Bio-sensor in engineering

Awadhesh Kumar Singh and Narendra Singh

1Maharaja Agrasen Institute of Technology, India
2Gaya College, Magadh University, India

It is well known that animals/birds respond to earthquake much before its occurrence, especially dogs, rats and crows. They keep themselves safe by sensing it well in advance. Responsible biomolecules present in their body for this sensing system can be used as earthquake sensor. When pharmacology of dogs, rats and crows are further studied, it is found that their blood pressure/pulse-rate is also in the same range or even higher as in a human body suffering from high blood pressure, i.e. around 150-180 diastolic pressure. Pulse rate of crow=380 beats/min, rats=420 beats/min and dogs=120 beats/min [normal human body=75 beats/min]. Human body is also very sensitive to feeble vibration when suffering from hypertension/high blood pressure resulting in higher pulse rate. Means, biomolecules active during high blood pressure are responsible in sensing the feeble vibrations in human body. Sensing behavior of that biomolecules can be exploited to sense the earthquake. In human body, crows and dogs/rats, it is Norepinephrine (NE). So, behavior of NE or similar biomolecules can be used as earthquake sensor.

Biography

Awadhesh Kumar Singh has completed his B.Tech. in 1985 in Electronics and Communication thereafter M.Tech. in Instrumentation and Control. He is working on his research on behavior of organic sensor and its medical and nonmedical applications. He is Asst. Prof. in Electronics and Communication Department in Mait, Rohini, Delhi, India and have published a number of papers in various national and international technical conferences along with some patent of research products.

awadheshkumar_sngh@yahoo.co.in