



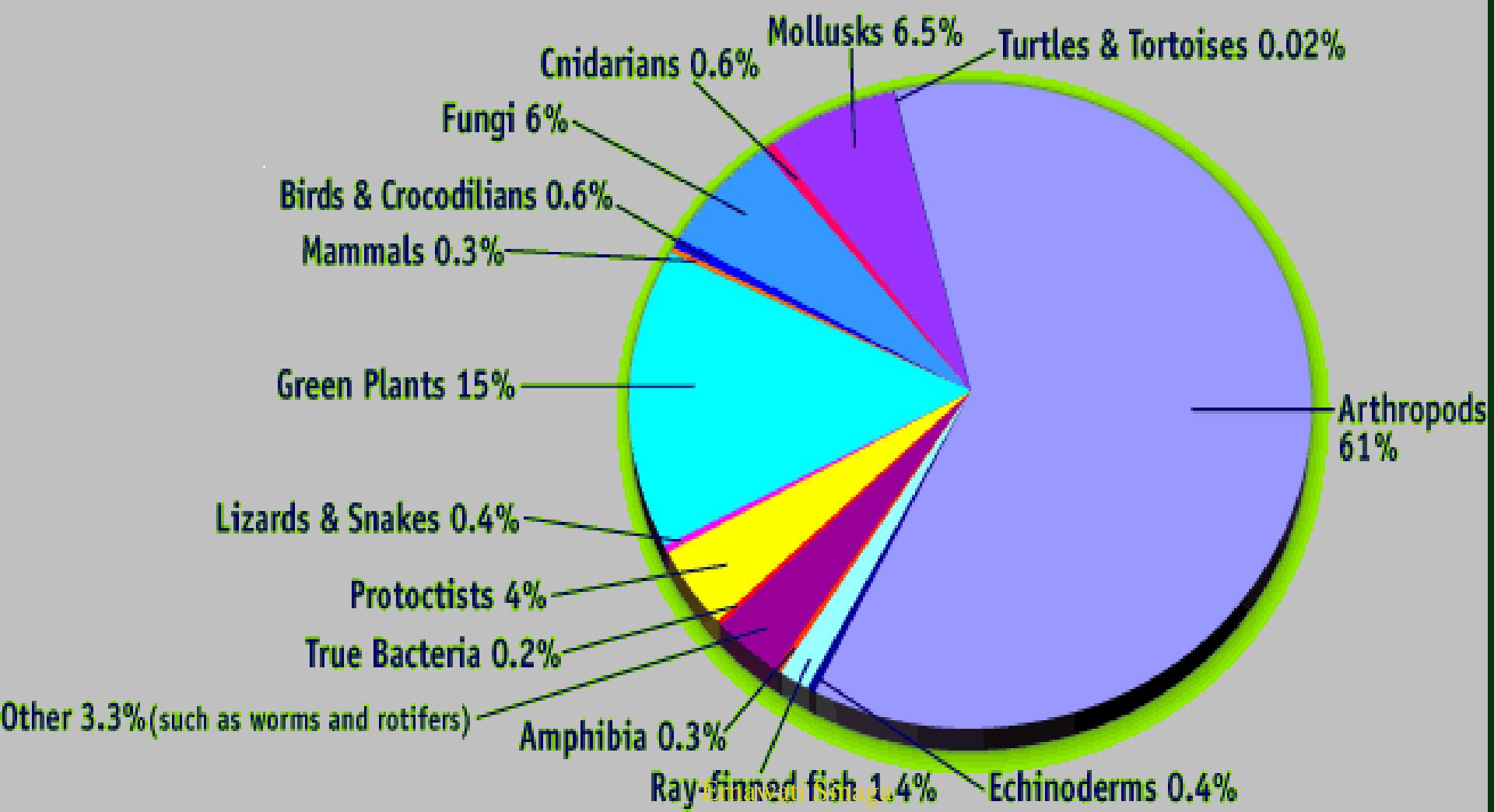
Tumbuhan Sebagai Sumber Bahan Baku Obat

Ernawati Sinaga

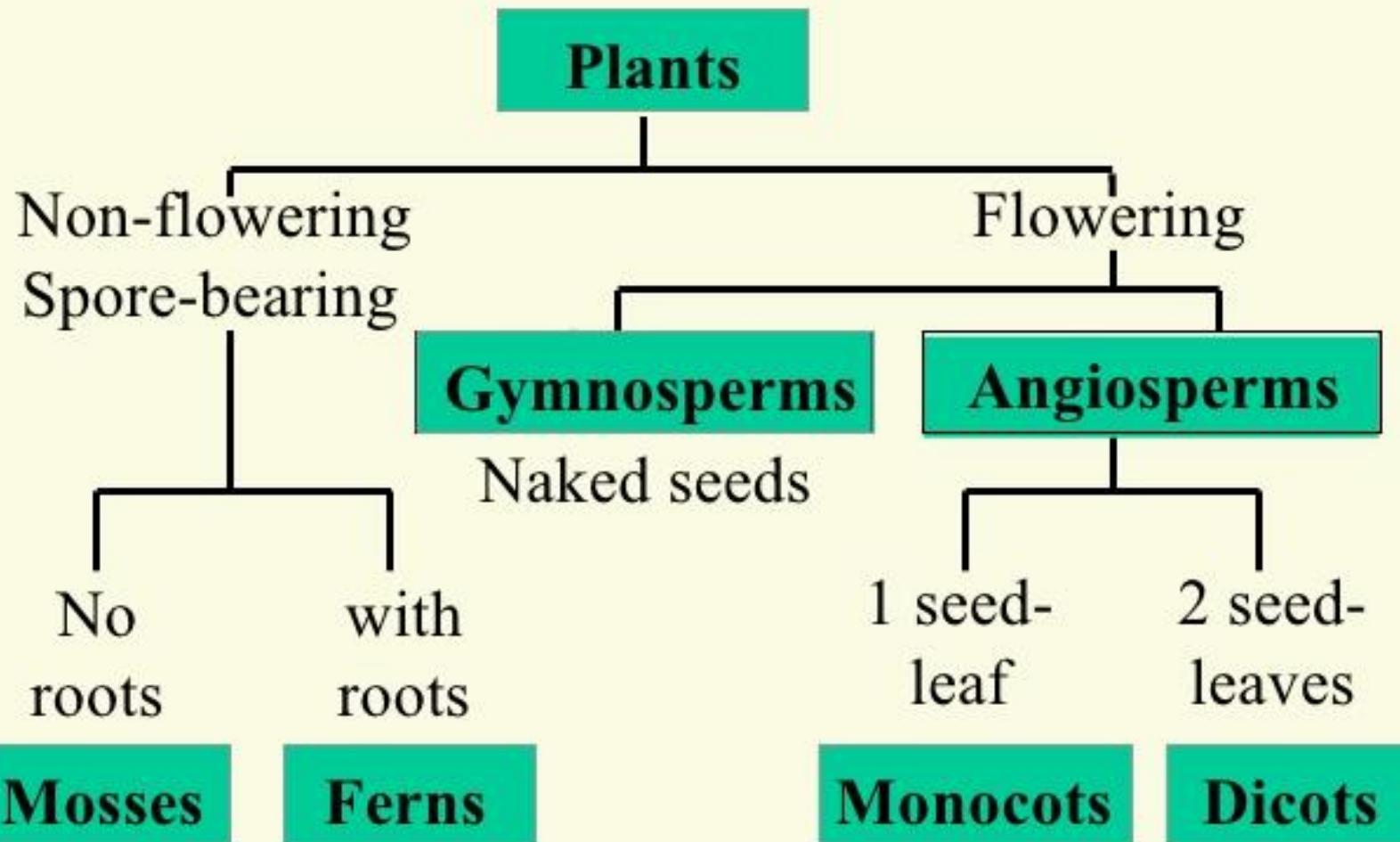
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Plant Classification



Kingdom	<i>Plantae</i> - Plants
Subkingdom	<i>Tracheobionta</i> - Vascular plants
Superdivision	<i>Spermatophyta</i> - Seed plants
Division	<i>Magnoliophyta</i> - Flowering plants
Class	<i>Magnoliopsida</i> - Dicotyledons
Subclass	<i>Asteridae</i>
Order	<i>Solanales</i>
Family	<i>Solanaceae</i> - Potato family
Genus	<i>Solanum</i> L. - nightshade
Species	<i>Solanum lycopersicum</i> L. - garden tomato



