Main branches of biology



Dr Zaid O Ibraheem

Zoology -the study of animals, including classification, physiology, development, evolution and behavior

Ethology – the study of animal behaviour

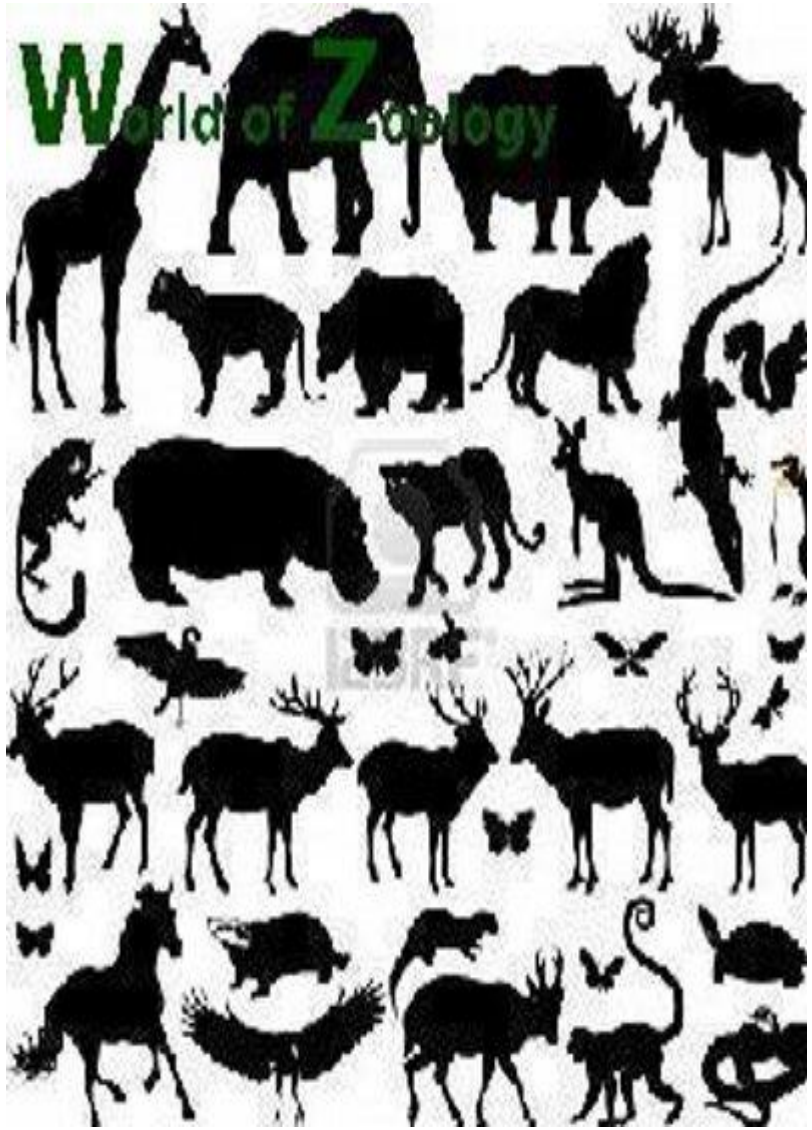
Entomology – the study of insects

Herpetology – the study of reptiles and amphibians

Ichthyology – the study of fish

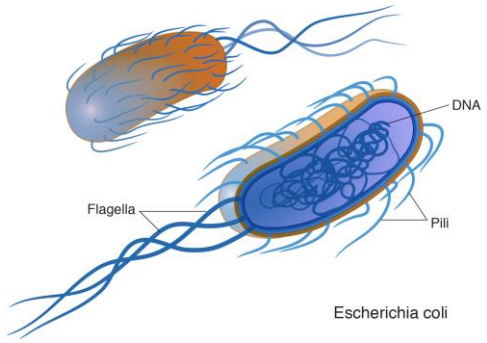
Mammalogy – the study of mammals

Ornithology – the study of birds

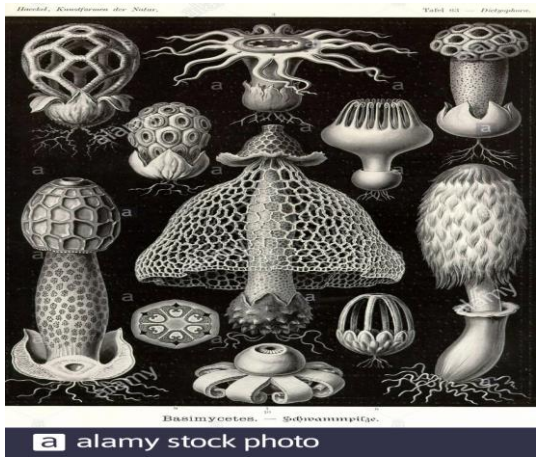


Microbiology – the study of microscopic organisms (microorganisms) and their interactions with other living things

Bacteriology – the study of bacteria



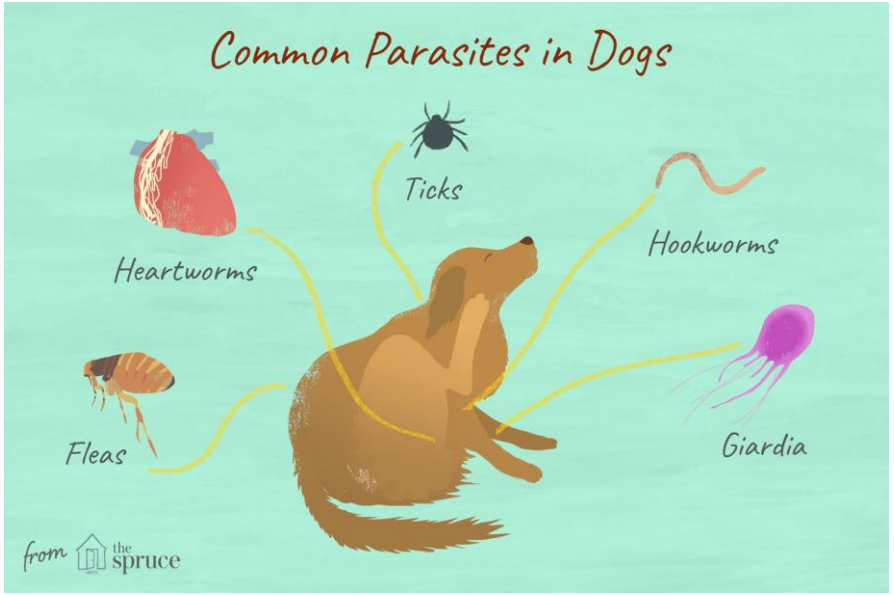
Mycology –علم الفطريات the study of fungi



