

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES



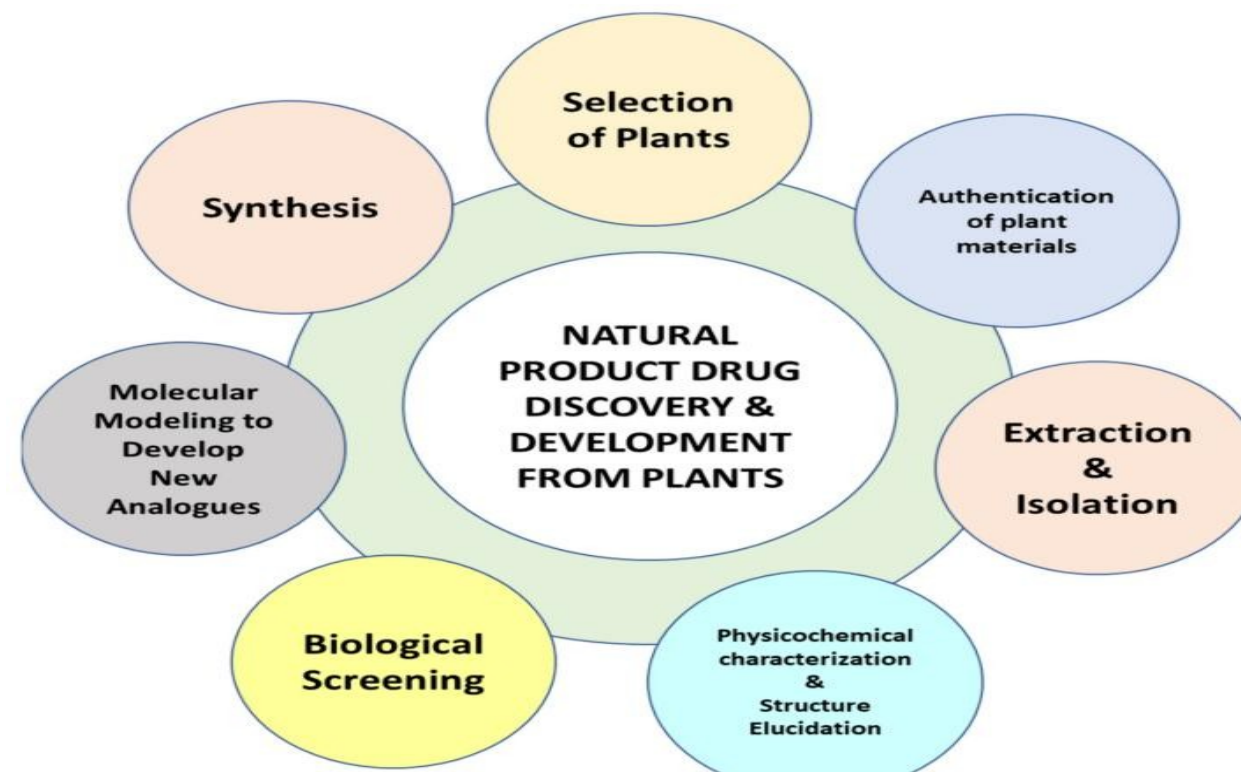
Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

COURSE NAME : COMPUTER AIDED DRUG DESIGN(BP 807 ET)

