SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

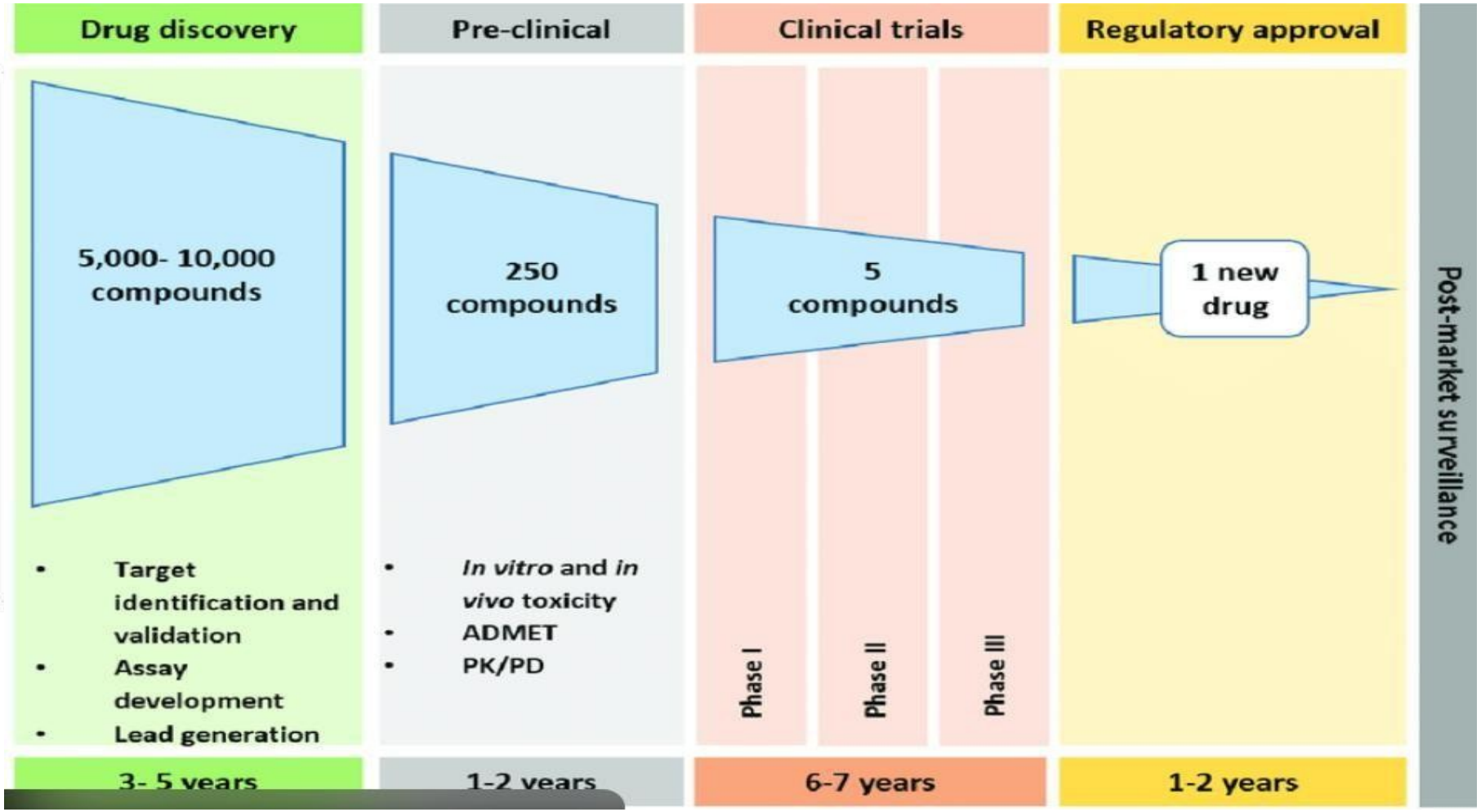
Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