Virology –علم الفايروسات the study of viruses and some other virus-like agents

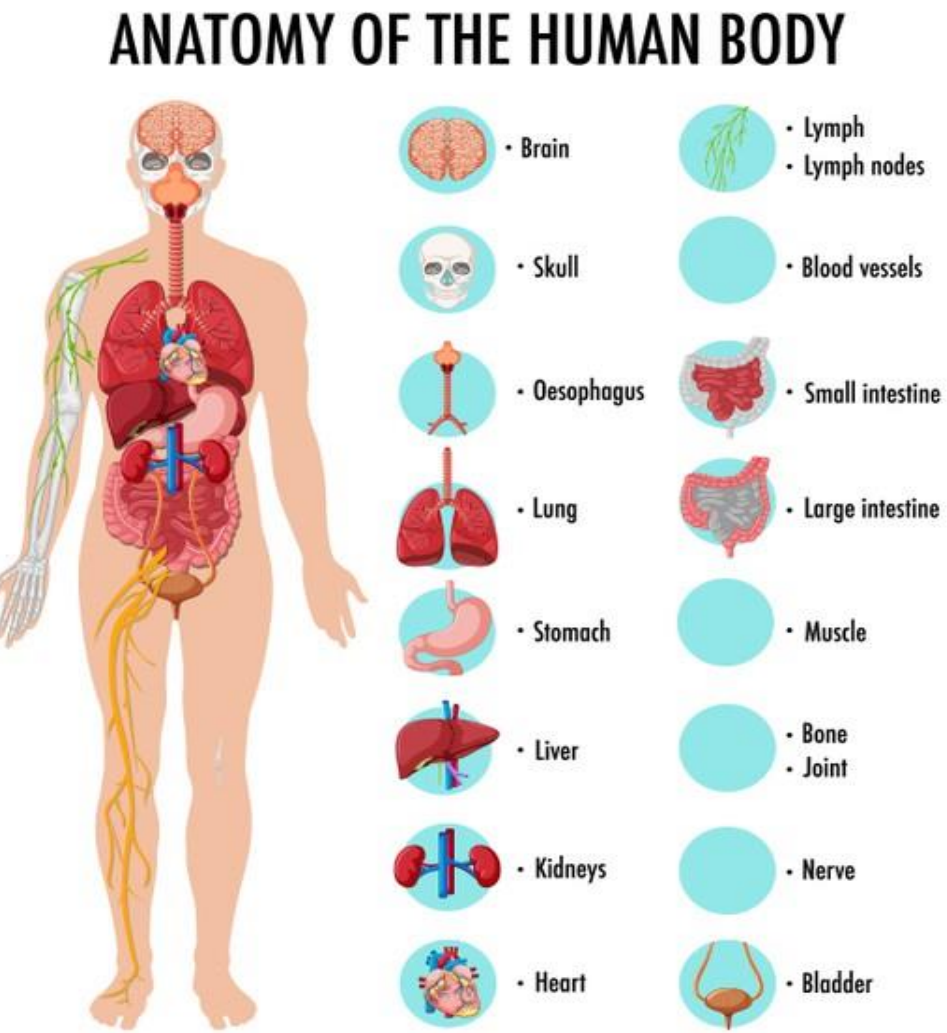


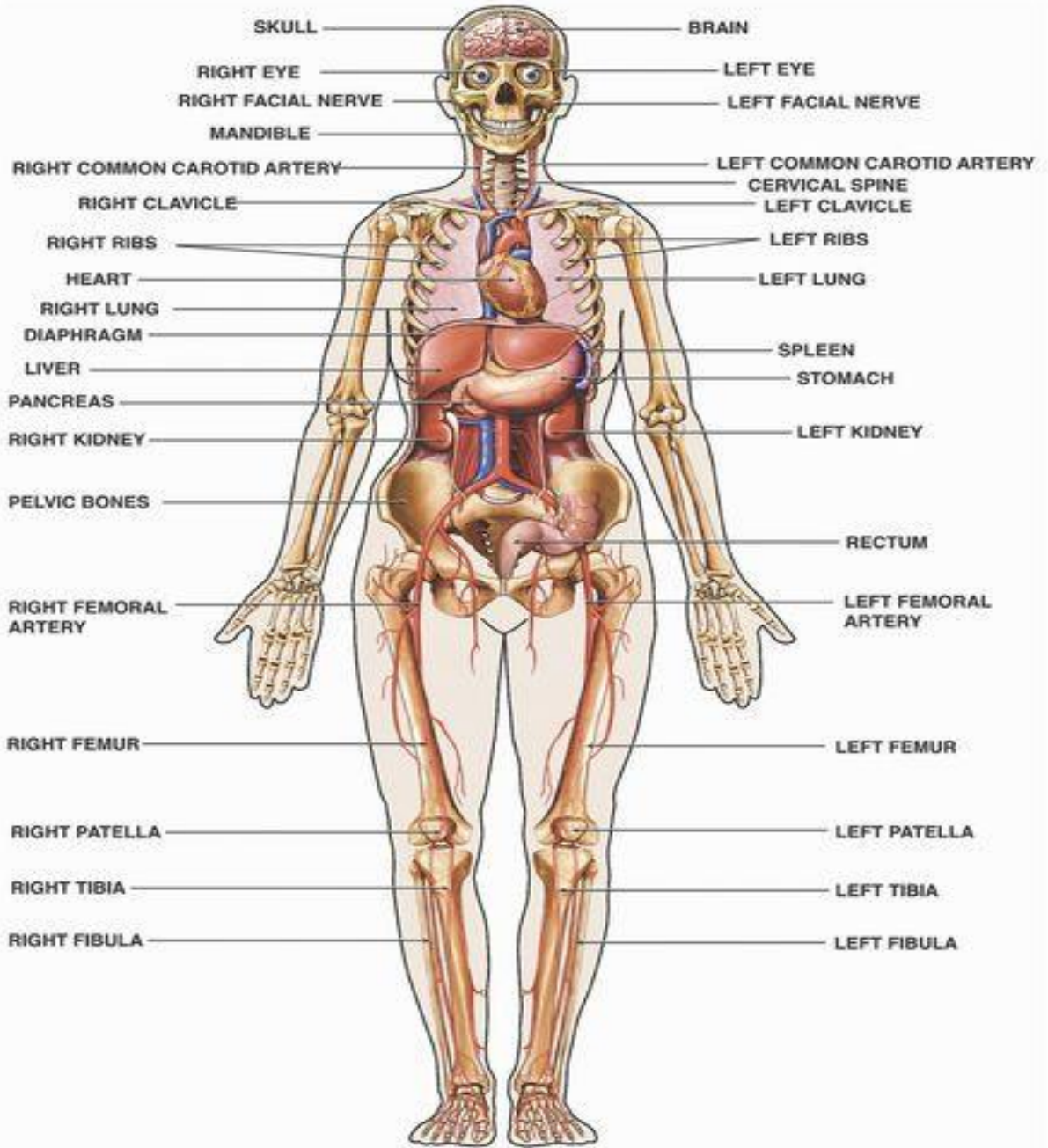
Parasitology علم الطفيليات– the study of parasites
Parasites = unicellular organisms produce infection in human



