

UE9 Anglais
Pr Christian Bernier
Le 27 février 2017 de 10h30 à 12h30
Ronéotypeur : Mathilde DAMEZ
Ronéolecteur : Antoine MILLET

Cours 1 : Human Body Part 1

Le prof a accepté de relire la ronéo. Nous nous sommes arrêtés à la page 12 du poly classe.

Plan du cours

I. Généralités : organisation de l'UE

II. Introduction

III. Anatomy

1. Vocabulary
2. Stages of life
3. True or false ?
4. Fill the blanks

IV. Cells

1. Vocabulary
2. True or false ?
3. Written comprehension

V. Glandular cells

1. True and false ?
2. Anwer the questions

I. Généralités : organisation de l'UE

Le prof a commencé le cours par une introduction sur les consignes et le fonctionnement de l'UE:

- Il y aura toujours 2 polys :
 - un poly classe que l'on fera en classe
 - un poly pré à préparer avant l'ED et à ramener en classe. Le prof vérifiera s'il a bien été fait en classe ou il peut éventuellement le ramasser. S'il n'est pas fait un devoir supplémentaire sera demandé
- Une feuille de prononciation de mots de vocabulaire sera distribuée généralement à chaque cours, la prononciation de ces mots doit être apprise sinon des points seront enlevés si le mot est mal prononcé lors des oraux. Ceci est valable pour des mots courants comme blood ou heart et non pour des mots rares
- Mail du prof : cbernier.eila@univ-paris-diderot.fr, il répond généralement dans les 48h
- Pour l'instant les polys de préparation doivent être récupérés dans le bureau de Mme Maati, puis ils seront à aller chercher dans le bureau du prof S143 situé au premier sous-sol
- Le prof est présent dans son bureau de 12h40 à 13h30 le lundi, le mardi et le vendredi
- Pour tout changement de groupe, il faudra informer le prof à l'avance par mail. Ces changements doivent rester exceptionnels. En cas d'absence, il faut essayer de rattraper l'ED en venant un autre jour de la semaine. Toute absence doit être justifiée sinon des points allant de 0,5 à 2 pts seront enlevés, le justificatif doit être envoyé au prof par mail
- Au total 13 présences sont obligatoires :
 - Un ED de 2h par semaine soit 6 au total pour le semestre, en plus des deux ED du 1^{er} semestre
 - 2 séances informatiques qui commenceront à partir du 14 mars
 - 1 documentaire où un film sur le milieu médical sera diffusé, un essai de 500 à 700 sera ensuite à écrire
 - 2 oraux
- Évaluation des connaissances (le prof n'a pas voulu de donner de coefficients précis pour éviter « la cuisine des coefficients » mais il a quand même donné des ordres de grandeur) :
 - Un CC qui aura lieu le 31 Mars (et non le 13/04 attention erreur sur le poly) : 35 à 65%
 - Deux oraux : 20 à 30%
 - Des quiz en ligne : 10 à 20%
- Pour le CC : 50% de vocabulaire et 50% de QR. Seuls les mots de vocabulaire en italique sont à apprendre, Lors du CC une définition en anglais sera donnée et il faudra trouver le mot en anglais et en français . Un CC de rattrapage en mai est prévu, si la note finale reste inférieure à 10/20 il y aura un rattrapage en septembre
- Pour les oraux, 2 dialogues qui devront être passés sur un même créneau de 20 min. 10 min en tant que patient et 10min en tant que médecin donc il y aura deux cas cliniques différents. Ils commenceront à partir du 20 mars, les premiers groupes qui passeront auront un point bonus vue qu'ils auront moins de temps pour les préparer. Des documents seront distribués pour nous aider à réaliser ces deux dialogues
- Après chaque cours, un devoir (quiz ou compréhension orale) sera mis et devra être fait en ligne. Une note apparaîtra mais elle ne sera pas prise en compte, 1 pt sera attribué si le devoir est fait et 0pt s'il n'est pas fait. Attention le test est chronométré donc si le prof voit qu'il a été baclé (genre en 17sec) 0pt sera attribué.
- Le mot croisé du premier poly class contient des mots de vocabulaire qui seront probablement demandés au CC

II. Introduction

Four major tissues: CMEN = Connective Muscle Epithelial Nervous

Use the definitions on the right to describe each of the scientific disciplines listed on the left.

