

# Traditional Health Sciences of India



**Prof. Ram Harsh Singh**

**Professor Emeritus**

**Faculty of Ayurveda**

**Banaras Hindu University, Varanasi**

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# Indian systems of Medicine

No assessment of Indian health system can be complete without the inclusion of ISM. India has an incomparably rich heritage in ancient systems of medicine that makeup a veritable treasure of knowledge for both preventive and curative health care. These systems through the safe and cost effective treatments have potential to make a significant contribution to health care of the common people. But their true potential is still largely unrealized.

**–India Health Report 2003 Oxford**

## ISM / AYUSH Comprise of Six Systems:

1. Ayurved
2. Siddha
3. Unani
4. Yoga
5. Naturopathy
6. Homeopathy

Ayurveda is the dominant system in ISM.

Homeopathy, though foreign in origin, has a large Indian clientele and is second only to Ayurveda among the ISMs.

# MEDICAL PLURALISM BECOMING A REALITY

# Underlying Similarities

1. All ISMs adopt a holistic approach
2. Are more life-oriented than disease-oriented.
3. Emphasize promotive and preventive care.
4. Believe that disease is a consequence of disharmony between man and nature.
5. Use natural substances specially herbs more often as nutritional supplements rather than drugs alone.
6. Emphasize greatly on diet and life style management

# The Potential of ISMs

With its vast infrastructure and cultural acceptance it would be logical to expect ISM to play a major role in Indian health care in following areas :

- Treatment of chronic intractable diseases.
- Care of the elderly.
- Promotive and preventive health care.
- Primary health care in under-served areas.
- To provide leads for discovery of safe and cost effective drugs.
- Export of natural products in industrialized world

# The Infrastructure Available

Facilities	Ayurved	Unani	Siddha	Total*
Hospitals	2394	261	280	<b>3192</b>
Hospital Beds	42087	3906	2396	<b>60237</b>
Dispensaries	13887	1010	463	<b>21376</b>
Pharmacies	7786	376	313	9124
Registered Practitioners	443634	46230	17560	<b>724823</b>
U.G. Colleges Admissions	225	38	06	<b>461</b>
	10220	1595	320	<b>25605</b>
P. G. Colleges Admissions	61	09	03	<b>106</b>
	977	85	110	<b>2242</b>

\* Inclusive of Yoga, Naturopathy & Homeopathy (not displayed)

# Integration Status

- 1. ISMs and Western Modern Medicine continue as separate independent services.**
- 2. ISM Education is on a modest integrated lines incorporating basic medical sciences in ISMs Curriculum.**
- 3. Modern Medical Education is now getting inclined to incorporate essentials of ISMs in Modern Medicine graduate Course.**



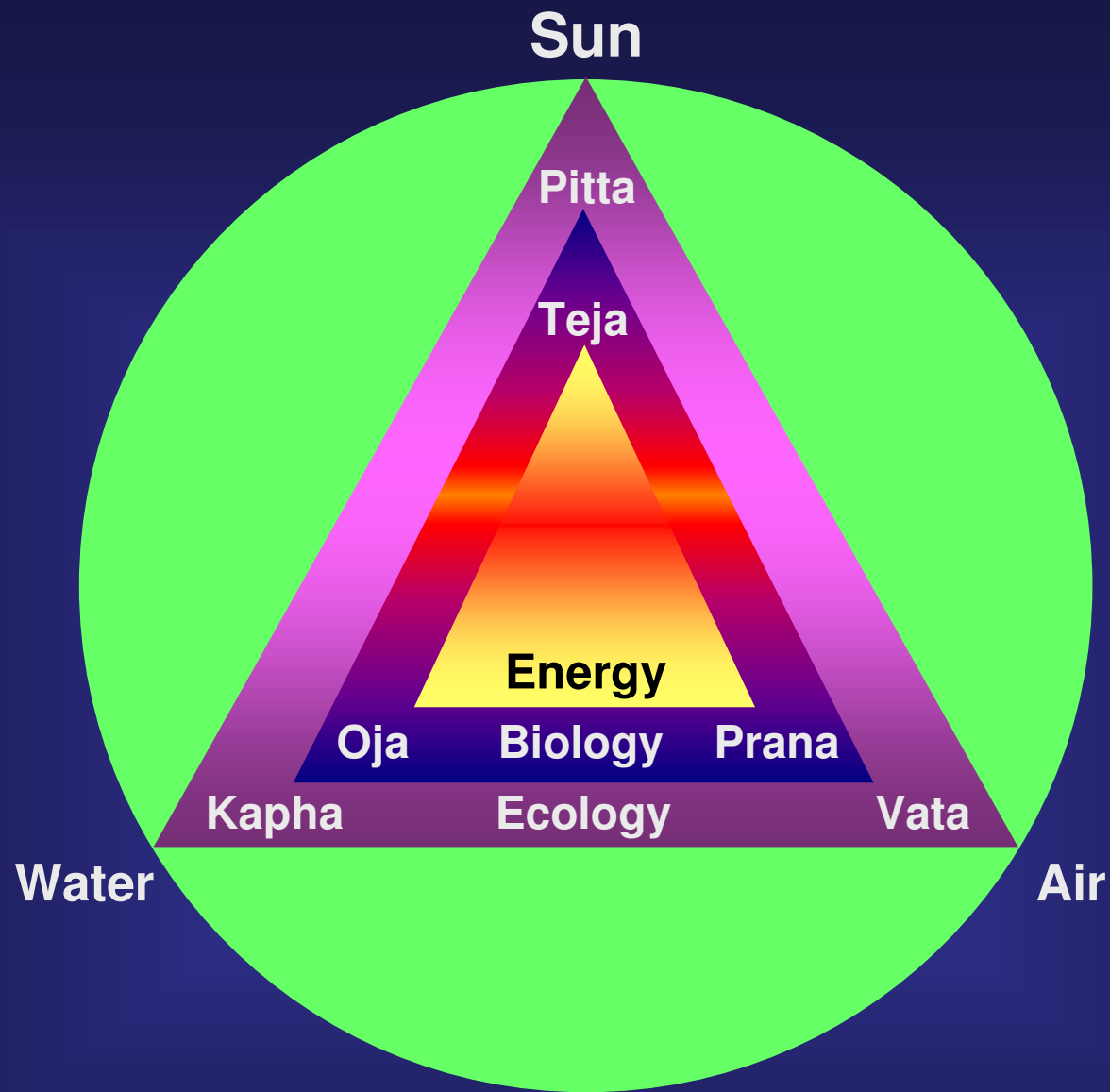
# *The Historicity and the Available Ancient Literature*

