



# *Pelatihan Herbal dan Aromaterapi untuk Mahasiswa STIKES ISFI Banjarmasin*

**Dr. apt. Kintoko, M.Sc**

Dosen Farmasi UAD, Ketua Apoteker Praktek Herbal Indonesia  
Direktur CV Naturonal & Peneliti Etnomedisin  
Pakar Herbal Indonesia



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KETUA UMUM APOTEKER PRAKTEK  
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EDUCATION

- S1 Farmasi  
Universitas Gadjah Mada
- Pendidikan Apoteker  
Universitas Gadjah Mada
- S2 Fakulti Biosains  
Universiti Kebangsaan Malaysia
- S3 Pharmaceutical Collage  
Guangxi Medical University, China

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Doktor Kintoko Official

WORK EXPERIENCE

- Tim Riset Tanaman Obat dan Jamu (RISTOJA) KEMENKES.
- Tim Studi Kelayakan Bahan Baku Obat, KEMENPERIM.
- Tim Pemetaan Bahan Jamu dan Industri Jamu Nasional, KEMENPERIM.
- Ketua Sentra Pengembangan dan Penerapan Pengobatan Tradisional (SP3T), Dinkes DIY.
- Founder Perkumpulan Griya Sehat Tradisional Indonesia (Pergisti).
- Ketua Bidang Kerjasama & Komersialisasi, Asosiasi Kekayaan Intelektual, Perguruan Tinggi Muhammadiyah.
- Penulis Buku: Bungan Rampai Herbal Indonesia.
- Direktur CV Naturonal Creatama Indonesia.
- Apoteker Praktek Herbal di Poliherbal Rumah Sakit Nur Hidayah.
- Owner Klinik Holistik Naturonal, Rumah Senat BALAHUSADA.

TRAINING EXPERIENCE

- Pelatihan Inovasi & Bisnis, FHM University, Hannover, Jerman.
- Pelatihan Kekayaan Intelektual, Japan Patent Office, Tokyo, Japan.
- Pelatihan Herbal Industry, Prince Of Songkla University, Thailand.
- Pelatihan Sosio-preneurship, British Council.
- Pelatihan English for Academic, University Of Saint Anthony, Irigia, Filipina.

# Naturonal

## Natural Organik Herbal



Pondok Pesantripreneur  
**ABDURRAHMAN-ALI**  
Inkubator Saudagar Santri



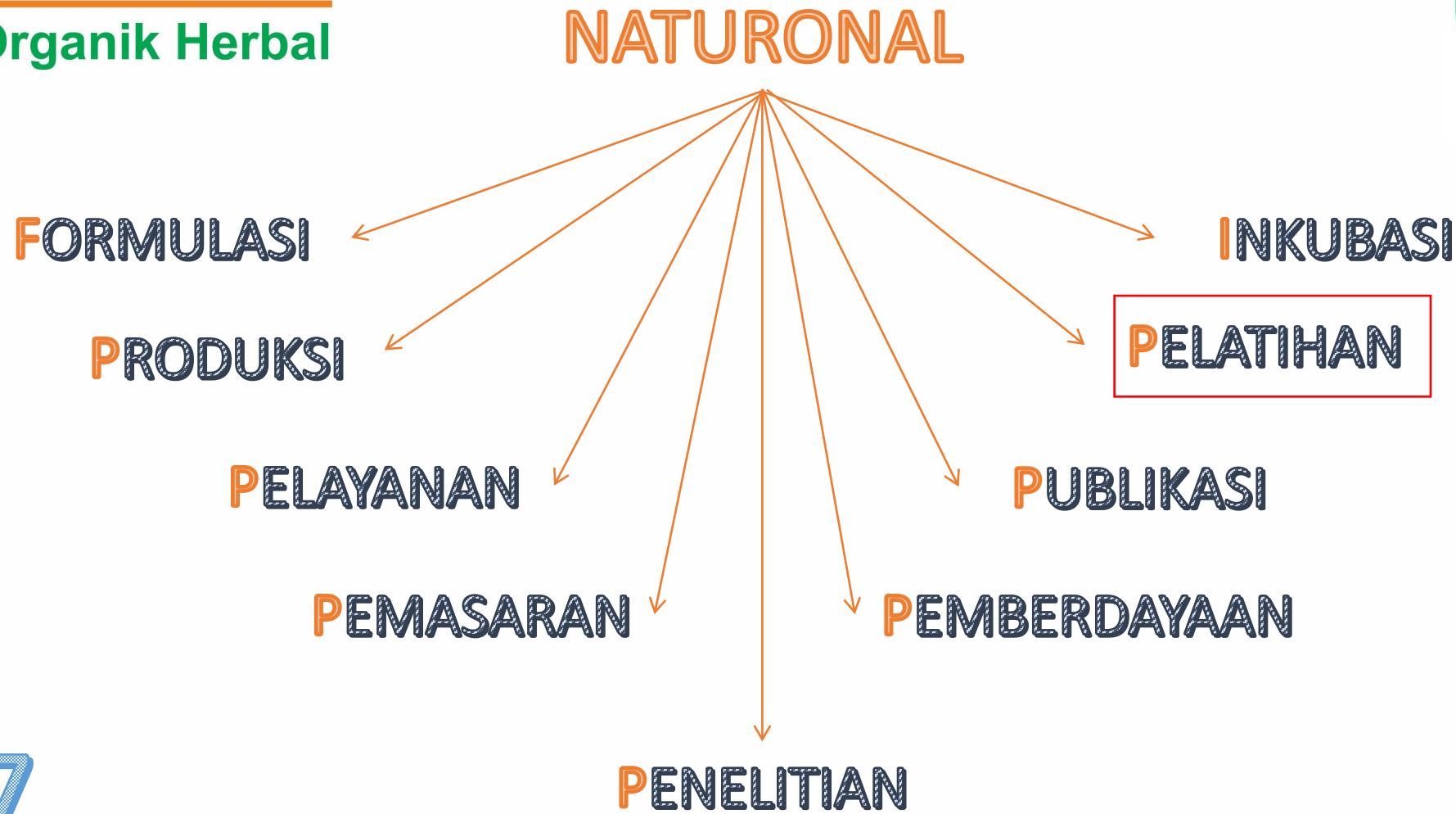
**RUMAH SEHAT  
BALA HUSADA**



**SEKOLAH INOVASI JAMU**  
TRAINING & EMPOWERING

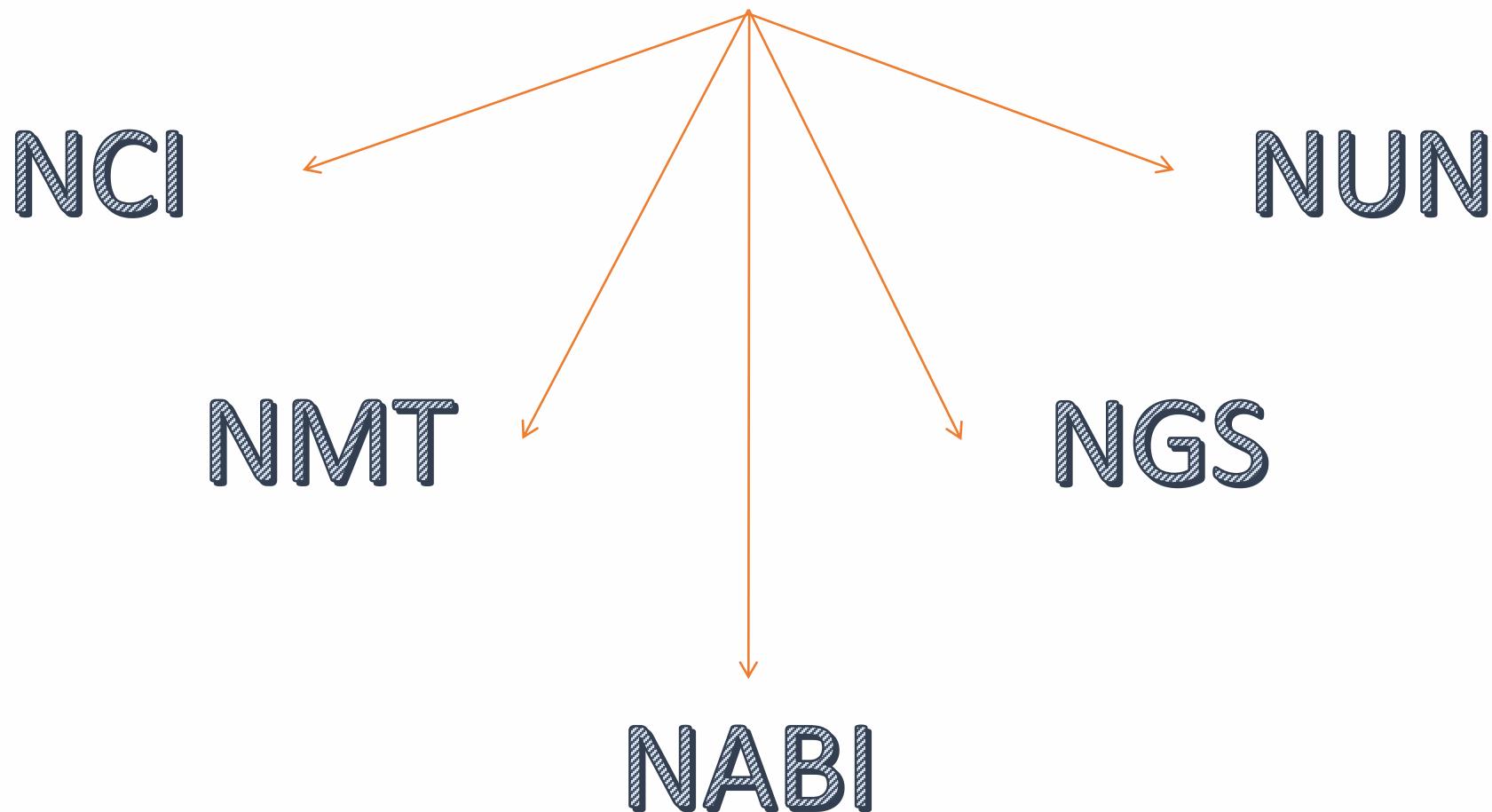


**Rumah Bekam Farma**  
Be The Best & Scientific  
Operated by  
Nabawi Pharmagreen



FIP-7

# NATURONAL GROUP



# NATURONAL GROUP

1. NATURONAL CREATAMA INDONESIA (NCI)
2. NATURONAL USADA NUSANTARA (NUN)
3. NATURONAL APHI BERDIKARI INDONESIA (NABI)
4. NATURONAL GLOBAL SEJAHTERA (NGS)
5. NATURONAL MEDICA TECHNOLOGY (NMT)

# PERTANIAN BIOFARMAKA



IPB



# Mapping Sentral Biofarmaka Riau Berbasis Indeks Organoleptik dalam Meningkatkan Ketersediaan Bahan Baku Obat Bermutu untuk Industri

**Pengusul-UNRI**

Ketua : Dr. Deviona., S.P., M.P.