Biology	Refers to the science of life and of living organisms, including their structure, function, growth, origin, evolution, and distribution
Anatomy	Refers to the shape and structure of organisms and their parts
Physiology	Refers to the biological study of the functions of living organisms and their parts
Histology	Refers to the scientific study of the microscopic structure of tissues
Cytology	Refers to the formation, structure and function of cells
Biochemistry	Refers to the chemical composition of living matter and of the chemical processes that go on in living organisms
Medicine	Refers to the scientific study or practice of diagnosing, treating, and preventing diseases or disorders of the body or mind

Match the descriptions on the right with the appropriate anatomical structure on the left.

- **Organelles :** - can only be seen with an electron microscope
 - include mitochondria, Golgi complex, lysosomes, endoplasmic reticulum, ribosomes, centrioles
 - are specialized structures inside cells
- **Cells :** - are generally considered the basic units of living organisms
 - can be studied using a light microscope (a.k.a (also know as= aussi appelé, alias) “optical microscope”)
 - are contained within a semi-permeable, hydrophobic, phospholipid bilayer
 - are genetically identical to other cells within the same organism
- **Tissues :**
 - were first defined as an anatomical level of organization by Xavier Bichat around 1800
 - are made up of morphologically similar cells
 - are generally classified into four major categories
- **Organs :**
 - Accomplish a specific function
 - Are found in a specific location
 - Are recognizable by their structure
 - Are made up of several different types of tissues

III. Anatomy

1. Vocabulary

Seuls les mots en italique du poly classe sont à apprendre, les autres sont données pour faciliter la compréhension du texte. Au CC on aura des définitions en anglais et il faudra trouver le mot en français et en anglais correspondant. Ici seuls les mots en italique donc à apprendre sont listés.

Définition	Mot en anglais	Mot en français
The entire material or physical structure of an organism, especially of a human	Body	Le corps
To be composed of, to be formed of	Made up of	Être composé de
The smallest structural unit of an organism that is capable of independent functioning, consisting of one or more nuclei, cytoplasm, and various organelles, all surrounded by a semipermeable cell membrane	Cells	Cellules
Scientific study of living organisms	Biology	La biologie
The science of the structure of living organisms	Anatomy	L'anatomie
<ol style="list-style-type: none"> The science which treats of the functions of the living organism and its parts, and of the physical and chemical factors and processes involved. The basic processes underlying the functioning of a species or class of organism, or any of its parts or processes 	Physiology	La physiologie
Relative position or rank on a scale. A relative degree	Level	Niveau
A constituent element or part	Component	Un composant/ Un constituant
A differentiated part of the body that performs a specific function	Organ	Un organe
The condition or fact of being related; connection or association	Relationship	Une relation/ Un Rapport
The study of the structures of the body that can be seen with the naked eye. Also called macroscopic anatomy	Gross anatomy	Anatomie macroscopique
The pursuit of knowledge, as by reading, observation, or research	Study	L'étude
The act or an instance of cutting apart or separating tissue, especially for anatomical study	Dissection	La dissection
The branch of biology that deals with the formation, structure, and activity of macromolecules essential to life, such as nucleic acids, and especially with their role in cell replication and the transmission of genetic information	Molecular biology	La biologie moléculaire

1. Relating to the study of the chemical substances and vital processes occurring in living organisms 2. Relating to the chemical composition of a particular living system or biological substance	Biochemical	Biochimique
Union of male and female gametes to form the diploid zygote, leading to development of a new individual	Fertilization	La fécondation
A coming into being; act or process of being born	Birth	La naissance
The speed or frequency with which an event or circumstance occurs per unit of time, population, or other standard of comparison	Rate	Un rythme/ Un taux / Un niveau
The process of growing. The progressive increase in size of a living thing, especially the process by which the body reaches its point of complete physical development	Growth	La croissance
The process of growing old or maturing. The gradual changes in the structure of a mature organism that occur normally over time and increase the probability of death	Aging (Ageing)	Le vieillissement

2. Stages of life

Complete the following table using the words given below.

Age (years)	Stage(s) of development	Corresponding nouns
(Prenatal)	Fetal development / Pregnancy / Gestation	Foetus
0	Birth	Newborn
0-2	Infancy	Infant / Toddler
2-12	Childhood	Child / Kid (gamin)
12-18	Puberty / Adolescence / Youth	Teenager / Adolescent
18-40	Adulthood	Adult
40-65	Middle age	Middle-aged person
65-Death	Old age	Elderly person / the elderly

- Toddler = baby who has just learned to walk
- Technically when you are 19 (nineteen), you are a teenager until 20 years old.