**Ayurveda is the most ancient system of medicine, its antiquity going back to the Vedas, surviving today through two sets of classic texts:**

Name of Texts	Author	Historicity	Subject
<b>Brihatrayī – The Three Major Texts :</b>			
1. Caraka Samhita	Caraka	1000-700 B.C.	Philosophy & Medicine
2. Susruta Samhita	Susruta	1000-600 B.C.	Practice of Surgery
3. Vagbhatta Samhitas	Vagbhatta	300-600 A.D.	Medicine & Therapeutics
<b>Laghutrayī - The Three Minor Texts :</b>			
1. Madhav Nidana	Madhavkara	900 A.D.	Diagnostics
2. Sarangadhar Samhita	Sarangdhara	1300 A.D.	Medicine
3. Bhava Prakasa	Bhava Misra	1600 A.D.	Drugs and Herbs

# EIGHT CLINICAL SPECIALITIES OF AYURVEDA

1	<i>KAYACHIKITSA</i>	INTERNAL MEDICINE
2	<i>SHALYA TANTRA</i>	SURGERY
3	<i>SHALAKYA TANTRA</i>	EYE & ENT DISEASES
4	<i>KAUMARBHRITYA</i>	PAEDIATRICS & GYNAEC
5	<i>AGAD TANTRA</i>	TOXICOLOGY
6	<i>BHUTA VIDYA</i>	PSYCHIATRY
7	<i>RASAYANA</i>	NUTRITION & GERIATRICS
8	<i>VAJIKARANA</i>	SEXOLOGY, REPRODUCTION



**Tritriangular Eco-genomic Holism, the circle signifying inherent harmonising equilibrium**

# Ayurvedic Diagnostics

## EXAMINATION OF PATIENT

- *Constitutional Make-up*
- *Health Status*

## EXAMINATION OF DISEASE

- *Nature of Pathology*
- *Manifestations of Disease*

## TOOLS OF DIAGNOSIS

- *Interrogation*
- *Physical Examination Including Pulse Diagnosis*

# Principles of Treatment

**[I] Elimination of the Cause of Disease**

**[II] Reversal of Pathogenesis**

**[A] Bio-purification by Pañca Karma**

**[B] Palliative Care by : [1] Drugs, [2] Diet and  
[3] Life Style Management**

# Pancakarma Therapy

*Samsodhana* or Biopurification of the body using five-fold therapeutic technology of *Pancakarma* is an important component of classical Ayurveda. Some of these practices have shown notable effect in clinical settings viz., *Vamana* in treatment of bronchial asthma and allergies, *Vasti* in the treatment of neurological diseases, *Snehana-Swedan* in treatment of arthritis, *Sirodhara* in treatment of headaches, anxiety and insomnias etc.