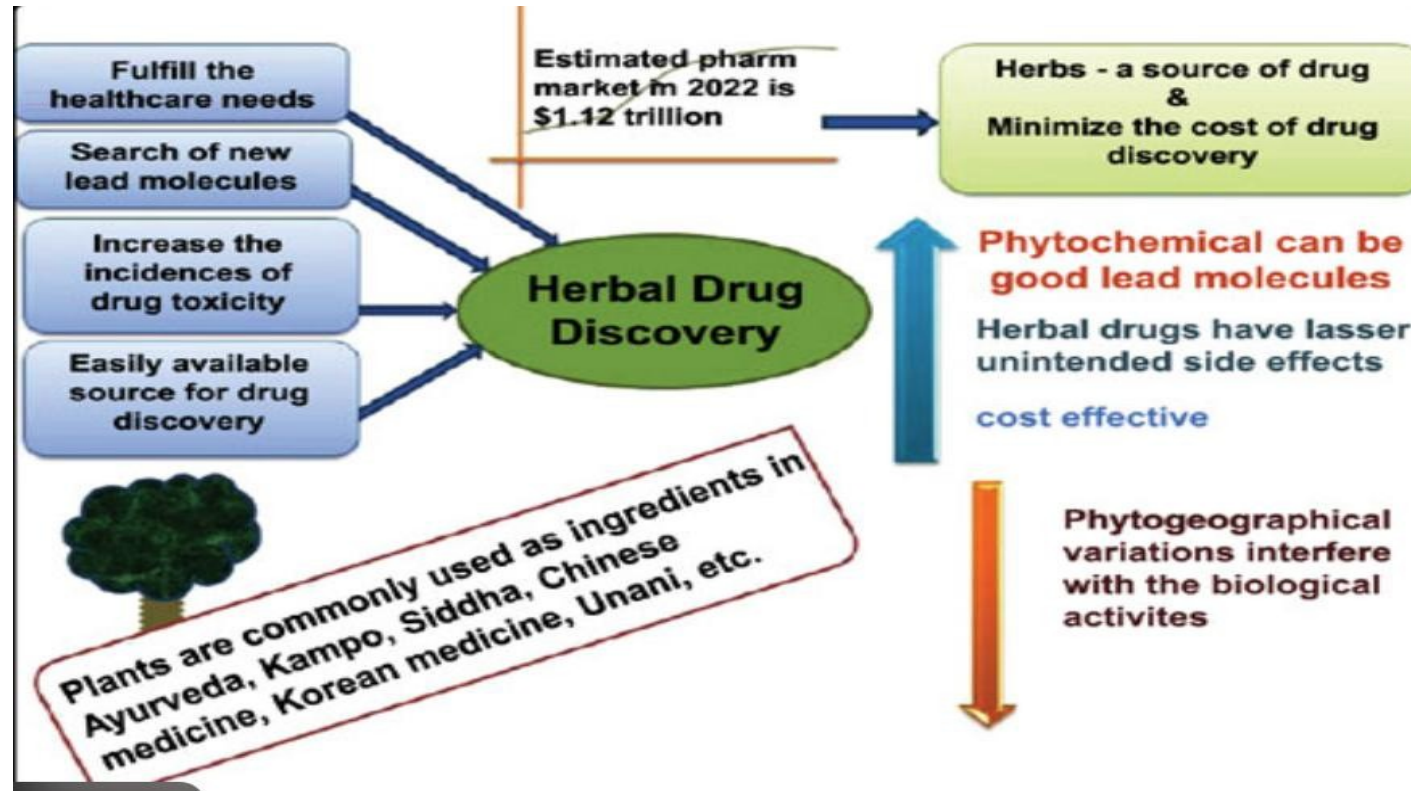
VIII SEM / IV YEAR

**TOPIC 2: RATIONAL APPROACHES TO LEAD DISCOVERY BASED
ON TRADITIONAL MEDICINE**

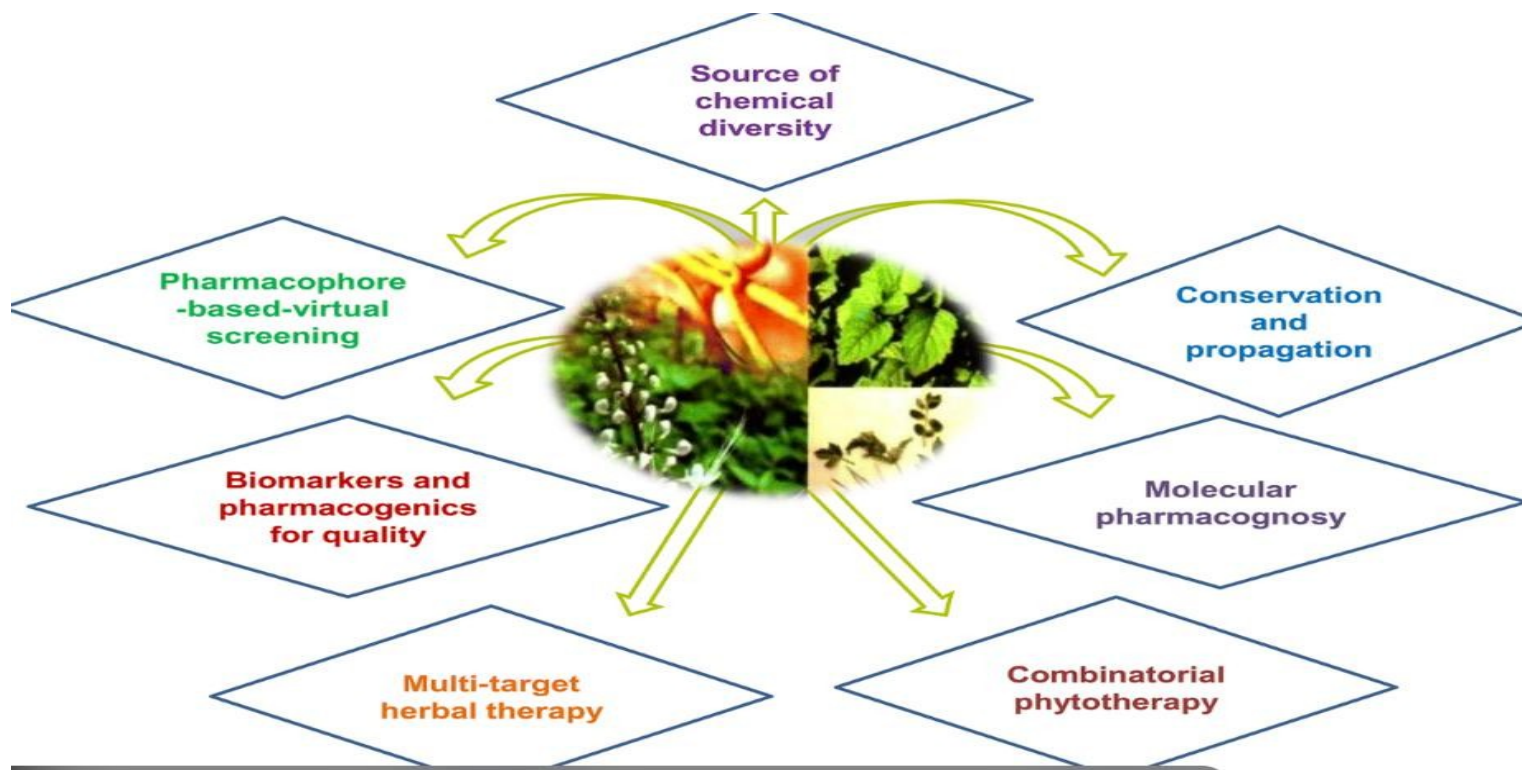
MINDMAP



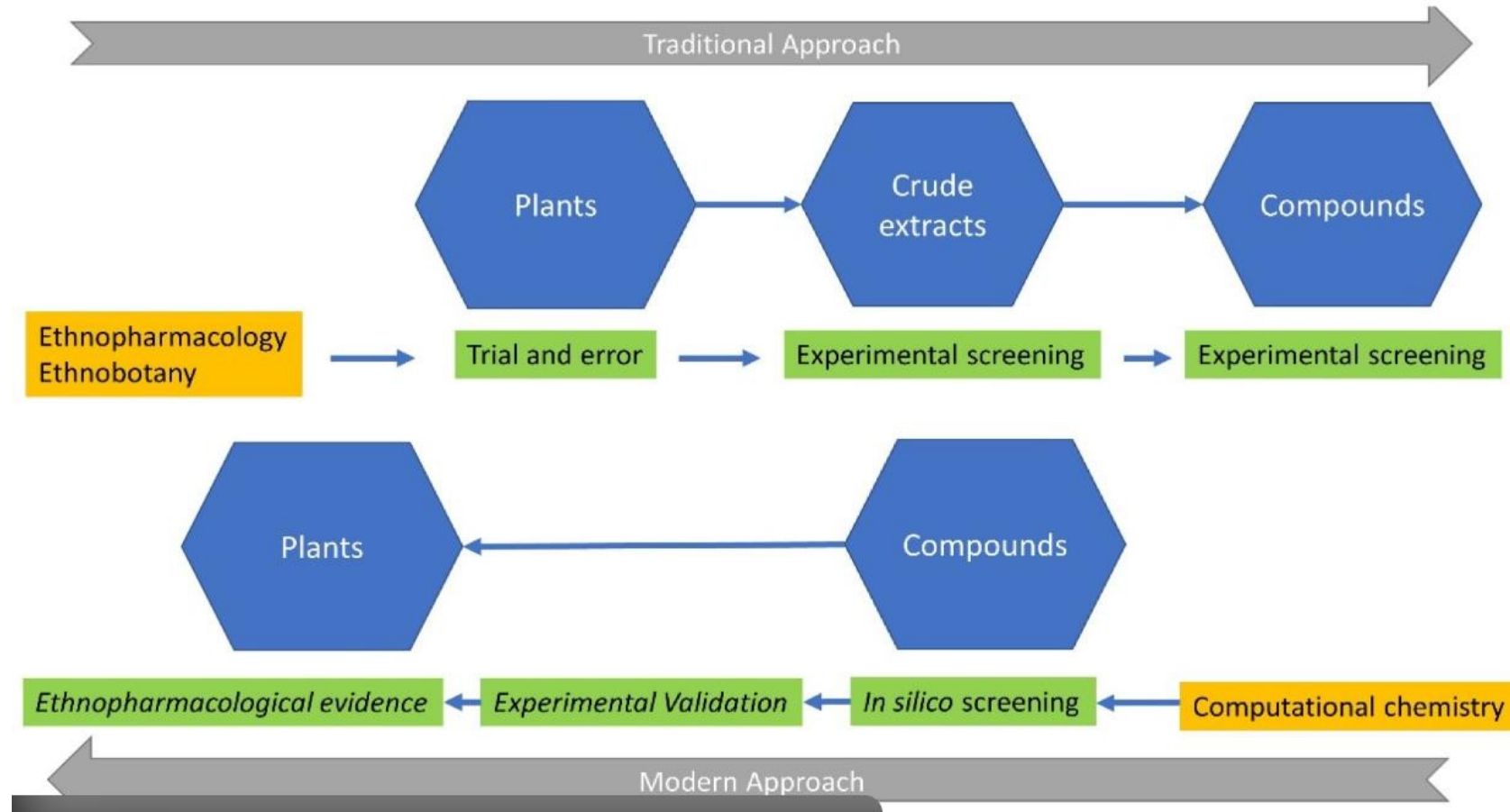
STUDY OF HERBAL DISCOVERY



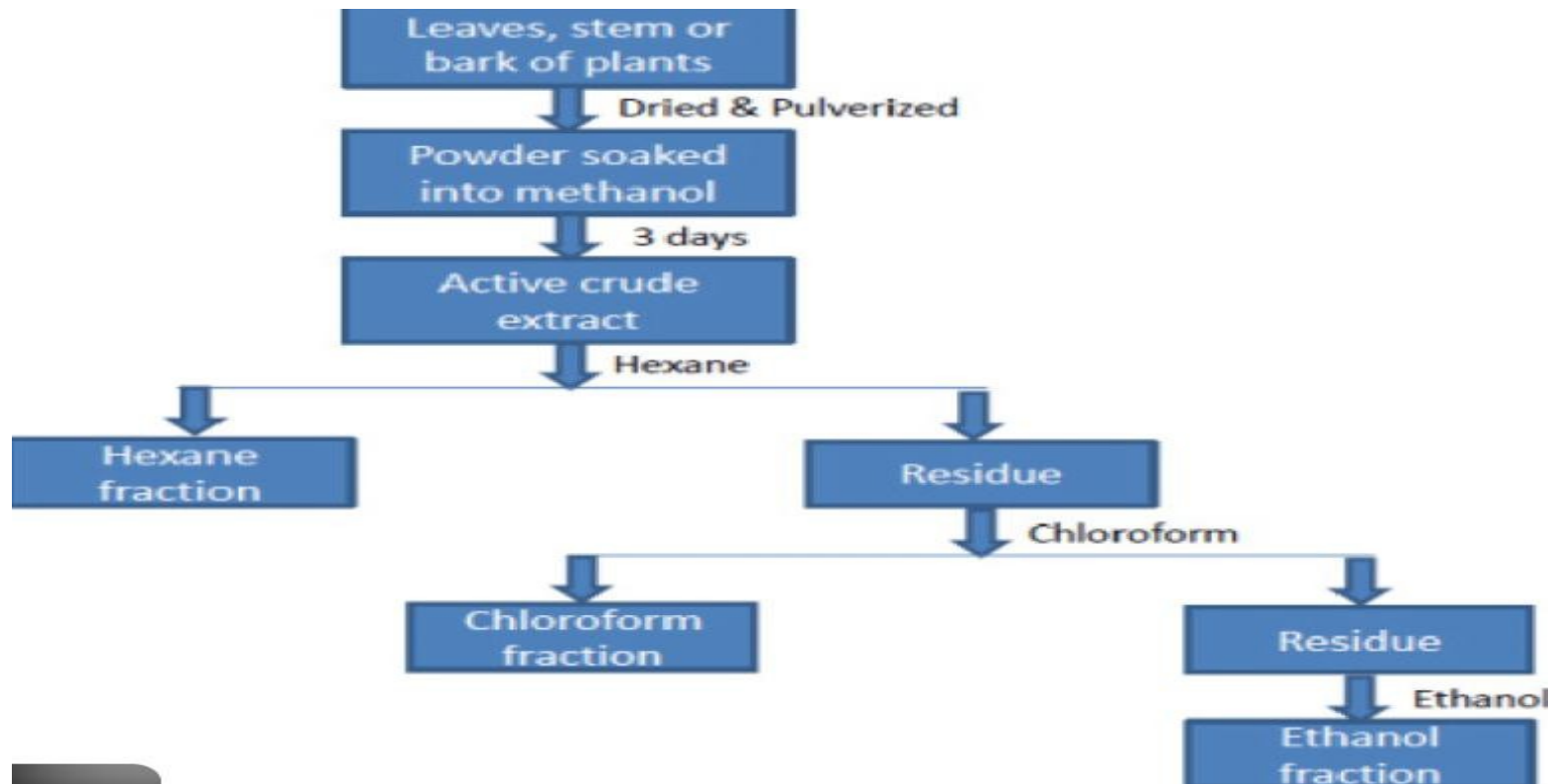
RATIONAL APPROACHES ON TRADITIONAL MEDICINES



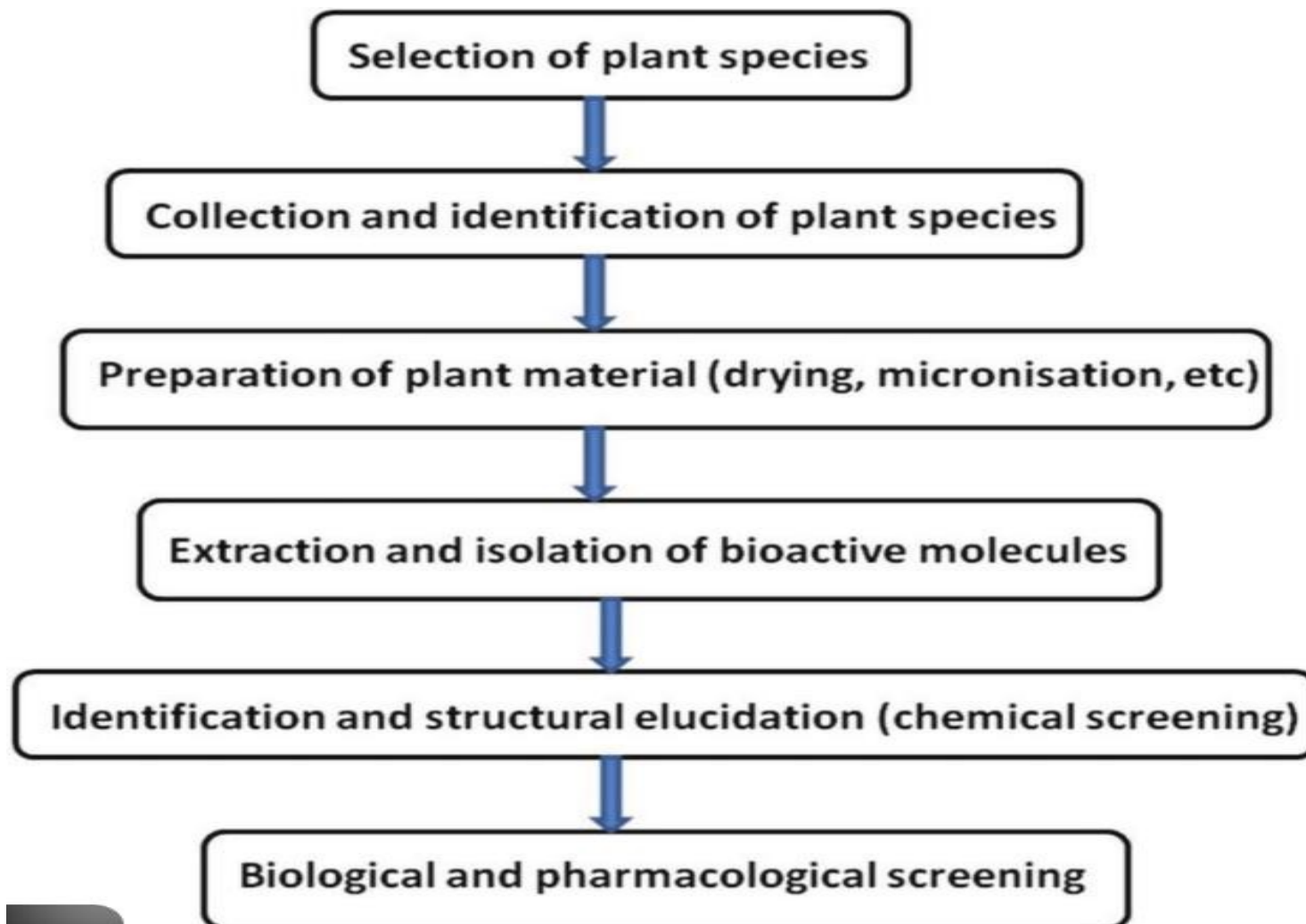
TRADITIONAL APPROACH & MODERN APPROACHES IN HERBAL DRUGS



EXTRACTIION METHODS FOR TRADITIONAL HERBAL MEDICINES



SELECTION AND PREPARATION FOR HERBAL MEDICINES



COMPOUNDS BASED ON TRADITIONAL MEDICINES

Terpenes

Key effects

Anticancer, anti-inflammatory, antimicrobial, antioxidant.

Synergy with Artemisinin

Synergistic effects, broad range of biological effects.