3. True or False

A. Another name for “cellular anatomy” is histology.

→ False, it's cytology. Histology is science of tissue, we use microtome to cut tissue. The cut is between 50 to 100 μm ($1 \mu\text{m} = 10^{-6} \text{m} = 0,001 \text{mm}$), for example a hair (un cheveu) is 17 to 170 μm .

B. To investigate the body's organs, doctors mainly practice visual inspection and dissection.
 → True and false or just false, because doctors practice visual inspection but they don't mainly practice dissection. They use other ways to inspect organs like medical imagery (scan), auscultation (listen sounds) or palpation/percussion (for example an hepatomegaly: liver too big).

4. Fills in the blanks

1. **Gross anatomy** involves studying the body's organs by simple visual inspection and dissection.
2. On the contrary, special instruments such as **microscope** and techniques (e.g. staining) are required for the study of cells and cellular components, a.k.a. **cellular anatomy**.

IV. Cells

1. Vocabulary

Comme tout à l'heure, seuls les mots à apprendre sont listés.

Définition	Mot en anglais	Mot en français
Be composed of	Be made up of To make up	Être constitué de
A female gamete; an ovum	Egg (cell)	Un ovule
Biochemistry. A molecular structure or site on the surface or interior of a cell that binds with substances such as hormones, antigens, drugs, or neurotransmitters	Receptor	Un récepteur
To act in response to or under the influence of a stimulus	React	Réagir / Interagir
<ol style="list-style-type: none"> 1. A substance used in the diagnosis, treatment, or prevention of a disease or as a component of a medication 2. A chemical substance, such as a narcotic or hallucinogen, that affects the central nervous system, causing changes in behavior and often addiction 	Drug Medicine Medication Remedy	Médicament
To receive; include Syn. to absorb	Take in(to)	Absorber Assimiler Ingérer(un aliment)
To expend ; use	Consume	Consommer
To begin and carry through to completion; do	Perform	Réaliser
The process by which a cell divides to form two daughter cells	Cell division	La multiplication cellulaire
<ol style="list-style-type: none"> 1. Sugar in the form of glucose in the blood 2. The concentration of glucose in the blood, measured in milligrams of glucose per 100 milliliters of blood 	Blood sugar level	La glycémie

A differentiated structure within a cell, such as a mitochondrion, vacuole, or chloroplast, that performs a specific function	Organelle	Organite
The fluid consisting of plasma, erythrocytes, leukocyte, corpuscles and platelets that is circulated by the heart through the vascular system, carrying oxygen and nutrients to and waste materials away from all body tissues	Blood	Le sang
The membranous tissue forming the external covering of the body and consisting of the epidermis and dermis	Skin	La peau
Cordlike bundles of fibers made up of neurons through which sensory stimuli and motor impulses pass between the brain or other parts of the central nervous system and the eyes, glands, muscles, and other parts of the body	Nerve	Un nerf
A substance usually a peptide or steroid, produced by one tissue and conveyed by the bloodstream to another to effect physiological activity, such as growth or metabolism	Hormone	Une hormone
Numerous proteins functioning as biochemical catalysts	Enzyme	Un(e) enzyme
Two milk-secreting, glandular organs on the chest of a woman; the human mammary gland	Breast	Le sein
A long, irregularly shaped gland, lying behind the stomach, that secretes enzymes into the duodenum and insulin, glucagon, and somastostatin into the bloodstream	Pancreas	Le pancréas
A polypeptide hormone functioning in the regulation of the metabolism of carbohydrates and fats, especially the conversion of glucose to glycogen, which lowers the blood glucose level	Insulin	L'insuline
A covering or coating for an inside surface	Lining	Un revêtement (intérieur)
Two spongy, saclike respiratory organs occupying the chest cavity together with the heart and functioning to remove carbon dioxide from the blood and provide it with oxygen	Lung	Le poumon
The viscous, slippery substance that consists chiefly of mucin, water, cells, and inorganic salts and is secreted as a protective lubricant coating by cells and glands of the mucous membranes	Mucus	Les mucosités / Le mucus