Anggota : Dr. Irwin Mirza Umami, SP.,M.P

Dr. Ir. Evy Rossi, M.Sc

Apt. Yuli Haryani., MSc

Chairul., ST., M.T

Sri Yoseva S.P.,M.P

Jum'atri Yusri S.Pt., M.Si

Fak.Pertanian- Agroteknologi – Pemuliaan

Fak.Agroteknologi – Ilmu Tanah

Fak.Pertanian-Teknologi Hasil Pertanian

FMIPA-Kimia-Biokimia

Fak.Teknik-Teknik Kimia-Bioproses

Fak. Pertanian-Agroteknologi-Budidaya

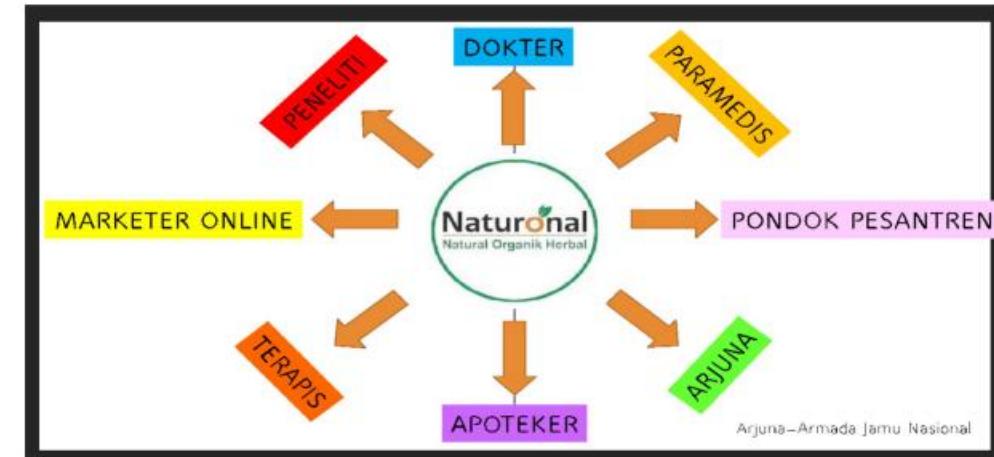
Fak. Pertanian- Agribisnis

**Mitra-DuDi**

CEO : Dr. Apt. Kintoko., MSc. Alumni GuangXi Medical University- Ketua SP3T

**CV. Naturonal Creatama Indonesia-Produksi dan Pemasaran Produk Herbal.  
(AHU-0028063-AH.01.14 tahun 2022)**

Visi: Terwujudnya kelestarian budaya jamu dan sumber daya alam Indonesia yang berdampak pada peningkatan kesehatan, kesejahteraan dan kemandirian bangsa atas landasan kebersamaan



Arjuna-Armada Jamu Nasional

# Bahan Baku Basah



# Bahan Baku Kering Rajangan



# Bahan Baku Kering Bubuk



# Bahan Baku Ekstrak



# Bahan Baku Minyak Atsiri



# FORMULASI DAN PRODUKSI POLIHERBAL SINERGIS

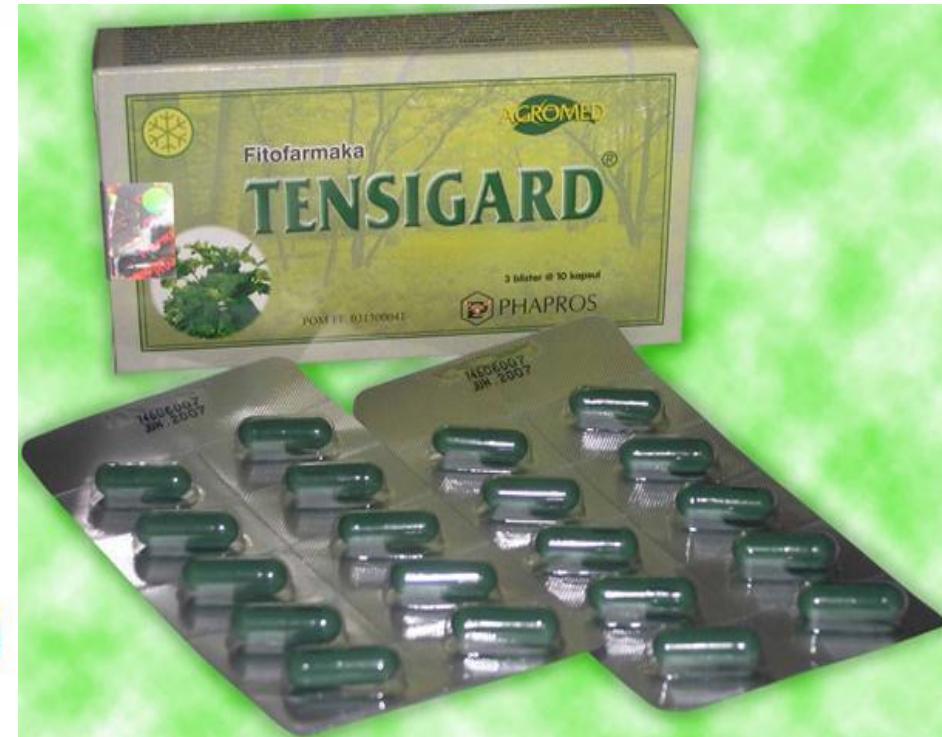
# MAKANAN/MINUMAN KESEHATAN



# OLAHAN PANGAN



# OBAT TRADISIONAL



# SUPLEMEN KESEHATAN



# AROMATERAPI



# KOSMETIK NATURAL



# JAMU TERNAK

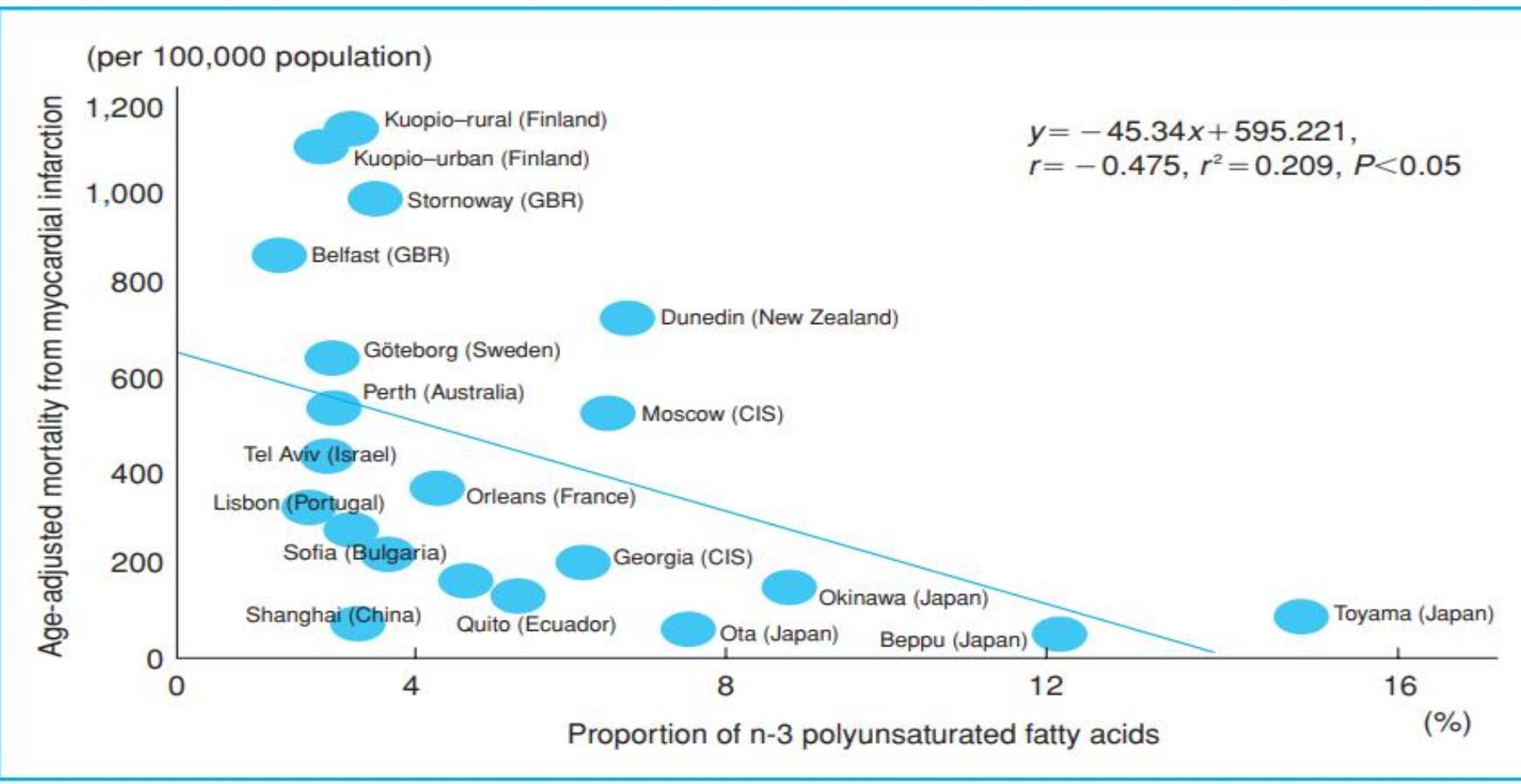


# PRODUK HERBAL UNTUK PERTANIAN



# PERBEKALAN KESEHATAN RUMAH TANGGA





(Produced from Yamori Y, et al. Dtsch Med Wochenschr. 1994;105:1825–1841/Yamori Y, et al. J Hypertens. 2006;24:1499–1505/Yamori Y. Exp Clin Card. 2006;11:94–98)

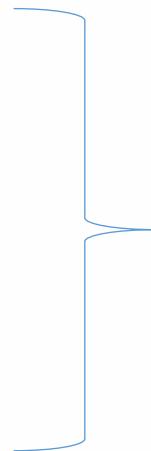
**Fig. 4 N-3 polyunsaturated fatty acid and mortality from myocardial infarction (in men)**

Relationship between the mean ratio of n-3 polyunsaturated fatty acids to total fatty acids in plasma phospholipids and the age-adjusted mortality from myocardial infarction in the WHO-CARDIAC Study.

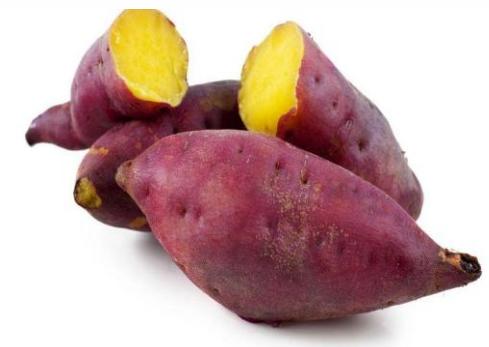
# Healthy Food/Beverage

# KATEGORI

1. Crops
2. Horticulture
3. Spices
4. Ornamental
5. Wild plant

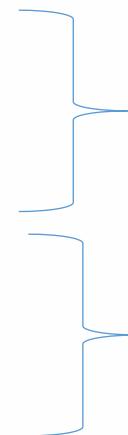


Familiar



# PANCA CITRA

- 1. Citra Halal
- 2. Citra Rasa
- 3. Citra Sehat
- 4. Citra Unik
- 5. Citra Estetik



LIFESTYLE (*sootheness*)

WELLNESS (*care giver*)

ATTRACTIVENESS  
(*Barista/Bartender*)



## Stabilizing and Modulating Color by Copigmentation: Insights from Theory and Experiment

Patrick Trouillas,<sup>\*†‡</sup> Juan C. Sancho-García,<sup>§</sup> Victor De Freitas,<sup>||</sup> Johannes Gierschner,<sup>⊥</sup>  
Michal Otyepka,<sup>\*‡</sup> and Olivier Dangles<sup>@</sup>

<sup>†</sup>INSERM UMR 850, Univ. Limoges, Faculty of Pharmacy, 2 rue du Dr. Marcland, F-87025 Limoges, France

<sup>‡</sup>Regional Centre of Advanced Technologies and Materials, Department of Physical Chemistry, Faculty of Science, Palacký University Olomouc, tr. 17. listopadu 12, 771 46 Olomouc, Czech Republic

