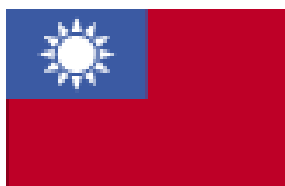


Hua-Lian International Nutraceuticals and Functional Foods Workshop



August 24-25, 2004.
Hua-Lian, Taiwan



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R & D in Nutraceuticals and Functional Foods



Consumers utilize herbs and other dietary supplements for a variety of reasons

- In a survey of 3,226 users
 - General health 67%
 - Cold 53%
 - Osteoarthritis 39%
 - Energy enhancement 37%
 - Cholesterol lowering 29%
 - Cancer prevention 28%
 - Allergy 27%
 - Weight management 25%



Top 10 herbal products (2003)

Herb	% of market
• Ginkgo	12.1
• Garlic	11.6
• Echinacea	11.5
• Soy	9.2
• Saw palmetto	7.8
• Ginseng	7.8
• St. John's wort	5.6
• Cranberry	3.9
• Black cohosh	3.6
• Valerian	2.9



Many herbs have been used as the source of widely accepted pharmaceutical drugs

• Drug	Herb source	Approved use
• Colchicines	Autumn crocus	Anti-inflammatory
•	(<i>Celchicum autumnale</i>)	
• Etoposide	Mayapple	Anti-tumor
•	(<i>Podophyllum peltatum</i>)	
• Taxol	Pacific yew	Anti-tumor
•	(<i>Taxus brevifolia</i>)	
• Vincristine	Madagascar periwinkle	Acute lymphocytic leukemia
	(<i>Catharanthus roseus</i>)	

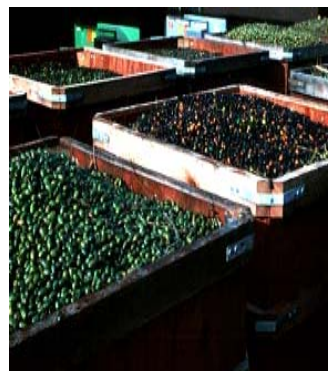


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In 2004, Nutraceutical Industry looks into men's health market

- Popular supplement such as saw palmetto (*Serenoa repens*) with estrogenic properties for benign prostate hyperlasia (BPH)



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Nutraceutical industry is aiming at the concerns of baby boomer generation

- Aging, over weight
- Cancer
- Heart disease
- Stay healthy
 - Antioxidant
 - Enhance immune system
 - Health food
 - Nutritional supplement
- Youth appearance
- Stress




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A significant one in four adults simply do not believe the health claims made by manufacturers due to negative media stories.

Therefore, it is crucial to build up credibility of nutraceutical and functional food products



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Sustainability of nutraceuticals and functional foods industry

- Steps to take and make this fragile industry sustainable and credible.



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1. Scientific studies to support claimed therapeutic values



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2. Understand the principles of medicinal plants



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3. Improve reputation



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A lot of medicinal herbs on the market with reputation problems especially Chinese products



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So, what should we do to solve this problem?



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1. Practice important approaches

- A. Good Agriculture Practices (GAP)
- B. Good Laboratory Practices (GLP)
- C. Good Manufacture Practices (GMP)
- D. Good Clinical Practices (GCP)



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2 Government regulatory control



- A. Production inspection
- B. Manufacture regulation
- C. Quality control
- D. Product labeling
- E. Storage condition and shelf life



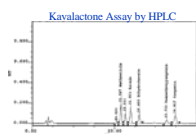
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3. Standardization

- A. Quality
- B. Validating analytical methods
- C. Standard markers
- D. Prove of claimed therapeutic values
- E. Herbs added to conventional food



5. Public awareness for herbal medicines

- Safety, toxicity, and shelf life
- Possible interaction with prescription drugs
- Period of time needed to be functional
- Reliable sources of material and efficacy
- Be aware of adulteration intentionally or unintentionally



6. Increase knowledge and provide training for practitioners and pharmacists





Cosmeceutical industry



- A product which is marketed as a cosmetic, but which contains biologically active ingredients that have an effect in the users.

- Anti-wrinkle creams
- Baldness treatments
- Moisturizers
- Sunscreens



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Herbs for pets and animals



- Allergies
- Anti-itch
- Bad breath
- Constipation
- Cough/Asthma/Respiratory
- Digestive tonic
- Urinary tract infection



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Thank you for your attention

Merci

謝謝

Vielen
Dank

Eυχαριστώ

Hvala

Obrigado!

شكراً

תודה

Teşekkürler

Gracias

Dikey

ขอบคุณ

Grazie

Bedankt

**THANK
YOU**

Köszönettel



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