Indonesia: Mega Biodiversity

- 10% of world's flowering plant species
- 12% of world's mammal species
- 16% of world's reptile and amphibian species
- 17% of world's bird species
- 25% of world's fish species
- 15% of world's insect species

Indonesia: Mega Biodiversity

(Damayanti, 2008)

Category	Number of Species	Endemic
Plants	38,000	55%
Mammals	515	39%
Reptiles	511	29%
Amphibians	270	37%
Birds	1531	26%
Freshwater fish	1400	
Invertebrates	2827	



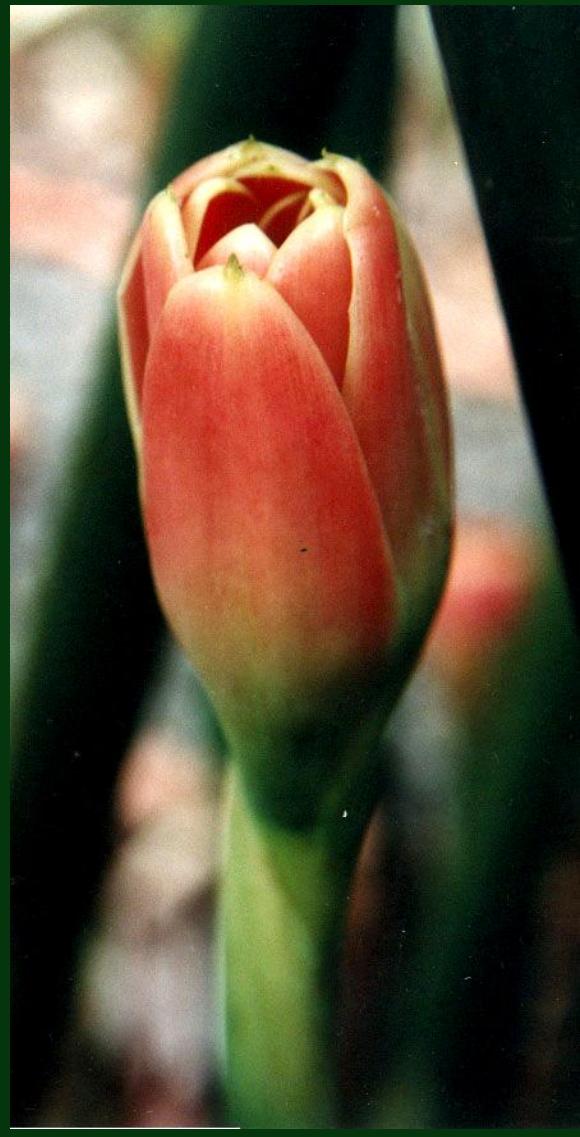
Indonesia: Second Mega Biodiversity

- Lebih 30.000 spesies Angiospermae (tumbuhan berbunga)
- >2000 spesies telah dikenal sebagai tumbuhan obat (Zuhud et al, 2009)
- Kurang dari 300 jenis yang digunakan oleh industri obat tradisional (BPOM)
- ± 100 dibudidaya (BPOM)
- < 10% yang sudah memiliki data ilmiah cukup lengkap



Beberapa Famili Tumbuhan Obat-1

1. Zingiberaceae (jahe-jahean)
2. Euphorbiaceae (jarak-jarkan)
3. Asteraceae/Compositae
4. Acanthaceae
5. Labiatae/Lamiaceae
6. Solanaceae
7. Malvaceae



Beberapa Famili Tumbuhan Obat-2

8. Myrtaceae (jambu-jambuan)
9. Leguminosae (kacang-kacangan)
10. Amaranthaceae (bayam-bayaman)
11. Piperaceae (sirih-sirihan)
12. Apocynaceae
13. Anacardiaceae
14. Rutaceae