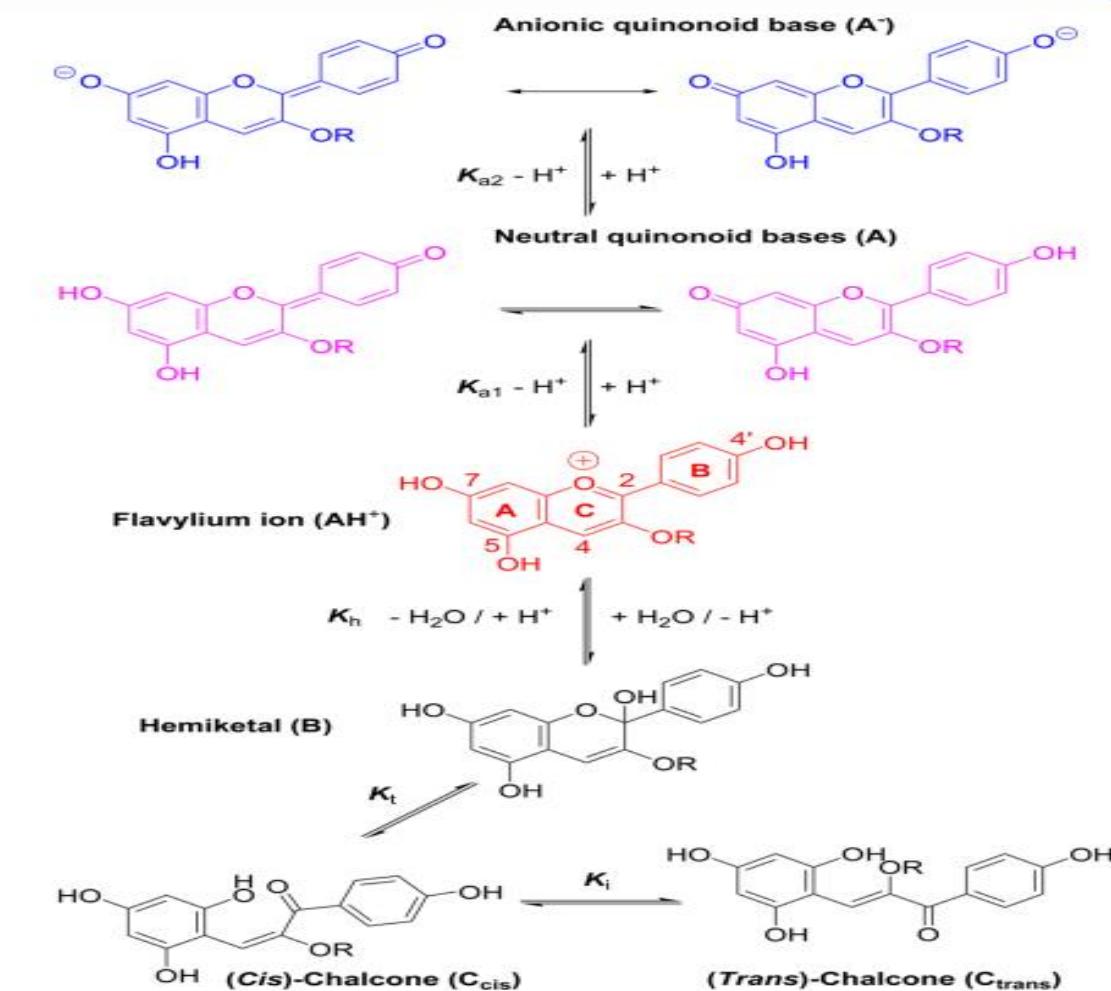
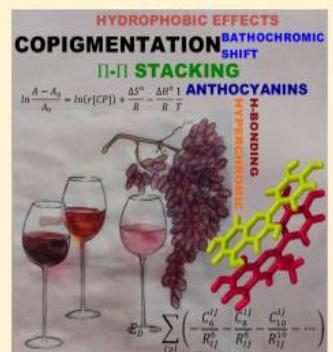
<sup>§</sup>Departamento de Química Física, Universidad de Alicante, Apartado de Correos 99, E-03080 Alicante, Spain

<sup>||</sup>REQUIMTE/LAQV – Research Unit, Faculty of Science, Porto University, Rua do Campo Alegre, 4169-007 Porto, Portugal

<sup>⊥</sup>Madrid Institute for Advanced Studies - IMDEA Nanoscience, C/Faraday 9, Ciudad Universitaria de Cantoblanco, E-28049 Madrid, Spain

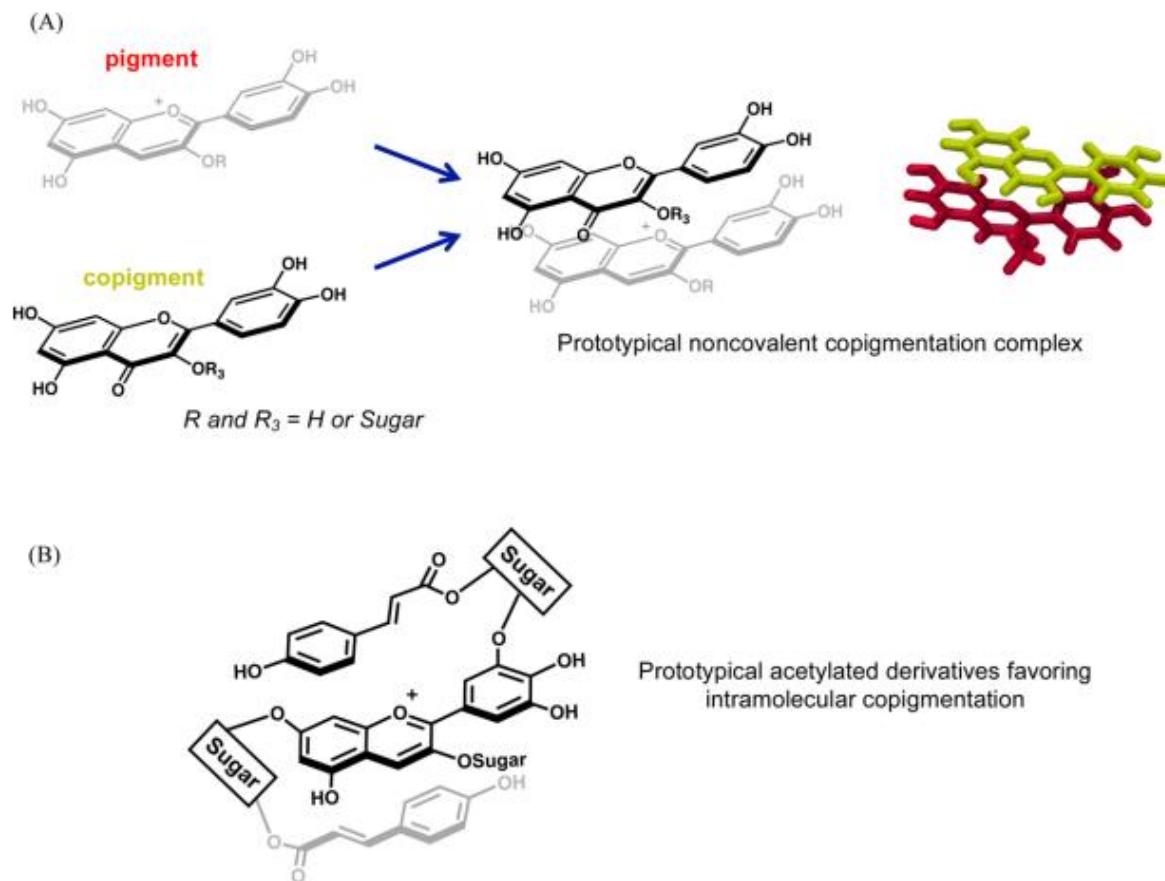
<sup>@</sup>University of Avignon, INRA, UMR408 SQPOV, F-84000 Avignon, France

**ABSTRACT:** Natural anthocyanin pigments/dyes and phenolic copigments/co-dyes form noncovalent complexes, which stabilize and modulate (in particular blue, violet, and red) colors in flowers, berries, and food products derived from them (including wines, jams, purees, and syrups). This noncovalent association and their electronic and optical implications constitute the copigmentation phenomenon. Over the past decade, experimental and theoretical studies have enabled a molecular understanding of copigmentation. This review revisits this phenomenon to provide a comprehensive description of the nature of binding (the dispersion and electrostatic components of  $\pi$ - $\pi$  stacking, the hydrophobic effect, and possible hydrogen-bonding between pigment and copigment) and of spectral modifications occurring in copigmentation complexes, in which charge transfer plays an important role. Particular attention is paid to applications of copigmentation in food chemistry.

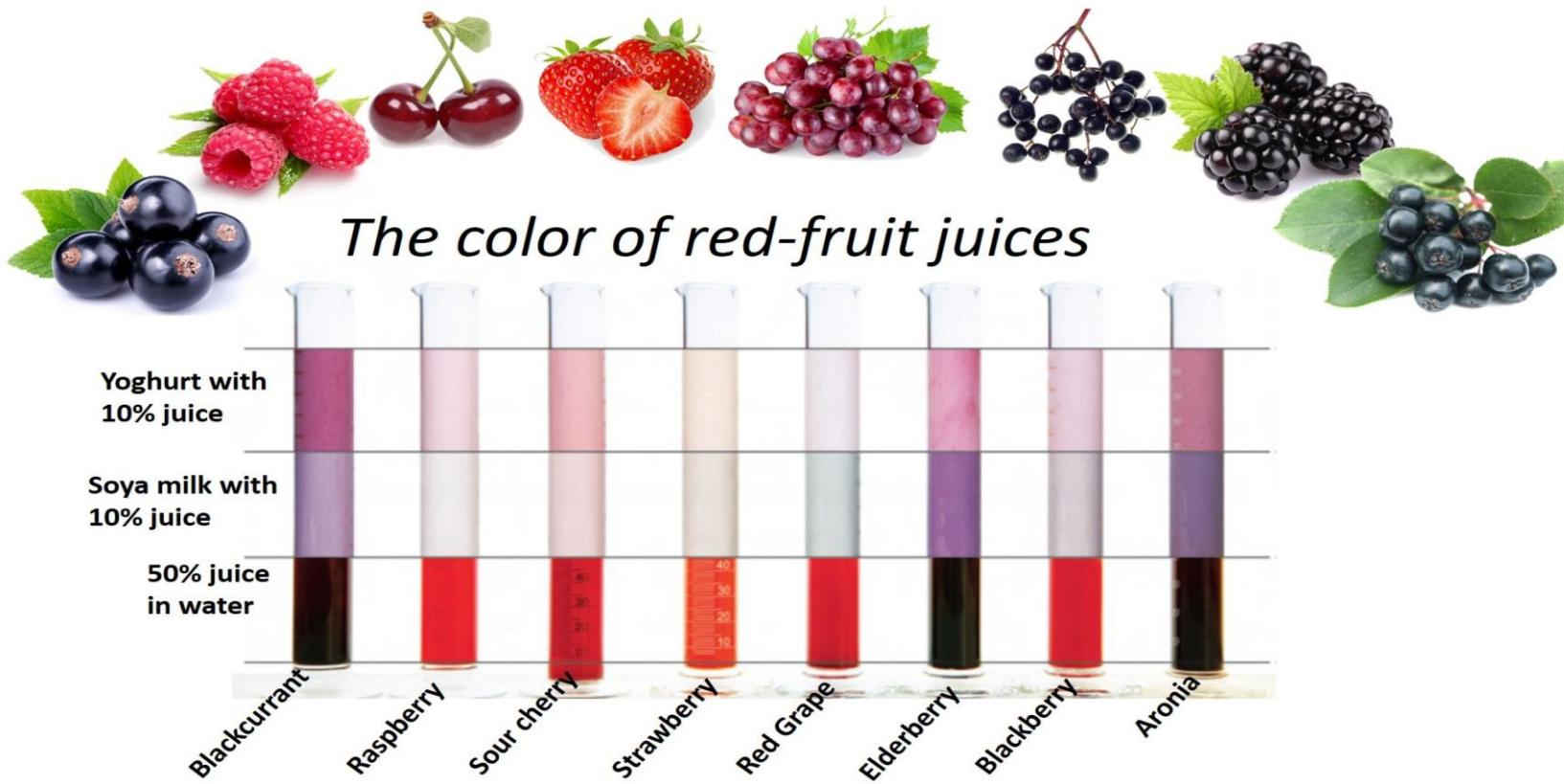


**Figure 3.** Structural transformations of anthocyanins in acidic to neutral solution. Proton loss from C5-OH omitted for simplicity.