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

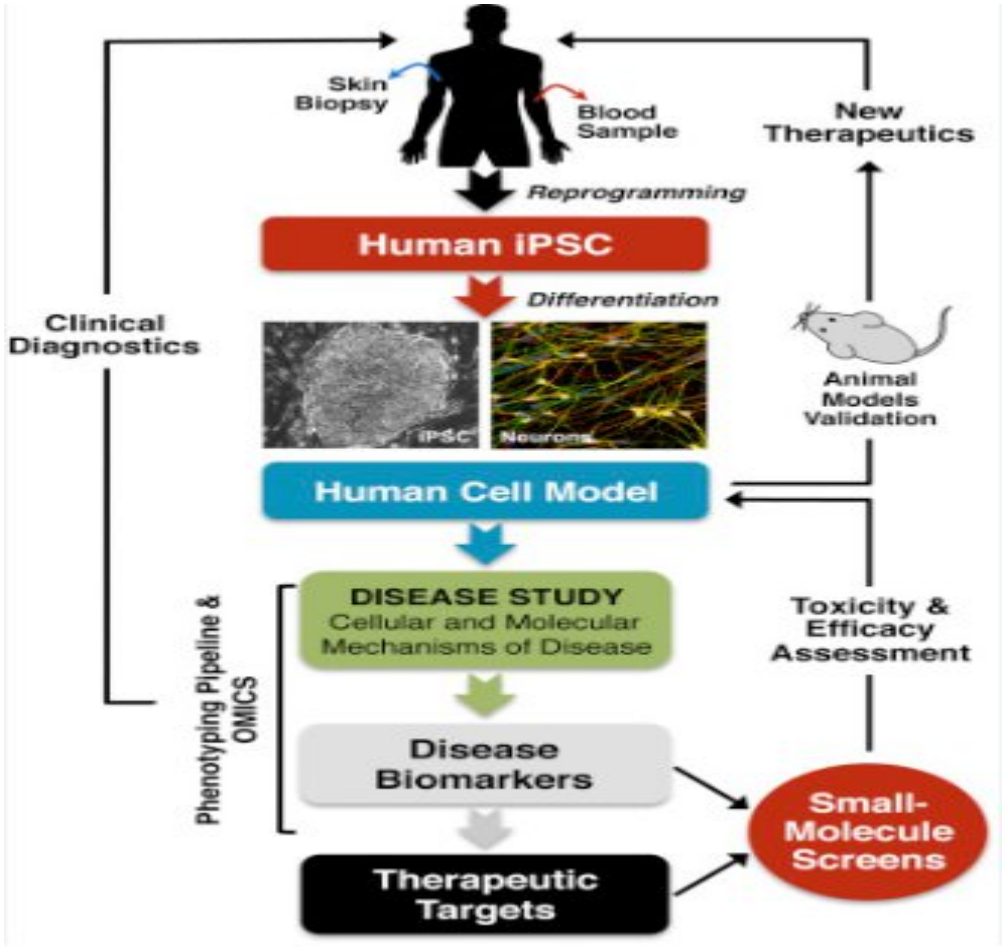
VIII SEM / IV YEAR

TOPIC 3: RANDOM SCREENING, NON-RANDOM SCREENING, SERENDIPITOUS DRUG DISCOVERY

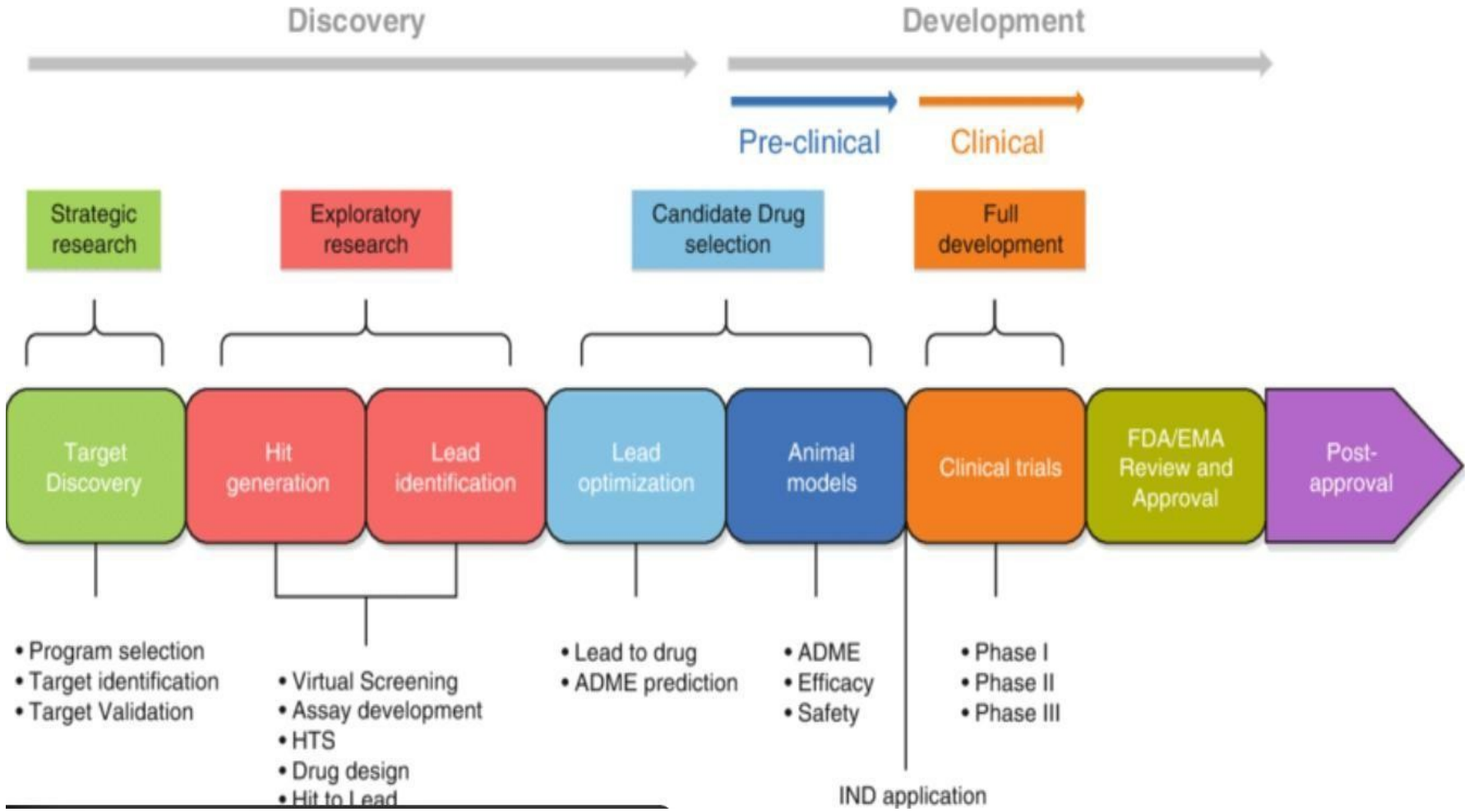