Sub Branches of biology

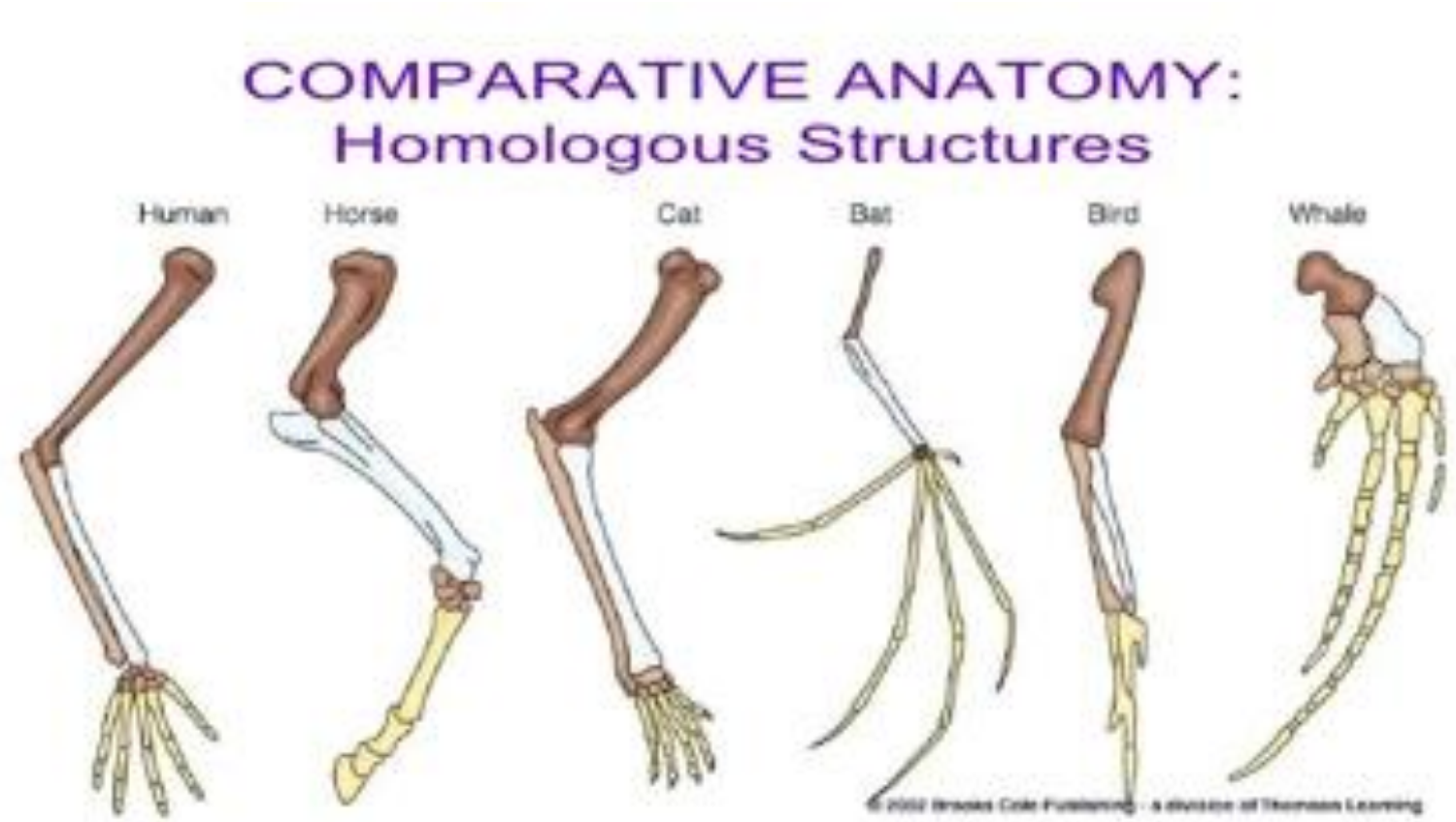
Anatomy – the study of organisms' structures



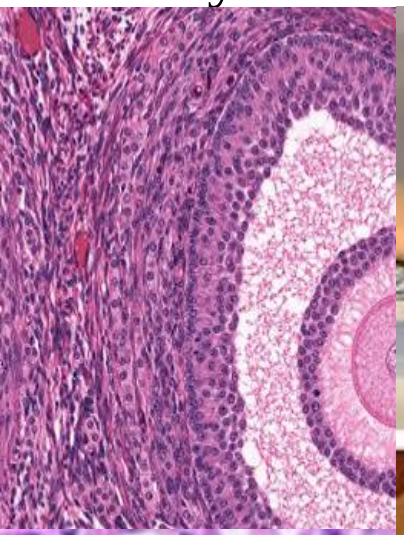


Comparative anatomy – the study of evolution of species through similarities and differences in their anatomy

علم يدرس التطور في اجناس الكائنات الحيه حيث يدرس اوجه التشابه و الاختلاف في التراكيب المختلفه