Copigmentation is likely to occur and  
stabilize coloration in fruit products  
(juices, purees, jams, and syrups)

**Scheme 1. Prototypical Copigmentation Complexes<sup>a</sup>**

<sup>a</sup>(A) Noncovalent association of a prototypical anthocyanin pigment and a prototypical flavonoid copigment (intermolecular copigmentation). (B) Prototypical acylated derivatives allowing copigmentation between the anthocyanin moiety and two phenolic acids covalently linked (intramolecular copigmentation).



# BLACK RICE

healthy heart

anti-oxidants

fiber



nutrients

clear skin

detoxifier

gluten - free

THEINDIANSOTP

# Black rice µg/g



3474

482

0.8

63

325.2

# Brown Rice (µg/g)



21

0

12.3

0

0.08

# Red rice µg/g



191

4.3

22

0

79

# White Rice (µg/g)



24

0

8.2

0

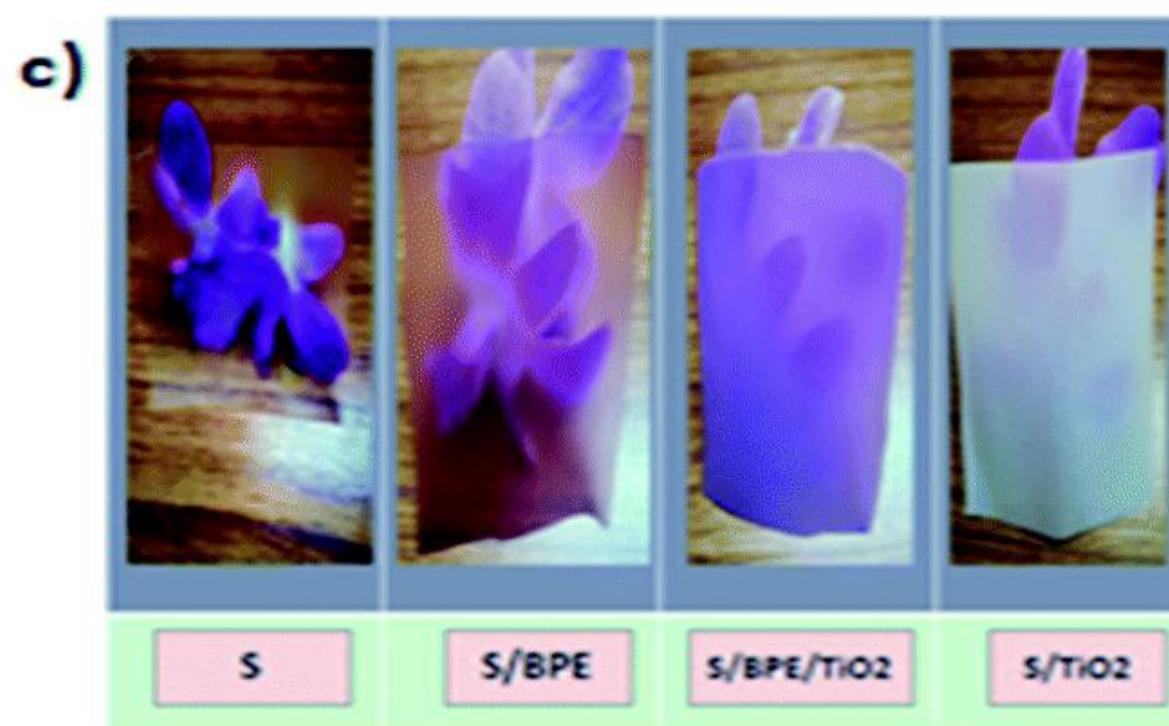
0.008

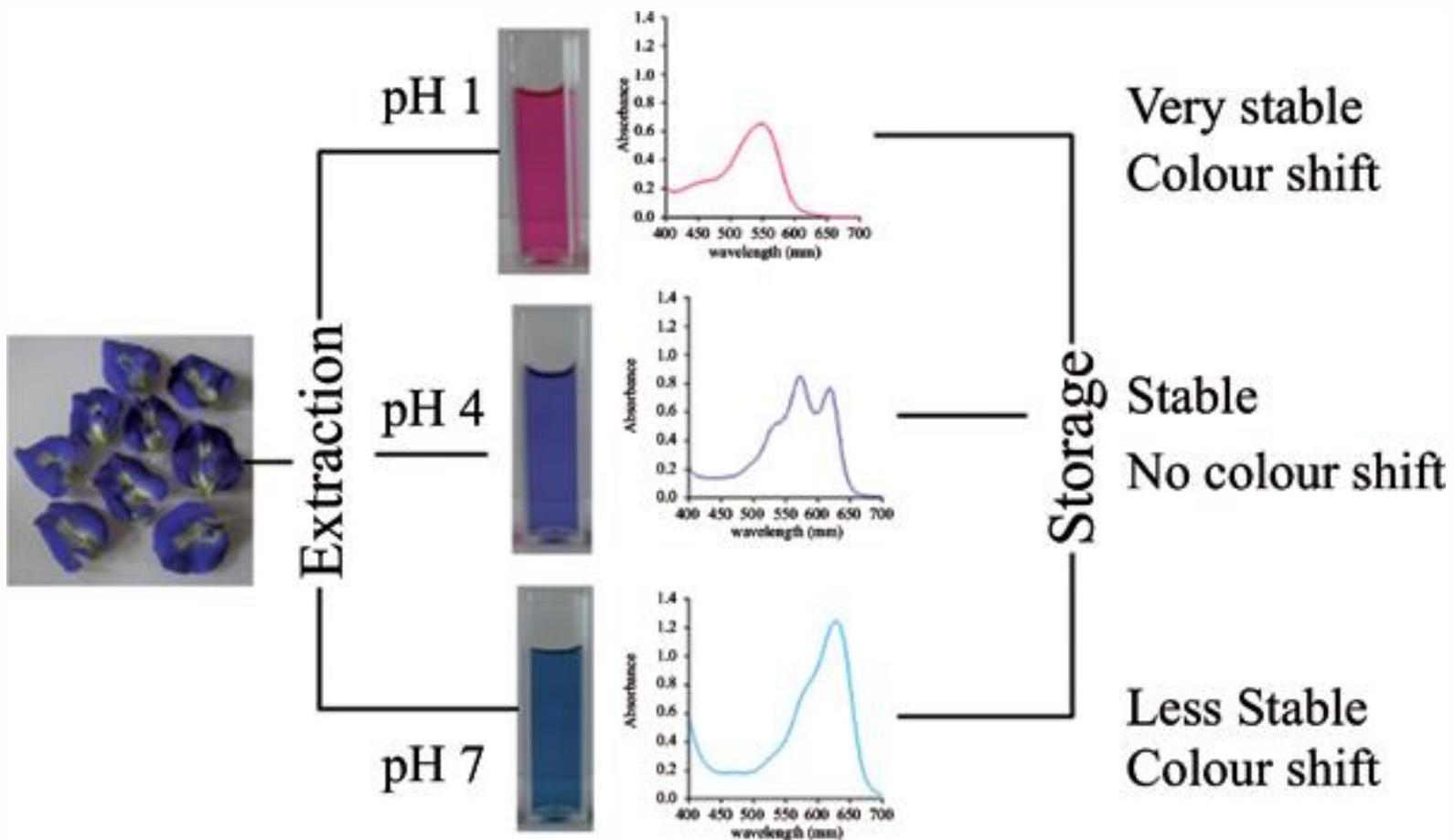
■ Anthocyanins ■ Flavone and Flavonols ■ Chlorogenic acids ■ γ-oryzanol ■ Flavan-3-ols

*Reprinted by permission from Pereira-Caro et al., 2013.*



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**Bluechai Flowers**

Organic blue dye, no chemicals



**Lemon/lime juice**

Slowly changes from blue to pink



=

**Magic!**

Create awesome cocktails & tea



# COLOR CHANGING EXPERIMENT



BUTTERFLY PEA FLOWER



## Marketing vs Branding

**Marketing** adalah seperti anda ingin mengajak orang untuk berkencan

**Branding** adalah alasan mereka mau menikahi anda.



## Conten

Konten adalah raja. Jika anda ingin konsumen memberhatikan anda. Maka buatlah konten yang menarik!





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COVID 19 : Waspada Boleh Panik Jangan

Dr. Apt. Kintoko, M.Sc. Herbalista | Kamis 26 Maret 2020

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Dr. Apt. Kintoko, M.Sc.

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Dr. Apr. Kintoko M.Sc Pakar Herbal

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# Naturonal

## Natural Organik Herbal



### Binagel

**Naturonal**  
Natural Organik Herbal

**SEMBUHKAN LUKA DAN JERAWAT**

Daun Binahong sudah banyak dikenal akan khasiatnya dalam mengobati luka terbuka. Hal ini dikarenakan Daun binahong mengandung senyawa flavonoid, saponin dan tannin. Kandungan saponin pada daun binahong dapat berperan sebagai antisепtik yang mencegah infeksi bakteri dan mempercepat pembentukan kolagen.

Sedangkan kandungan flavonoid pada daun binahong terbukti efektif dalam mengurangi peradangan luka. Kandungan tanin dalam daun binahong juga dapat membantu mengecilkan pori-pori kulit luka, menghentikan produksi nanah, dan menghentikan perdarahan ringan seperti luka menjadi lebih cepat menutup.



The product packaging for 'BINAGEL' is white with green accents. It features the 'Naturonal' logo and the product name 'BINAGEL' in large letters. Below it says 'ANDEKA CORDIFOLIA EXTRACT Gel untuk luka dan jerawat'.



# PENELITIAN & PENEMUAN OBAT BERBASIS EDRAS

Clifford J. Bailey<sup>1</sup>

Received: 14 March 2017 / Accepted: 10 May 2017  
© Springer-Verlag Berlin Heidelberg 2017

**Abstract** Metformin (dimethylbiguanide) has become the preferred first-line oral blood glucose-lowering agent to manage type 2 diabetes. Its history is linked to *Galega officinalis* (also known as goat's rue), a traditional herbal medicine in Europe, found to be rich in guanidine, which, in 1918, was shown to lower blood glucose. Guanidine derivatives, including metformin, were synthesised and some (not metformin) were used to treat diabetes in the 1920s and 1930s but were discontinued due to toxicity and the increased availability of insulin. Metformin was rediscovered in the search for antimalarial agents in the 1940s and, during clinical tests, proved useful to treat influenza when it sometimes lowered blood glucose. This property was pursued by the French physician Jean Sterne, who first reported the use of metformin to treat diabetes in 1957. However, metformin received limited attention as it was less potent than other glucose-lowering biguanides (phenformin and buformin), which were generally

Diabetes Study (UKPDS) in 1998, providing a new rationale to adopt metformin as initial therapy to manage hyperglycaemia in type 2 diabetes. Sixty years after its introduction in diabetes treatment, metformin has become the most prescribed glucose-lowering medicine worldwide with the potential for further therapeutic applications.

