

Coconut Dehusker

Implements

- A 1.5 HP electric motor is coupled through a belt to a long cylindrical metal rod. The tip of the rod is fixed with two sharp blades at one side
- The blades are at $\frac{3}{4}$ feet length and at 1" interval. These blades on rotation help to dehusk the coconut easily to the desired level
- On an average 150 nuts can be dehusked per hour, thereby dehusking about 7200 nuts in an 8 hour shift

Mr. R. Jayaseelan



[Video](#)

Understanding traditional knowledge

Can more than 25000 herbal leads with NIF database based on systems of community and individual traditional knowledge and innovations address global and national health problems?

Linking formal and informal science

Context of uncoded non-classical knowledge:

a) Codified knowledge versus uncoded knowledge:

(i) codification took place thousand years ago, and thus may have generated robust solutions but less precise for specific applications; *parsimoniousness has a price,*

(ii) *non-codified system has developed often location specific solutions which may have higher fit locally and less robustness generally, but when pooled together may achieve similar or higher robustness,*

(iii) greater variation among local solutions may also indicate that causal organism for a specific disease or group of disease may itself have mutated and varied across locations. Different remedies may thus be solving variations on a disease theme—an approach which may help in avoiding increasing chances of diseases developing resistance to drugs

Disease wise frequency of traditional knowledge practices in a sample of NIF database (2004) n=8497

Sl.	Disease/Disorders	Number of practices
1	Ache/Pain	1056
2	Respiratory disorders	895
3	ENT	864
4	Gastro-intestinal	753
5	Ulcer/Wounds/Cuts	702
6	Liver disorders	626
7	Fever	521
8	Musculo-orthopaedic	489
9	Skin diseases	442
10	Gynaecological	341
11	Poisoness bites/Stings	324
12	Neurological	309
13	Diabetes	253
14	Urological disorders	128
15	Blood	125
16	Burn injury	119
17	Cancer	119
18	Others	110
19	Viral diseases	89
20	Reproductive disorders	80
21	Cardio-vascular	68
22	Gum/Tooth disorders	37
23	Allergic disorders	25
24	Bacterial diseases	14
25	AIDS/HIV	8
	Total	8497

Disease wise distribution of patent application at Indian PO (1994-2004)

(Out of 7034 only 5568 could be classified, *herbal drugs remain to be classified*)

Sr.No.	Disease/disorder	No. of applications
1.	Antidiabetic	301
2.	Herbal	204
3.	Anti-inflammatory	181
4.	Immuno-modulators	180
5.	Drugs for the treatment of reproductive disorders	172
6.	Antidepressant	154
7.	Vaccine	124
8.	Anti-HIV drugs	113
9.	Asthma drugs	113
10.	Anti-hyperlipidaemic	102
11.	Antiviral	82
12.	Antifungal	80
13.	Analgesic	76
14.	Antipsychotic	72
15.	Heterocyclic compounds	71
16.	Anti-allergic	66
17.	Blood coagulation modulators	64
18.	Ophthalmic drugs	60
19.	Anti-malarial	46
20.	Anti-Tuberculosis	36
21.	Anti-ulcer	28

Source: Sen, A. 2005. *Analysis of Patent Applications filed in India.*
FPM Course submission to Prof. Gupta, Anil . K. at IIMA

**PATENTS FILED FOR TREATMENT OF DIFFERENT DISEASES / DISORDERS AND OTHER USES
AT USPTO FROM 1996- 25TH MARCH, 2003**

No.	Disease / Disorders/Uses	Patents
1.	Skin care and personal care products	173
2.	Nervous system	65
3.	Infectious disease and various microbial diseases	51
4.	Endocrine system	45
5.	Cardiovascular problems and Circulatory system	45
6.	Inflammation	41
7.	Immunological disease & disorder	38
8.	Respiratory system	35
9.	Hair care	34
10.	Reproductive system	33
11.	Digestive system and intestinal problems	21
12.	Veterinary disease and as animal feed composition	21
13.	Psychiatry	13
14.	Others Pharmaceutical uses (muscular pain, dietary supplement, increase bioactivity, increase efficiency of growth hormones, composition for reducing weight, for ear, eyes and other therapeutic uses)	75
15.	Non- Pharmaceutical uses (plant protectant, detergent, essential oils, herbal tea, chewing gums, fabric freshener, scented pillows, reducing stress to fabrics, additive, flavour-fragrance agent, etc.)	48

Total Herbal patents filed at USPTO from 1996 to March 25th 2003. : 769

Source :Gupta, A. K. and Chandak, V. S. 2003. Own Compilation.

Key Issues:

- a) Will these thousands of leads be entitled to resources from global pool of funds for creating public goods

- b) Will modern medicine, science and institutions listen to, learn from and leverage the grassroots innovations and traditional knowledge?

- c) Where are the funding programmes focusing on uncodified traditional knowledge based drug discovery programmes?