

## Medical research publishing in India

The write up on the *Indian Journal of Medical Research (IJMR)* by Rajni Kant *et al.*<sup>1</sup> captures the nostalgia in medical research publishing in India and briefly indicates the type of research in which the medical community had remained involved. In fact, national priorities in health research were the main factors behind the type of research that could be undertaken and published by this premier journal. Despite surviving the travails and gasps at certain demanding times, the publication could able to maintain regularity in amazing proportions. Throughout its life of nearly 100 years, its appearance and layout changed half a dozen times to keep pace with the changing requirements of newer methods of technology in publication, so that a few essential elements of aesthetics could be harnessed for scholarly publications. Though it could maintain steady circulation of the print version and still receives

some amount in royalty, the availability of all its issues online as full text, free, in pdf format obviated the need to procure the print edition. The policy of making available online, free of cost, the journals that receive funds from the public exchequer has been widely acclaimed and championed by the consortium of editors of learned journals, including the *Current Science*. However, *IJMR* should be viewed differently from the *New England Journal of Medicine*, *The Lancet* and fraternity journals and the *British Medical Journal* in respect of human resources and the establishment that supported it. Yet, despite constraints, the *IJMR* is a success story that banked upon dedication, hard work, ingenuity and wisdom of the editorial team that managed affairs from time to time. It is however, regrettable that the popular media seldom gets attracted towards the type of success stories in respect of learned pub-

lications from India and shown a miserly trait in ever making mention in retrospect. Obviously, history of publishing of medical research is as important as the content of learned journals. Lately, the media in both its idle time as well as at the time of outbreak of a disease viewed as public health emergency in India has shown interest in picking up the material from *IJMR* for filing noteworthy stories.

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1. Rajni Kant, Satyanarayana, K., Sharma, Anju and Katoch, V. M., *Curr. Sci.*, 2012, **103**, 1257–1258.
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RANBIR S. PHAUGAT

*Society for People's Advancement,  
Technology and Heritage,  
275, Sector-2, HUDA,  
Rohtak 124 001, India  
e-mail: ranbirphaugat@gmx.com*

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## Screen all patients with tuberculosis for diabetes

India has the highest number of tuberculosis (TB) cases (estimated at 2.2 million per annum; range 2.0–2.5 million) in the world<sup>1</sup>. Case detection rate for all forms of TB is 59%, but in those patients detected the treatment success rate is high at 88%. Given the large absolute number of patients with TB, the number of patients with multi-drug resistant TB (MDR-TB – resistance to both isoniazid and rifampicin) is high, with 2% of new cases and 15% of retreatment cases estimated to have MDR-TB<sup>1</sup>. Available data also suggest that an estimated 8% of people above the age of 20 years have diabetes mellitus (DM), with about half of those in both rural and urban areas

being unaware of the problem or in prediabetes condition. There is a high burden of both DM and TB in India. Despite a good national TB programme in India, the diabetes epidemic is hampering TB control efforts. Recently published clinical research studies in South India in about 1500 TB patients found a high prevalence of DM, that was about 25% in Tamil Nadu and about 44% in Kerala<sup>2,3</sup>. Although routine screening for diabetes takes place in some hospitals, if it is done in all places, it will lead to better and earlier detection and treatment of DM, and improved clinical outcomes on anti-TB treatment.

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1. World Health Organization, Global Tuberculosis Report, 2012, WHO/HTM/TB/2012.6, WHO, Geneva, 2012.
  2. Balakrishnan, S. *et al.*, *PLoS One*, 2012, **7**, e46502.
  3. Viswanathan, V. *et al.*, *PLoS One*, 2012, **7**, e41367.
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M. V. JALI<sup>1</sup>  
VINAY MAHISHALE<sup>2</sup>  
M. B. HIREMATH<sup>1,\*</sup>

<sup>1</sup>*KLES Diabetes Centre, and*  
<sup>2</sup>*Department of Pulmonary Medicine,  
KLES Dr Prabhakar Kore Hospital and  
Medical Research Centre,  
Belgaum 590 010, India  
\*e-mail: murigendra@gmail.com*

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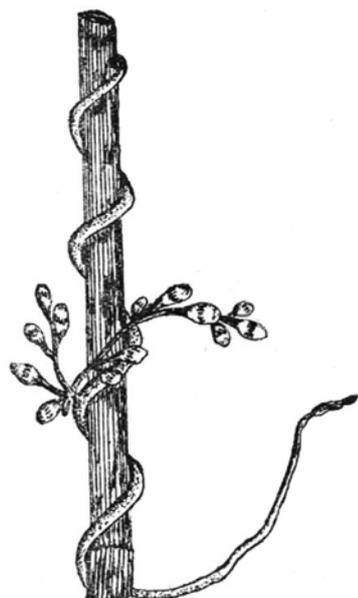
## Field studies in botany are essential

This has a reference to a question: 'Are field studies in botany really essential?' posed recently by Arya<sup>1</sup>. There is a crying need of good trained persons for identifying plants correctly; this trait of scientists is fast vanishing at present. This is mainly due to lack of good teachers

in the field of botany and their fast unavailability during the last 2–3 decades.

Back in 1953, nearly six decades ago, when I undertook my first major field trip to Nainital, we had observed *Botrychium* sp. in enough abundance, which has now completely disappeared. Why?