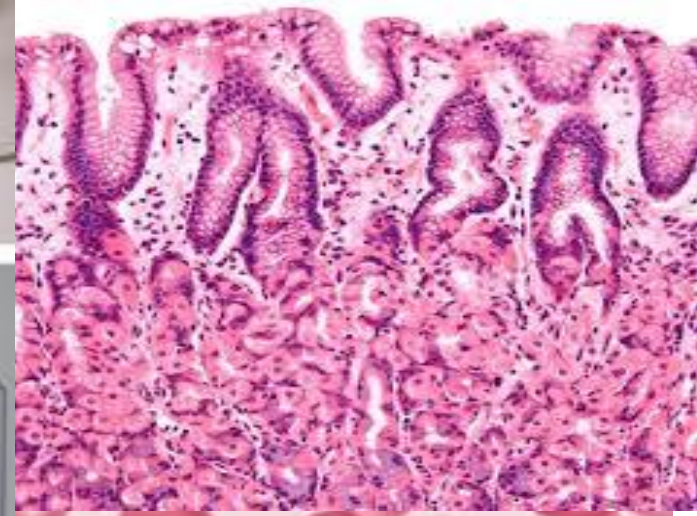
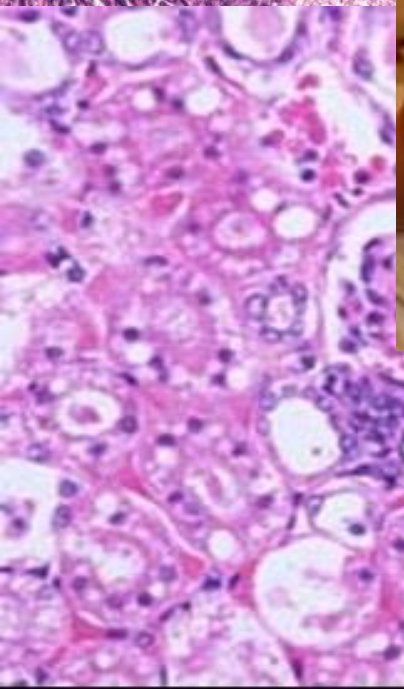
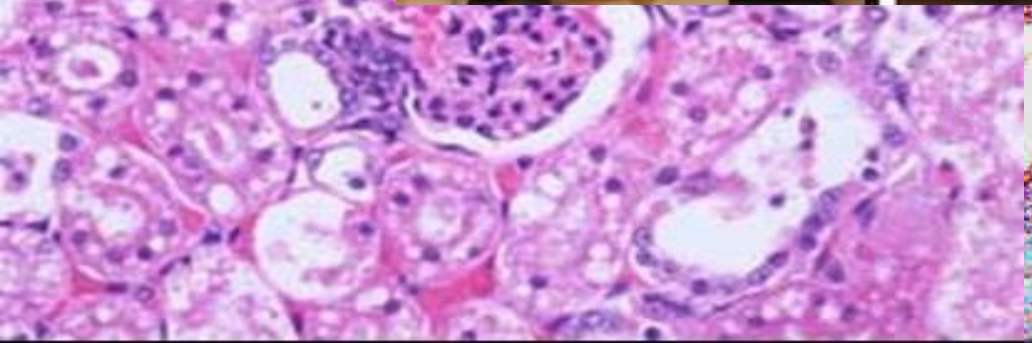
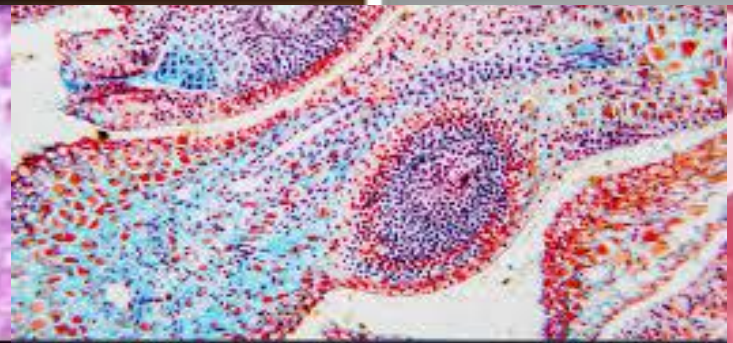
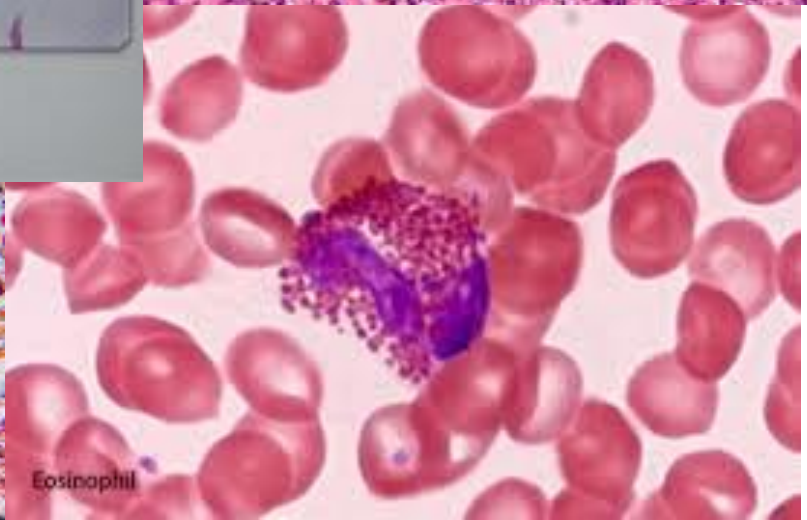
Histology – علم الانسجهThe study of tissues, a microscopic branch of anatomy. It is the microscopic counterpart of anatomy







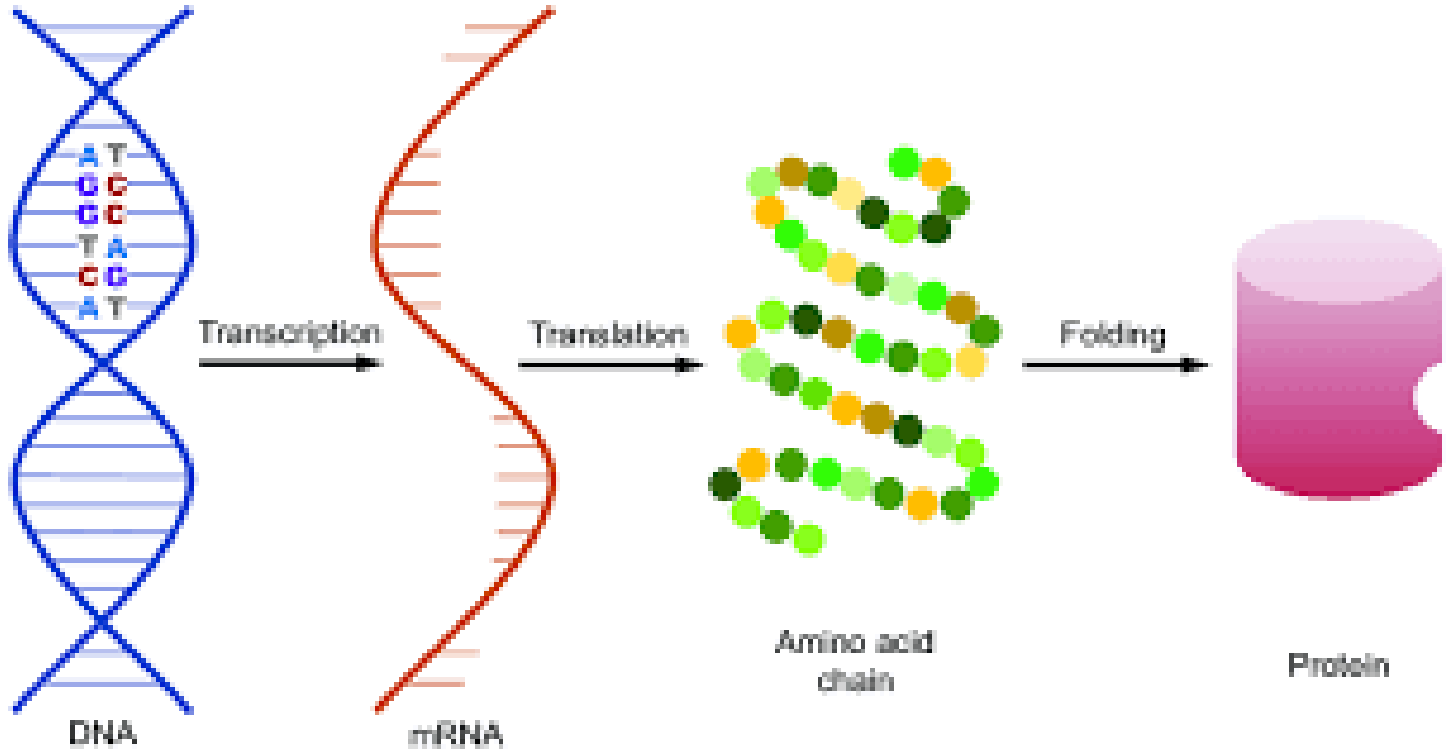


Biochemistry – the study of the chemical reactions required for life to exist and function, usually a focus on the cellular level. It studies the reactions that occur at both intracellular and extracellular levels