# Rasayana Therapy

Rasāyana is the Science of Nutrition aiming to procure the best qualities of body tissues (*Dhātus*) leading in turn to longevity, immunity, resistance against disease and improved mental faculties. *Rasāyana* is one of the Eight branches of Ayurveda and it encompasses rejuvenative life style, healthy dietetics and rejuvenative herbomineral nutraceuticals.

# Kshara Sutra Treatment

Application of standardised medicated thread in treatment of fistulla-in-ano has shown notable success and acceptability. Gradual cutting and simultaneous healing of fistullar tract by *Kshara Sutra* has overwhelming advantage over conventional surgery for this purpose. There are convincing published data as evidence-base for this technique.



# **Ayurvedic Materia Medica and Pharmacy**

- **Plants, Minerals, Metals, Biological Products.**
- **Five-Elemental Basis of Use.**
- **Nutraceuticals vs Pharmaceuticals.**
- **The Green Pharmacy & Medicinal Green Revolution.**
- **Ancient Pharmaceutical Technology.**
- **Application of Newer Methods, Problems & Prospects.**

# The Issue of Evidence-Base

## **I. The Four - Fold Classical Parameters:**

1. *Pratyaksa* – Direct Observation
2. *Anumana* – Inferential Evidence
3. *Aptopadesa* – Scriptural Evidence
4. *Yukti* – Experimental Evidence

## **II. Supporting Evidence:**

1. Mass acceptability
2. Experience Based Evidence
3. Longstanding Use / HMPC
4. New Scientific Evidence

## **III. Key Issues related to Global Evidence**

# Ongoing Āyurvedic Research

**1. Literary Research**

**2. Conceptual Research**

**3. Clinical Studies on diseases and diagnostics**

**4. Drug Research**

**5. Standardization of drugs for quality assurance**

**6. Conservation, cultivation and value addition to Medicinal plants**

# **Lead Areas in Drug Research**

- 1. Antistress, adoptogenic, neurostabiliser and memory enhancing drugs.**
- 2. Immuno-enhancers and Anti-Aging remedies.**
- 3. Hypolipidemics and Cardioprotectives.**
- 4. Hepatoprotectives.**
- 5. Antidiabetics and Anti-arthritics.**
- 6. Cytostatic and Anticancer Drugs.**
- 7. Nutraceuticals, Food Supplements and Antioxidents.**
- 8. Cosmetics and Cosmetic base materials.**

# Priorities in Ayurvedic Drug Research

- Standardization and quality control of in-use Ayurvedic medicines with necessary GMP.
- New drug / formulation development through a “Reverse Pharmacology approach”.

## ***In vivo* Antistress Effect of certain Herbs**

<b>Name of herbs (Botanical Name)</b>	<b>part used</b>	<b>Antistress Effect (Ed<sub>50</sub> mg/kg)</b>
1. <b><i>Tulasi</i></b> ( <i>O. sanctum</i> )	Leaves	13.7 ± 1.3
2. <b><i>Asvagandh</i></b> ( <i>W. somnifera</i> )	Roots	14.9 ± 1.5
3. <b><i>Aralu</i></b> ( <i>A. excelsa</i> )	Plant	19.1 ± 1.9
4. <b><i>Tinduka</i></b> ( <i>D. perigrina</i> )	Plant	22.9 ± 2.2
5. <b><i>Kutaki</i></b> ( <i>P. kurroa</i> )	Roots	23.5 ± 2.1
6. <b><i>P. ginseng</i></b> (□□)	Root	25.2 ± 2.3
control	-	46.1 ± 1.4





