## JOURNAL OF SCIENTIFIC RESEARCH

BANARAS HINDU UNIVERSITY

### Section - A

## Earth Science



तत् त्वं पूषन् अपावृणु सत्यधर्माय दृष्टये

## JOURNAL OF SCIENTIFIC RESEARCH

BANARAS HINDU UNIVERSITY

Section - B

## Life Science



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## JOURNAL OF SCIENTIFIC RESEARCH

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# Section - C Physical Science



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प्रोफेसर धीरेन्द्र पाल सिंह कुलपति Prof. D.P. Singh

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#### **FOREWORD**

It is a matter of great pleasure to learn that the Faculty of Science, Banaras Hindu University is bringing out the 54<sup>th</sup> volume of the Journal of Scientific Research. It publishes original scientific contributions and reviews encompassing all the areas of Sciences such as Physical, Earth and Life Sciences. Scientists from the Institute of Technology, Institute of Agricultural Sciences and outside have also contributed articles in this journal. Publishing of the knowledge generated through research is of no less importance that the research itself. It is only through such journals that the researches are subject to review, acceptance and adoption for benefit of the mankind. Also, this fuels further research and thus the development of knowledge goes on. For this matter, the efforts of the publishers are worth praise.

I wish the publishers all the success and hope that this journal will continually improve its quality and increase its circulation so as to benefit a much larger section of target readers and researchers.

(D. P. Singh)

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