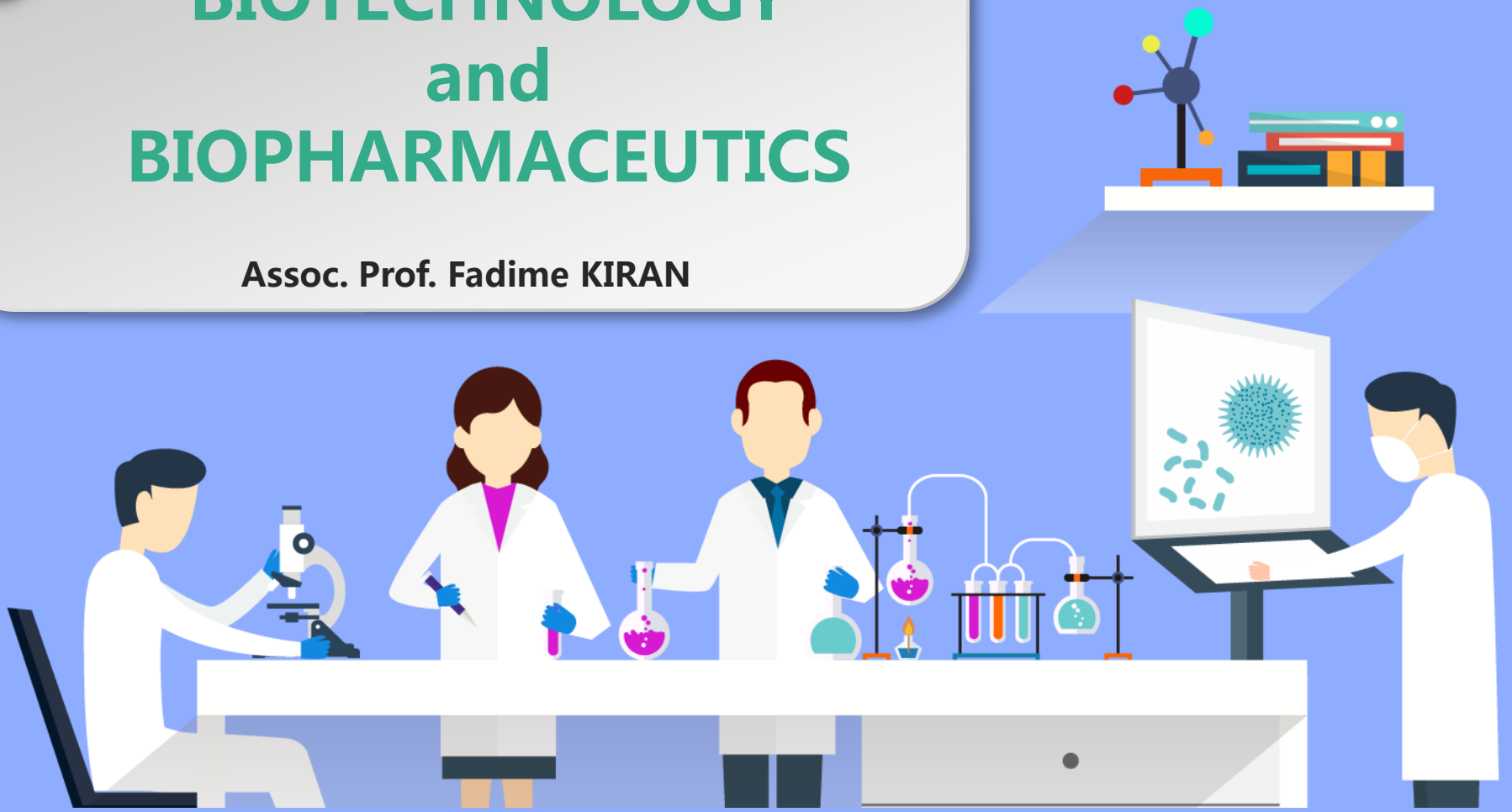
BIOTECHNOLOGY and BIOPHARMACEUTICS

Assoc. Prof. Fadime KIRAN

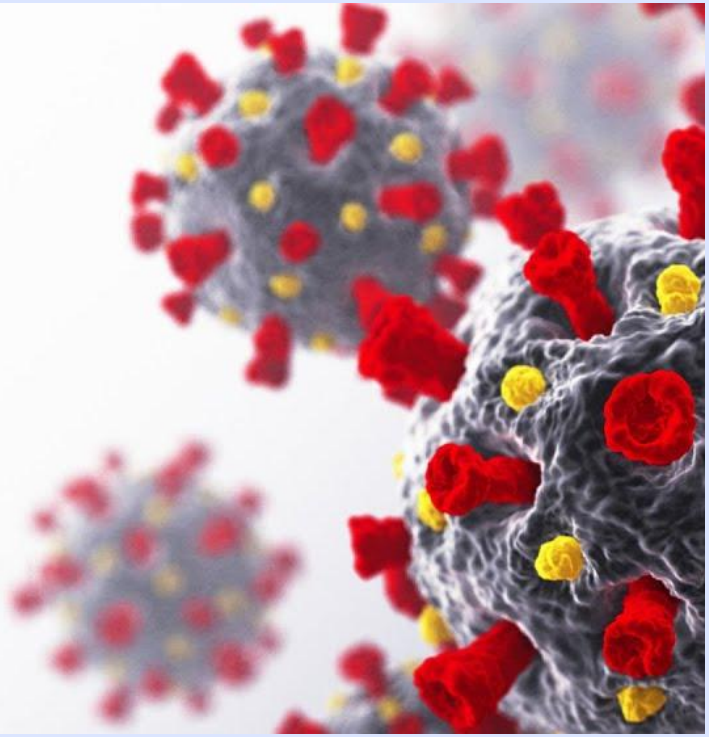


02

- Introduction to Biotechnology
