



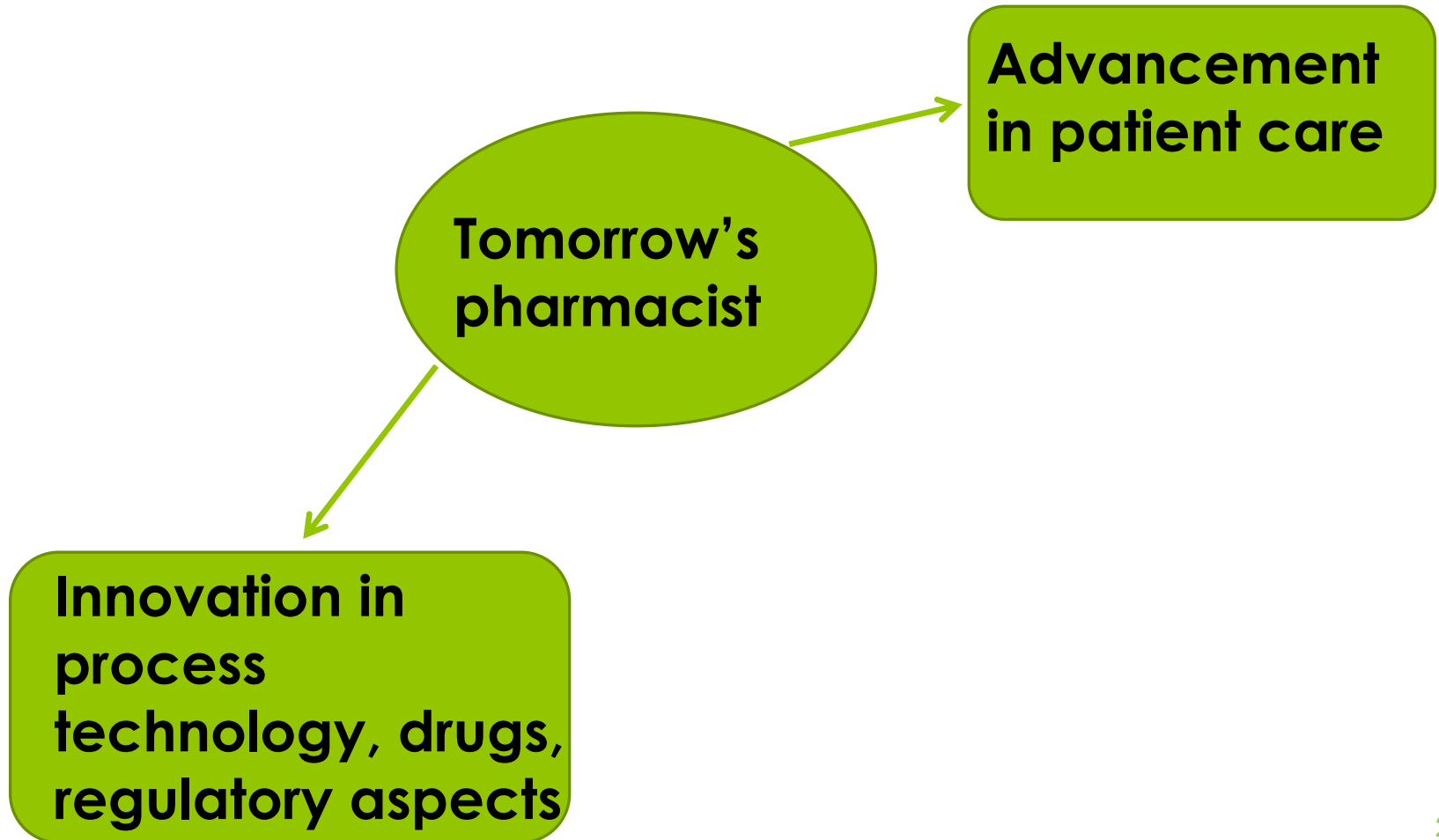
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Student perceptions of drugs that changed the world

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The challenge for pharmacy education