SCREENING STAGES OF DRUG DISCOVERY



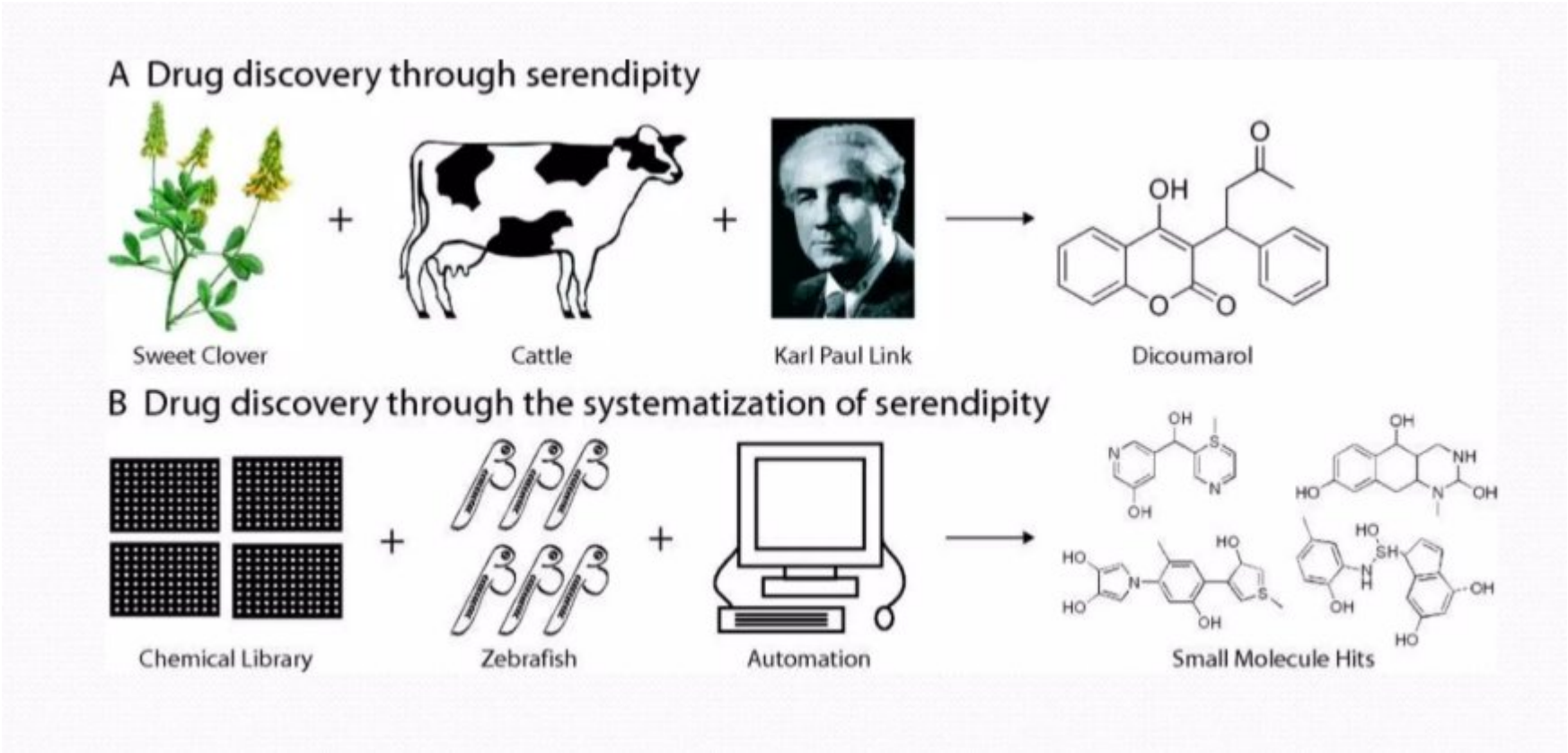
SCREENING OF THERAPEUTIC TARGETS INTO PRECLINICAL AND CLINICAL ASSESSMENTS



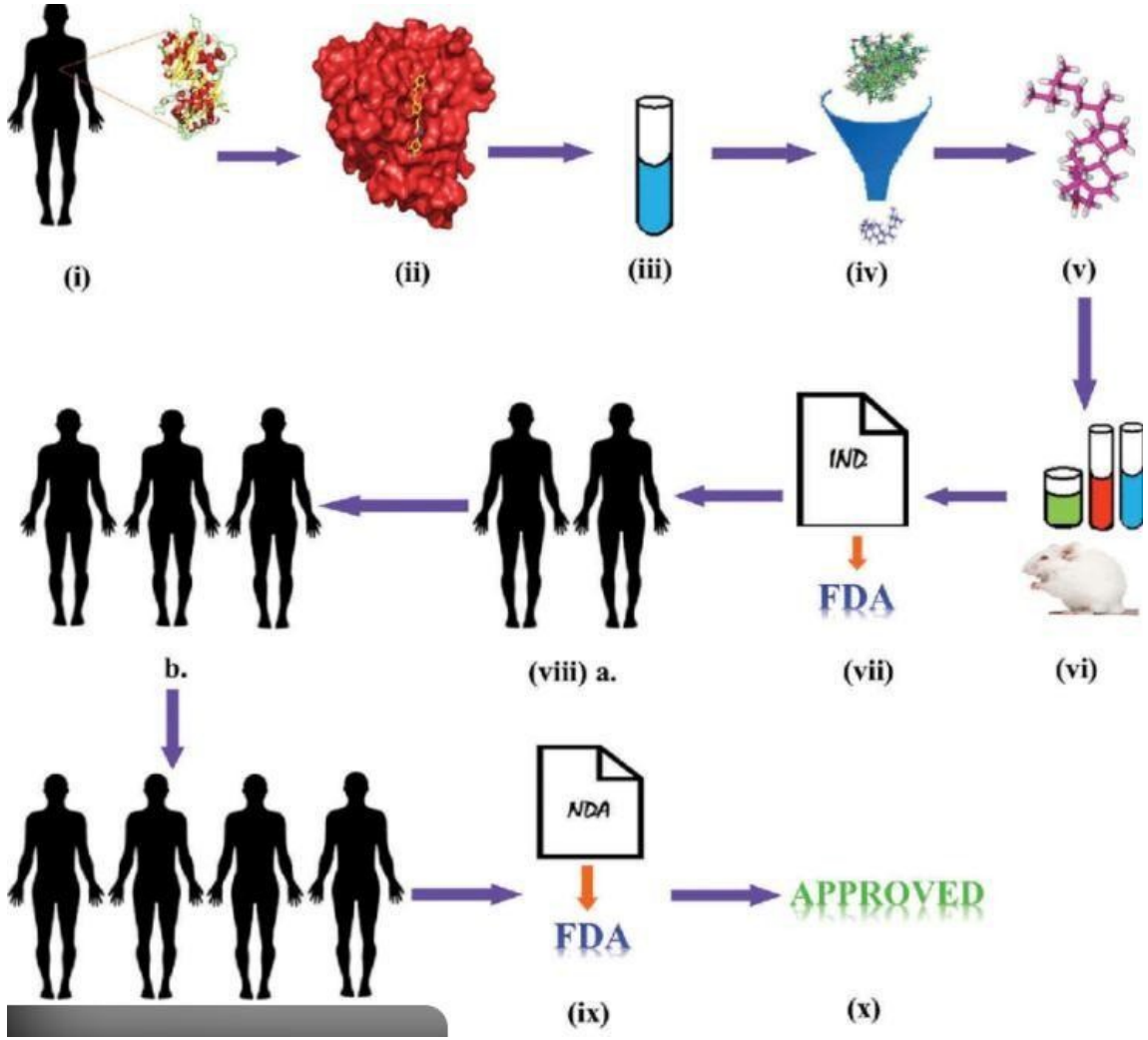
STUDY OF DRUG DISCOVERY AND DRUG DEVELOPMENT



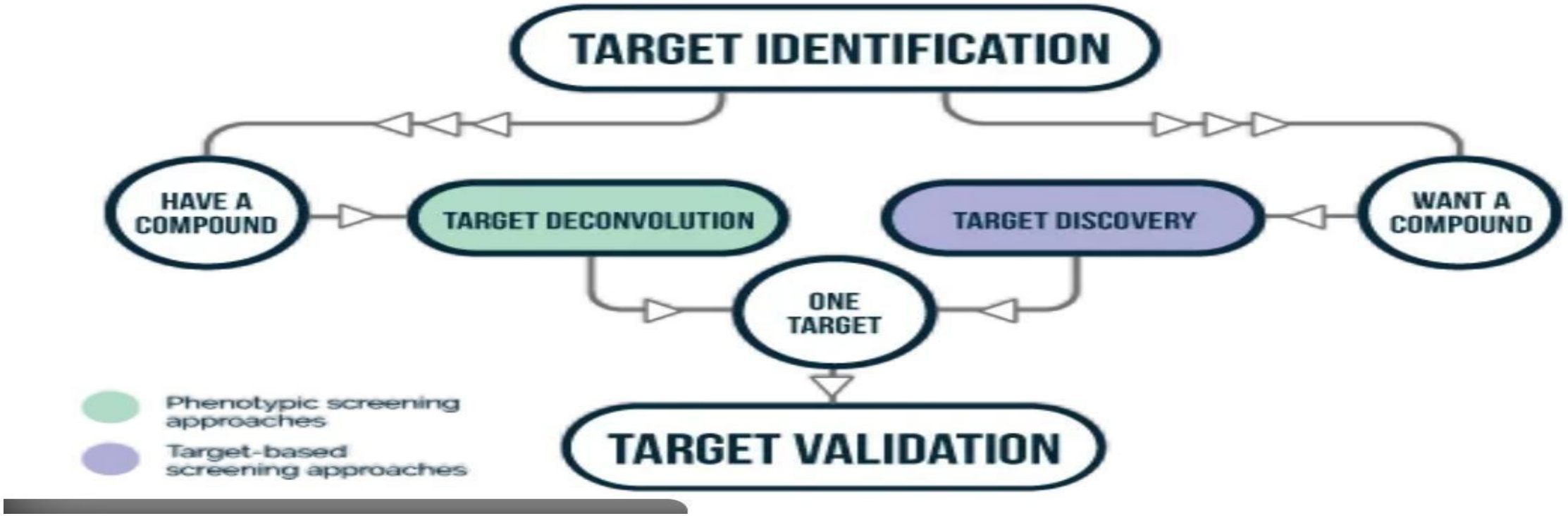
