnosis of tuberculosis. IMS Engineering College, Ghaziabad on 16th July 2016.
22. Renu Dharra, Mahesh Kulharia, **Promod K Mehta**. Designing of drug-like compounds targeting *Mycobacterium marinum* melf protein. IMS Engineering College, Ghaziabad on 16th July 2016.