Phenolic Compounds (coumarins, flavonoids and phenolic acids)

Key effects

Analgesic, anticancer, anti-inflammatory, antimicrobial, antioxidant, cardioprotective, hepatoprotective, immune-modulating, neuroprotective, UV protection.

Synergy with Artemisinin

Enhanced intestinal absorption, bioavailability and therapeutic efficacy, oxidative protection.



Polysaccharides

Key effects

Anticancer, antioxidant, immunomodulatory (cytokine secretion, macrophage activation, NO production), prebiotic.

Synergy with Artemisinin

Enhanced therapeutic efficacy, improved intestinal absorption and bioavailability, reduced degradation activity.

Essential Oils

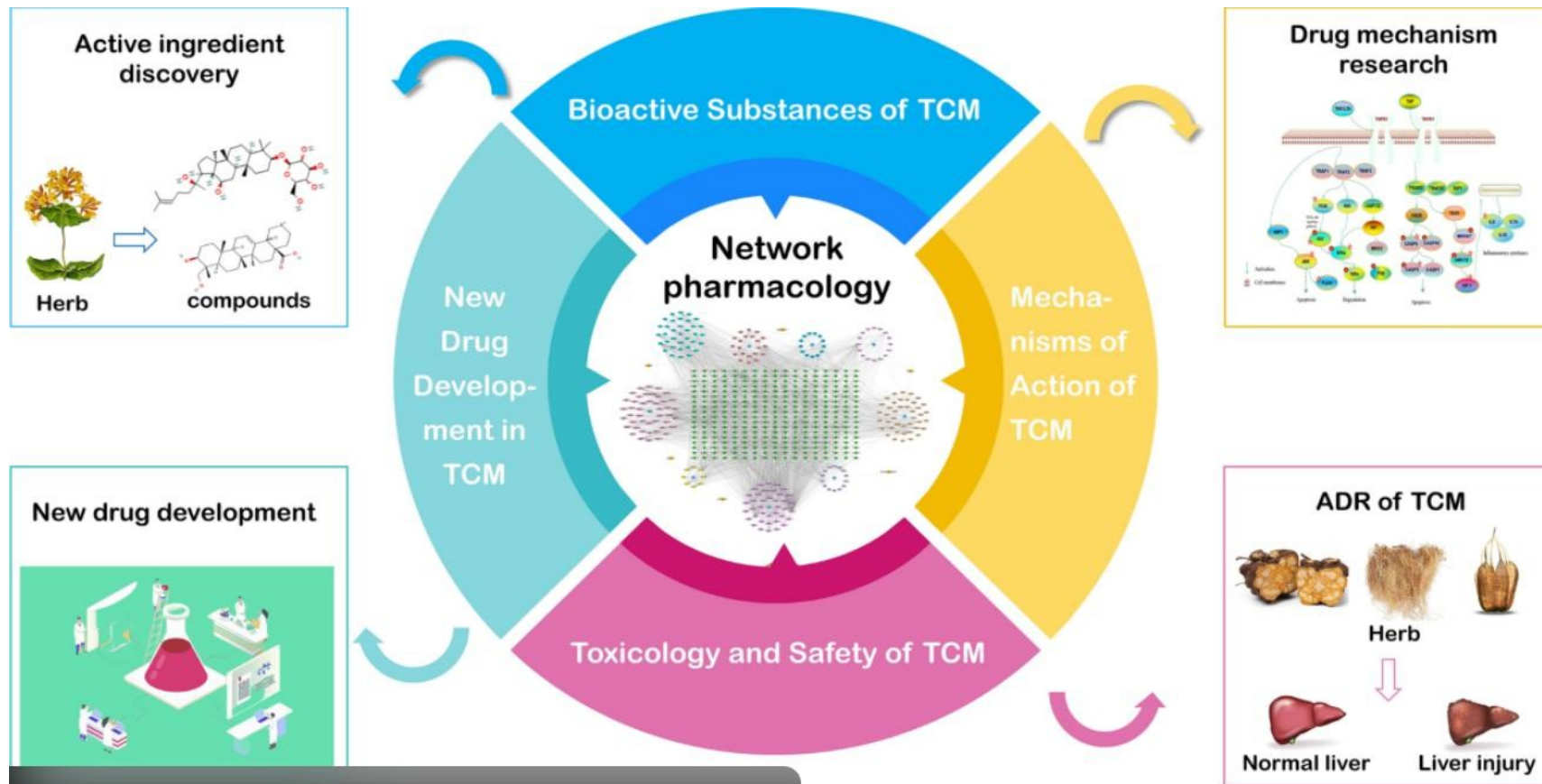
Key effects

Antimicrobial, anti-inflammatory, antioxidant, expectorant, healing-promotion.