**ASVAGANDHA**

*Withania somnifera* Dunal





**Brahmi (*Bacopa monnieri*)**



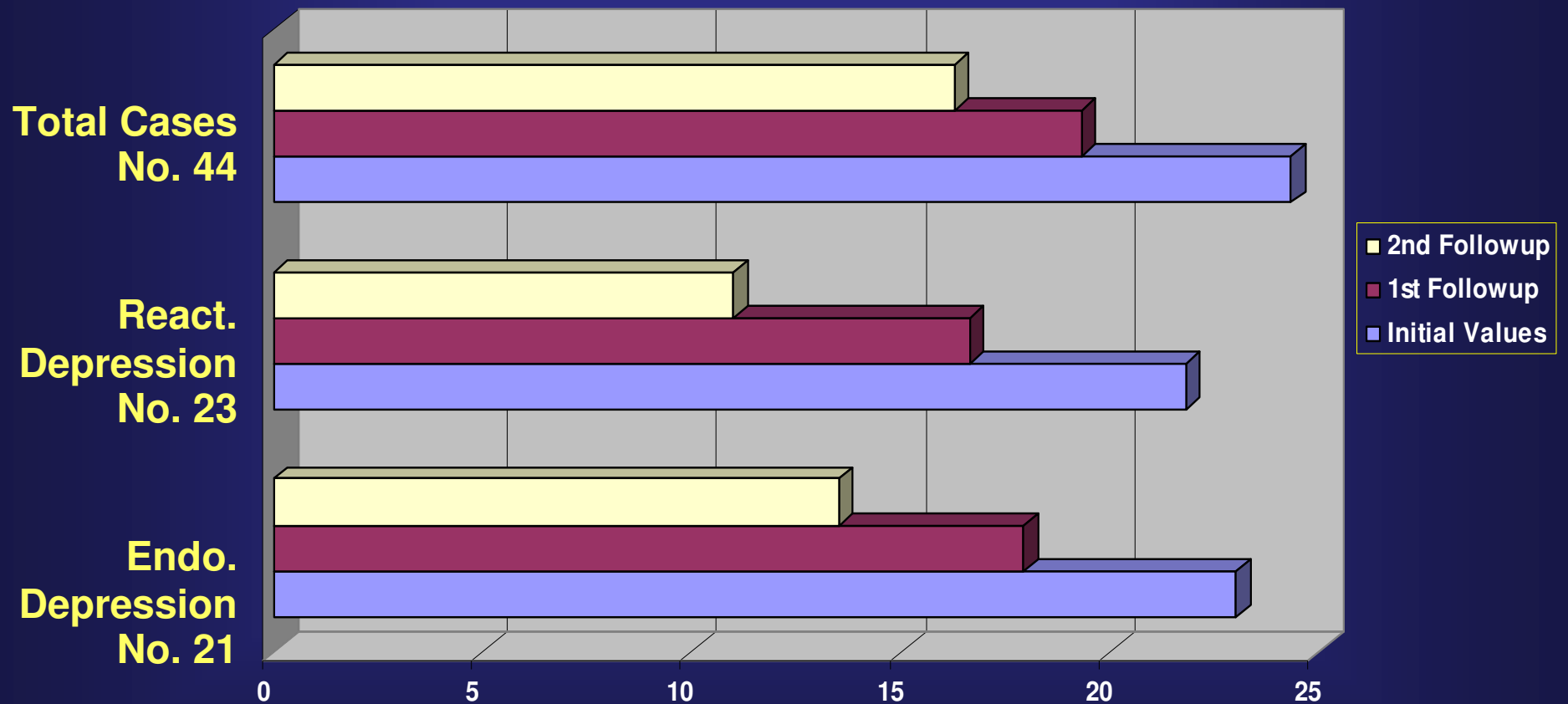
## Invitro Cytostatic Effect of certain Herbs

Name of Herbs (Botanical Name)	part used	IC <sub>50</sub>
1. <i>Vaca</i> (A. calamus)	Rhizome	>100
2. <i>Arka</i> (C. procera)	Flower	<10
3. <i>Karcura</i> (C. zedoaria)	Rhizome	>100
4. <i>Bhallataka</i> (S. anacardium)	Fruit	<10
5. <i>Citraka</i> (P. zeylanica)	Branches	>100
6. <i>Sigru</i> (M. oleifera Lam)	Cortex	>100
7. <i>Mahanimba</i> (M. azadarach.)	Fruit	10-100
8. <i>Brihati</i> (S. indicum)	Fruit	>100
9. <i>Nirgundi</i> (Vitex negundo)	Leaves	>100
10. <b>Sisplatin</b>	-	<10

J. Ethnopharmacology 47(2): 75-84

# Anti Depressant effect in Kapikacchu as Changes in Hamilton Rating Scale Scores in Cases of Depression

## Reverse Pharmacology approach



# Conclusion

*Although tracing the history and evolution of Indian Medicine is a difficult exercise, there are evidences that medical wisdom began in the earliest antiquity of Indian Traditions. The knowledge continued to grow and it transformed into a rational system of medicine before beginning of the Christian Era and has been growing further down the ages.*

*Presently Ayurved is one of the six official systems of Medicine in India and it enjoys a huge educational and professional infrastructure with growing scientific research to develop it as an evidence based system of medicine. Slow pace of R and D activity is the main constraint. There has been a resurgence of interest in ISMs & Ayurved and its cures world over.*

*“In spite of the fact that the ancient Hindu Medicine practised in India in the earliest times was an equally developed scientific discipline as any other contemporary system in the world, its influence on the western society was small. Hence, most of the current writings in history of medicine do not have an appropriate mention of the contributions of ancient Indian medicine”.*

**Welch, C.S. 1968**