**Keywords** Biguanide · Dimethylbiguanide · *Galega officinalis* · Guanidine · History · Jean Sterne · Metformin · Review · Type 2 diabetes

## Abbreviations

FDA	Food and Drug Administration
IFG	Impaired fasting glucose
IGT	Impaired glucose tolerance
UKPDS	UK Prospective Diabetes Study



**Fig. 1** *Galega officinalis*. *G. officinalis*, the herbal lineage of metformin, is also known as goat's rue, French lilac, Italian fitch, Spanish sainfoin or professor weed. This plant was used as a traditional medicine in medieval Europe; it is now classed as a noxious weed in many states of the USA. Copyright Malcolm Storey, [www.bioimages.org.uk](http://www.bioimages.org.uk) (photograph taken in Berkshire, UK, 1 July 2000)

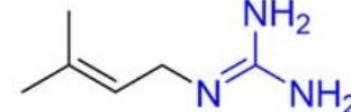
**Table 1** Landmark events in the history of metformin for the management of type 2 diabetes

Year	Landmark	Reference
1772	<i>Galega officinalis</i> used to treat symptoms of diabetes (Hill)	[3]
1844–1861	Identification and synthesis of guanidine (Strecker)	[6]
1878–1879	Synthesis of biguanide (Rathke)	[6]
1918	Guanidine lowers blood glucose in animals (Watanabe)	[7]
1922	Synthesis of dimethylbiguanide (Werner and Bell)	[17]
1926–1928	Galegine and synthalin lower blood glucose in animals and humans	[8–13]
1929	Metformin and other biguanides lower blood glucose in animals (Hesse and Taubmann; Slotta and Tschesche)	[18, 19]
1930s	Use of guanidine derivatives to treat diabetes initially grows then declines due to toxicity and also availability of insulin	[6]
1944–1947	Guanidine-based antimalarial agent, proguanil (Paludrine), lowers blood glucose in animals	[20, 21]
1949–1950	Dimethylbiguanide (flumamine) tested as potential antimalarial agent and used to treat influenza in Philippines. Also found to potentially lower blood glucose (Garcia)	[22]
1956	Jan Aron encourages Jean Sterne and Denise Duval to study guanidine-based glucose-lowering agents	[6]
1957	Jean Sterne publishes use of metformin to treat diabetes	[24]
1957–1959	Phenformin and buformin reported as treatments for diabetes	[32, 33, 37, 38]
1958	Metformin introduced to treat diabetes in the UK and other European countries	[6]
1958–1964	Sterne and colleagues (especially Azerad) further evaluate metformin in individuals with diabetes	[25–28, 36]
1968	First large prospective comparator trial of metformin (Edinburgh, UK; notably Duncan, Clarke and Campbell)	[42]
1977–1980	Phenformin and buformin withdrawn in most countries because of risk of lactic acidosis	[49]
1980–1994	Substantial new scientific and clinical evidence (e.g. Hermann, Noel, Wiernsperger and Bailey), strategic input by Lipha pharmaceuticals (e.g. Howlett, Meynaud, Daniel, Goodman) and discussions with the FDA (Reaven, DeFronzo, Bailey, Turner, Garber)	[6, 41, 44, 56–62]
1994–1995	Metformin approved (1994) and introduced (1995) in the USA	[6]
1995–1996	Key publications confirm favourable benefit:risk ratio of metformin in management of T2D	[63, 64]
1995–2000	Extensive diabetes education programme by Bristol-Myers Squibb (e.g. Cryer)	[6]
1998	UKPDS reports long-term metabolic effects of metformin and reduced cardiovascular risk with use	[69]
2000–2002	Extended-release formulation and fixed-dose combination drugs with metformin as the primary active ingredient are approved in the USA	[65, 67]
2002	Metformin reduced progression of 'prediabetes' (IGT and/or IFG) to T2D in the DPP	[82]
2005	The IDF recommends metformin as an initial glucose-lowering pharmacotherapy for T2D. Other guidelines adopt metformin as an initial glucose-lowering agent	[75]
2008	UKPDS follow-up: continued reduction of cardiovascular risk with use of metformin (Holman)	[74]
2011	Metformin included in WHO's essential medicines list	[79]

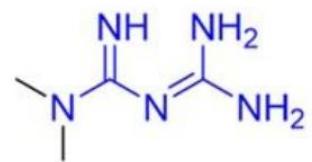
DPP, Diabetes Prevention Program; IDF, International Diabetes Federation; T2D, type 2 diabetes; WHO, World Health Organization



*Galega officinalis*  
(Fabaceae)



Galegine  
(Isolated in 1914)



Metformin  
(Synthesized in 1922)



**Fig. 5** Gallery of people who ‘made metformin happen’. Upper row: Jean Sterne, Denise Duval, Jan Aron, Elie Azerad, Leslie Duncan, Basil Clarke, Ian Campbell, Leif Sparre Hermann, Harry Howlett, Michel Noel. Lower row: Andre Meynaud, Nicolas Wiernsperger, Gerard Daniel, Anita Goodman, Gerald Reaven, Ralph DeFronzo, Clifford Bailey, Robert Turner, Alan Garber, Dennis Cryer, Rury Holman.

Missing: C. K. Watanabe, Emil Werner and James Bell, Erich Hesse and Gert Taubmann, Karl Slotta and Rudolf Tschesche, Eusebio Garcia. Apologies to the thousands of scientists, healthcare professionals and pharmaceutical personnel listed in reference [56] who have made important contributions to the journey of metformin but who have not been listed here. Copyright for each photograph lies with the respective holders

*ETHNOMEDICINE-DRIVEN  
REVERSAL APPROACH SYSTEM*

**HEMAT-CEPAT-AKURAT**



# Quantitative ethnomedicinal study of indigenous medicinal plants used for digestive disorders of Laspur Valley, Chitral, Northern Pakistan

Sher Wali, Hammad Ahmad Jan, Rainer W. Bussmann

## Research

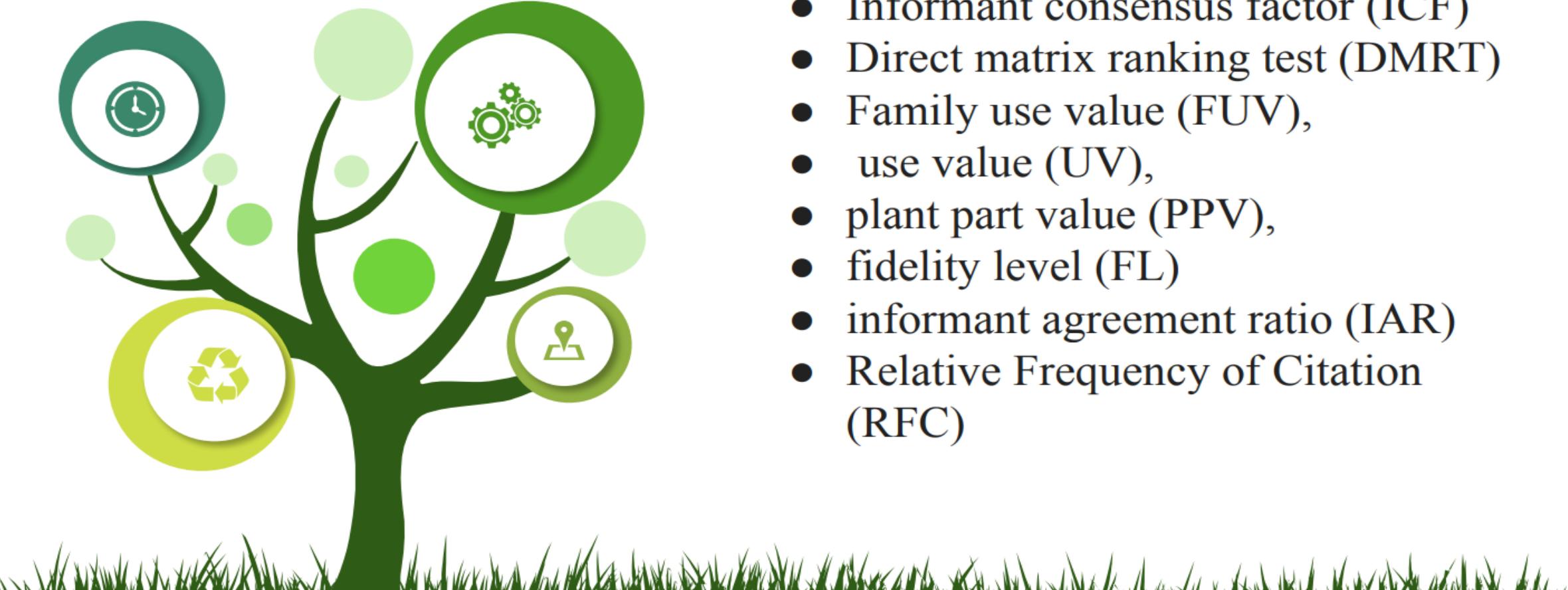
### Abstract

*Background:* The present study was the first one of its own kind conducted in the study area. Throughout the world digestive system diseases and their related

**Key words:** Quantitative ethnomedicinal; indigenous medicinal plants; digestive disorders; Laspur valley; Northern Pakistan

### Correspondence

# 9 PARAMETER ANALISIS KUANTITATIF ETNOMEDISIN



- Rasio kesepakatan informan (RKI)
- Informant consensus factor (ICF)
- Direct matrix ranking test (DMRT)
- Family use value (FUV),
- use value (UV),
- plant part value (PPV),
- fidelity level (FL)
- informant agreement ratio (IAR)
- Relative Frequency of Citation (RFC)

# Analisis Data

## 1. Use Value Index (UVI)

$$UVI = \frac{\Sigma U}{Ns}$$

Keterangan:

$\Sigma U$  = Jumlah kegunaan tumbuhan obat yang disebut oleh responden

$N_s$  = banyaknya responden yang mengetahui atau menggunakan tumbuhan obat  
(Attah *et al.*, 2016)

## 2. Fidelity Level (FL)

$$FL = (N_t/N) \times 100$$

Keterangan:

FL = Nilai *Fidelity Level*

$N_t$  = jumlah informan yang mengutip penggunaan tertentu dari tanaman

$N$  = jumlah total informan yang mengutip tanaman untuk penggunaan apapun

## 3. Informant Consensus Factor (ICF)

---

$$ICF = \frac{N_{uc} - N_t}{N_{uc} - 1}$$

---

Keterangan:

$N_{uc}$  = Jumlah kutipan penyakit tertentu

$N_t$  = Jumlah spesies yang digunakan untuk pengobatan penyakit tersebut  
(Pathy *et al.*, 2021)



Seminar Pendadaran Penelitian

**STUDI ETNOMEDISIN TANAMAN  
TERMAS (*Poikilospermum suaveolens*  
(Blume) Merr.) YANG DIMANFAATKAN  
OLEH MASYARAKAT DUSUN KLEPU DESA  
NGLEGI KAPANEWON PATUK  
KABUPATEN GUNUNGKIDUL**