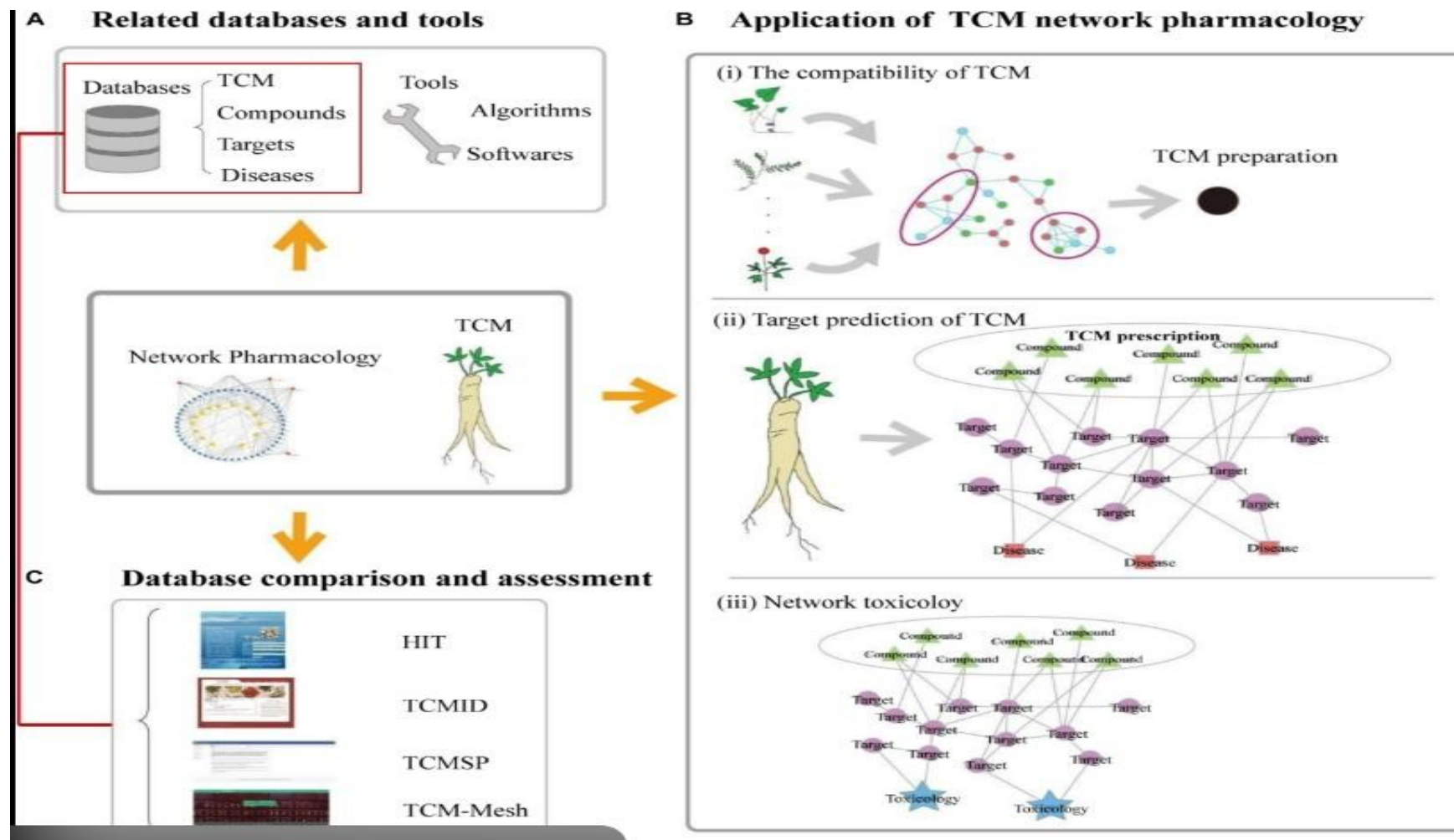
Synergy with Artemisinin

Enhanced absorption, and therapeutic efficacy (anti-inflammatory).