A SYSTEMIZATION OF DRUG DISCOVERY THROUGH SERENDIPITY



SCREENING OF DRUGS INTO REGULATORY APPROVAL

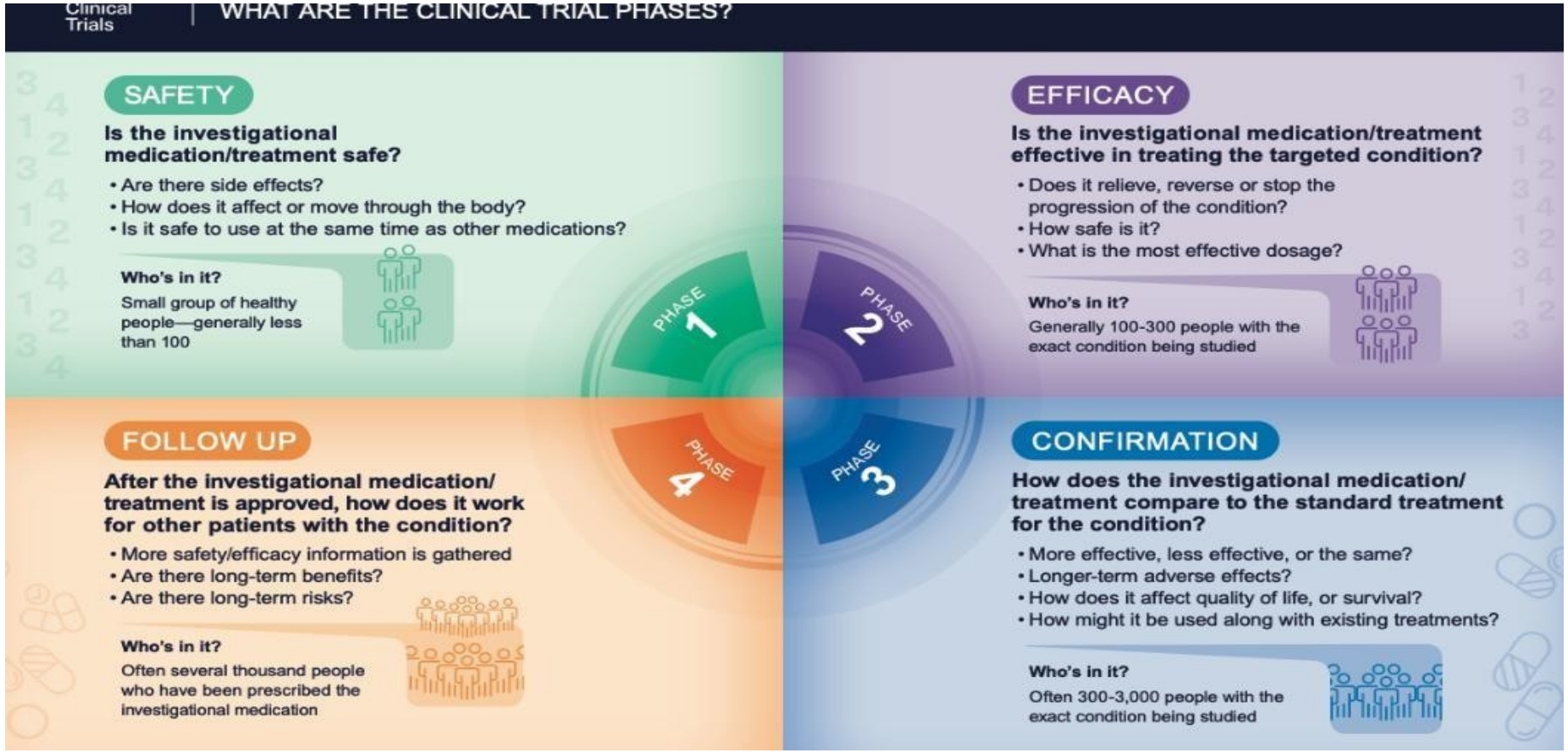


DIFFERENCE BETWEEN TARGET IDENTIFICATION AND TARGET VALIDATION ON DRUG DISCOVERY