- Introduction to Biopharmaceutics
- Market Trends
- Pharmacoeconomy


CORONA
VIRUS

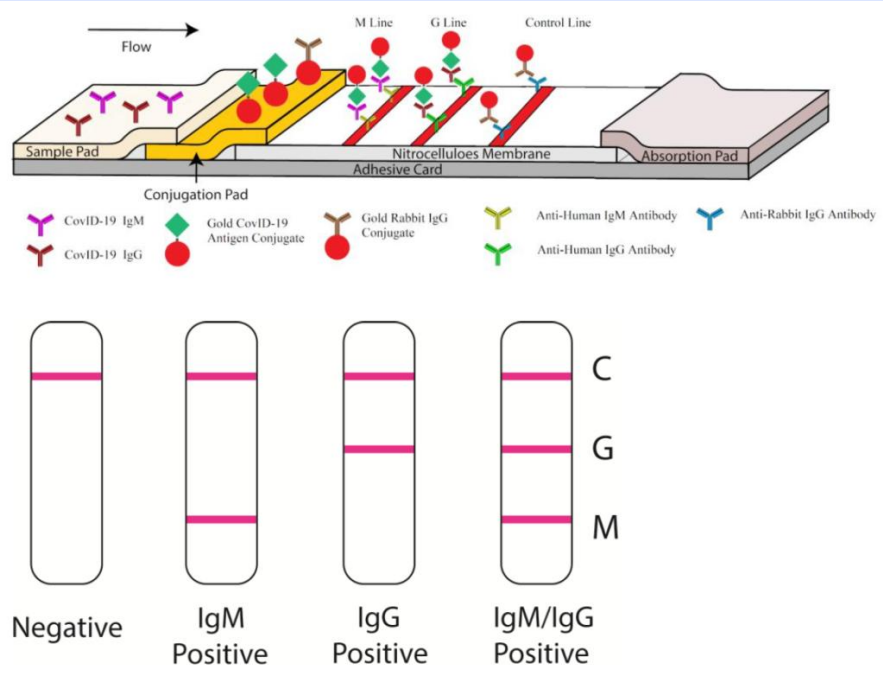
Covid-19



Imagine the year is 2021... and as a society, we have;

