

Editor's Note

Special Publication on Health and Environmental Sciences

The 27th Swadeshi Science Congress held at Amrita Viswa Vidyapeetham, Kollam during November, 2017 provided adequate attention on various aspects including health sciences and environmental issues. There were a large number of delegates involved in the serious deliberations on health sciences, medicine, highlights of cancer research, yoga and its influence on human wellbeing, environmental issues and so on. There were creative discussions on the health hazards due to environmental deterioration.

With a decline in infectious diseases and upsurge in complex lifestyle disorders it is important to understand the close link between health and our environment. The environment is nothing but an extension of us, for example our bodies are 70% water and thus the need to maintain the environment and prevent its pollution and degradation is of foremost importance. In this decade we also realize the significant impact our environment has on our health. Though the genome is stable, the epigenome is highly dynamic and shows changes with different development stages, time points, and is cell specific. It responds and changes depending upon the environmental conditions and each pollutant has its own epigenetic signature and leaves its impact on the epigenome. Thus our lifestyle, our thoughts, behavior, what we eat (diet), breathe, drugs we take, seasonal variations, climate, stress, social interactions, level of physical activity all significantly impact the genome by inducing covalent modifications in DNA bases and inducing various post translational modifications on conserved amino acids in amino terminal end of histones. Thus there is a need to maintain our health and maintain our environment. The effect of environment notably impacts the present generation but also has trans generational effects as the epigenetic marks (epialleles) are mitotically and meiotically stable. Thus as we understand the link between environment and our health and that the genes which were considered the blueprint of our biology and health, it is equally essential that we understand that our environment, our lifestyle also impact our biology.

As discussed already, health and environmental sciences largely pertains to the health of the biota and the support elements – viz., soil, water, air & food. A balance in the ecosystem is often delicate and most vital; to sustaining life and living. Any anthropogenic activity often leads to destruction and consequent pollution of the environment. This ultimately hampers the ambient surroundings – leading to harmful effects like bio – accumulation, bio – magnification, carcinoma etc. This leaves us with a major responsibility to safeguard the environment thus the health trajectory of the future generations.

Hence judicious exploitation of the environment with proper sustainable management techniques is imperative. Good food, clean environment, healthy living practices like yoga and meditation etc, can go a long way in supporting a healthy and vibrant society.

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