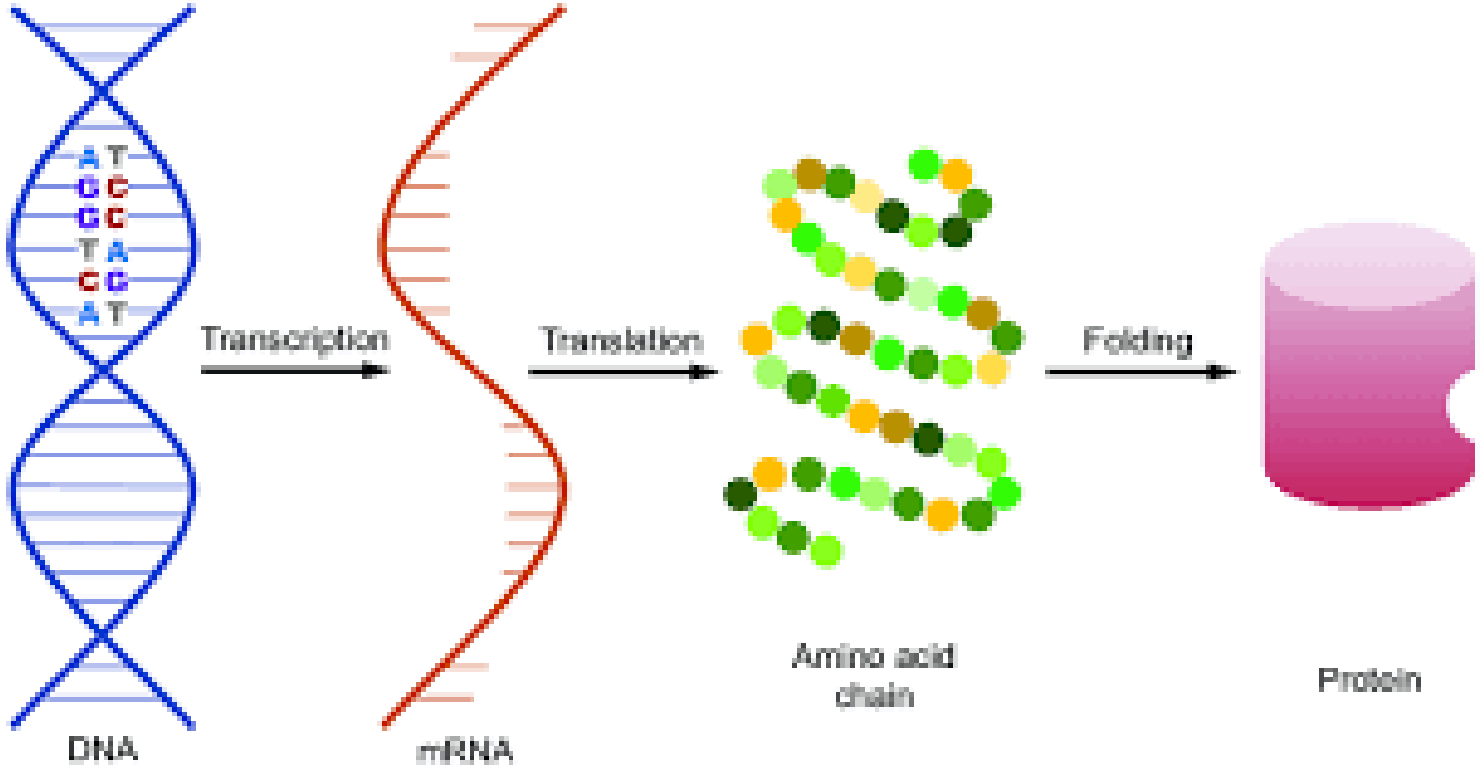
Molecular biology – the study of biology and biological functions at the molecular level, some cross over with biochemistry.



Biomedicine = study of health and disease



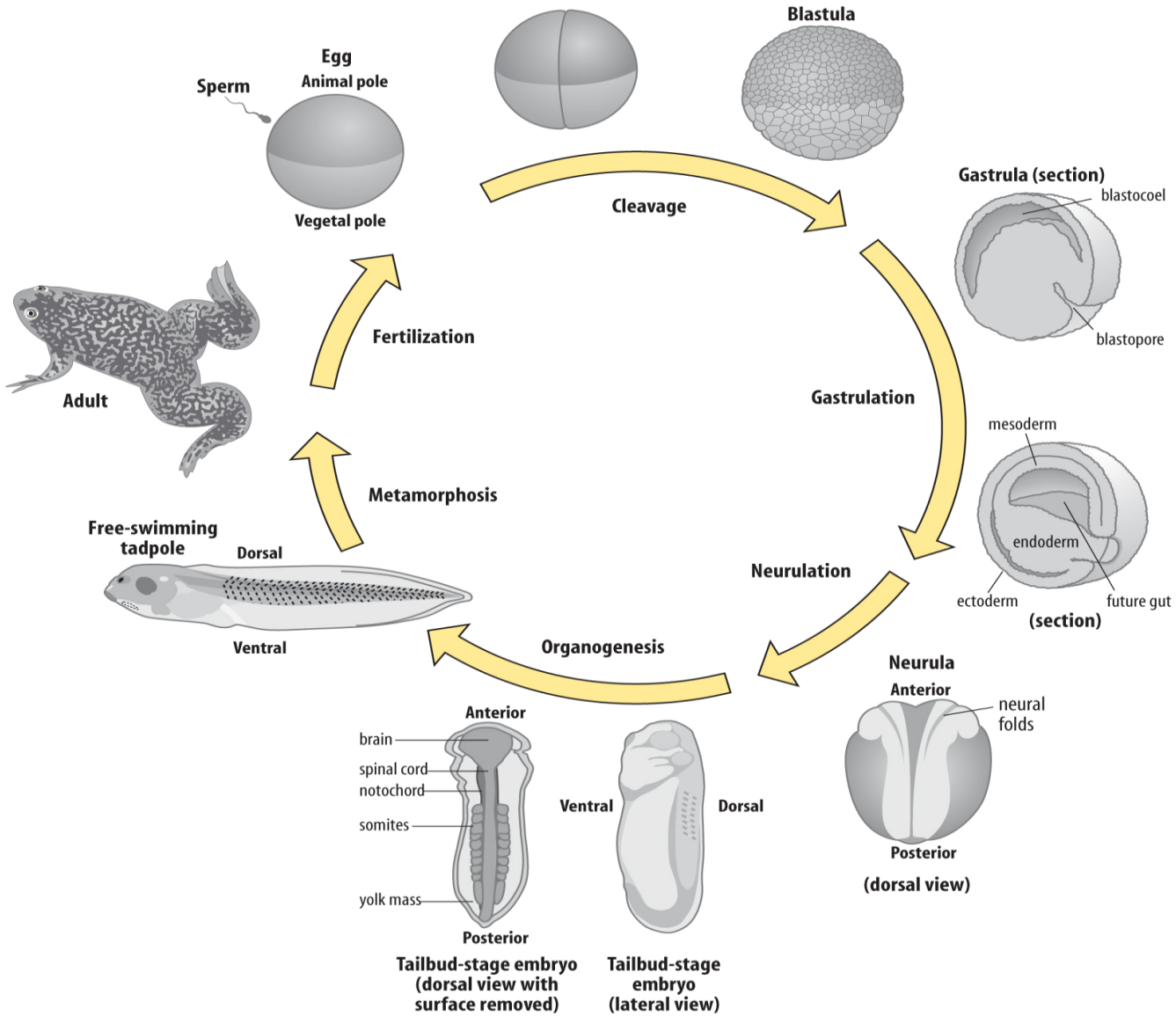
Molecular biology – the study of biology and biological functions at the molecular level, some cross over with biochemistry