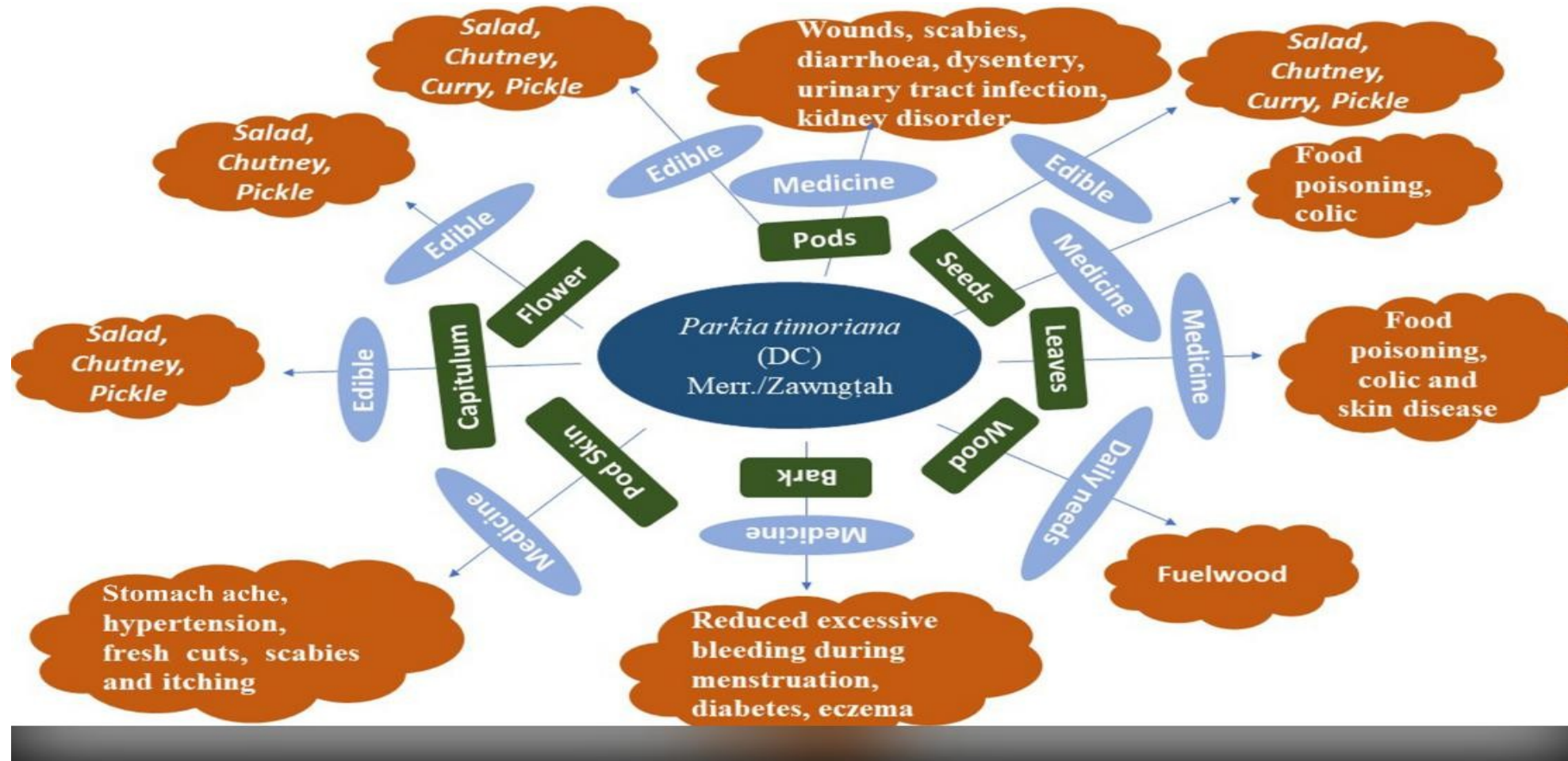
NETWORK PHARMACOLOGY ON HERBAL MEDICINES



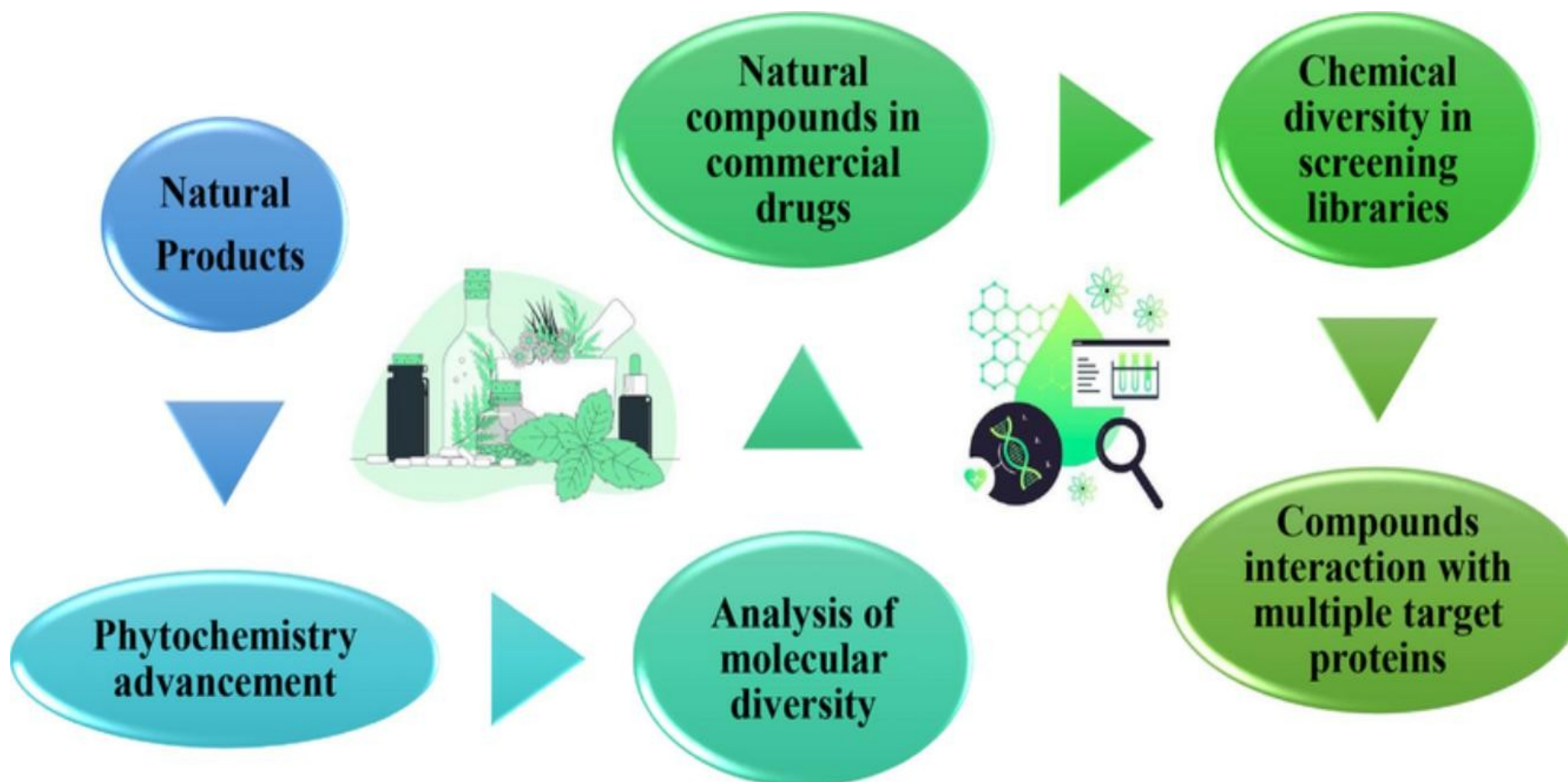
DATABASES AND APPLICATIONS OF TRADITIONAL HERBAL MEDICINES



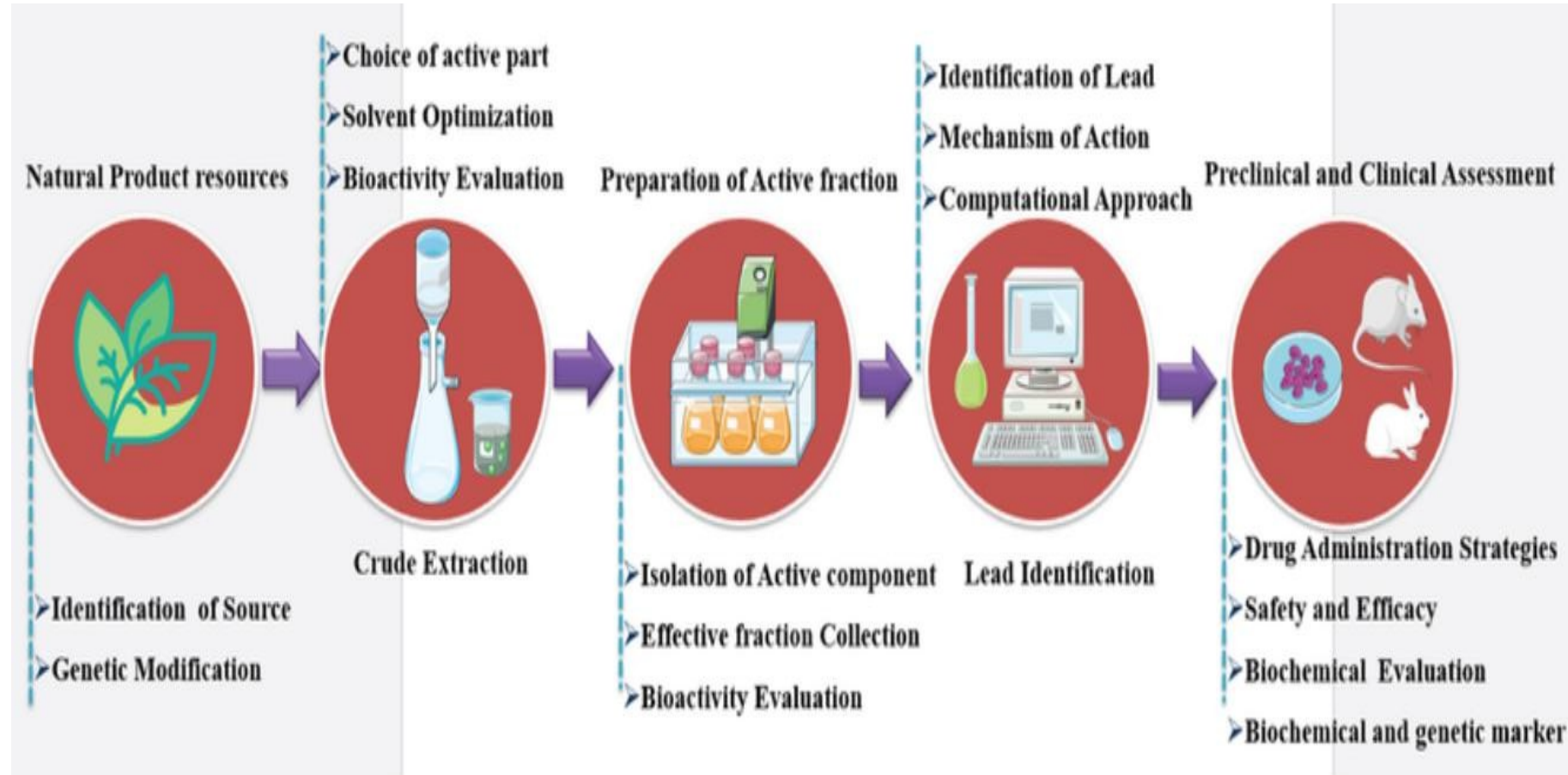
STUDY OF PARKIA TIMORIANA IN HERBAL MEDICINES



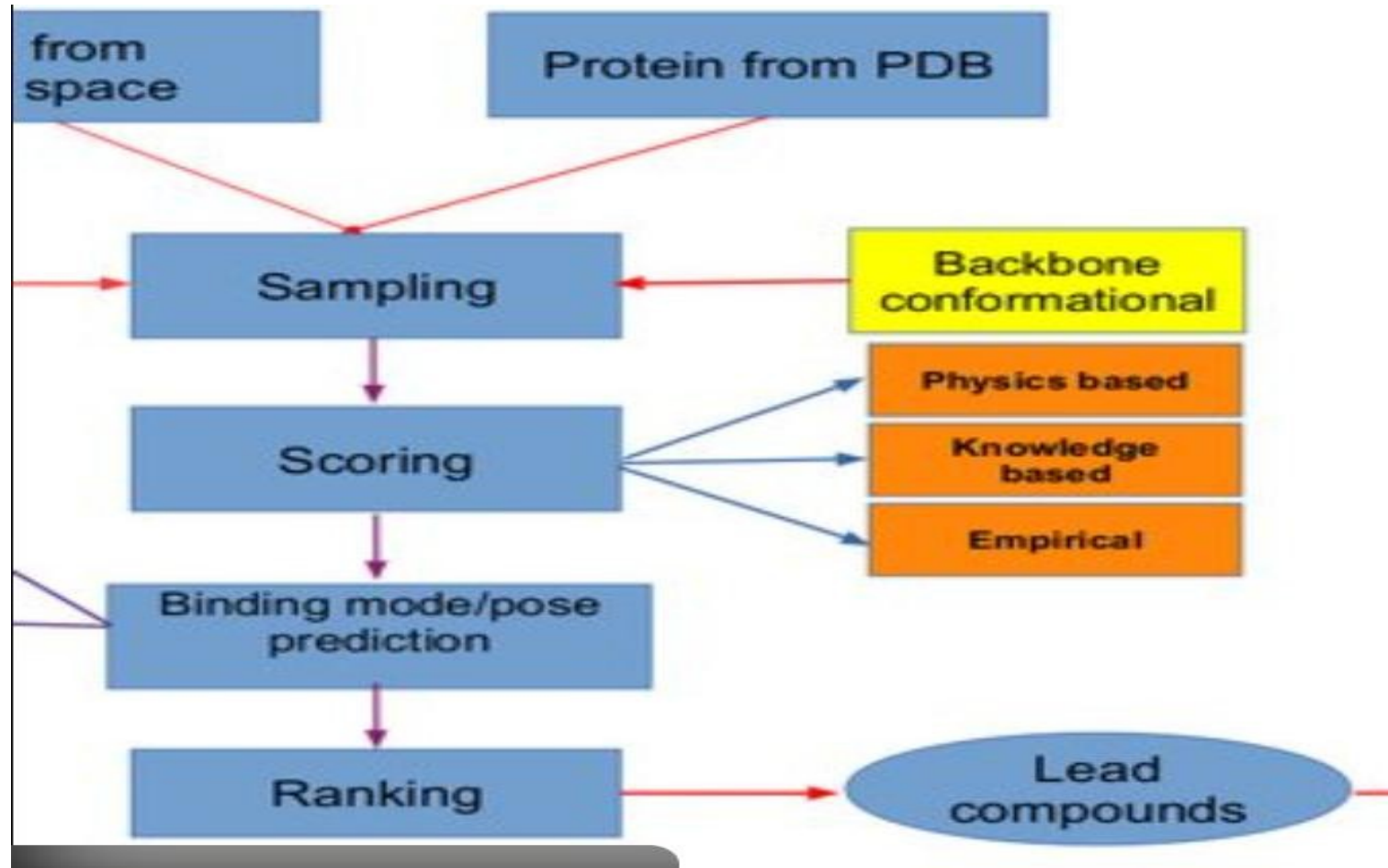
COMPOUNDS BASED ON TRADITIONAL MEDICINES



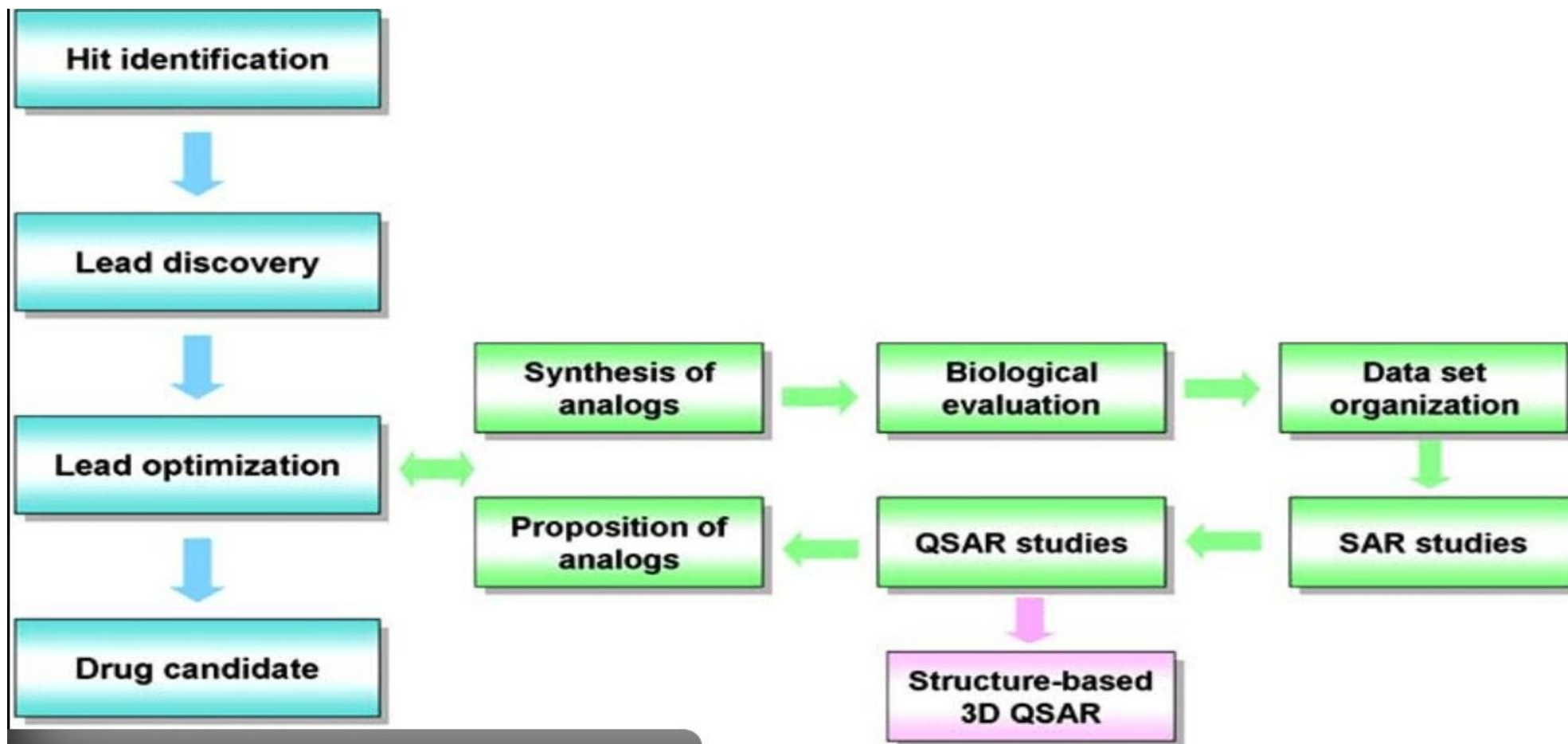
PROCEDURES FOR HERBAL MEDICINES TO PRECLINICAL AND CLINICAL ASSESSMENT



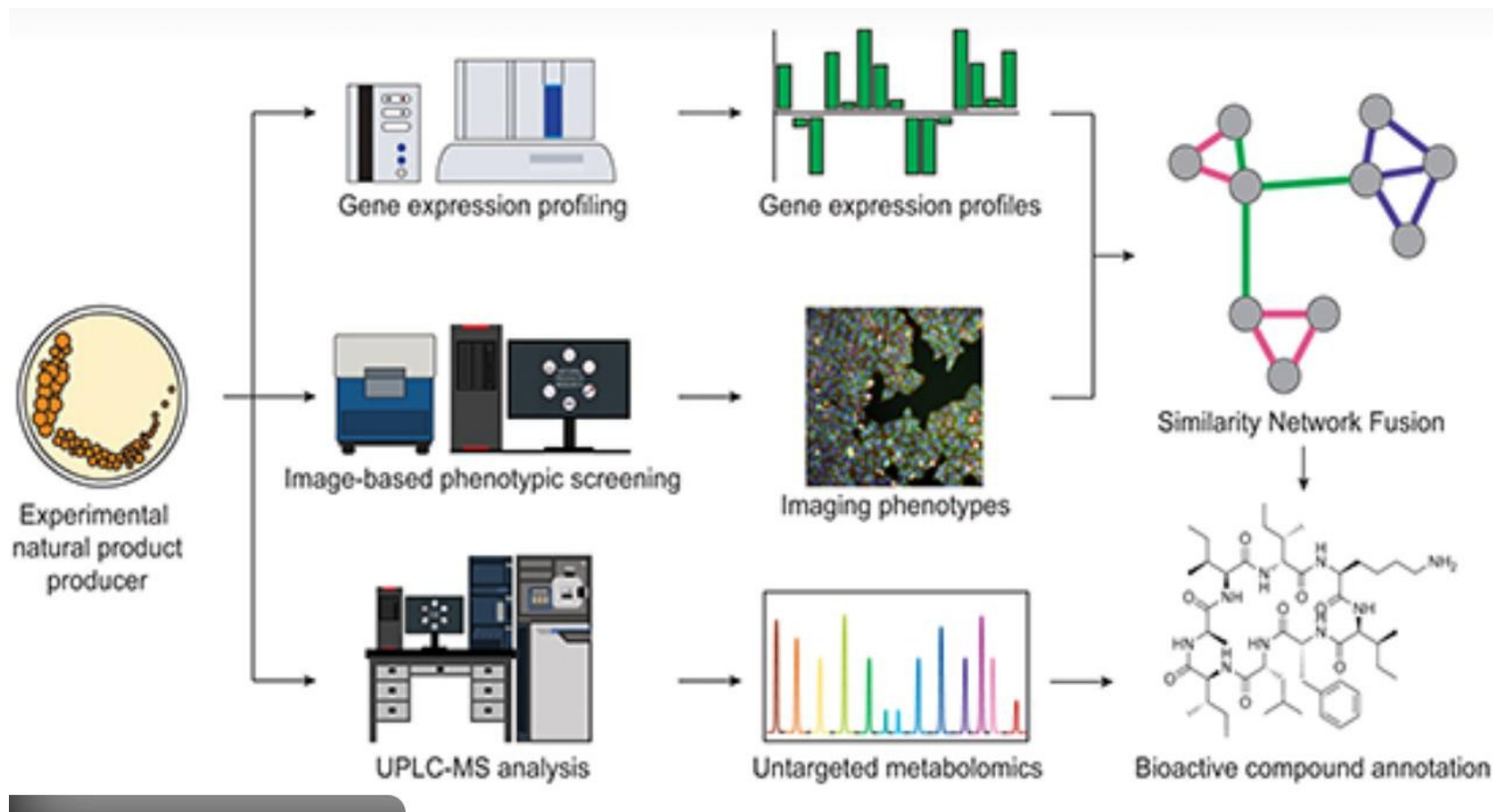
STUDY OF LEAD DISCOVERY



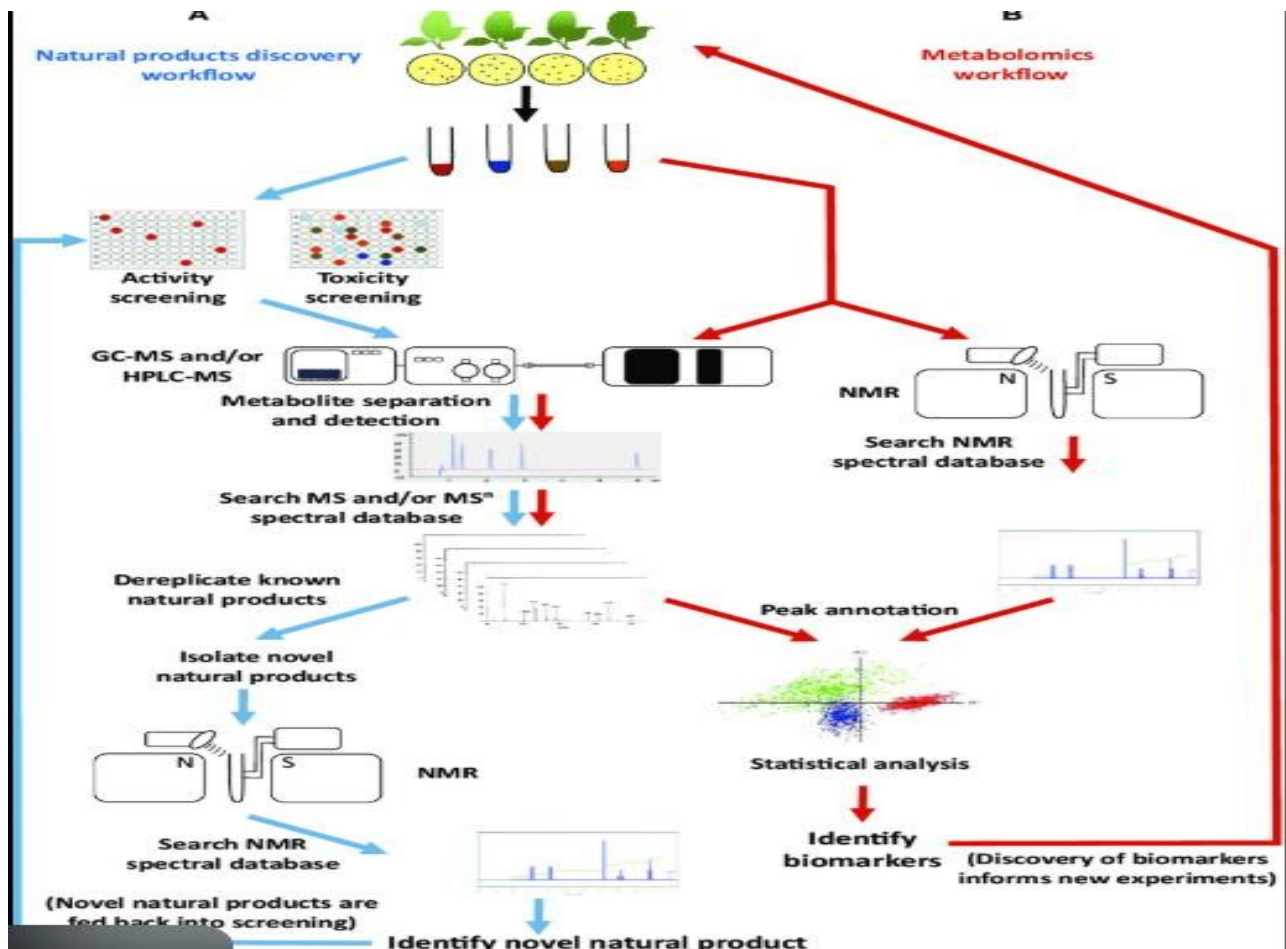