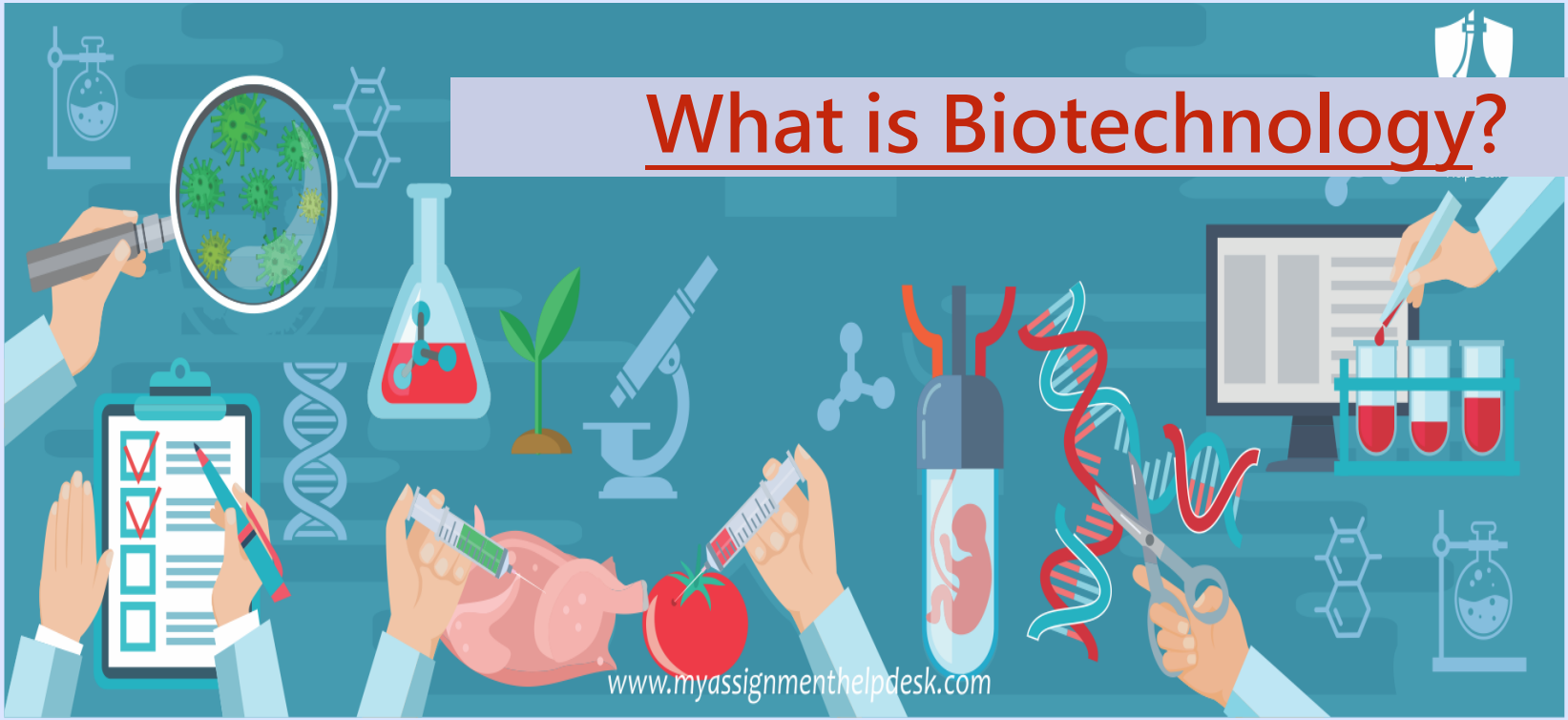
•a COVID-19 vaccine that is safe (e.g. less than 0.0001% for adverse incidents) and effective for all variants of the virus and its relatives…

•a rapid COVID-19 test that has high specificity and sensitivity and gives results within hours…



