

## **I Effective Academic Writing**

Effective writing is readable — that is, clear, accurate, and concise. When you are writing a paper, try to get your ideas across in such a way that the audience will understand them effortlessly, unambiguously, and rapidly. -Use focused sentences: express one idea per sentence, use short sentences, **choose the right verb, the right tense and the right voice** (active/passive).

### **\*Tenses**

#### **-The present simple**

-*For present actions*: Ex: Lowry's paper (1951) is the most cited paper in the field of biology

- *For temporal facts (when presenting results)*: Ex: -Section 3 explains the difference between the treated and control groups

-The results of weight variations are presented in table 3

-*For general facts*: - Smoking increases the risk of coronary heart disease

-*For uncertain facts* we use (may, can, possible...) Ex: -The gut microbiome may affect brain function in adults.

#### **-Present perfect:**

*When referring to an action in the past but still continuous or valid* Ex: -The presence of high concentrations of insulin in brain samples has raised the question of its origin.

-Unusual glycosylation events have been observed in cancer cells

*When the action is in the past but the time is unspecific*: Ex -The brain has been traditionally thought to be insensitive to insulin.

#### **-The Past simple**

-*For actions in the past* (describing the experimental protocol) Ex: -We collected blood samples from 33 patients.

-*For reporting actual results* (Observation): Ex The mice in the group treated with the high dose developed a severe weight loss, on average, twice as much as in the group treated with the low dose.

-*For reporting results in literature* Ex - Smith et al (2019) did not report any weight loss

-In 1976 Bradford proposed an alternative protocol for proteins quantification.

#### **-The Future**

##### *For Perspectives*

In a follow-up experiment, we will study the role of the CYP1A1 in the metabolism pathway of . . .

The influence of hepatic metabolism will be the object of future research.

### **\*Passive and active voice**

when it is important to focus on the subject use the active form Ex:

- The gut microbiome may affect brain function in adults.

When it is important to focus only on the object use the passive form.

-Blood samples were collected from 33 patients

## **II Tenses in the active and the passive voice**

### **1 Present**

#### **Active voice**

Root form, root form+ s with she, he and it. For a few verbs, the third-person singular ends with es instead of s. Typically, these are verbs whose root form ends in o, ch, sh, th, ss, gh, or z.

#### **Ex**

Insulin stimulates glycogenesis in the liver

Mitochondria produce energy in eukaryotic cells.

Smoking increases the risk of lung cancer.

I check the samples in the incubator daily at 10 am.

#### **Passive voice**

Passive subject + To be in the present + past participle

#### **Ex**

The risk of lung cancer is increased by smoking

Samples in the incubator are checked daily at 10 am.

### **2 Present perfect**

#### **Active voice**

**Have or has + past participle ( regular verbs add d or ed or irregular verbs)**

I have worked in this lab since 2017

He has made great progress in his last experiments

The researchers have developed a new strategy to improve insulin delivery to patients

#### **Passive voice**

Passive subject + To be in present perfect + past participle

#### **Ex**

The project has been completed recently.

The non-coding DNA has been referred as junk DNA, because it has been thought that it has no role at all. However, results from recent experiments indicate that non coding DNA plays a key role in the regulation of gene expression.

**Transform the following phrases from active to passive voice**

Our research team has published over 20 papers in the past two years.

Researchers around the world have made extensive efforts to accelerate the development of Covid 19 vaccines.

**3 Past simple**

Past simple

Active voice

Root form + d or ed at the end except for the irregular verbs

**Ex**

In 1976, Bradford proposed an alternative protocol for proteins quantification

In 2020, Charpentier and Doudna won the Noble price for developing the precise genome-editing technology Crispr9.

Passive voice

Passive subject + To be in the past simple + past participle

**Ex**

Samples were stored at -80 C for ulterior use

Blood samples were collected from 33 patients

DNA was extracted using Triazol reagent

#### **4/ Negative form in different tenses**

##### **Present Simple**

**The negative form is formed by adding do /does not before the root of the verb**

-The sentence does not make any sense / -The results of this study do not correlate with the results of **previous** studies

##### **Past Simple**

**The negative form is formed by adding did not before the root of the verb**

-The experiment did not work

-The patients did not respond to the treatment

##### **Present perfect**

**The negative form is formed by adding not after the first part of the verb**

-Researchers have not fully understood the mechanism of action of many drugs such as metformin.

- Brain has not revealed all its secrets yet.

##### **Passive voice**

**In all tenses the negative form is formed by adding not after the first part of the verb**

##### **Present Simple**

-This experiment is not designed to investigate the molecular mechanism behind metformin action.

-The samples are not conserved appropriately.

##### **Past Simple**

- mRNA was not quantified by real time PCR, we used **instead** the Northern blot technique.

-Animals were not kept in the same conditions.

##### **Present perfect**

-The therapeutic effects of olive oil have not been **fully** studied.

- The role of noncoding DNA in the regulation of gene expression has not been taken into consideration until recently.

