
Departmental Seminar

Seminar Title	: Happiness through Tissue Engineering, Sustainability and Happiness Capsules
Speaker	: Prof. Narayan Chandra Mishra
Supervisor	: Devendra Verma
Venue	: Seminar Room, BM Department
Date and Time	: 15 Apr 2025 (11:00 AM)
Abstract	: Today if you have money, you can buy almost everything except happiness and spare parts of human body (e.g. kidney, heart). One can buy spare parts of car, but cannot buy spare parts of body: you cannot buy heart, lungs, kidney, etc. Tremendous research has been going on to develop biofunctional body parts. Tissue engineering, by the application of our knowledge in biology and engineering, may produce biofunctional tissues, i.e., spare parts of human body. In tissue engineering there are three key elements: cells, scaffolds (house where cells can live happily) and growth factors (nutrients & growth conditions). Cells are seeded in the 3D porous scaffold and kept in a bioreactor, where nutrients are provided and growth conditions (e.g. temperature, pH) are maintained: the cells grow, proliferate and differentiate to create various biofunctional tissues. Specific interactions among the 3 key elements (cells, scaffolds and growth factor) may create specific tissue/organ. By having organ/tissue, one can live a long life happily. Human sustainability i.e. life time increases when the human being is happy. One of the easiest ways to get happiness, is digesting happiness capsule every day. There are various happiness capsules: “BMW-4”, “5-Finger”, “Ha-Ha-Ha-Ha” etc. BMW-4 is the balance management of four wheels of our life (our life is a running car). The 4 wheels are (i) Personal life, (ii) Family life, (iii) Professional life and (iv) Social life. If the balance of these four wheels is lost, then people will get imbalanced and unpeaceful life. We have to give a minimum time for each of the wheels/life, which balances the four wheels of life. We have to give a minimum time for our personal life i.e., to take care of our health and mind by doing yoga, physical exercise and sports etc. In professional life, we need to understand our professional responsibilities/duties and we have to maintain that strictly. For a teacher, the main duty is how good he/she can teach in an innovative/efficient way, so that students can understand the lectures and enjoy the teaching. For a family life, one has to know what is his/her duty to his/her family members, e.g. he/she must care of his/her parents, wife and kids. And accordingly he/she should fulfil the duty of family life. In social life, one has to understand how he/she has to behave with his neighbour, colleagues and friends. Besides, one has to think to help the needy/poor person and should plan how he/she can maintain a good environment by taking care of mother nature. One can plant a lot of plants for maintaining greeneries and can take measures to clean the dirty/unclean areas. Thus, if a person balances the four wheels of life, he/she will lead a happy-smiling life. Similarly, the other happiness capsules “5-Finger”, “Ha-Ha-Ha” etc. have deep philosophical understandings, which we need to realise and implement in our day-to-day life to get eternal happiness and smiling. Here, it will be discussed the secret of Tissue Engineering, to develop spare parts of human body, human sustainability and various happiness capsules which will bring happiness in human life and create a happy-smiling environment, where we will immerse in divine happiness and smile.