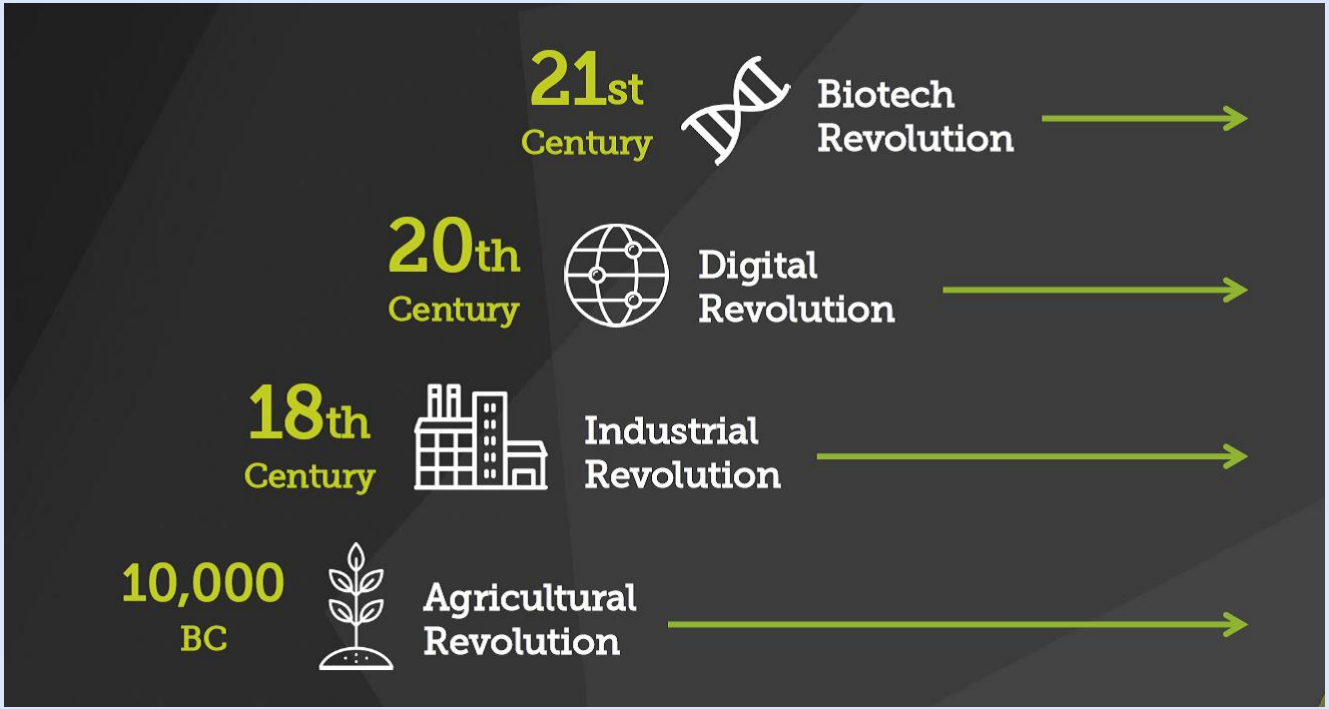
- and low-cost treatment for COVID-19, ensuring the survival of most everyone who gets infected.

What is Biotechnology?

