

Statement of Dr. Krishna Bahadur, M.Sc., D.Phil., D.Sc.,
D.I.C. (Lond.) regarding his work on Origin of Life.

(123)

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- (1) I together with my wife Dr. S. Ranganayaki, who is a D.Phil and D.Sc in chemistry and a number of ~~us~~ our research workers have been working on the Problem of Origin of Life since 1954, in the Chemistry Department of Allahabad University.
- (2) We synthesised amino acids and peptides in sterilised aqueous mixtures photochemically which contained ammonium salts, a source of organic carbon as formaldehyde and inorganic catalysts commonly found in soil, in 1954 and 1957 respectively. ~~etc~~ (1, 2, 3, 4, 5, 6, 7, 8).
- (3) In 1963 we photochemically synthesised such particles which grow from within, multiply by budding and have metabolic activity using simple organic and inorganic substances. We named these particles as Jeevanu, a Sanskrit word for "Particles of Life" (9, 10, 11, 12, 13). These were the first living particles synthesised from lifeless material. In 1965 Fox of U.S.A and in 1967 Oparin of U.S.A. claimed that they too have been able to induce ~~these~~ the property of growth, multiplication and metabolism in their particles microspheres and Coacervates. Where as these particles show the biological ~~properties~~ ^{properties} one at a time with the help of added chemicals Jeevanu shows these properties in a natural way like in microorganisms.
- (4) The work on the synthesis of Jeevanu was confirmed by the English scientist Dr. M.H. Briggs who presented a paper ⁱⁿ confirmation of our work in his laboratory in the 4th International Conference on Photobiology held at Oxford in 1964 (14). He published another confirmation

of our work in 'Spaceflight' journal in 1965 (15). The work on Geewanu was further confirmed by U.S.A. scientists Rudin and Mueller in 1970 (16). Geewanu with materials absent in to-day's cells have also been made (17).

(5) In 1970 the experiments on Geewanu were further improved to effect the abiogenesis of biochemicals as amino acids, peptides, nucleic acid bases, nucleosides, phospholipids ^{and} sugars ~~etc.~~ ^{within} a short period of irradiation using ammonium molybdate, diammonium hydrogen phosphate, biological minerals and formaldehyde (18, 19, 20, 21, 22).

(6) Geewanu have internal structures and boundary wall. These particles are capable of adaptability and thus evolution (18, 22).

(7) Geewanu can be fixed with biological fixatives and stained with a number of biological dyes (23).

(8) Geewanu are sensitive to the presence of antibiotics (24) and sulphur drugs in the irradiated mixtures. We are ~~is~~ investigating the evolution by natural ~~selection~~ selection in these particles.

(9) Thus Geewanu, the particles with properties of biological order have been prepared in sterilised aqueous mixtures containing simple organic and inorganic substances on exposure to light and in Rigved and Atharvaved it is reported that life originated in water ~~or~~ by the interplay of the primary elements.

(10) In the study of Origin of Life one has to investigate the very inherent nature of the

physico-chemical factors which produced living things from lifeless material and in all probability this study will provide a scientific basis for the ethics and character ~~of~~ of humanity and ~~provides a basis~~ inspire human beings to live a corporate life.

(11) I was arrested under a false D.I.R. Case on 5th ~~Jan~~ July '75 and was served with MISA warrant on 15th July '75. I was detained under MISA till 22nd March 1977. During this period my research work suffered a good deal.

(12) I wish that an Institute for researches on the ~~problem of~~ "Origin of Life" be established at Allahabad, ~~to~~ with all modern equipment and facilities. A plan for this is being submitted.

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x. We are pioneers in this field of research in our country. We sadly lack all the modern for the complete and systematic comprehensive study of this problem,

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