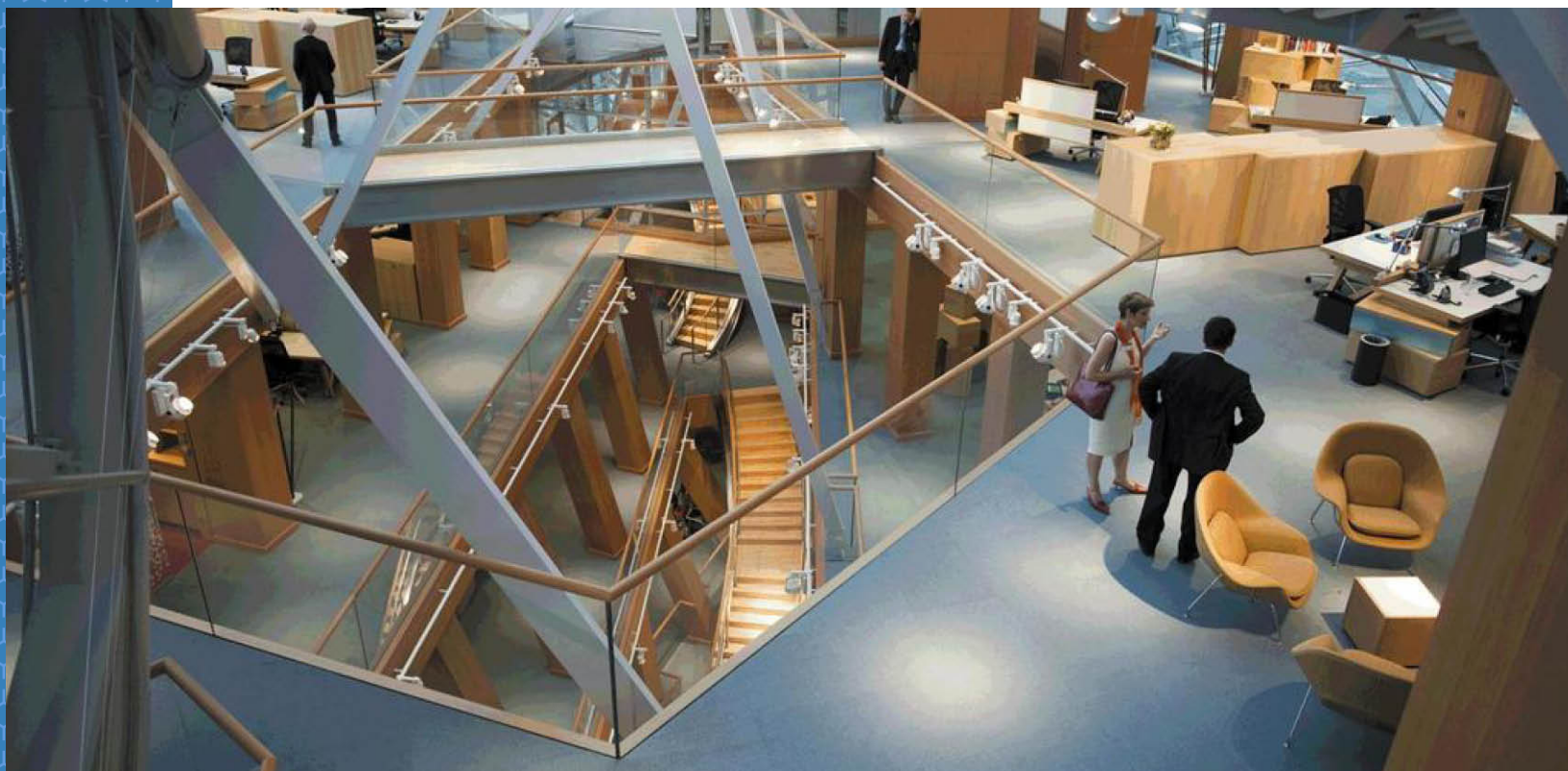




Role of big data analytics in drug discovery

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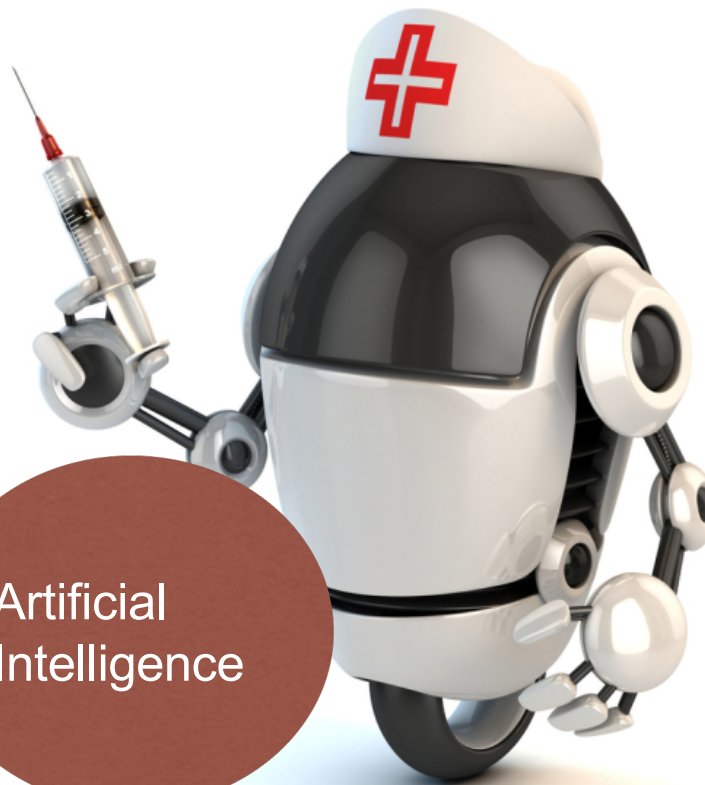


How does
a Doctor
decide on
treatment?



**Medical Education,
Books, Literature,
Experience**

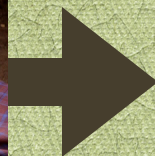
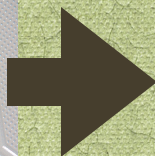
Artificial
Intelligence



Drug Discovery Process

Understand Disease pathology
Identify potential targets (Gene, receptors, enzyme etc)
Drugs modifying targets
Drug development

Library (Drug targets)
Possible actions in body
Identify disease associations
Drug development



Intervention



Recovery



Death

Understanding Natural history of disease



Experiments



Historical Knowledge



Serendipity

Chronic diseases

Heart disease	Cancer	Stroke	Chronic lung disease
Pneumonia	Diabetes	Psychiatric illness	Chronic kidney disease Chronic liver disease

ean Labeling
 ing to
 al Rule

directed with other sun
 measures, this product
 he risk of skin cancer
 skin aging, as well as
 rent sunburn.

icts labeled with both
 spectrum" AND SPF15 or
 ve been shown to
 these benefits.

Drug Facts	
Active Ingredients Avobenzone 3% Homosalate 10% Octyl methoxycinnamate 7.5%	Pu Su
Uses • helps prevent sunburn • if used as directed with other sun protection measures (see Directions) decreases the risk of skin cancer and early skin aging caused by UV radiation	
Warnings For external use only Do not use on damaged or broken skin When using this product keep out of eyes. Rinse with water to remove. Stop use and ask a doctor if rash occurs. Keep out of reach of children. If product is swallowed, get medical help or contact a Poison Control Center right away.	
