



## Editorial

## Integrity of Ayurveda



The extent of quality research and high impact publications on Ayurveda is slowly increasing. Agreeably, more efforts are needed for research capacity building and human resource development to ensure critical mass of thinkers, researchers, clinicians and scholars. The Indian and international scientific community needs proper interaction with Ayurveda scholarship for developing epistemology sensitive research protocols. While trans-disciplinary collaborative research must be encouraged, it is indeed crucial to protect the basic principles, ethos and value systems of Ayurveda. Two recent studies published in reputed scientific journals might help to explain this point. These reports reaffirm the enormous potential of Ayurveda to provide novel ideas; however, they also exemplify how basic principles and integrity of Ayurveda can be potentially compromised.

### 1. Panchakarma for metabolic disorders

The first example is a paper by Peterson et al. in Nature Scientific Reports [1]. These researchers have studied effect of a 6-day Panchakarma-based Ayurvedic intervention involving herbs, vegetarian diet, meditation, yoga, and massage on metabolic profile. They have reported that the intervention resulted in significant decrease in plasma phosphatidylcholines through changes in metabolites across many pathways such as phospholipid biosynthesis, and choline and lipoprotein metabolism. A merely six day Panchakarma-based intervention is reported to have resulted in statistically significant changes in plasma levels of phosphatidylcholines and sphingomyelins.

The authors have used the classical Ayurveda term 'Panchakarma', however they have not followed the classical procedures. It is disappointing to note that the logic behind combining only two procedures like Virechana and Nasya in the study has not been explained. Classical Panchakarma requires pre-procedure therapy and sequential interventions under careful supervision of qualified vaidyas to ensure that the toxins are removed and doshas are balanced. This process is highly personalized and it may not be suitable to be offered as a 'package'. In fact, if wrongly applied, these procedures might even cause harm. Under the pretext of 'package' authors have tried to introduce various treatment modalities including a vegetarian diet, a proprietary herbal program, meditation, yoga, oil massage, heat therapies, and health education on self-care, which are portrayed as Panchakarma program. This amounts to distortion of classical Panchakarma procedures and raises serious questions regarding authenticity and intellectual

property. Although the protocol was approved by the institutional ethics committee, this study calls for serious attention to the indiscriminate use of Panchakarma procedures, especially in the United States where this study was carried out. This article certainly deserves a refutation from the Ayurveda community. The Ministry of AYUSH may think of suitable mechanisms to protect Ayurveda from being distorted and inappropriately used in India and abroad. Arguably, there may be scientific merit in this study and involvement of reputed scientists and Universities is appreciated. Ironically, this effort seems to be primarily driven by commercial intentions leading to commodification of Ayurveda.

### 2. Ashwagandha in obesity

A second example is a study published in Nature Medicine by Lee et al. who have reported that withaferin A, a steroidal lactone isolated from Ashwagandha, can exert profound metabolic benefits in mice, including body-weight loss, reduced hepatic steatosis and improved glucose control [2]. Authors have reported that withaferin-A treatment in obese mice resulted in a 20–25% reduction of body weight along with decreased hepatic steatosis. This study indicates that withaferin A is a potential leptin sensitizer with additional antidiabetic actions.

Isolating an active ingredient from medicinal plants is an important step in the process of new drug discovery. Many potent drugs like artemisinin, paclitaxel, and metformin have emerged through this route. It will certainly benefit if withaferin A becomes one of the future potent drugs to treat obesity. However, the approach to look at single molecules acting on specific targets to treat complex condition like obesity is far stretched dream. Following the report by Lee et al., Nature Medicine published an editorial entitled 'Obesity: will withaferin win the war?' [3] This approach of viewing therapeutics as some kind of war between disease and drug is against the core philosophy of Ayurveda, which emphasizes importance of bliss, balance and homeostasis at the levels of spirit, body and mind. Now it is understood that complex syndromes, polygenic diseases, and lifestyle disorders need holistic management. No single drug even if highly potent, can cure non communicable diseases or disorder like obesity or diabetes. Therefore the Ayurvedic principles and its holistic approach is gaining greater appreciation.

### 3. The value of the holistic approach

Ayurveda certainly can contribute to new drug discovery. Many classical Ayurvedic drugs have the potential to be included in

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modern therapeutics. Ayurvedic drugs can serve as very good adjuvants in many chronic and difficult to treat conditions like cancer, diabetes, asthma, and obesity. However, projecting it merely as a source of herb-based drugs severely compromises proper understanding of Ayurveda, which insists on restoring balance to doshas and dhatus, and preventing repetition of their vitiation, as the first priority. Solely using herbal drugs is against the ethos of Ayurveda. Sadly, even in India, current research and practice of Ayurveda is moving on the lines of allopathy where drugs take center stage. The real strengths of Ayurveda are in its holistic approach and applications based on *hetu*, *linga* and *aushadha*. *Aushadha* consists of not just drugs but includes *swasthivritta*, *aahara*, *vihara*, *dinacharya*, *ritucharya*, *pathya* *apathya*, *rasayana*, and *panchakarma*. The world is trying to move towards holistic and integrative approaches, which represent the core of Ayurveda. We must not undermine or dilute its basic principles, ethos, and value systems. Rather we must protect the integrity of holistic Ayurveda as the Science of Life in its true spirit.

#### 4. Upcoming reforms

J-AIM applauds efforts of AYUSH Minister Shripad Yesso Naik, Secretary Ajit M Sharan and Ayurveda Advisor Manoj Nesari, Joint Secretaries, staff of the Ministry and Directors of Research Councils for successful celebrations of the World Ayurveda Day. This is indeed a very good beginning. During any transformational phase strategic policy reforms are necessary. Recognizing this need, the Ministry has initiated serious efforts for several reforms in the right direction. The Ministry has appointed high power committees to develop a National Policy on AYUSH; to improve the functioning of various research councils; to review functioning of Central Council for Research in Ayurvedic Sciences (CCRAS) and its peripheral institutes. The Ministry is in the process of amending the Drugs and Cosmetics Rules 1945 to propose revised licensing mechanism for new Ayurveda, Siddha and Unani (ASU) drugs only after thorough examination by an expert committee. This should improve quality assurance and bring effective regulatory checks on manufacturing and sale of spurious, substandard, counterfeits, and Ayurvedic drugs sold unethically with tall claims [4].

At the request Ministry of AYUSH, the University Grants Commission has issued an advisory to all Indian Universities to include AYUSH disciplines in their PhD programs. To support this initiative, the Ministry has decided to offer 200 Senior Research Fellowships every year for pursuing transdisciplinary research on AYUSH

through National Eligibility Test (AYUSH-NET). The All India Institute of Ayurveda led by Director Abhimanyu Kumar is now functional with good infrastructure and supporting faculty. It is heartening to note that the research collaborations between AYUSH and the Indian Council of Medical Research (ICMR) are being strengthened under the visionary leadership of eminent biomedical scientist Soumya Swaminathan, currently Director General of ICMR and Secretary Department of Health Research (DHR). An independent inter-departmental committee for identifying viable new systems of medicine has been appointed by the Ministry of Health and Family Welfare. These forward looking reforms can go a long way to bring fresh ideas to revitalize and integrate AYUSH into the mainstream healthcare without any dogmatism.

Ayurveda is receiving increased attention from the national and global scientific community. In the past, Yoga became popular in the west and was rapidly commercialized through distorted variants. The emerging culture of commodification like Panchakarma ‘packages’ may take Ayurveda in similar direction unless timely precautionary measures are taken. We hope that the Indian Government can ensure that any attempts to distort the essence of Ayurveda are discouraged and its integrity is respected.

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