Because of carelessness of students under the misguidance of their teachers to collect this plant recklessly, leading to its eradication. My first research publication<sup>2</sup> in 1959 was on the material collected on the downward slopes of Nainital, entitled '*Cuscuta reflexa* – a



**Figure 1.** *Cuscuta reflexa* parasitizing *Equisetum ramosissimum* Desf. var. *altissimum*.

parasite on *Equisetum ramosissimum* Desf. var. *altissimum*' (Figure 1). Late P. N. Mehra confirmed the host and the parasite and late U. N. Chatterjee helped in checking the write-up. Now there is complete disappearance of this rare parasitic relationship of *Cuscuta* on a cryptogam from where it was abundantly collected.

The emphasis here is for a careful collection of plants by students during field trips. My observations are that a bagful of numerous plants are collected from the field by each student, which are thrown after the students have made 1–2 herbarium specimens. This needs to be strictly avoided, especially where plant material is scarce, like in the Indian desert, but it does not mean that these need not be collected and examined carefully.

Field trips are extremely essential in deserts of Rajasthan and Gujarat. I wish to cite another observation, which I made and published in 1978. A plant *Ipomoea pes-tigridis*, quite common all over the country, exists in nine forms (Figure 2) in the Indian desert, which I have stated as adaptive polymorphism<sup>3</sup>. When I showed these forms to late V. Puri from Meerut, he was amazed and commented that we plant morphologists will make these as distinct species, without seeing them in the field. Unless a student makes a field study, he/she cannot appreciate the role

of climate and habitat on plant life. In order to find out whether this variability has a genetic basis, seeds from different plants were sown in pots. In each case, the offspring was like the parent, i.e. all forms were breeding true. A microevolution is taking place in nature and some forms will disappear in the days to come, as they are not suitable for the prevailing environmental conditions. Both, seed size and shape, represent adaptive compromises. This remarkable genetic polymorphism is not only in regard to seed size, weight, indumentums, dormancy and germination (Figure 3), but also in regard to leaf shape, anatomical traits and anthocyanin content, obviously to assure good development and success in a variety of different microhabitats. The occurrence of stipules, when present, their morphology serves as a taxonomic character<sup>4</sup>. All these features are missed by a student who does not make a field study.

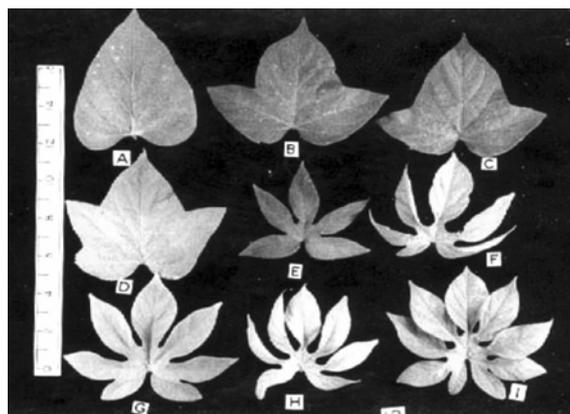
It has been rightly said that taxonomy although one of the oldest of all biological sciences, is dwindling<sup>5</sup>. Because of newer, challenging and fashionable disciplines, this subject is neglected by most

biologists. Besides, the young generation does not want to take pains for the field studies. Many universities, where taxonomy was flourishing 2–3 decades ago, now find it difficult to teach the subject to postgraduate students. For example, at the University of Jodhpur, where a renowned field botanist, the late M. M. Bhandari, wrote a remarkable book: *Flora of the Indian Desert*<sup>6</sup>, now has no one to teach taxonomy?

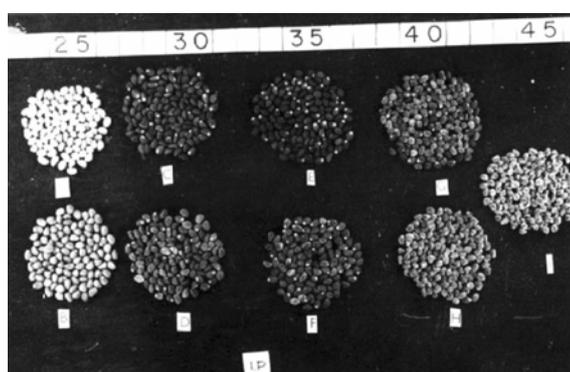
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2. Sen, D. N., *Sci. Cult.*, 1959, **24**, 435–436.
3. Bhati, P. and Sen, D. N., *Plant Syst. Evol.*, 1978, **129**, 111–117.
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5. Rao, R. R., *Proc. Natl. Acad. Sci. India, Sect. B*, 2012, **82**, 259–264.
6. Bhandari, M. M., *Flora of the Indian Desert*, MPS Repros, Scientific Publishers (India), Jodhpur, 1990.

DAVID N. SEN

*Professor of Botany (Retd.),  
Jai Narain Vyas University,  
Jodhpur 342 001, India  
e-mail: profdensen@rediffmail.com*



**Figure 2.** Leaf patterns of nine categories of *Ipomoea pes-tigridis*.



**Figure 3.** Seeds of nine categories of *Ipomoea pes-tigridis*.