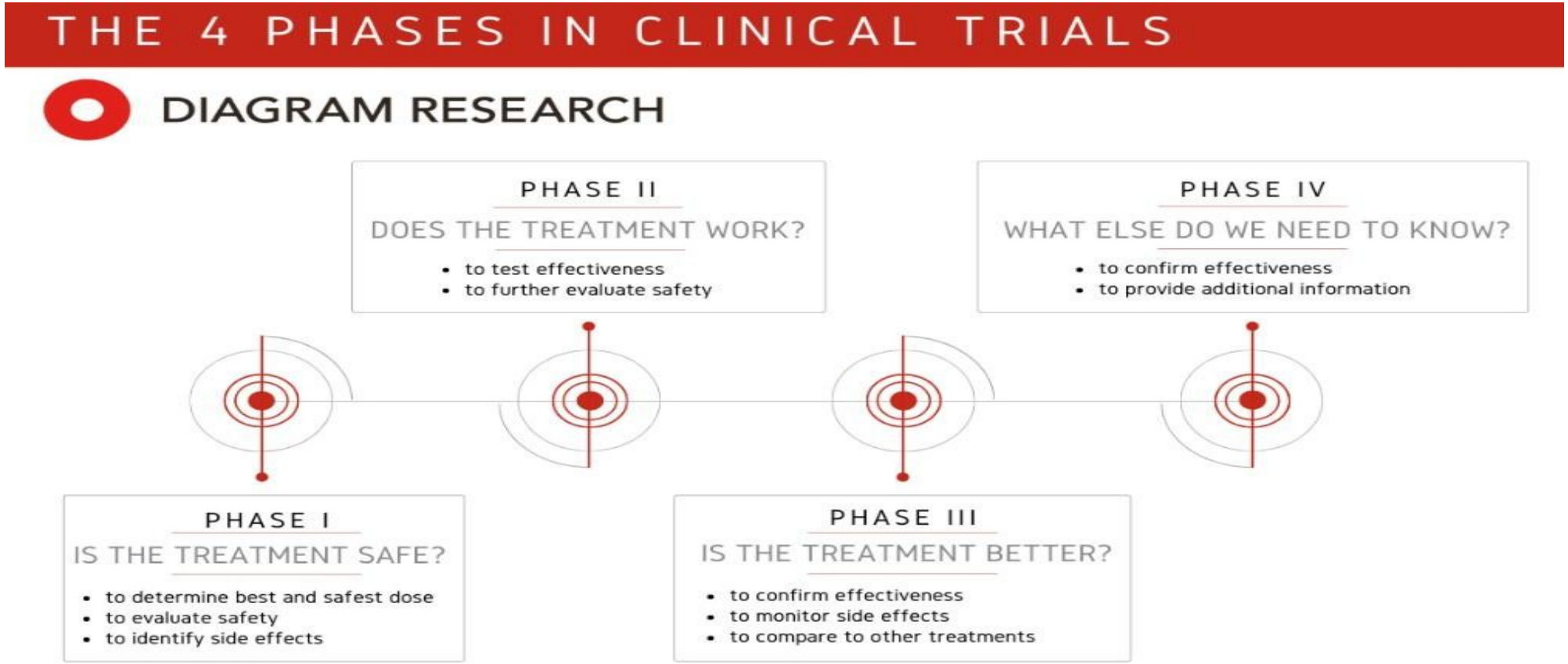


STUDY OF LEAD DISCOVERY IN RANDOM SCREENING AND NON RANDOM SCREENING

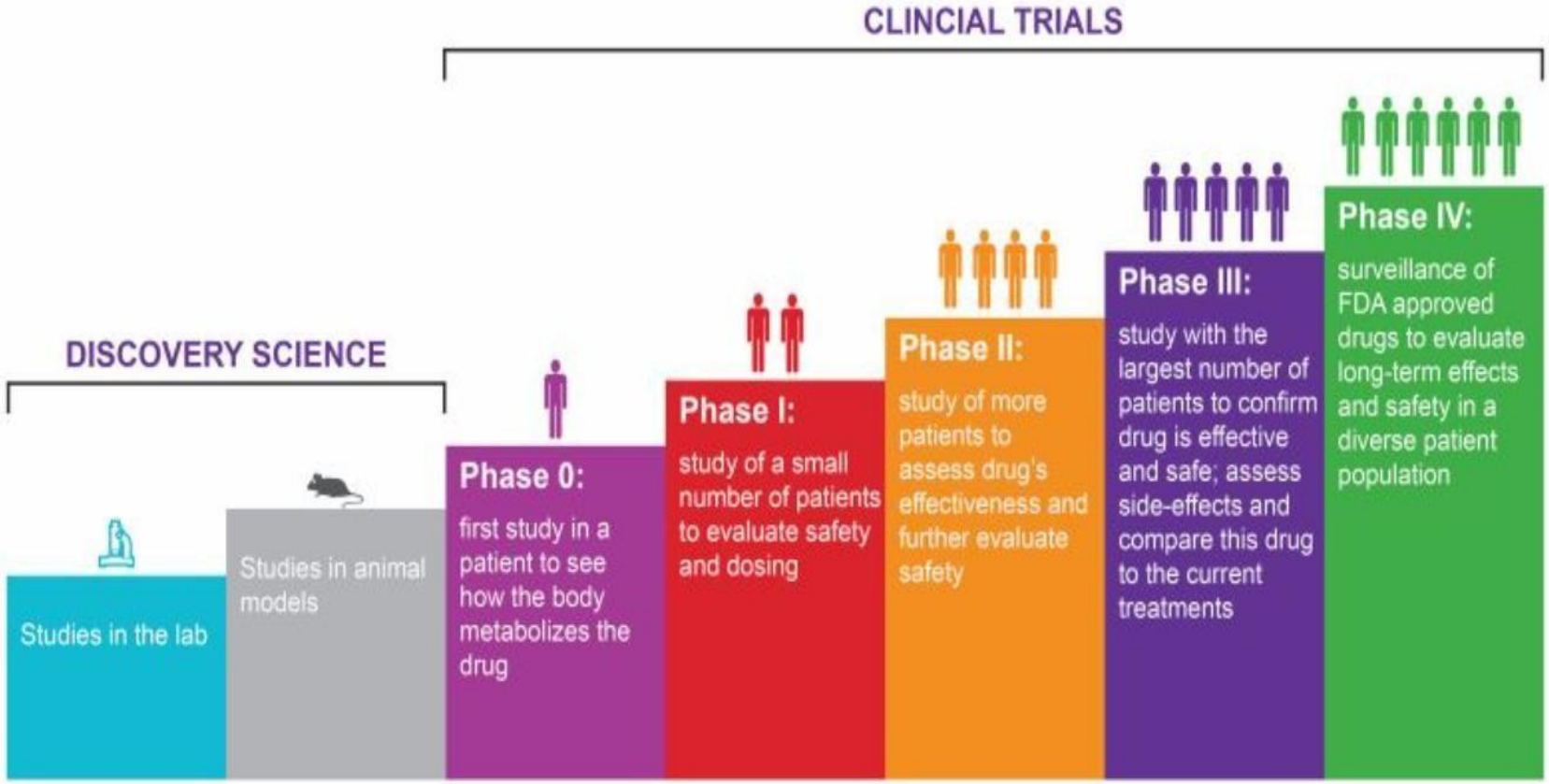
METHODS OF CLINICAL TRAILS



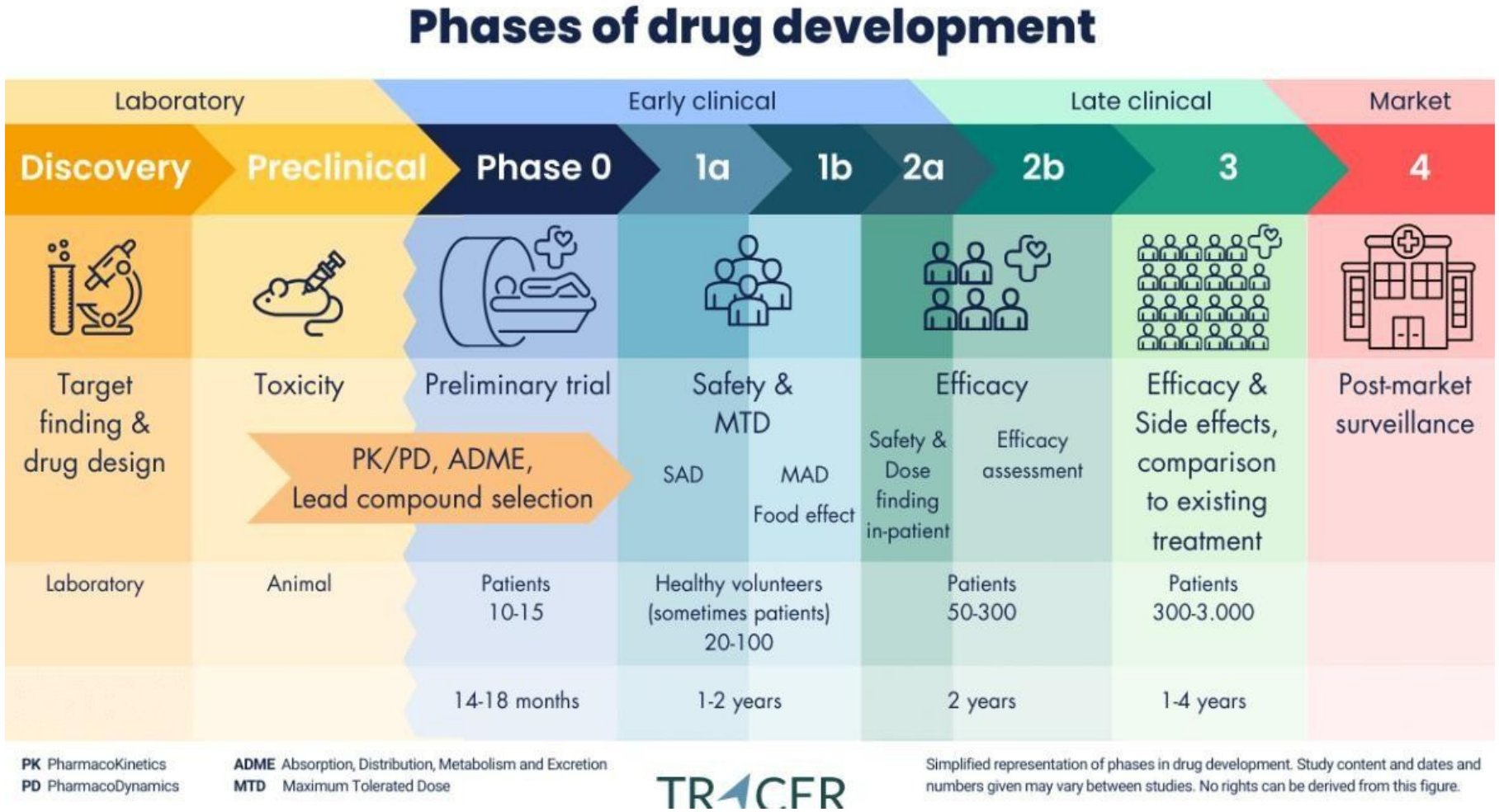
PHASES OF CLINICAL TRAILS IN DRUG DISCOVERY



