GANDHI INSTITUTE OF TECHNOLOGY AND MANAGEMENT (GITAM)

Multidisciplinary Unit of Research on Translational Initiatives (MURTI)

MURTI-Colloquium

Speaker : Prof. D.K. Aswal, FNASc, FIAAM, Sweden
Director
Health Safety and Environment Group
Bhabha Atomic Research Centre
Mumbai- 400085

Topic : Radiation, Nuclear Energy and Environment

Day and Date : Friday, June 20, 2024

Time : 10.30h – 12.00 h

Venue : KRC Auditorium
GITAM (Deemed to be University)

All are requested to attend

(Hari Misra), 9920458791
Distinguished Professor of Life Sciences

Copy to;

1. President, GITAM
2. Hon. Vice Chancellor, GITAM
3. Pro-VC Campus Life, VIZAG
4. Registrar, GITAM
5. Dean, School of Sciences (For Display on Notice Board)
6. Principal, Science College (For Display on Notice Board)
7. Dean, GIT, for circulation and display on notice board please
8. Dean, School of Pharmacy (For circulation and Display on NB)
9. Director, Research and Consultancy
10. All HoDs in GSS (For circulation to faculties and Research Scholars PI)
11. HoD of Biotechnology (GIT) (Circulation to faculties & Ph.D. Students)

Abstract enclosed

Radiation, nuclear energy and environment

Dinesh K. Aswal

Health, Safety and Environment Group
Bhabha Atomic Research Center, Trombay, Mumbai 400085

Email: dkaswal@barc.gov.in

The nuclear energy is important to combat climate change as well is important for improving the human development index of a nation. Nuclear energy is low-carbon, clean and reliable source of electricity. In addition, nuclear energy is useful in many beneficial effects related to health, societal and industrial growth. We will present an overview of radiation, which is in an integral part of the civilisation. We will review and analyse the existing radiation protection philosophy, which is based on a linear no-threshold (LNT) model for cancer risk assessment and implies that a single ionising radiation has a risk possibility. The LNT model does not consider the adoptive response of biological systems, and has created unnecessary fear of radiation in public. We will try to analyse the past studies, scientific biases, ethical and moral challenges, nuclear fallout, and the development of international policies. It is emphasized that there is a need to carry out extensive scientific studies (especially at low doses) and to move away from LNT model to a more realistic Hormesis model that considers adoptive responses.