Diajukan oleh  
Syifa Dhuha Yuliasari  
1800023010

Dosen Pembimbing : Dr. apt. Kintoko, M.Sc

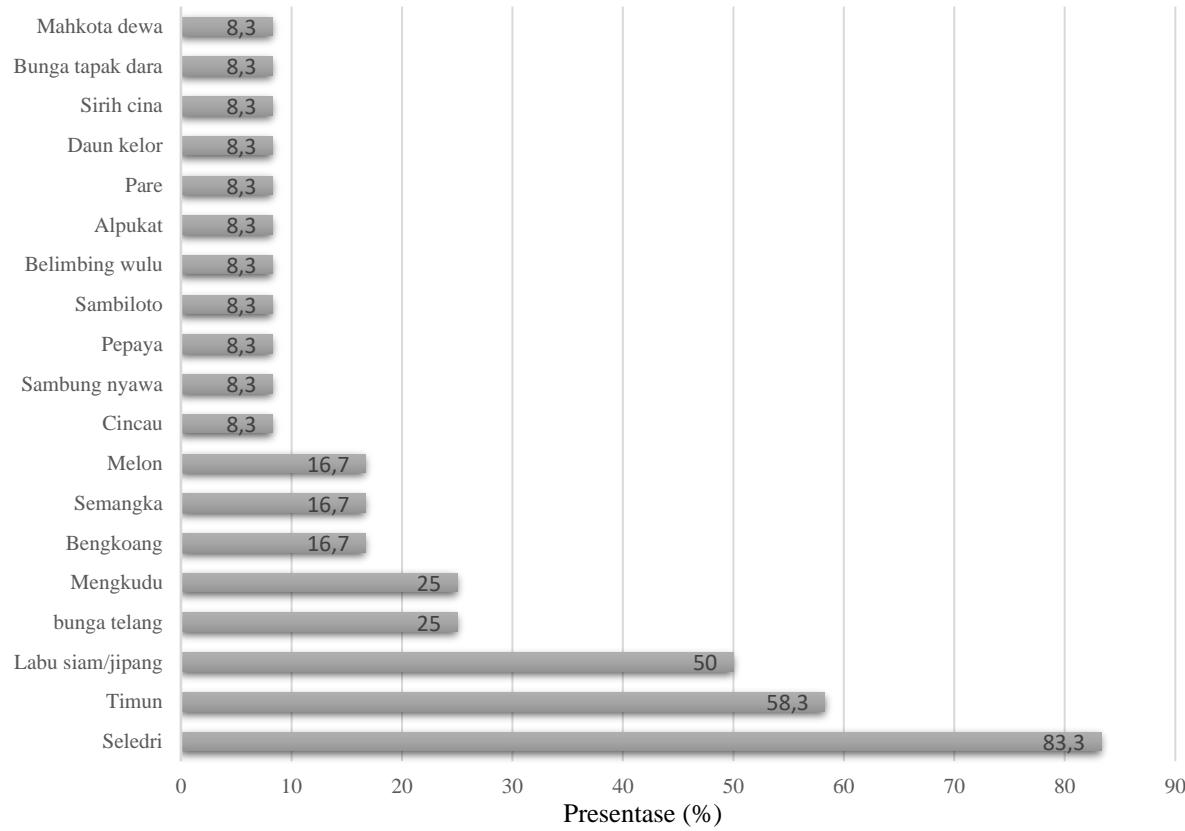
**FAKULTAS FARMASI  
UNIVERSITAS AHMAD DAHLAN  
2022**



# PARAMETER KUANTITATIF ETNOMEDISIN

## 1. *Relative Frequency of Citation (RFC)*

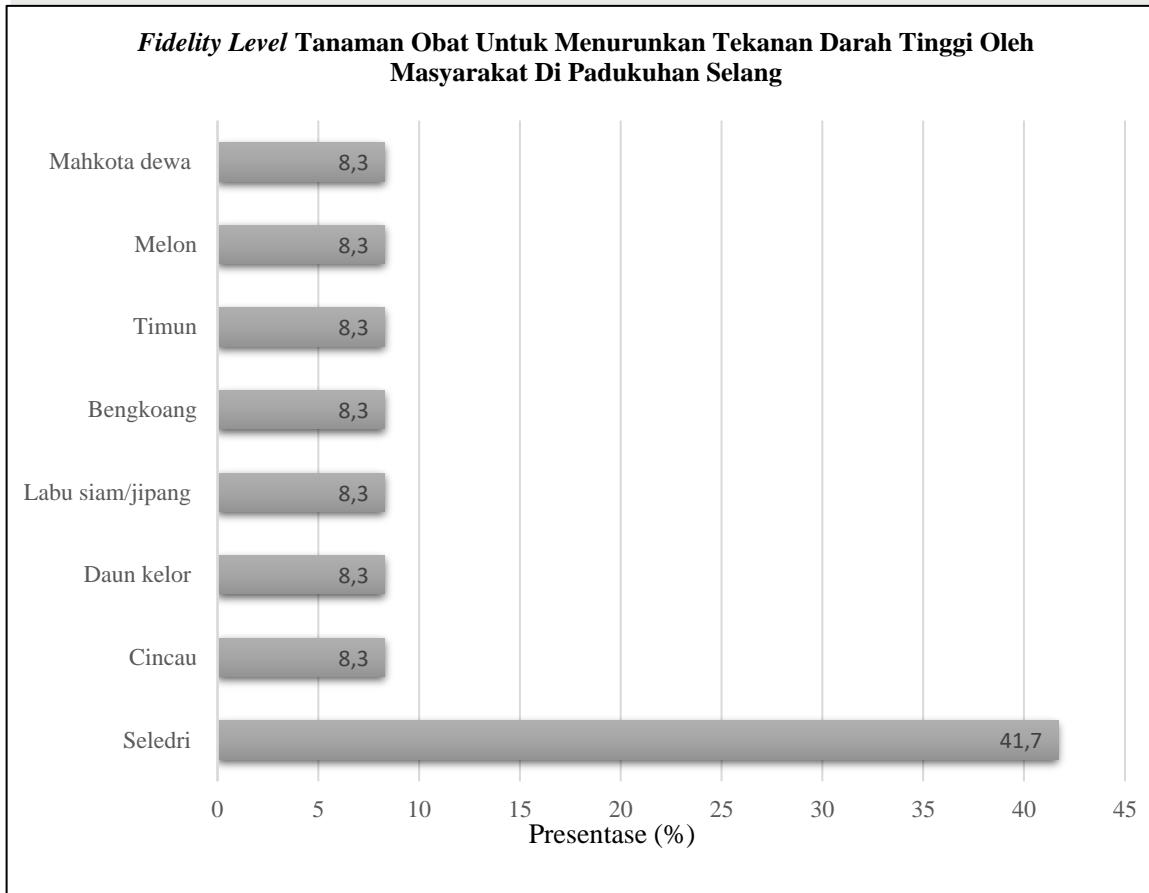
*Relative Frequency of Citation (RFC) Tanaman Obat Oleh Masyarakat Di Padukuhan Selang*



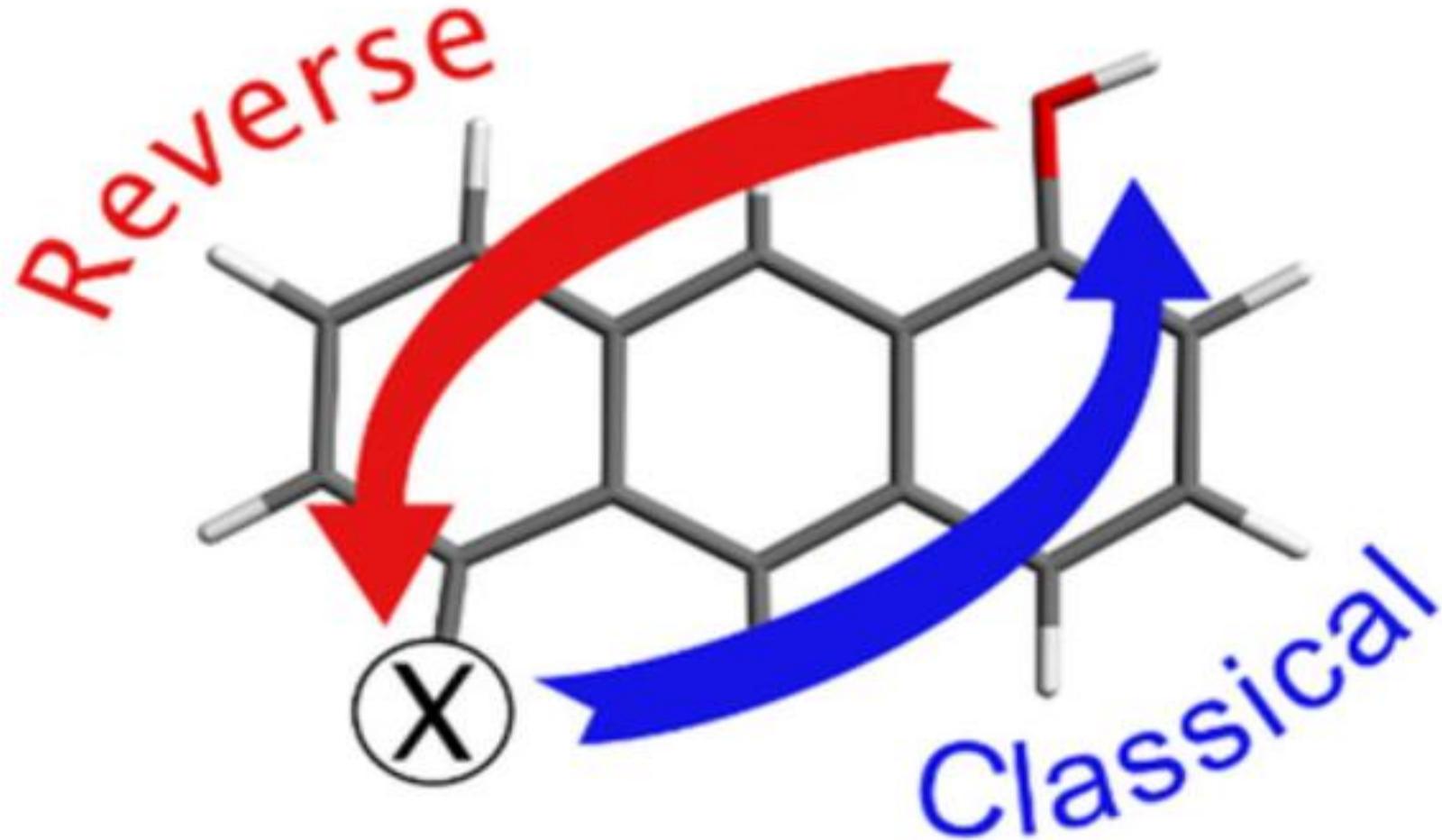
- **Nilai frekuensi sitasi tertinggi** yaitu seledri (83,3%), timun (58,3%) dan labu siam/jipang (50%)
- Tanaman seledri memiliki nilai frekuensi yang tinggi karena tanaman ini sangat umum digunakan dan sering dijumpai masyarakat dalam kehidupan sehari-hari baik untuk bahan obat atau bahan masakan, serta tanaman ini sangat mudah didapatkan dan diolah.

# PARAMETER KUANTITATIF ETNOMEDISIN

## 2. Fidelity Level (FL)



- *Fidelity level (FL)* adalah salah satu parameter kuantitatif etnomedisin yang digunakan untuk mengetahui jenis tanaman yang paling dipilih masyarakat untuk mengobati penyakit hipertensi.
- **Nilai FL tertinggi** yaitu tanaman seledri (41,7%)
- Alasan responden memilih tanaman seledri yaitu karena “*seledri mampu menurunkan tekanan darah tinggi lebih cepat dan tanamannya mudah diperoleh*” (Responden 2 menit ke 01.48); “*tanaman seledri memberikan efek nyaman pada tubuh setelah digunakan*” (Responden 7 menit ke 06.29).