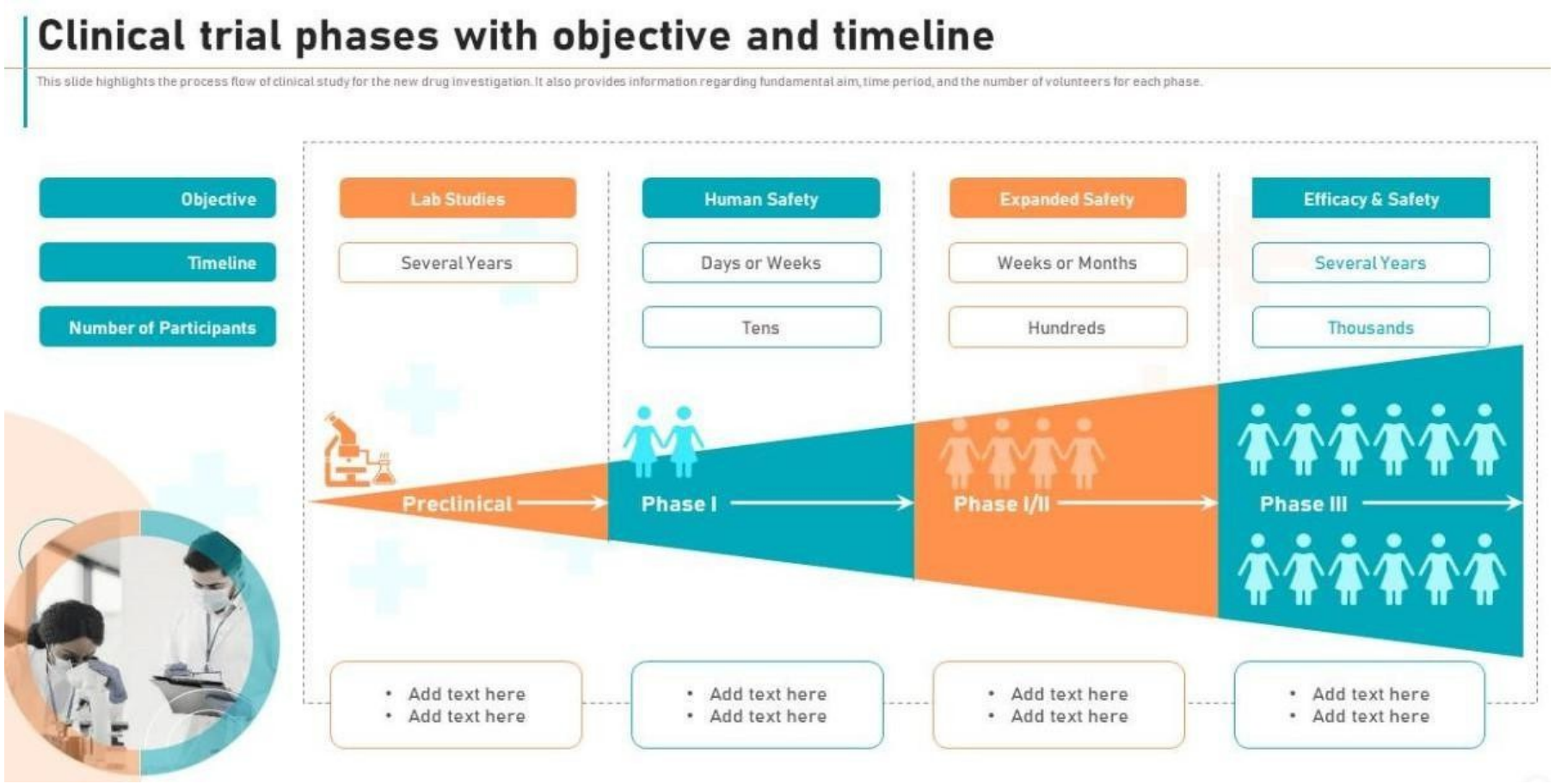
STUDY OF DIFFERENCE ON BETWEEN DISCOVERY SCIENCE & CLINICAL TRAILS IN DRUG SCREENING PROCESS



STAGES OF PHASES ARE INVOLVED IN DRUG DEVELOPMENT



OBJECTIVES AND TIMELINES OF CLINICAL TRAIL PHASES (HUMANS)