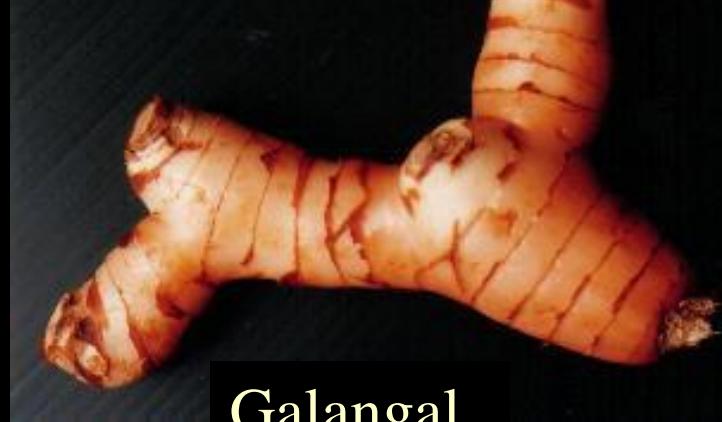
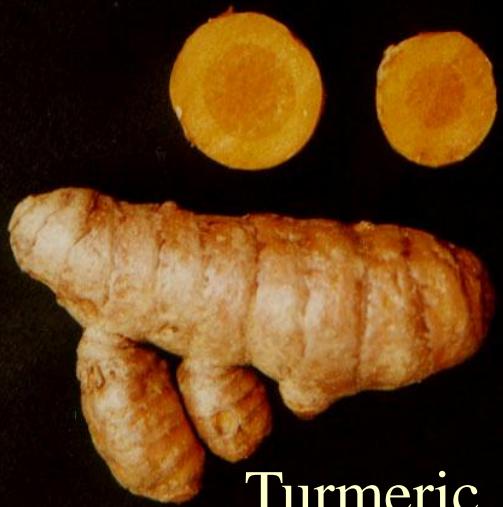
Beberapa Famili Tumbuhan Obat-3

- | | |
|----------------------|--------------------|
| 15. Araliaceae | 25. Oleaceae |
| 16. Asclepiadaceae | 26. Pandanaceae |
| 17. Boraginaceae | 27. Portulacaceae |
| 18. Crassulaceae | 28. Plumbaginaceae |
| 19. Cruciferae | 29. Plantaginaceae |
| 20. Cucurbitaceae | 30. Rutaceae |
| 21. Graminae/Poaceae | 31. Simarubaceae |
| 22. Moraceae | 32. Theaceae |
| 23. Meliaceae | 33. Umbelliferae |
| 24. Melastomaceae | 34. Verbenaceae |

Keanekaragaman tTumbuhan Obat di Indonesia (2000 species, Zuhud et al, 2009)

Families	No.Sp.	Families	No.Sp.	Families	No.Sp.
Fabaceae	110	Asteraceae	40	Acanthaceae	22
Euphorbiaceae	94	Apocynaceae	39	Sterculiaceae	21
Lauraceae	77	Cucurbitaceae	34	Myristicaceae	21
Rubiaceae	72	Piperaceae	30	Rhizophoraceae	20
Poaceae	55	Menispermaceae	30	Others (181)	1055
Zingiberaceae	49	Melastomaceae	26		
Moraceae	46	Arecaceae	25		
Myrtaceae	45	Verbenaceae	23		
Annonaceae	43	Rutaceae	23		