Rising to the challenge

**Discipline
integration**



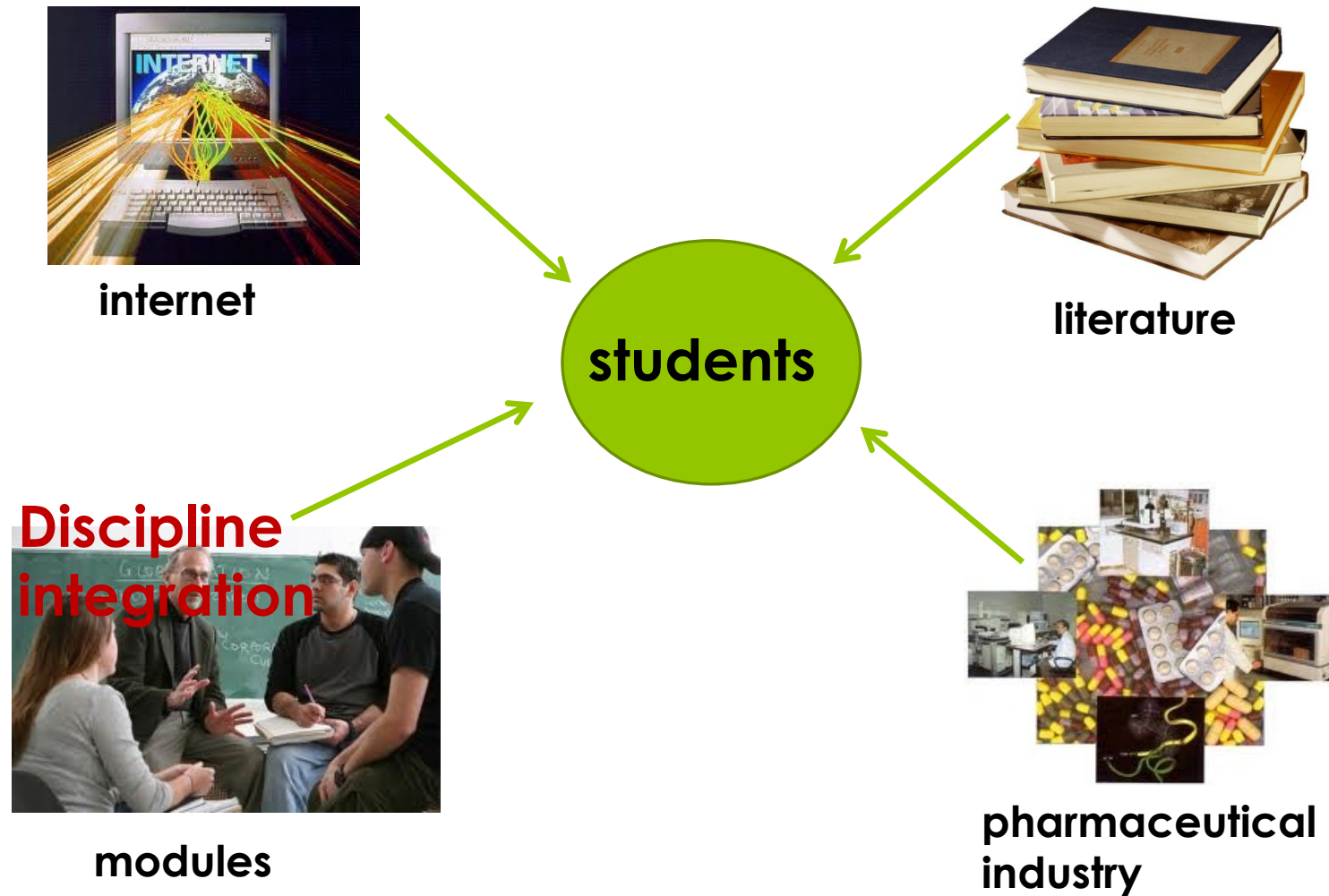
**Need to connect, combine,
analyse and integrate
information that is freely
available**

Discipline integration

- **Makes pharmacy education consistent with contemporary demands**
- **Brings clinical relevance to basic sciences**
- **Develops students' intellectual strengths**
- **Prepares students for interprofessional practice**

Ratka A. Integration as a paramount educational strategy in academic pharmacy. *American Journal of Pharmaceutical Education* 2012; 76(2): article 19

Student perception



- **To present formulary processes to pharmacy students**
- **To identify student perception of drugs that had a major impact in therapeutics**
- **To develop a 'Fantasy Formulary'**

- 90 minute session where the historical evolution of formularies was put forward
- informal



Babylon	3000BC	slab	cuneiform writing
Egyptians	1500BC	papyrus	list of medicines
Chinese	8th c	paper	State Formulary Guang Ti Fang
Arabs	8th c	paper	Al-Aqrabadin al-Kabir
Florence	1497	local	Obligatory Formulary Novo Receptario
England	1618	country	Pharmacopoeia Londinensis



Dublin Pharmacopoeia

Dublin, Second city of the British Empire



“better to learn the use of a few basic substances well than a number of medicines poorly.”

William H. Beierwaltes

Chairman Pharmacy & Therapeutics Committee

Foreward In: Don E. Francke ed. Hospital Formulary of

Selected Drugs, Illinois: Hamilton Press, 1954: vii.

- **Students were split into 6 groups, each group representing students from different years of the course**
- **Each group had to list the top Three drugs which in their opinion changed the world**



discussion

Formulary System

- **Review**
- **Approval**
- **Liaison between policy makers, funding agency and clinicians**

“Fantasy Formulary”

Top three drugs that ‘changed or are going to change the world’

- **Characteristics**
- **Why**



Change the world

Results

- 80 pharmacy students
- 20 males, 60 females

aspirin

thalidomide

COCs

aspirin

propofol

zolendronic acid

simvastatin

aspirin

penicillin

cisplatin

simvastatin

penicillin

penicillin

morphine

insulin

aspirin

penicillin

warfarin



*Fantasy
Formulary*

Penicillins

Aspirin

Thalidomide

Insulin

COCs

- **Penicillin: infective disorders**
- **Aspirin: analgesia and cardiovascular prophylaxis**
- **Thalidomide experience in 1960s started off the processes for pharmaceutical regulatory aspects**
- **Insulin: diabetes**
- **COCs: women's health**

Students

- addressed innovation
- applied intellectual strength
- used integration of knowledge
- supported to connect information from different sources

Teacher

- student perception
- integrating disciplines