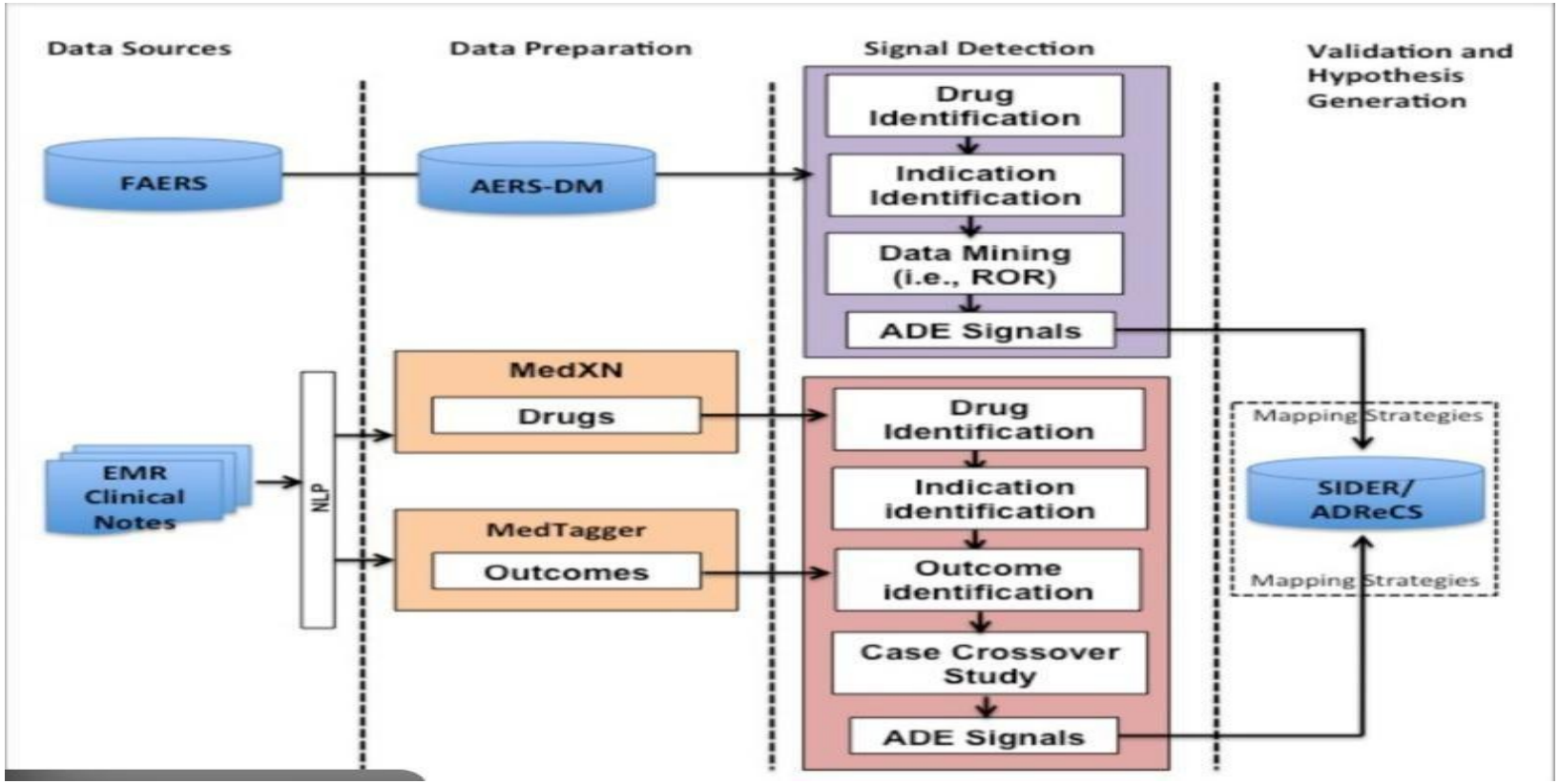
DRUG COMPOUNDS ARE INVOLVED IN CLINICAL TRAIL PHASES

Clinical trial phases funnel with drug compounds

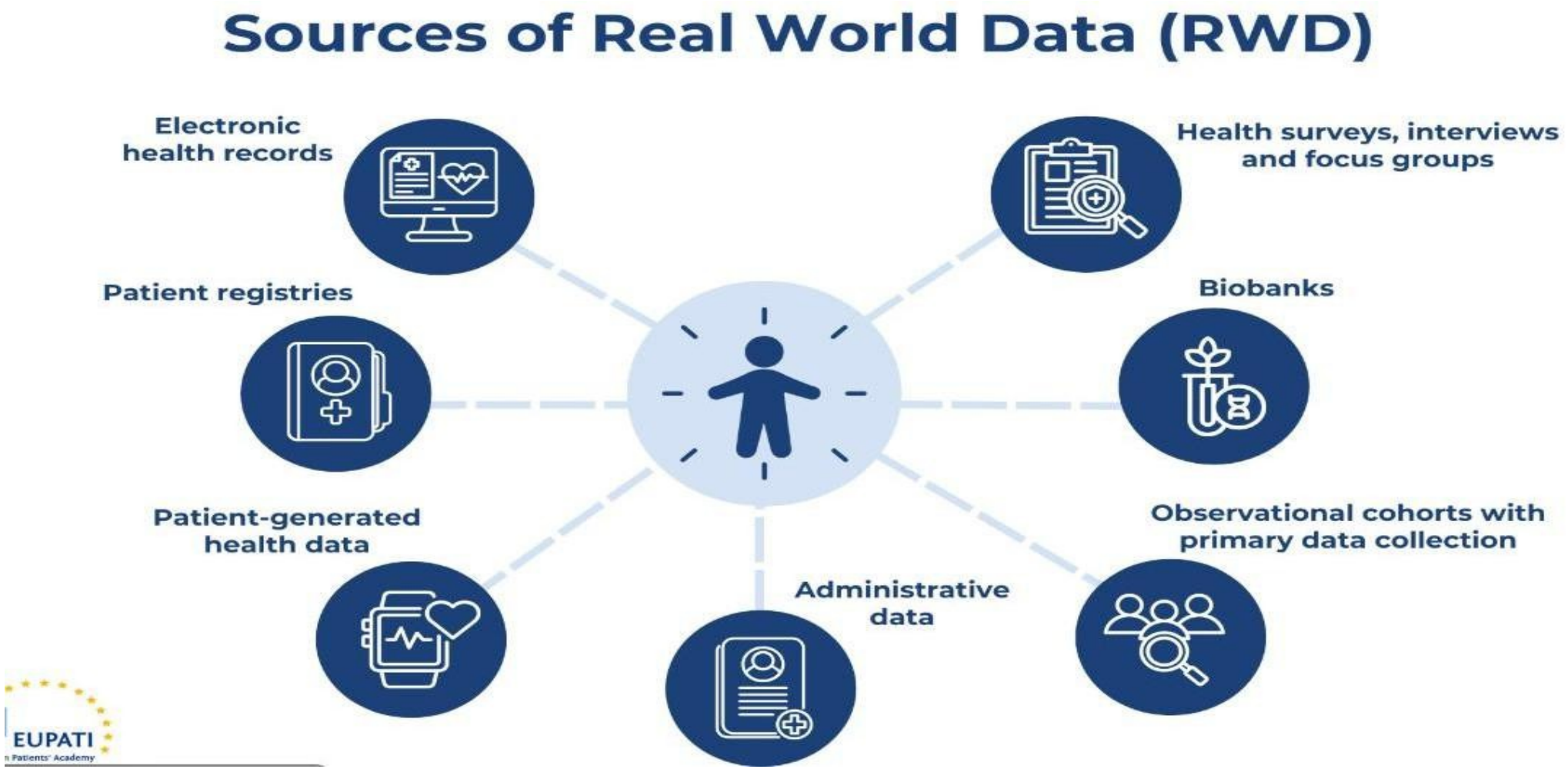
This slide covers the different phases of research trial for the testing of new medicine for human consumption. It also provides information about the number of drug dose variations tested in each step to find the optimum chemical composition of the drug.