## General Drug Development Process

### Classical Pharmacology

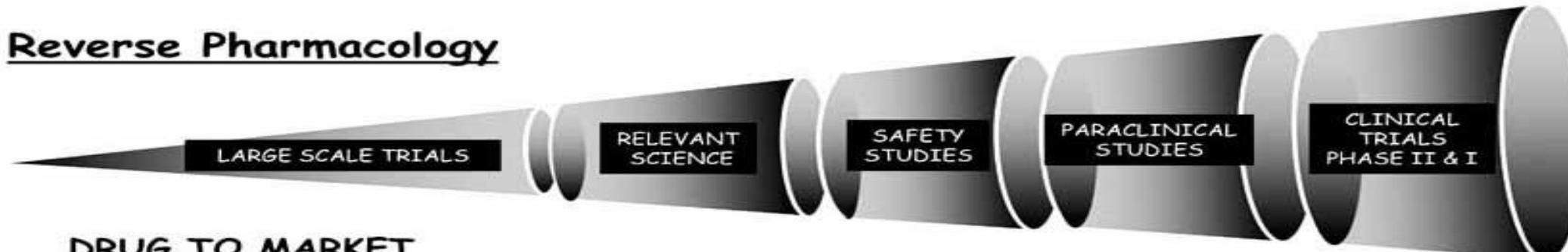
Expensive, time consuming, numerous bottlenecks



Economical, time sparing, least bottlenecks

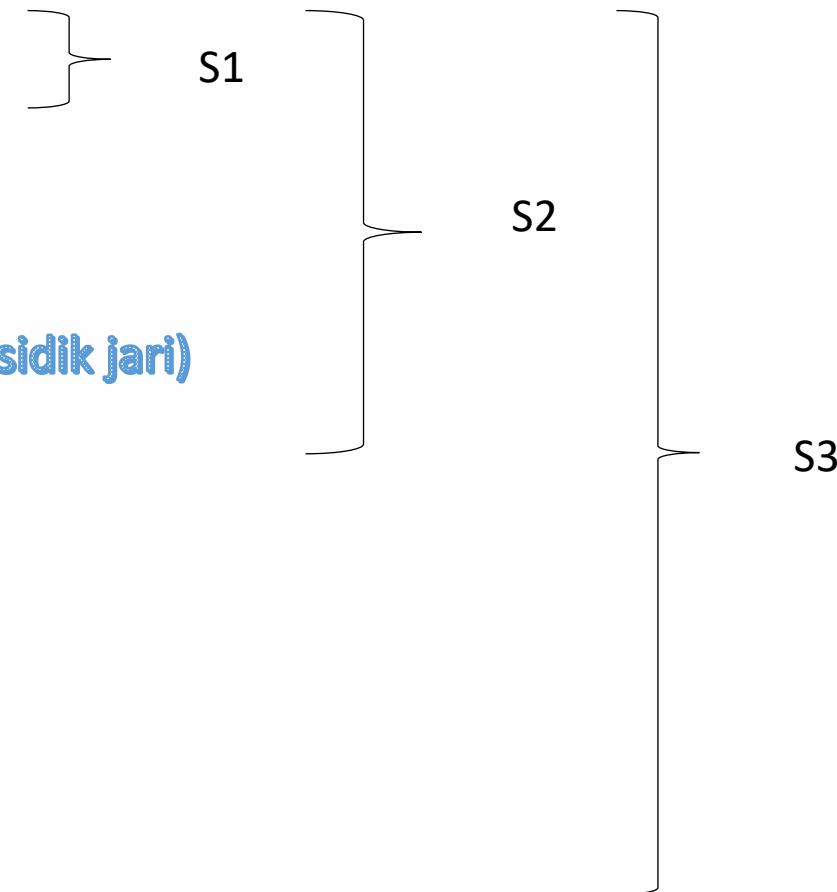
### Reverse Pharmacology

DRUG TO MARKET  
4 to 5 yrs



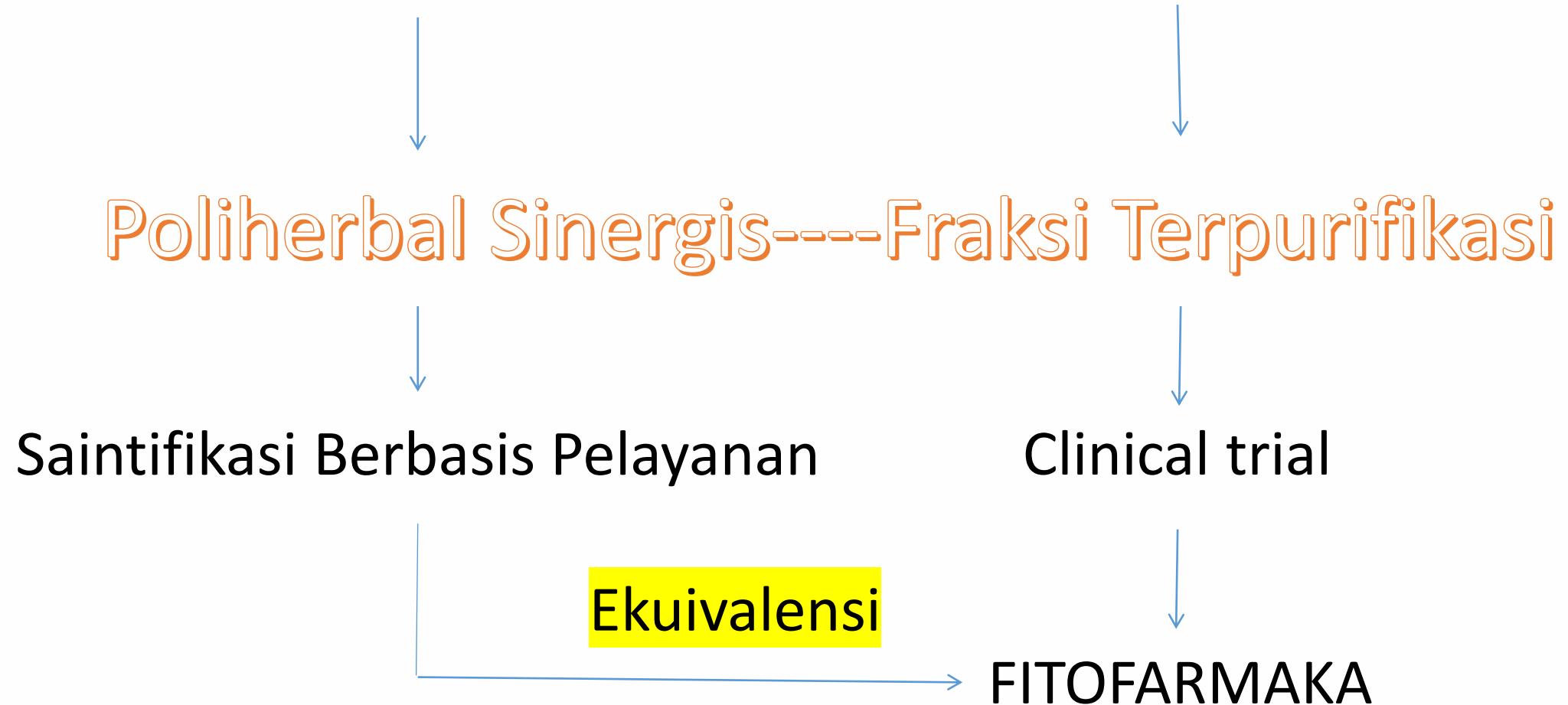
# TAHAPAN....

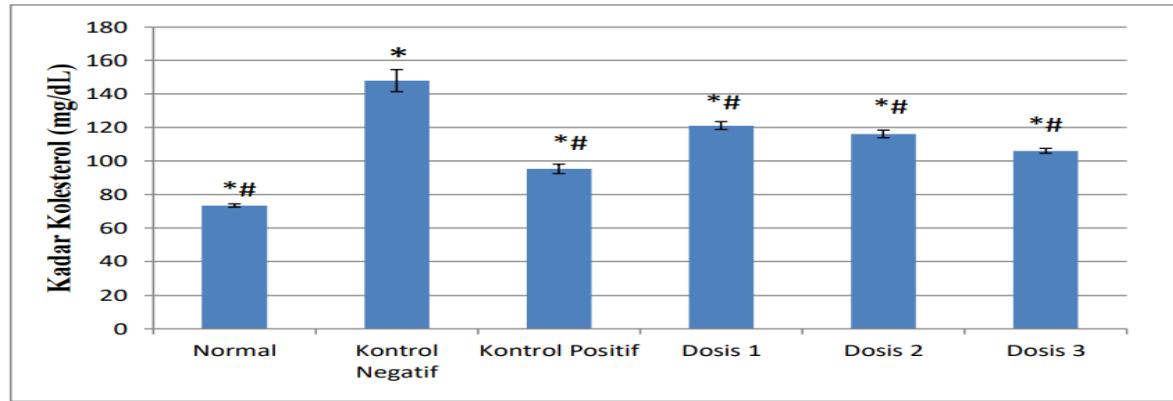
1. Riset etnomedisin berbasis market, manuskrip atau masyarakat
2. Analisis kuantitatif etnomedisin
3. In silico (docking molecule, networking pharmacology)
4. Analisis radar
5. Purwarupa (parameter standarisasi spesifik indeks rasa dan KLT sidik jari)
6. Uji toksikologi akut
7. Uji aktivitas farmakologi
8. Uji publik produk inti
9. Uji farmakodinamik
10. Uji observasi klinik
11. Ekuivalensi fitofarmaka



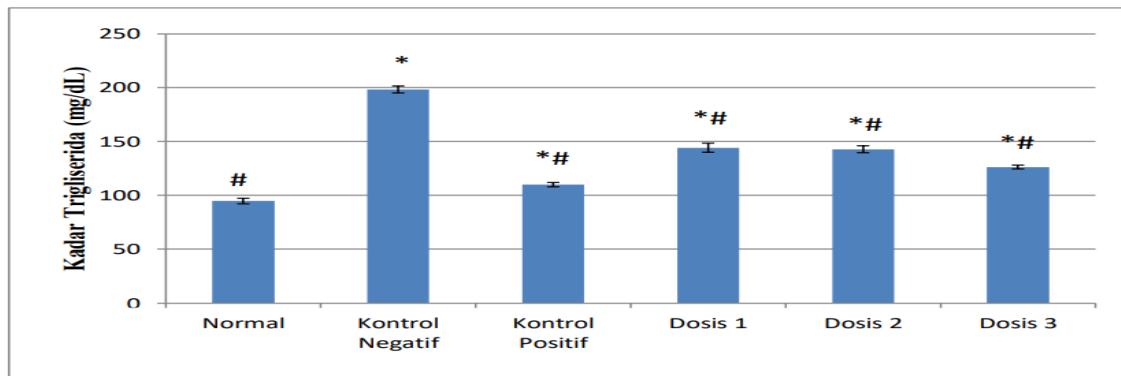
# HERBOLOGI DRK VS OBAT SINTETIK

# HERBOLOGI DRK VS OBAT MODERN ASLI INDONESIA



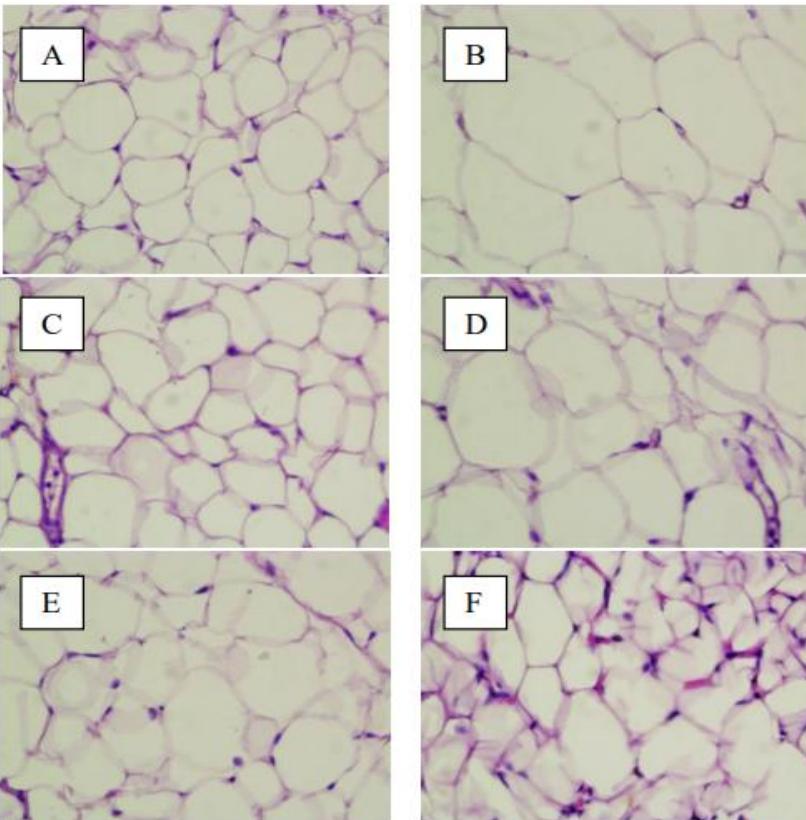


**Gambar 24.** Grafik Kadar kolesterol serum darah tikus pada hari ke-36. Keterangan : Kelompok normal : diet normal; Kelompok kontrol negatif : HFD; Kelompok kontrol positif: HFD + Orlistat(Xenical); kelompok Dosis 1 : HFD + trigonella reborn 1gr/grBB; Kelompok dosis 2: HFD + Trigonella reborn 2gr/grBB; Kelompok dosis 3; HFD + 4gr/grBB. \*Berbeda signifikan ( $p<0,05$ ) terhadap kelompok normal, #Berbeda Signifikan ( $p<0,05$ ) terhadap kelompok negatif.