Directions • apply liberally 15 minutes before sun exposure • reapply: • after 40 minutes of swimming or sweating • immediately after towel drying • at least every 2 hours • Sun Protection Measures. Spending time in the sun increases your risk of skin cancer and early skin aging. To decrease this risk, regularly use a sunscreen with a broad spectrum SPF of 15 or higher and other sun protection measures including: • limiting time in the sun, especially from 10 a.m. – 2 p.m. • wearing long-sleeve shirts, pants, hats, and sunglasses • avoiding sunburns in under 6 months: Ask a doctor	
Other Ingredients Water, butylparaben, benzyl alcohol, carbomer, dimethicone, EDTA, jojoba oil, methylparaben, octadecene/MA copolymer, polyglyceryl-3 distearate, phenethyl alcohol, propylparaben, sorbitan isostearate, sorbitol, stearic acid, tocopherol (vitamin E), triethanolamine, water	
Other information • protect this product from excessive heat and direct sun	
Questions or comments? Call toll free 1-800-XXX-XXXX	

Defining the label



Positioning

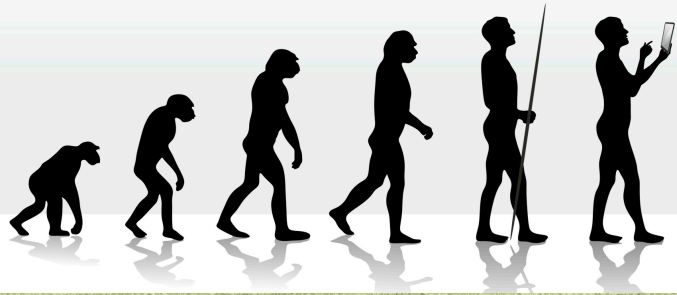


long term safety
efficacy



Limitations

Entire spectrum of disease



Weaker signals get missed



Personalisation of treatment



Big Data- Machine learning- Artificial Intelligence

➤ *Better understand the Natural history of
disease*

➤ *Amplify the weaker signals*

➤ *Find linkages to various diseases and
demographic parameters*

Global Drug Development



Beginning of a new era of Medicine



Thank you