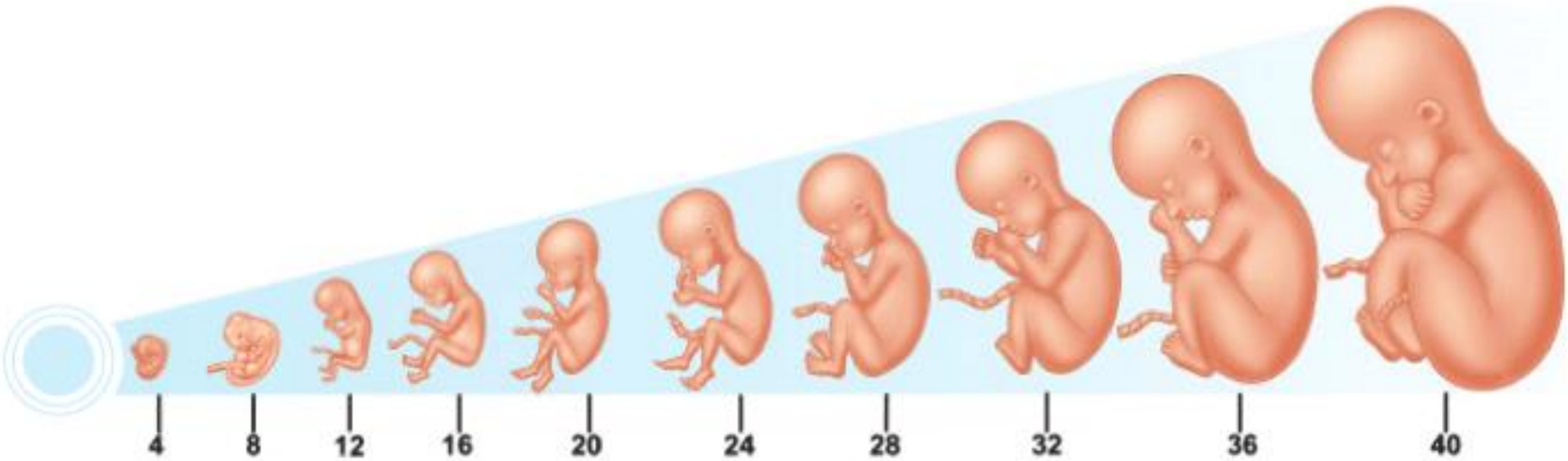
Developmental biology – the study of the processes through which an organism forms, from zygote to full structure.

Embryology علم الاجنه – the study of the development of the embryo (from fecundation to birth)

Gerontology – علم الشيخوخهthe study of ageing processes



EMBRYOLOGY



Embryology is the branch of biology which deals with the principles of the embryos from the stage of ovum fertilization till their development. This includes the developmental process of a single cell, embryo to a baby within an average of 266 days or 9 months. However, the term Embryology usually refers to the parental development of embryo and fetus.

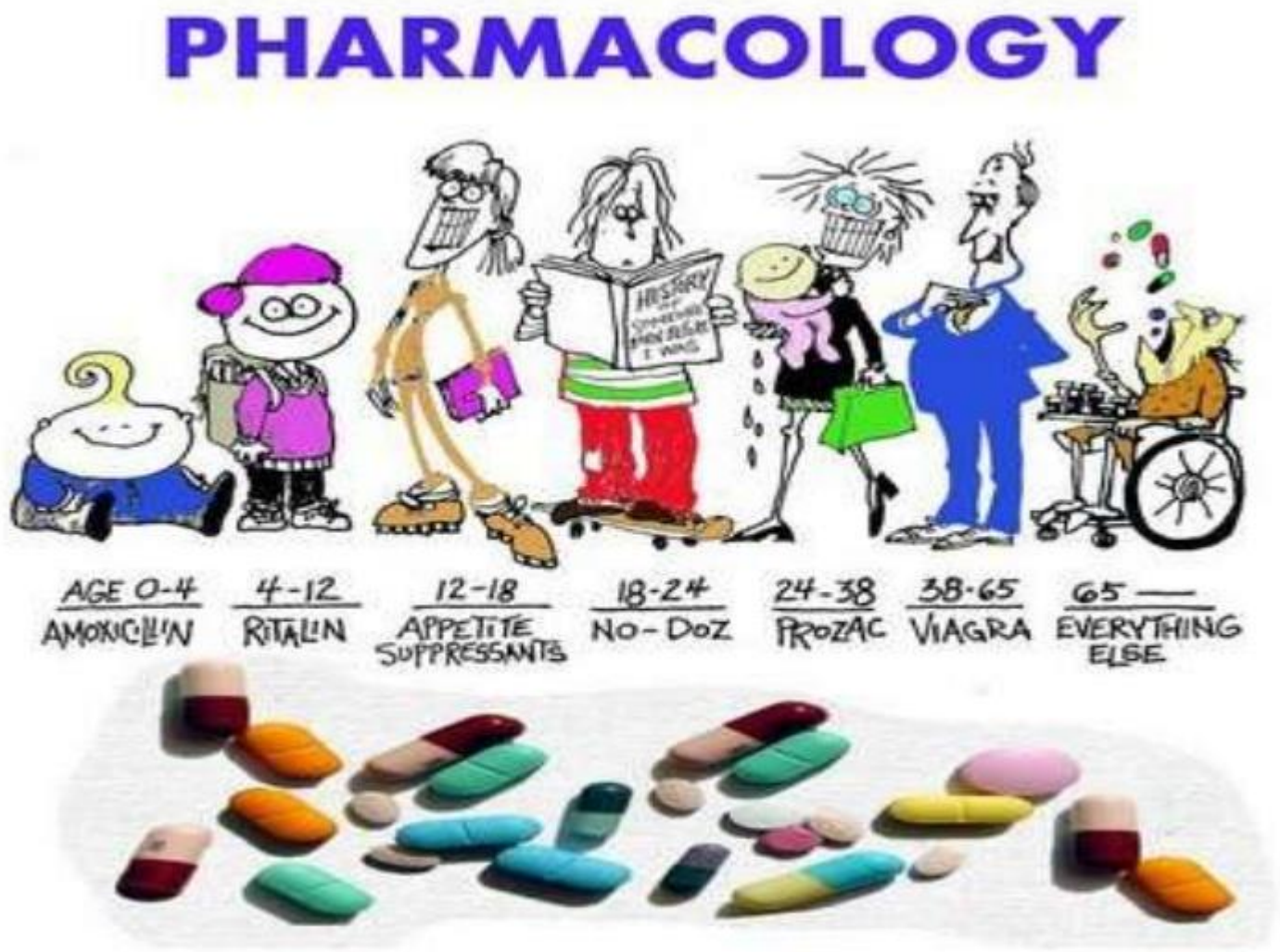
Gerontology = Science deals with the aging process



