



¿Cytus = Cellula?

INGRID ROMERO^{1,2}
MARIANO DEL SOL^{2,3}
MARIELA MUÑOZ^{2,3*}

¹ Departamento de Procesos Diagnósticos y Evaluación, Carrera de Nutrición, Facultad Ciencias de la Salud, Universidad Católica de Temuco, Chile

² Programa de Doctorado en Ciencias Morfológicas Universidad de La Frontera, Temuco, Chile.

³ Centro de Excelencia en Estudios Morfológicos y Quirúrgicos, CEMyQ, Universidad de La Frontera, Temuco, Chile

***Correspondence:**

Mariela Muñoz
E-mail address: mariela.munoz@ufrontera.cl

Dear Editor,

As is known, the correct use of biological terms in scientific communication helps the reader to a better and deeper interpretation of results and conclusions proposed by the authors in scientific articles. Thus, official documents of different terminologies have been developed in the morphology areas (1), which includes, among others, the Histological Terminology (TH), published by the FIPAT (International Federation of Anatomical Terminology Program) (2), which contains the nomenclature official for use in histology and cytology.

Although Latin is the official language of TH, there are still structures that have not been assigned an official Latin term, and therefore are not found in it. The foregoing has determined the need to create and incorporate new terms, as well as revision and correction of inconsistencies in some of these terms included in the TH. Thus in TH, in the blood cell section we find the term *Erythrocytus* (H2.00.04.1.01001) (2) and the term *Precursory Cellula haematopoietic* (H2.00.01.0.00006) (2). In these examples, the word Cytus, derived from Greek, and the word Cellula, derived from Latin, are used to name the same structure or component, both referring to the same Cell structure.

It was Robert Hooke in 1665, in his work “Micrographia” (or some physiological descriptions or tiny bodies made with magnifying glasses) (3), who used the term “small cells” to name what he observed in a thin section of cork under the microscope, he described something very similar to a bee hive, “I could clearly perceive that everything was perforated and porous, very similar to a honeycomb, but the pores were not regular, but it looked like a honeycomb...” The term “small cells”, used by Hooke, comes from the Latin *Cellula*, which in turn derives from the Latin word *cella* and the suffix *ulus-ula* whose literal meaning is “small cell” (4), which was Hooke’s description.

López Piñero (5) argues in his book “Introduction to Medical Terminology”, of 2005, that it was not Hooke who developed the current concept of cell, but who coined the modern use of term. Hooke understood *cella* with the meaning of ‘honeycomb cell’ and that is the metaphor that should be understood in the term, and not that of ‘monacal cell’, as sometimes stated. In fact, the Latin *cella*, whose basic meaning is “room, cabin”, gave rise to the word “cell”. Although Hooke wrote in English, the scientific communication language of ss. XVII and XVIII was Latin and the word *Cella* derived to the diminutive *cellula* which means “little cell”. Bishop in 2003 (6) pointed out that the cells observed by Hooke were dead plant tissue and what he had visualized was the rigid cell wall of plant cells. Even so, the term “cellule” or “cell” is used to refer to animal cells that are characterized as living structures

that change shape, as opposed to the small, rigid cells observed by Hooke.

The term Cytus derives from the ancient Greek κύτος whose literal meaning is “hollow”, and this root is used to describe a “container”, “cavity” or “enclosing thing” (7). The Greek root was also chosen in scientific environments as the equivalent of cellule, so both terms are used today to refer to the same structure in scientific terminology and we see both words in student texts and scientific articles.

We know that it is extremely difficult change Cytus, of Greek origin, for Cellule, of Latin origin, throughout the TH due to its common use, however, it would be optimal use the word Cellule because Latin is the official language used in medical and scientific writing. We suggest in the future, when creating a new histological and/or cytological term, carrying out a careful study of its origin and meaning, thus avoiding the use of two terms for the same structure. In addition, it is necessary to insist and encourage the authors of scientific texts and papers strictly follow the guidelines established by FIPAT.

REFERENCES

1. Federative International Programme for Anatomical Terminology (FIPAT). Histological Terminology. 2011 Available in: <https://fipat.library.dal.ca/terminologies/> Last accessed 13-06-2022
2. Federative International Committee on Anatomical Terminology. 2008 Histological Terminology. Wolters Kluwer/Lippincott Williams & Wilkins, Philadelphia.
3. Hooke R. Micrographia (or some physiological descriptions o minute bodies made by magnifying glasses). [e-book]. Dover publications, inc. Mineola, Nueva York, 2003.
4. Universidad de Salamanca editions. 2008 Medical-Biological, Historical and Etymological dictionary. Universidad de Salamanca, España. Available in: <https://dicciomed.usal.es/palabra/celula> Last accessed 13-06-2022
5. López Piñero JM, Terrada ML. Introducción a la terminología médica. Barcelona. 2005 Ed. Masson.
6. Bishop M.J. 2003 How to Win the Nobel Prize, An Unexpected Life in Science [e-book]. Harvard University Press, Cambridge, Massachusetts, London, England.
7. Spanish etymological dictionary online. Available in: [http://etimologias.dechile.net/?citologi.a#:-:text=La%20ra%C3%ADz%20griega%20%CE%BA%CF%8D%CF%84%CE%BF%CF%82%20\(kytos,%22%20y%20%22celda%](http://etimologias.dechile.net/?citologi.a#:-:text=La%20ra%C3%ADz%20griega%20%CE%BA%CF%8D%CF%84%CE%BF%CF%82%20(kytos,%22%20y%20%22celda%20) Last accessed 12-09-2022