STUDY OF LEAD DISCOVERY BASED ON TRADITIONAL MEDICINES



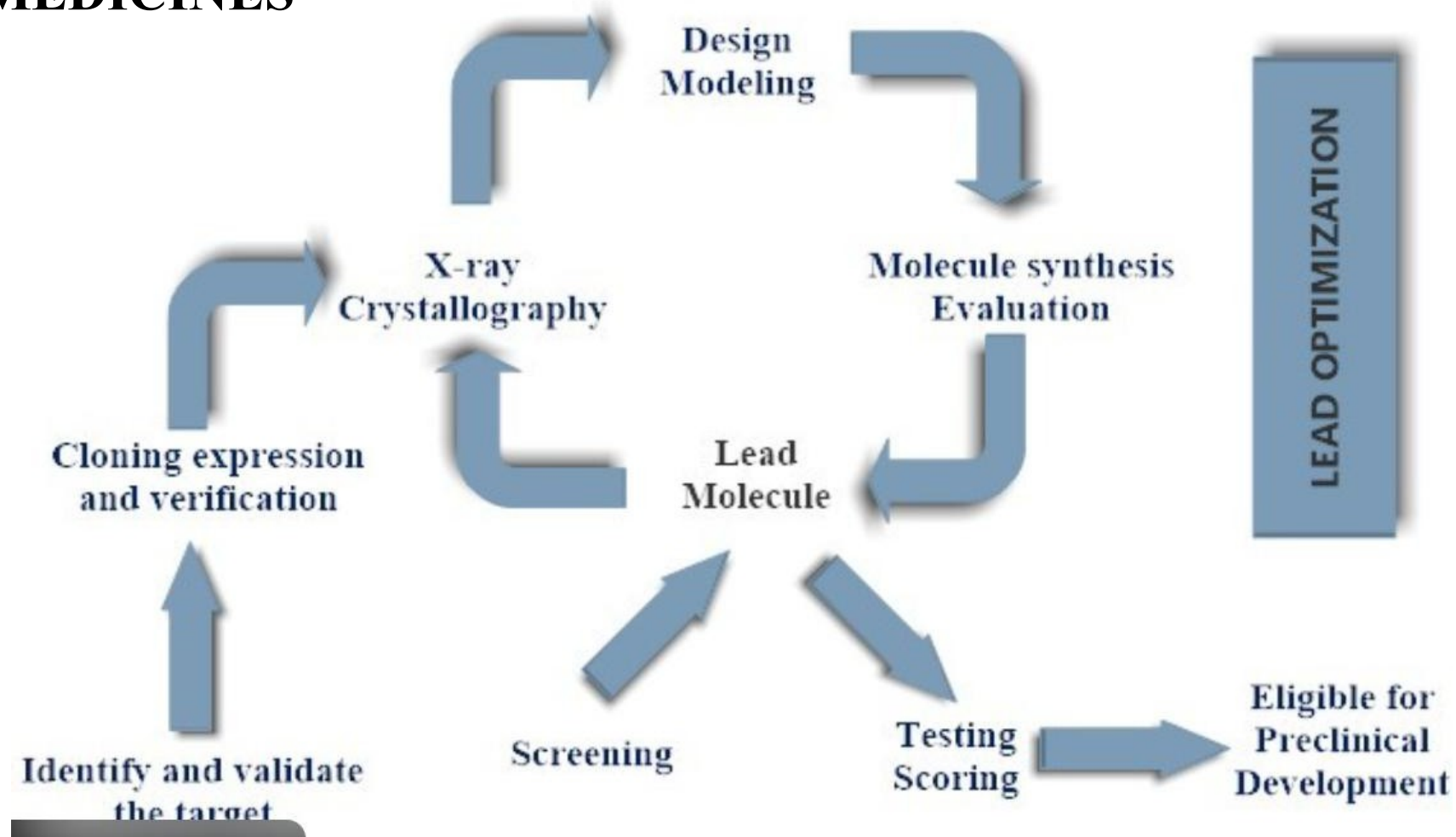
EXPERIMENTAL BASED ON TRADITIONAL HERBAL MEDICINES



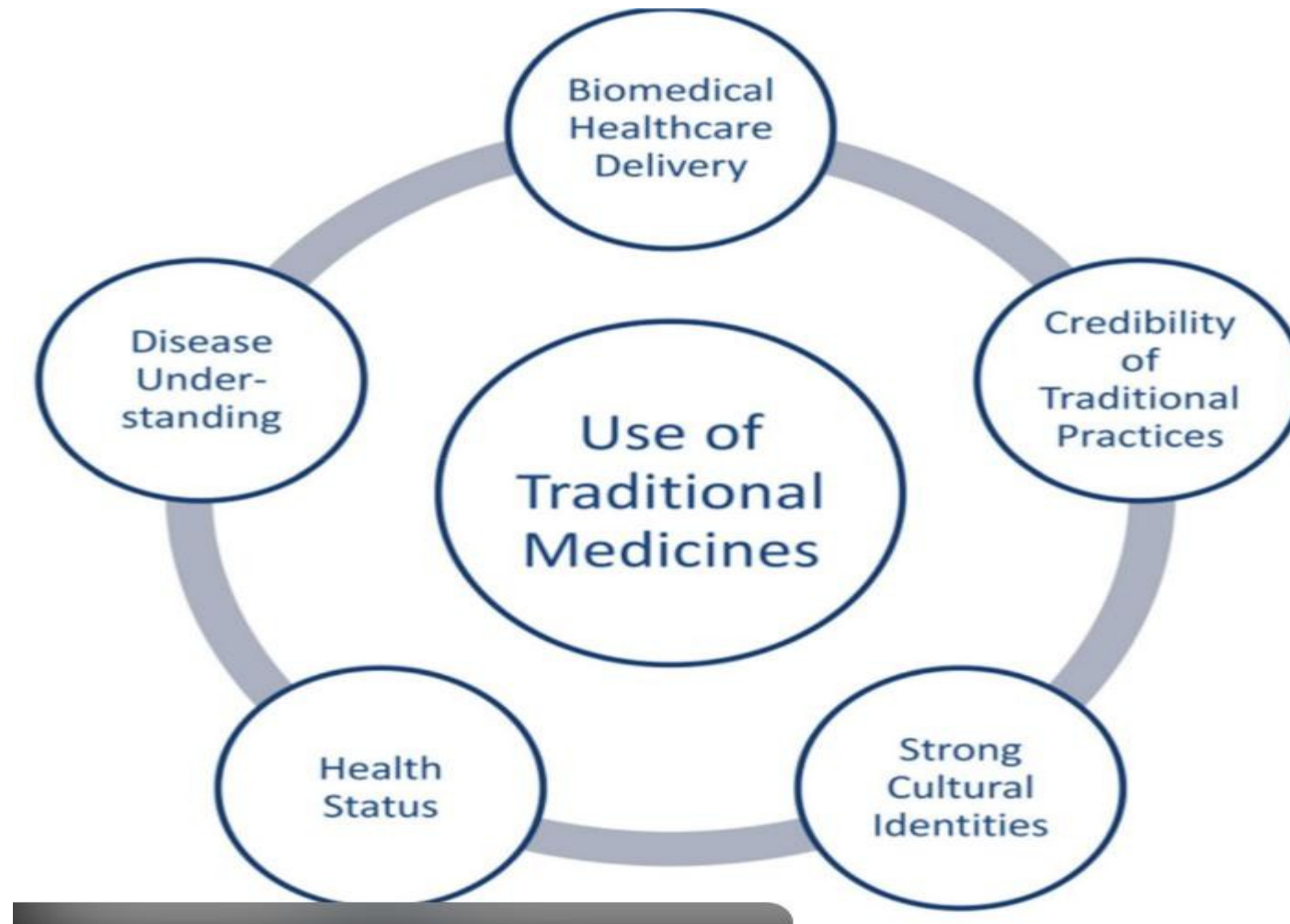
WORKFLOW OF TRADITIONAL MEDICINES



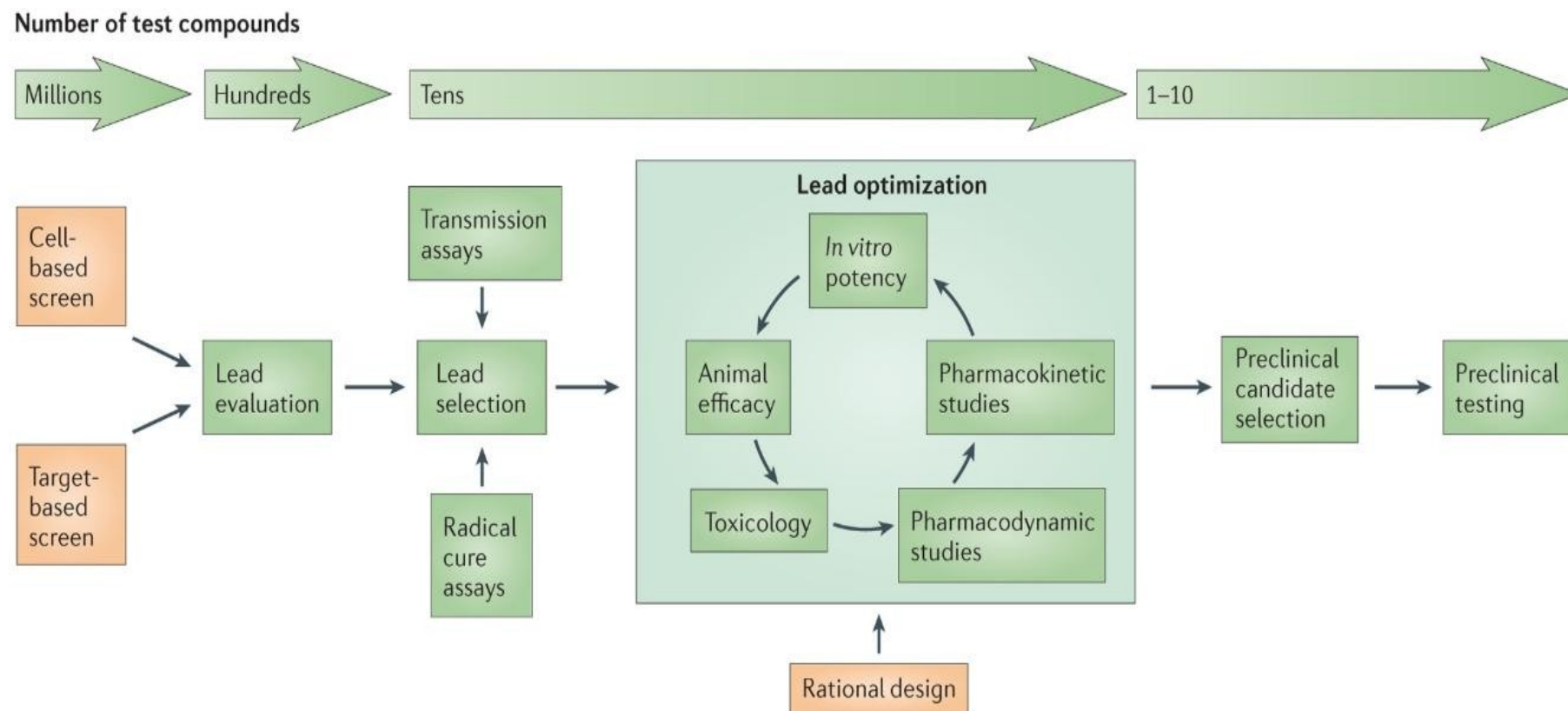
METHODS OF LEAD DISCOVERY BASED ON TRADITIONAL MEDICINES



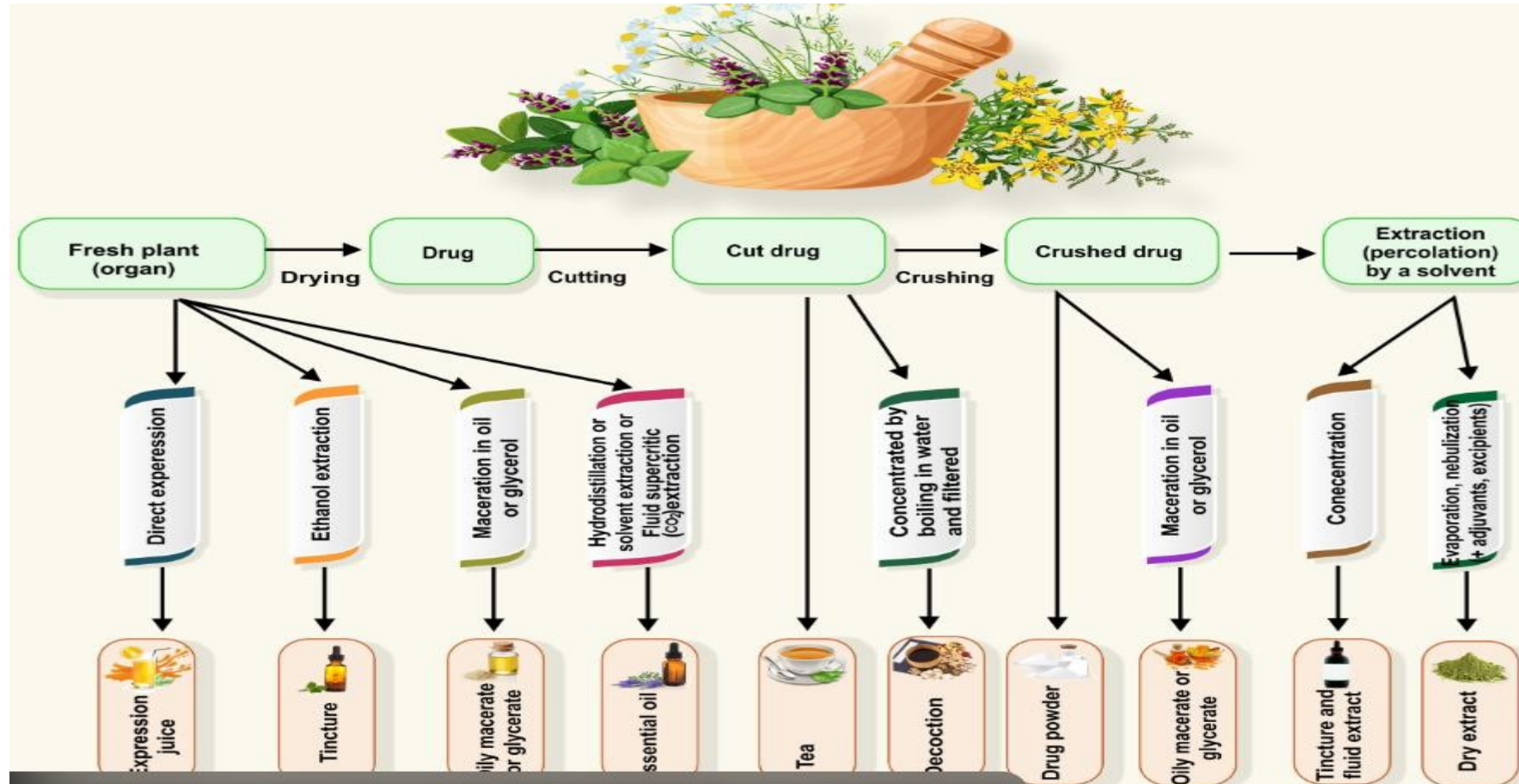
USES OF TRADITIONAL MEDICINES



SCREENING METHODS



PROCESSING STAGES FOR TRADITIONAL HERBAL MEDICINES



ASSESSMENTS

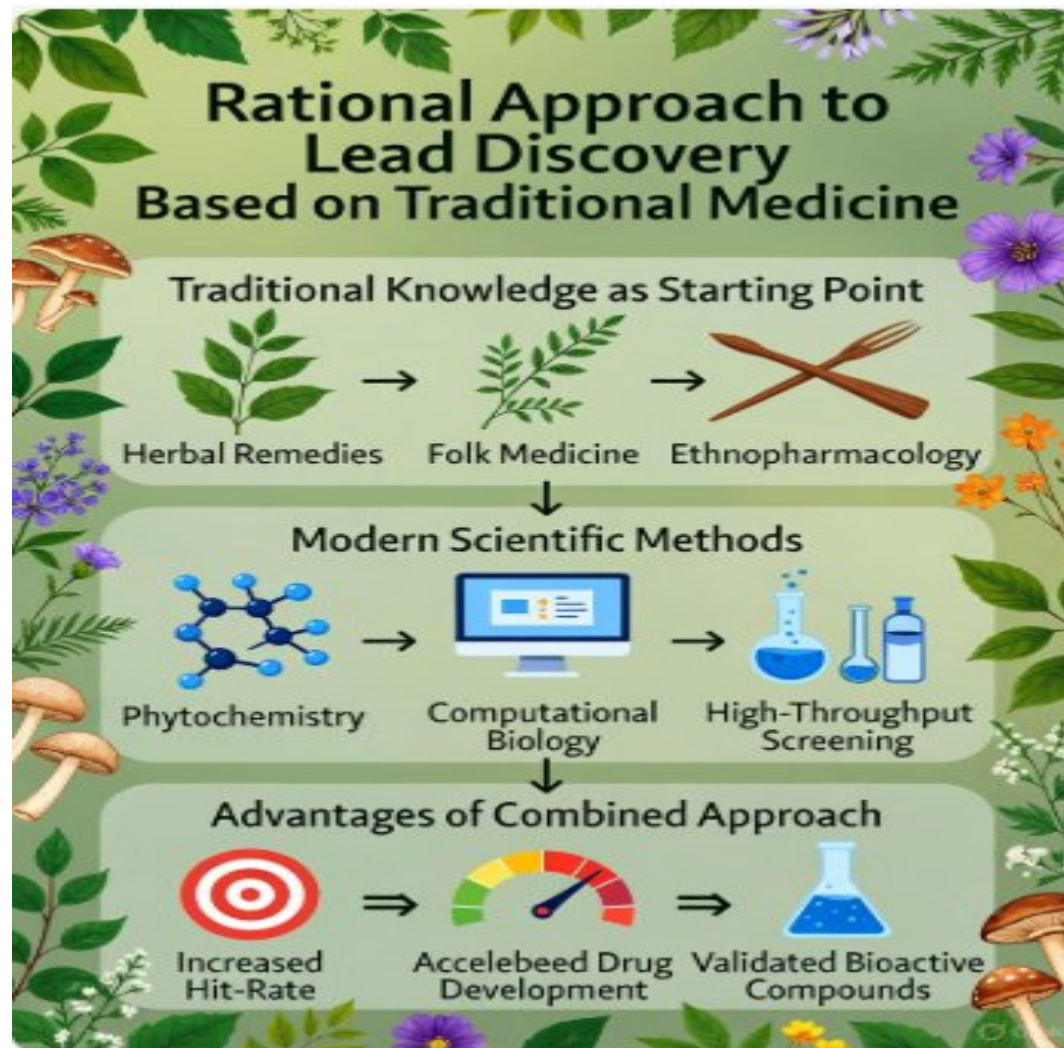