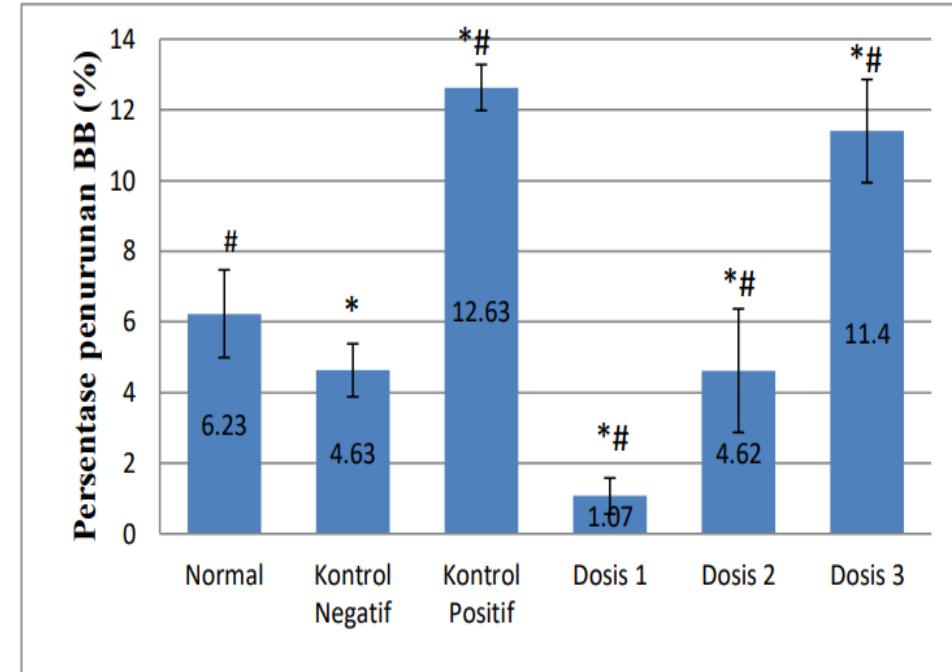


**Gambar 25.** Grafik kadar trigliserida serum darah tikus pada hari ke-36. Keterangan : Kelompok normal : diet normal; Kelompok kontrol negatif : HFD; Kelompok kontrol positif: HFD + Orlistat(Xenical); kelompok Dosis 1 : HFD + trigonella reborn 1gr/grBB; Kelompok dosis 2: HFD + Trigonella reborn 2gr/grBB; Kelompok dosis 3; HFD + 4gr/grBB. \*Berbeda signifikan ( $p<0,05$ ) terhadap kelompok normal, #Berbeda Signifikan ( $p<0,05$ ) terhadap kelompok negatif.

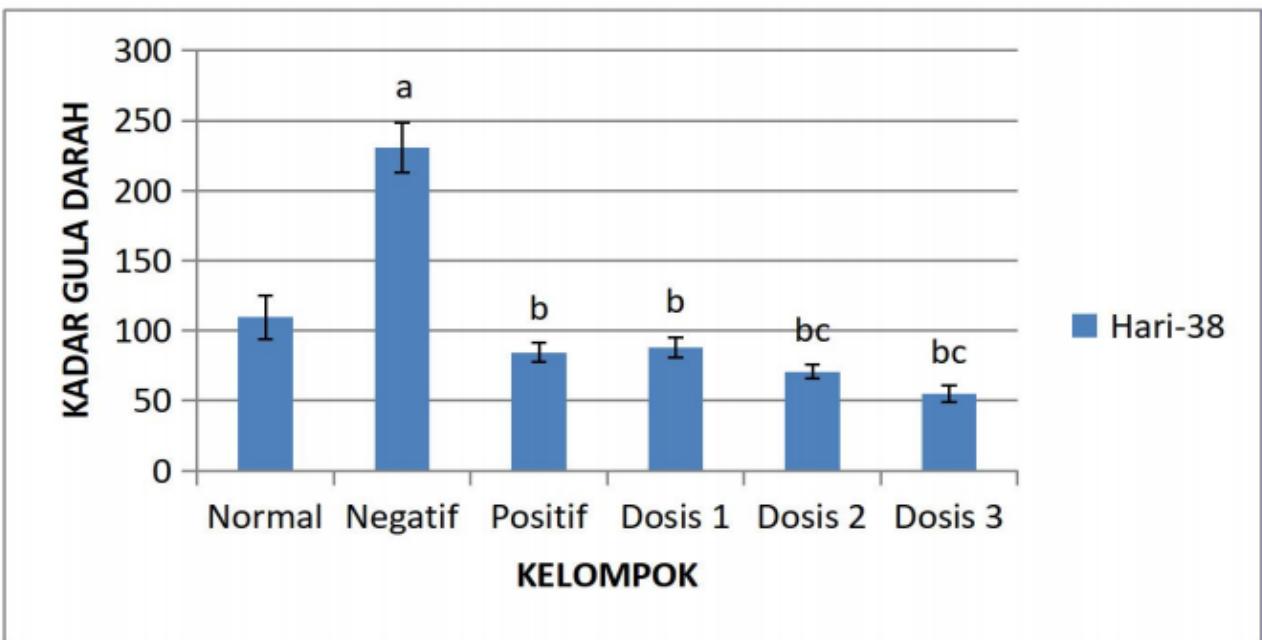




**Gambar 26.** Gambaran Histopatologi jaringan adiposa perbesaran 40X, pengecatan H&E. Keterangan : A. Kelompok Normal (Diet Normal); B. Kelompok kontrol negatif (HFD); C. Kelompok kontrol positif (HFD + Orlistat); D. kelompok dosis 1 (HFD + Trigonella Reborn 1gr/grBB); E. kelompok dosis 2 (HFD + Trigonella Reborn 2gr/grBB); F. kelompok dosis 3 (HFD + Trigonella Reborn 4gr/grBB).



**Gambar 23.** Persentase penurunan BB. Keterangan : Kelompok normal : diet normal; Kelompok kontrol negatif : HFD; Kelompok kontrol positif: HFD + Orlistat(Xenical); kelompok Dosis 1 : HFD + Trigonella reborn 1gr/grBB; Kelompok dosis 2: HFD + Trigonella reborn 2gr/grBB; Kelompok dosis 3; HFD + 4gr/grBB. \*Berbeda signifikan ( $p<0,05$ ) terhadap kelompok normal, #Berbeda Signifikan ( $p<0,05$ ) terhadap kelompok negatif.



Gambar 8. Grafik rata-rata KDG ± SD H38 (hari ke-14 setelah perlakuan). Keterangan: Kelompok normal (tanpa perlakuan), negatif (aquadest), positif (glibenklamid dengan dosis 0,09 mg/200 gBB), dosis 1 (“Trigonella” dosis 18 mg/200 gBB tikus), dosis 2 (“Trigonella” dosis 36 mg/200 gBB tikus), dosis 3 (“Trigonella” dosis 72 mg/200 gBB tikus). <sup>a</sup>sig. <0,05 terdapat perbedaan secara signifikan antar kelompok dibandingkan kelompok normal. <sup>b</sup>sig. <0,05 terdapat perbedaan secara signifikan antar kelompok dibandingkan kelompok negatif. <sup>c</sup>sig. <0,05 terdapat perbedaan secara signifikan antar kelompok dibandingkan kelompok positif.



Tabel 8. rata-rata persentase penurunan KGD

KELOMPOK	PENURUNAN (%)
Normal	-
Negatif	17,204
Positif	70,082
Dosis 1	65,807
Dosis 2	71,736
Dosis 3	79,726



Keterangan : Kelompok normal (tanpa perlakuan), negatif (aquadest), positif (glibenklamid dengan dosis 0,09 mg/200 gBB), dosis 1 (“Trigonella” dosis 18 mg/200 gBB tikus), dosis 2 (“Trigonella” dosis 36 mg/200 gBB tikus), dosis 3 (“Trigonella” dosis 54 mg/200 gBB tikus).

**CV GRIYA AN NUR**

Kampung Raden RT 01 RW 02 No.55  
Kelurahan Jatiraden, Kecamatan  
Jatisampurna

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**Pabrik: CV. GRIYA AN NUR**

Kampung Raden RT 01 RW 02 Gedung B,  
No. 88 Kelurahan Jatiraden, Kecamatan  
Jatisampurna

**KINOTENS**

Dus, Blister @ 2, 4,  
8, 10, 12 kapsul  
Obat Tradisional

**Pabrik: CV. GRIYA AN NUR**

Kampung Raden RT 01 RW 02 Gedung B,  
No. 88 Kelurahan Jatiraden, Kecamatan  
Jatisampurna

**KINORAT**

Dus, Blister @ 2, 4,  
8, 10, 12 kapsul  
Obat Tradisional

**Pabrik: CV. GRIYA AN NUR**

Kampung Raden RT 01 RW 02 Gedung B,  
No. 88 Kelurahan Jatiraden, Kecamatan  
Jatisampurna

**KINOTEROL**

Dus, Blister @ 2, 4,  
8, 10, 12 kapsul  
Obat Tradisional

**Pabrik: CV. GRIYA AN NUR**

Kampung Raden RT 01 RW 02 Gedung B,  
No. 88 Kelurahan Jatiraden, Kecamatan  
Jatisampurna

**KINODIAB**

Dus, Blister @ 2, 4,  
8, 10, 12 kapsul  
Obat Tradisional

**Pabrik: CV. GRIYA AN NUR**

Kampung Raden RT 01 RW 02 Gedung B,  
No. 88 Kelurahan Jatiraden, Kecamatan  
Jatisampurna

**KINOMAG**

Dus, Blister @ 2, 4,  
8, 10, 12 kapsul  
Obat Tradisional





KEMENTERIAN KESEHATAN RI DIREKTORAT JENDERAL PELAYANAN KESEHATAN RSUP DR. SARDJI YOGYAKARTA TELP. (0274) 587333 pswt : 1597, 1519, 1472 Fax : (0274) 547782					
Status : Rawat Jalan / Rawat Inap Penjaminan : Umum / JKN / JAMKESOS / JAMKESDA / Ikatan Kerjasama Poli / bangsal : .... Diagnosa : .... Tgl Resep : ..... Diagnosa : ..... Dokter : ..... Alergi : ..... KE					
<p>R.I</p> <p>- <i>Circumflex xanthoxylo phisoma</i>  <i>(Tuna laoshi)</i> extract  <i>250 mg / da in caps</i></p> <p>- <i>Cnidella antistichinalis</i>  <i>(Begajay)</i>  <i>250 mg / da in caps</i>  <i>/ / - / /</i></p>					
Identitas Pasien : <i>E.D. Santi</i> RM : <i>08.43.9333</i> L/P Tanggal lahir : <i>20.02.1980</i> BB : <i>55,6 kg (pasien anak)</i>					
DIISI OLEH FARMASI					
I. TELAH RESEP			II. TELAH		
No	Keterangan	Ya	No	Keterangan	Ya
I	Administrasi		4	Tepat Waktu	
II	Farmasetis		5	Duplikasi	
III	Klinis		6	Alergi	
1	Tepat Obat		7	Interaksi Obat	
2	Tepat Dosis		8	Berat Badan	
3	Tepat Rute		9	Kontra Indikasi	
Yang Menerima			Tanda Tangan telah l.		
Y					

# PELATIHAN TIBBUN NABAWI





**TO CURE IS SOMETIMES  
TO RELIEVE IS OFTEN  
TO COMFORT IS ALWAYS**

Untitled. Benyamin Lampson.  
Academic Medicine 2007;82:1112-3



*The White Egret Orchid*

**Terima Kasih**