Zingiberaceae → Empon-empon



Empon-empon

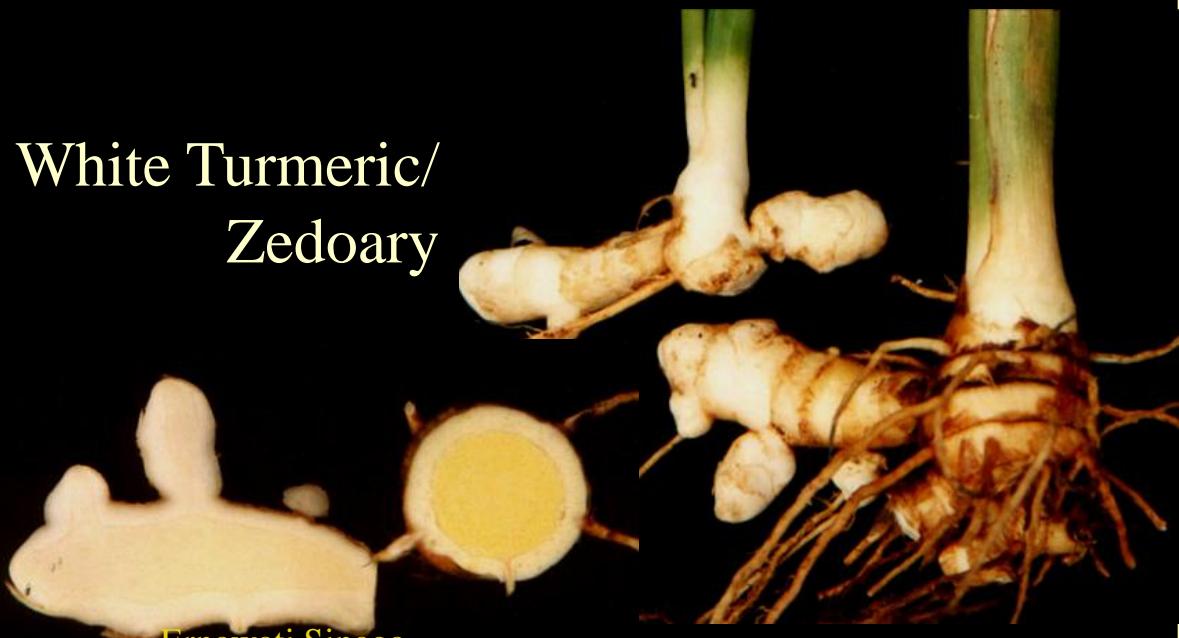


Temu putri



Finger root, Chinese key

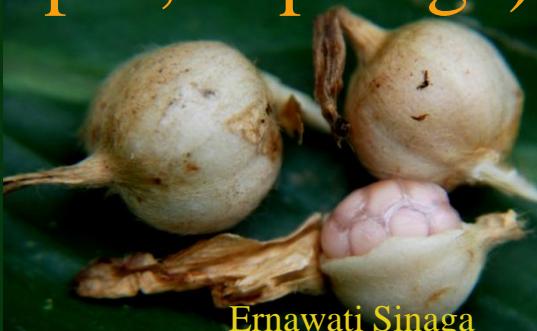
White Turmeric/
Zedoary



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Zingiberaceae: *Alpinia* & *Amomum*

1. *Alpinia galanga* (galangal; lengkuas)
2. *Alpinia malaccensis* (bunglai lanang)
3. *Alpinia mutica* (cengkenam)
4. *Amomum aculeatum* (parahulu)
5. *Amomum cardamomum*
(cardamom; kapol; kapulaga)



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Zingiberaceae: *Curcuma* & *Costus*

6. *Curcuma domestica* (turmeric)
7. *Curcuma aeruginosa* (black turmeric)
8. *Curcuma xanthorrhiza* (Greater turmeric)
9. *Curcuma zedoaria* (zedoary)
10. *Curcuma heyneana* (temu giring)
11. *Curcuma mangga* (temu mangga)
12. *Costus speciosus* (pacing)



Zingiberaceae: *Hedichium*, *Kaempferia* & *Nicolaia*

13. *Hedichium flavescens* (gandasuli)



14. *Kaempferia angustifolia* (kunci pepet)

15. *Kaempferia galanga* (kencur)

16. *Kaempferia pandurata* (temu kunci)

17. *Kaempferia rotunda* (temu rapet)

18. *Nicolaia heyneana* (kecombrang)



Zingiberaceae: *Zingiber*

19. *Zingiber officinale* (ginger)
20. *Zingiber cassumunar* (bngle)
21. *Zingiber ottensii* (bngle hantu)
22. *Zingiber aromaticum* (lempuyang wangi)
23. *Zingiber littorale* (lempuyang pahit)
24. *Zingiber amaricans* (lempuyang emprit)
25. *Zingiber zerumbet* (lempuyang gajah)



Ginger (*Zingiber officinale*)



- Jahe, Halia, La, Hai
- Rhizomes: cold, cough, stomach bloating, headache, nausea, diarrhea, rheumatism, muscle stiffness, cancer

Turmeric (*Curcuma domestica*)

- Kunyit, Cahang, Henda
- Rhizomes: diarrhea, stomach bloating, dyspepsia (digestive acidity), hepatitis, jaundice, osteoarthritis , candidiasis, dismenorrhea, menstrual pain,
as lactagogue



Greater Turmeric (*Curcuma xanthorrhiza*)



- Temulawak, Koneng Gede
- Rhizomes: hepatitis, jaundice, stomach bloating, dyspepsia dismenorrhea, menstrual pain, fatigue, thrush, as tonic and lactagogue.



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