Ecology – the study of the interactions of living organisms with one another and with the non-living elements of their environment



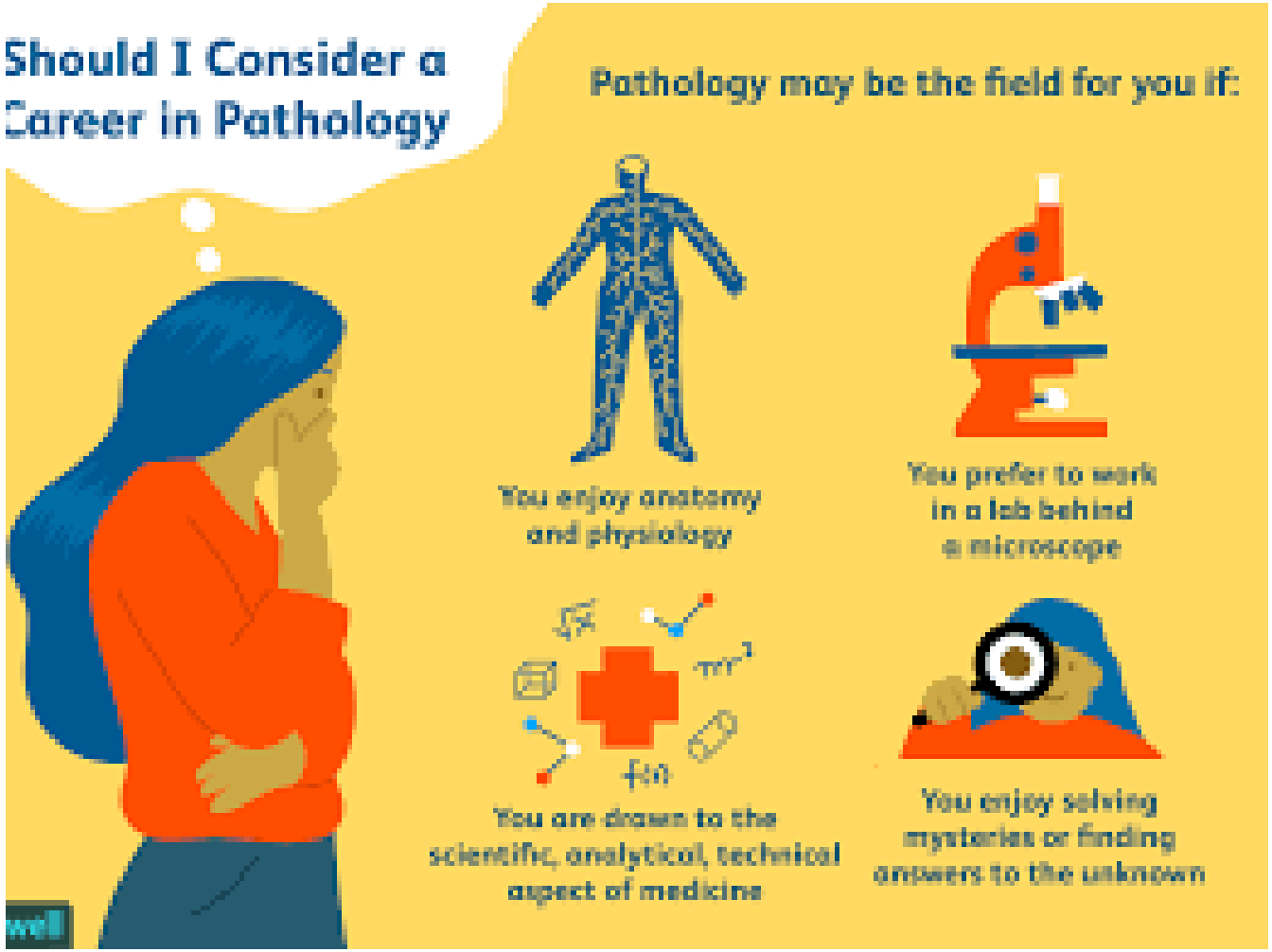
Pharmacology – the study of the interactions between drugs and organisms