Question 1 : Critically evaluate the statement: Traditional medicinal knowledge guarantees higher success in lead discovery compared to random screening. Use literature or examples to support your answer.



Question 2: Discuss the ethical, intellectual property and biodiversity considerations one must keep in mind when sourcing leads from traditional/indigenous medicine knowledge.



SUMMARY



REFERENCES

- Xu, X. “New concepts and approaches for drug discovery based on traditional Chinese medicine.” *Drug Discovery Today: Technologies*. 2006;3(3):247-253. doi:10.1016/j.ddtec.2006.09.008.
- Bi, Z., Li, H., Liang, Y., et al. “Emerging paradigms for target discovery of traditional medicines: A genome-wide pan-GPCR perspective.” *Innovation (Camb)*. 2025;6(3):100774. doi:10.1016/j.xinn.2024.100774. [_____](#)
- “Prospecting for Bioactive Constituents from Traditional Medicinal Plants through Ethnobotanical Approaches.” *Biol. Pharm. Bull.* 2014;37(6): —PSMs have been the source of many active ingredients in medicines... [_____](#)
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- “Phytochemicals in Drug Discovery—A Confluence of Tradition and Innovation.” *International Journal of Molecular Sciences*. 2024;25(16):8792. doi:10.3390/ijms25168792.



Thank You