The cavity lying at the upper end of the alimentary canal, bounded on the outside by the lips and inside by the oropharynx and containing the tongue, gums, and teeth	Mouth	La bouche
The watery mixture of secretions from the salivary and oral mucous glands that lubricates chewed food, moistens the oral walls, and contains ptyalin	Saliva	La salive
The electrochemical transmission of a signal that produces an excitatory or inhibitory response at a target tissue, such as a muscle or another nerve	Impulse	Une impulsion Un influx nerveux
The portion of the nervous system consisting of the brain and spinal cord, to which sensory impulses are transmitted and from which motor impulses pass out, and which supervises and coordinates the activity of the entire nervous system	Central nervous system	Le système nerveux central
The portion of the central nervous system that is enclosed within cranium, continuous with spinal cord, and composed of gray matter and white matter. It is the primary center for the regulation and control of bodily activities, receiving and interpreting sensory impulses, and transmitting information to the muscles and body organs. It is also the seat of consciousness, thought, memory, and emotion	Brain	Le cerveau
The thick, whitish cord of nerve tissue that extends from the medulla oblongata down through the spinal column and from which the spinal nerves branch off to various parts of the body	Spinal cord	La moelle épinière Le cordon médullaire La corde dorsale

3. True or False?

A. Cells are the smallest units of living organisms

→ **True**, three many reasons: they must be unite for protection, they must consume and transform energy with mitochondria, they can exist alone (it exists unicellular organism).

B. The cell's genetic material is contained in the nucleus in the form of chromosomes

→ **True and false, that's true only when it's replication.** The Genetic material isn't only in the form of chromosomes.

C. Substances such as hormones or drugs enter or leave the cell through receptors

→ **True and False or just false**, because **some substances like thyroid hormones go through (traverser) into cytoplasm or use channels (canaux) to enter into cells.**

How many cells in our body?

$3,7 \times 10^{13}$ cells = **37 trillion cells** (37 000 milliard de cellules)

Un milliard = a billion

1 000 Milliard = a trillion

4. Written comprehension

The cell membrane :

- a) Holds the contents of the cell together → **True**
- b) Contains HLA receptors on its surface → **True**
- c) Is just a sack → **False**
- d) Is more than a mere sack → **True**

The cytoplasm:

- a) Contains organelles → **True**
- b) Contains mitochondria → **True**
- c) Is responsible for the reproduction → **False**
- d) Deals with the energy of the cell → **True** because here we **talk about cytoplasm region** not only the fluid and so cytoplasm **contains mitochondria**

The nucleus :

- a) Is responsible for reproduction → **True**
- b) Deals with the energy of the cell → **False**
- c) Contains genetic information → **True**

V. **Glandular organs**

1. True or false?

A. Like white blood cells, red blood cells move freely within the body unattached to other cells.
→ **False, they are limited to bloods vessels.** So we can't say that they are totally free for that.

B. Endocrine glands secrete substances within body, whereas exocrine glands secrete substances outside the body.

→ **Mostly True, digestif system (stomach, intestine) is technically considered outside of our body** because we have orifices (mouth).

2. Answer these questions

A. What sorts of substances do glandular cells produce?

Saliva, milk, pancreas secrete insulin, lungs secrete mucus that is excreted.

Endocrine	Product(s)	Exocrine	Products
Hypothalamus	Thyrotrophin-releasing hormone Dopamine Growth hormone-releasing hormone Somatostatin,...	Sweat (a.k.a. sudoriferous) glands	Sweat (perspiration)
Pituitary gland	Growth hormone, Thyroid-stimulating hormone Follicle-stimulating hormone Luteinizing hormone,...	Salivary glands	Saliva
Thyroid	Thyroxine, Calcitonin	Mammary glands	Milk
Stomach	Gastrin, Ghrelin, neuropeptide Y	Stomach	Pepsin, Hydrochloric acid Mucus
Duodenum	Secretin, Cholecystokinin		
Liver	Insulin-like growth factor, Angiotensin, Thrombopoietin	Liver	Bile
Pancreas	Insulin, Glucagon	Pancreas	Trypsin, lipase, amylase
Kidney	Renin, erythropoietin		
Adrenal glands	Adrenaline		

B. How does the CNS (Central Nervous system) communicate ?

CNS communicate with the other parts of the body by electrical impulses through nerve cells.