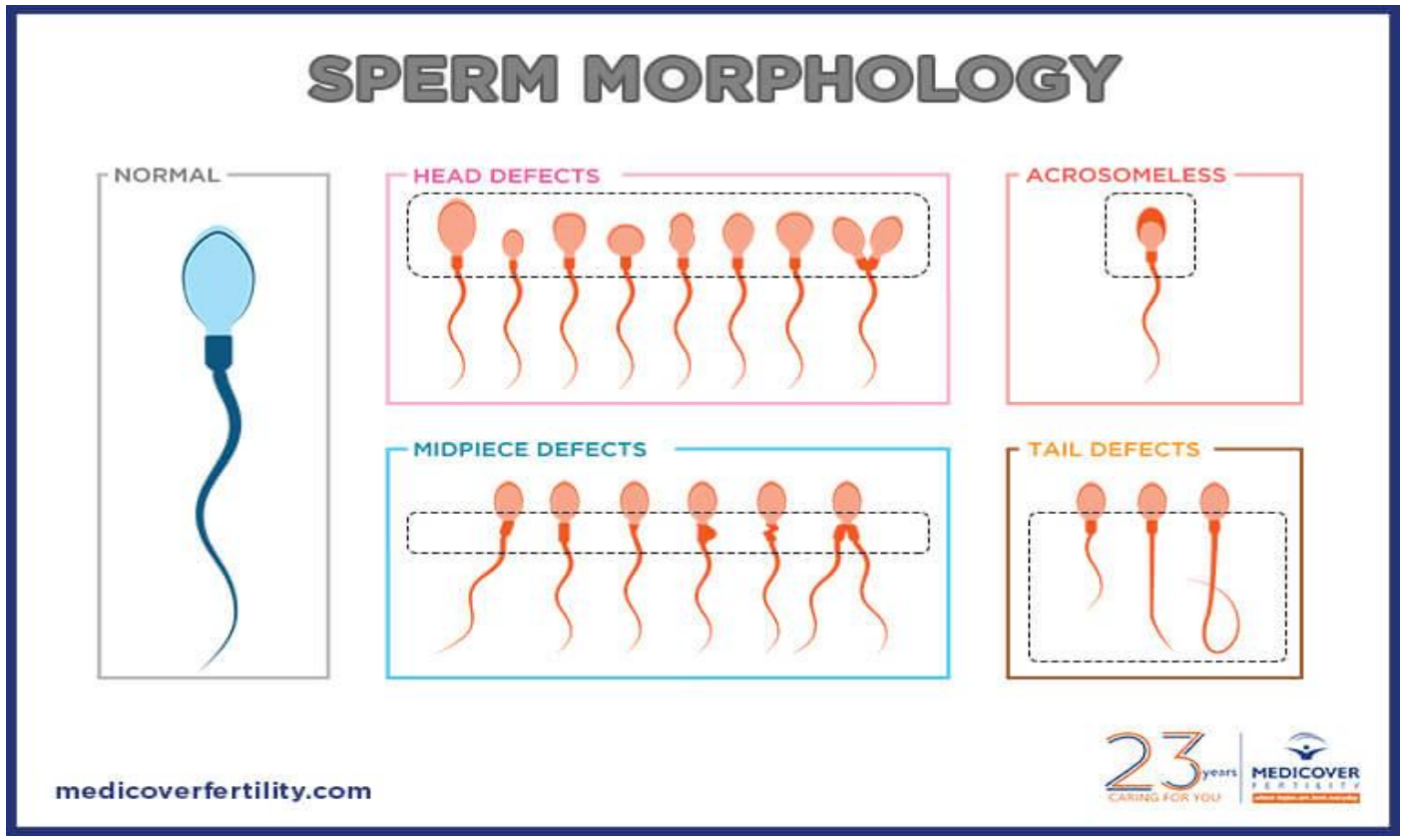
Physiology – the study of the functions and mechanisms occurring in living organisms

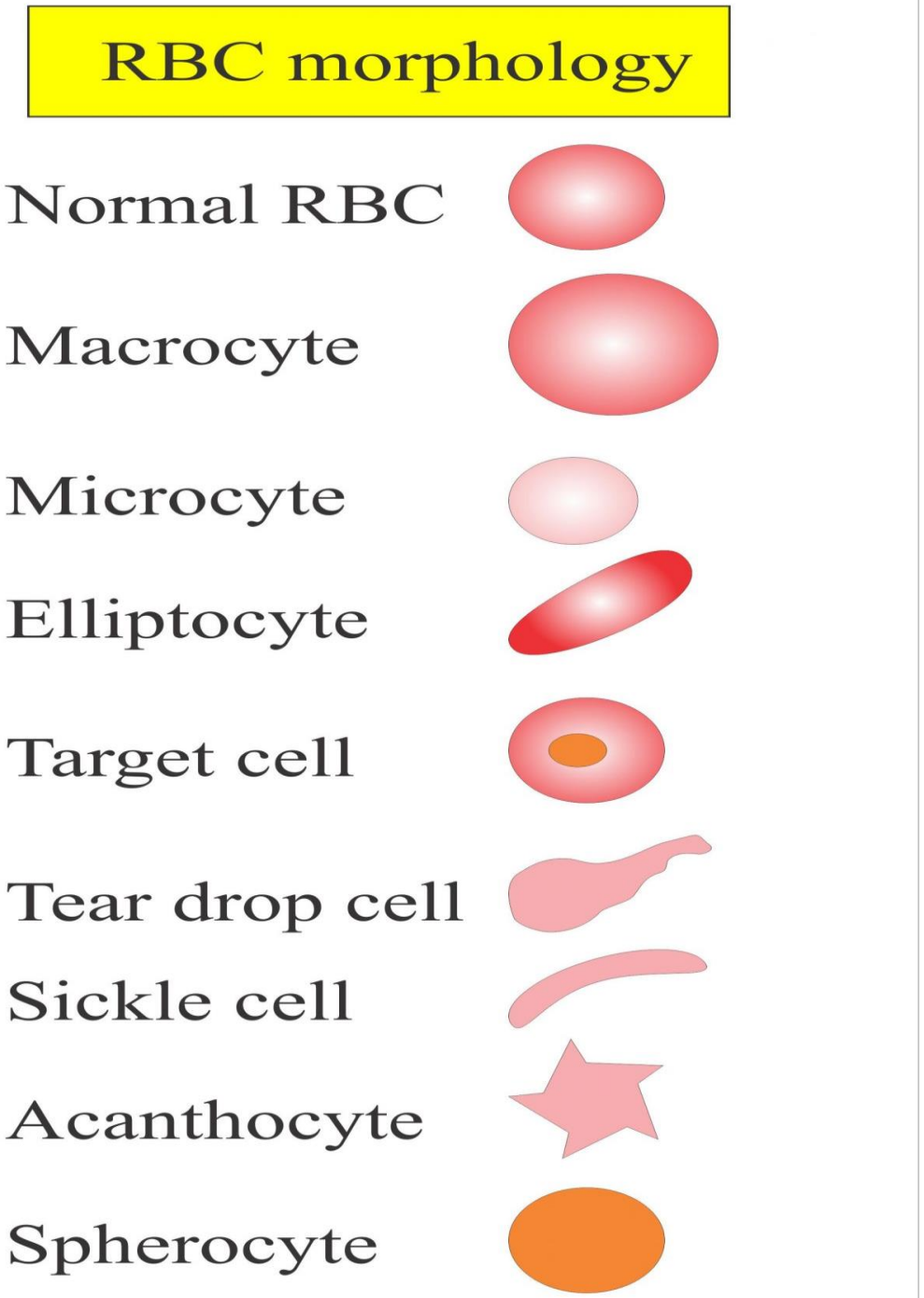


Pathology = Study of the path or cause of the disease as well as the morphology and structural changes during diseases



Morphology :- Study of the outer shape of organisms, organs or cells





Cytology = study of the structural anatomy, functions and morphology of cells . It includes

1- Cell anatomy

2-Cell physiology

3- Cell morphology