DRUG SCREENING DEVELOPMENT AND APPROVAL PROCESS

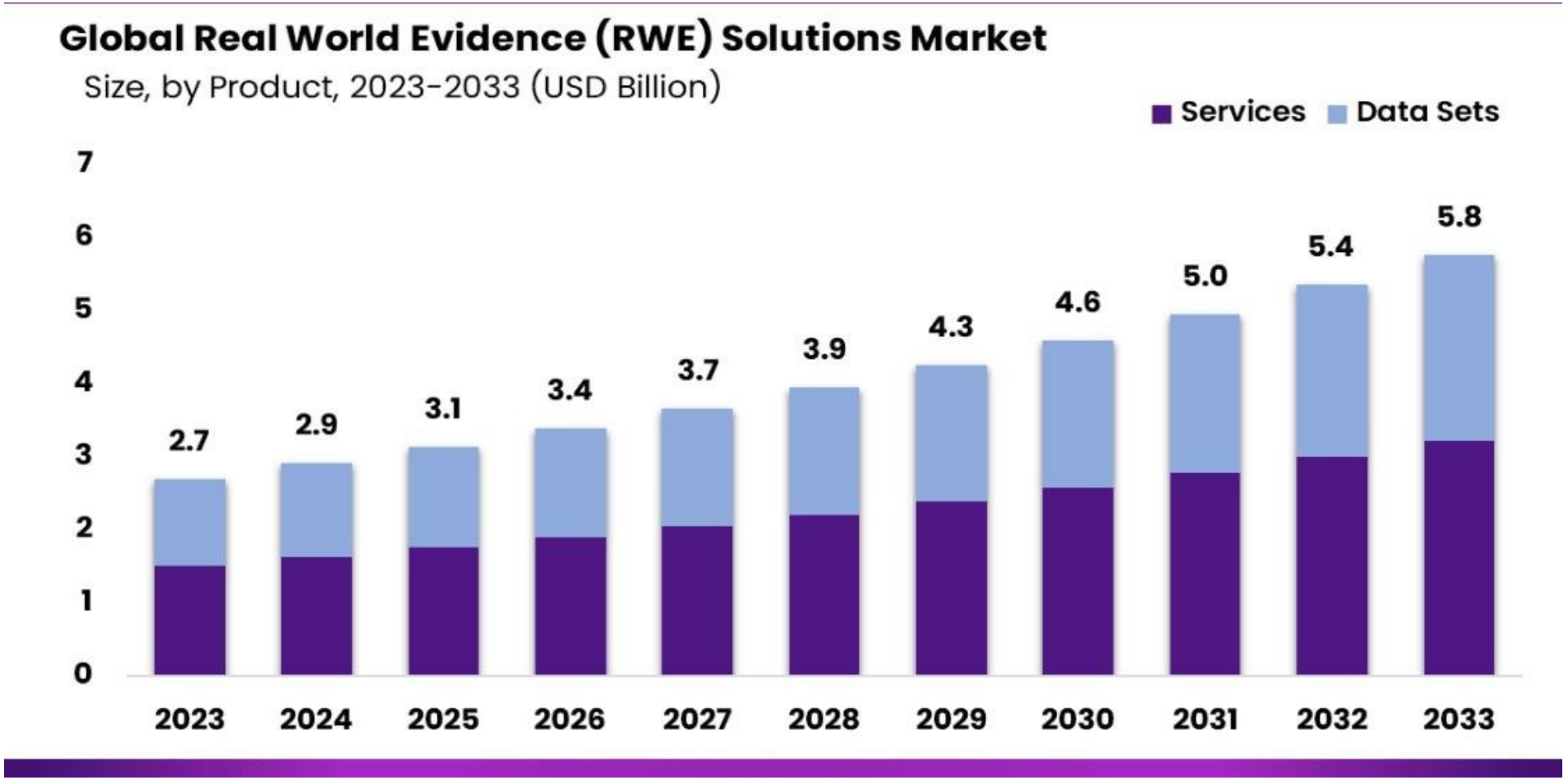
DRUG DEVELOPMENT SOURCES



SOURCES OF REAL WORLD DATA IN DRUG SCREENING PROCESS



GLOBAL MARKET DEVELOPMENT IN DRUG SCREENING PROCESS



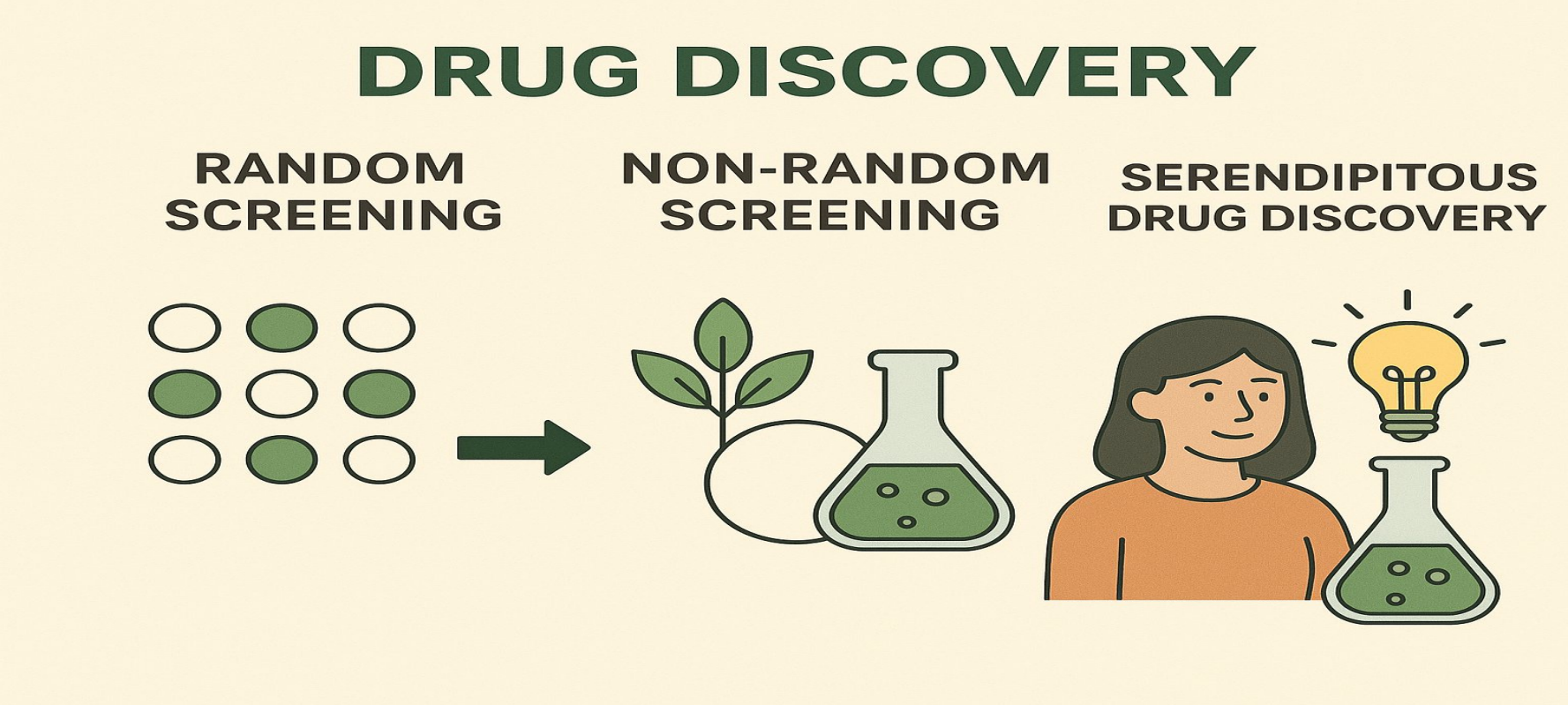
STUDY OF PHARMACOVIGILANCE IN DRUG DISCOVERY AND DRUG SCREENING PROCESS

ASSESMENTS

Question 1 : Discuss how advances in high-throughput screening (HTS) and target-based screening have affected the role of random screening and serendipity in modern drug discovery.

Question 2: While technology and rational design dominate drug-discovery these days, serendipity remains important.‖ Critically evaluate this statement, using examples and considering strengths and limitations of serendipity.

SUMMARY


DRUG DISCOVERY
RANDOM SCREENING
NON-RANDOM SCREENING
SERENDIPITOUS DRUG DISCOVERY

REFERENCES

- Random screening / untargeted screening: ―DRUG DESIGNING : A REVIEW‖ (PharmaTutor) — includes a section on Random Screening and Non-random Screening.
- Non-random / target-based & phenotypic screening: Wang S., Wang Z., Fang L., Lv Y., Du G. ―Advances of the Target-Based and Phenotypic Screenings and Strategies in Drug Discovery.‖ *International Journal of Drug Discovery & Pharmacology*. 2022;1(1). doi:10.53941/ijddp.v1i1.199.
- Serendipitous drug discovery: Ban, Thomas A. ―The role of serendipity in drug discovery.‖ *Dialogues in Clinical Neuroscience*. 2006;8(3):335–344. doi:10.31887/DCNS.2006.8.3/tban.


Thank You!