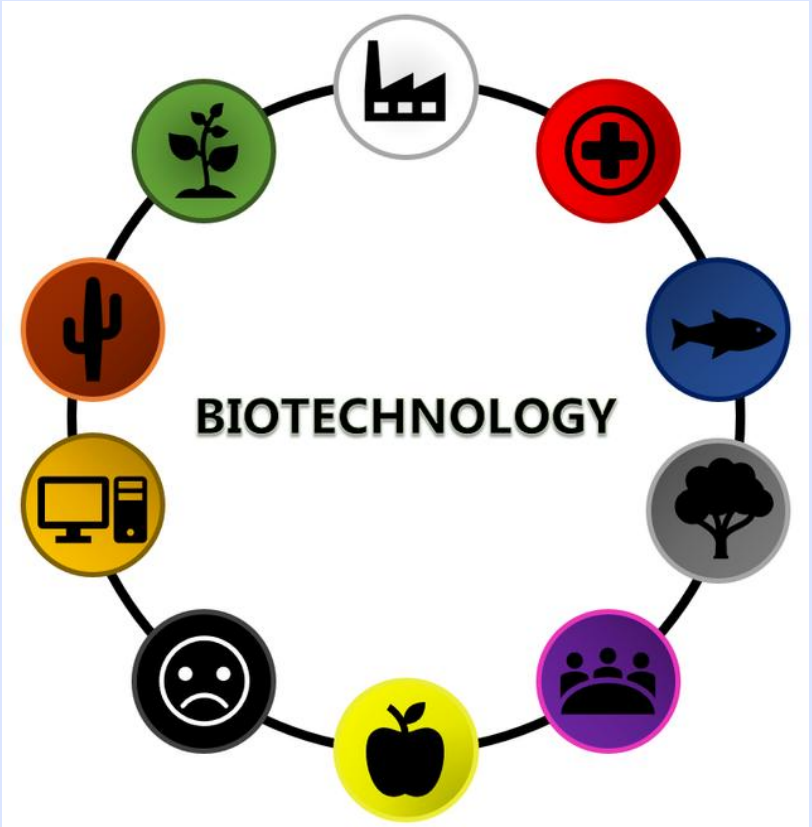


- BIO (life)+TECHNO + LOGY (study of or essence)
  Literally: Study of tools from living things…

