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## Micro-macro balance in contraceptive development driven healthcare

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Widely spreading inter-disciplinary science demands the need to fulfill the gap of scaling from micro (good laboratory practices) to macro (good manufacturing practices) level in medical/contraceptive manufacturing to achieve ideal healthcare. This article explores a new methodological approach based on information sharing co-ordination for linking the micro and macro-dimensions while pursuing biopolymer based contraceptive development and large-scale research involving it. Current study proposes the rationale of multilevel analysis called 'Multi Approach System (MAS)' as one analytical strategy, which deals the above perceptual pattern imbalance with help of 'Lagrangian Concept' by simultaneous examination of macro-level and micro-level factors. The use of MAS raises theoretical and methodological issues related to the theoretical model, the conceptual distinction between macro-level and micro level variables, the ability to differentiate 'independent' effects, the reciprocal relationship between factors at different levels, and the increased complexity that these models imply. It was found that MAS in combination with Lagrangian method is quite efficient to correlate micro-level (good laboratory practices) and macro-level studies (good manufacturing practices) for novel drug development. This idea of non-holonomic constraint is being implemented in real case example of bioactive polymer contraceptive manufacturing wherein time, speed and operator are three continuously changing parameters and are like wheels of manufacturing that ought to be controlled continuously. This interdisciplinary research will explore the dimension of quality assurance mechanism of medical/contraceptive product and way to implement the interdisciplinary coordination approach for quality manufacturing and continuous quality improvement in healthcare.

### Biography

Pradeep K Jha is a Senior Research Scientist at IIT (Kharagpur) and Visiting Faculty in J P Business School, Meerut. He also served as a Management Consultant of several start-ups like IcubedG Ideas Pvt. Ltd. and SG ArtHeart Pvt.Lt. Has completed MSc (Med Chem), MSc (TQM), PhD in Health Care Management from Gautam Buddha Technical University, Lucknow and EUROMA Summer Post-Doctoral training in Global Operation Management in Hungary. He developed a quality tool for health care industry. His main areas of research are quality Healthcare, Nanomedicine and Biomedical implant. He is Member of WABT France, EUROMA, ISSRF, SAI Professional Societies and Referee of several science and management journals. He has published 15 papers in international journals and presented more than seventy papers at national and international conferences.

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