Biotechnology Timeline



Branches Rainbow code of Biotechnology



Four Colors of BIOTECHNOLOGY

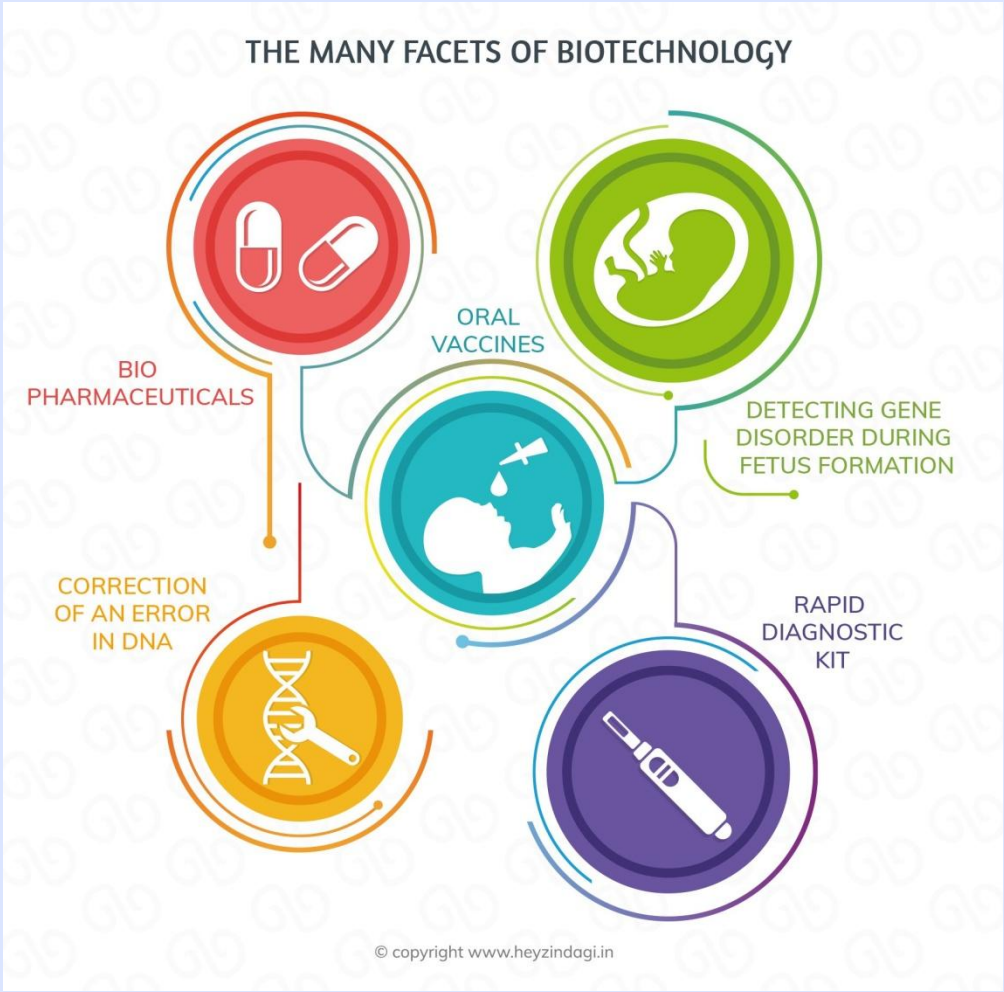
RED *Health, Medical, Diagnostics*

WHITE *Gene-based Bioindustries*

BLUE *Aquaculture, Coastal Marine Biotech*

GREEN *Agricultural, Environmental Biotechnology*


Red
Biotechnology
HEALTH
CARE


THE MANY FACETS OF BIOTECHNOLOGY
BIO PHARMACEUTICALS
ORAL VACCINES
DETECTING GENE DISORDER DURING FETUS FORMATION
CORRECTION OF AN ERROR IN DNA
RAPID DIAGNOSTIC KIT
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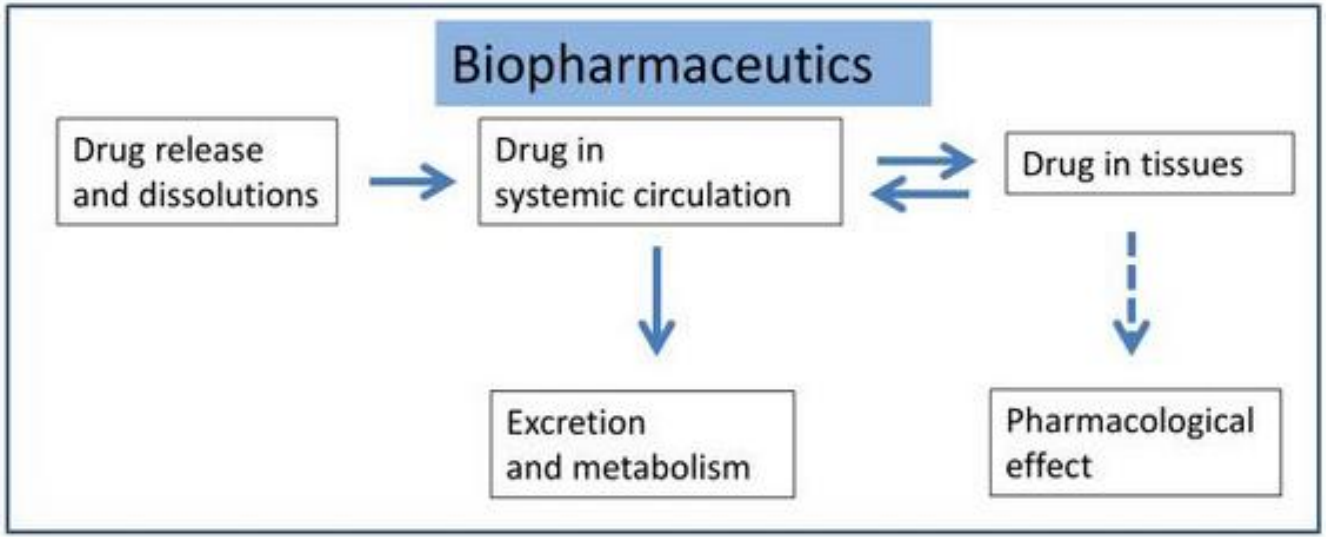
Biopharmaceuticals

- Biopharmaceuticals are the drugs which are produced using biotechnology. They include proteins (including antibodies), nucleic acids and living microorganisms like virus and bacteria where their virulence is reduced by the process of attenuation.

Biopharmaceutics

- The study of the chemical and physical properties of drugs, their components, and their activities in living organisms.



CLASSIFICATION OF BIOPHARMACEUTICALS

1. Hematopoietic Growth Factors
2. Monoclonal Antibodies
3. Vaccines
4. Thrombolytic Agent
5. Interferon
6. Hormones
7. Blood Factor

ANY
QUESTION?

fkiran@science.ankara.edu.tr


• See you next week...
Thank you...