

## ASPECTE ALE TRADUCERII UNUI TEXT ȘTIINȚIFIC DIN DOMENIUL BIOLOGIEI

### SIMILARITIES AND DIFFERENCES REGARDING THE ENGLISH-ROMANIAN TRANSLATION OF A BIOLOGICAL AND/OR MEDICAL TEXT

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#### Abstract

*In this article we have tried to explain the similarities and differences observed when one translates a “technical” text. In the medical field, a lot of words, expressions and concepts may seem similar in English and Romanian language. This can be deceiving as we’ll show in our presentation. In order to do that we took an example of a book we have published in 2001 “Transport mechanism in biological systems”, Foreign languages Press Group. The book is structured on seven chapters, like Introduction, Classification of phenomena of transport through biological membranes, Passive transport, Active transport – Ionic Pumps, Cellular signaling, Energy converting organelles and Selective Bibliography. We have also presented some aspects that we consider to worth discussing. The English and Romanian versions of some texts are presented. All the medical and biological terms are very similar because they are derived from the Latin or from a Latin-related language. In conclusion, an accurate translation of a “technical” text would require the cooperation of a both a philologist and a specialist, especially in the biological and/or medical field.*

**Cuvinte-cheie:** *limba română, medical, biologic, traducere, transport membranar*

**Keywords:** *Romanian language, medical, biological, translation, membrane transport*

The present article tries to explain the similarities and differences observed when one translates a “technical” text. In the medical field, a lot of words, expressions and concepts may seem similar in English and Romanian language. This can be deceiving as we’ll show in our presentation. In order to do that we took an example of a book we have published in 2001 “Transport mechanism in biological systems”, Foreign languages Press Group [1].

This book is structured on seven chapters, like Introduction, Classification of phenomena of transport through biological membranes, Passive transport, Active transport – Ionic Pumps, Cellular signaling, Energy converting organelles and Selective Bibliography. First of all let’s take a look at the translation of these chapters. There all very similar in both languages with one exception. The second chapter “Classification of phenomena of transport through biological membranes” and its Romanian equivalent “Clasificarea fenomenelor de transport prin membranele biologice” are slightly different in translation. This is due to the fact that for Romanian language where “classification” pertains to the “phenomena” is a little tricky on translating into English. So, for a mot-a-mot translation “of” will be repeated in order to underline that the chapter is about “classification” and not about “phenomena”. Probably, the most accurate translation would have been “Classification of Biological membranes Transport’s Phenomena” [2].

Subsequently we will present some aspects that we consider to worth discussing. The English and Romanian versions of some texts are presented.

English version: *In a way, the cells could be considered the functional units of living organisms. The fluid inside the cell, called the intracellular fluid is very different from that outside*

*the cell, which is called the extracellular fluid. The extracellular fluid includes both the interstitial fluid and the plasma, which communicates continuously with the interstitial fluid through the pores of the capillary membrane. The extracellular fluid supplies the cells with nutrients and other substances necessary for the cell functions. But, before the cell could use these substances, they have to be transported through the cell membrane.*

Romanian version: *Într-un fel, celulele pot fi considerate drept unitățile funcționale ale organismului viu. Fluidul din interiorul celulelor, denumit fluid intracelular, este foarte diferit de cel din exteriorul celulelor, denumit fluid extracelular. Fluidul extracelular include atât fluidul interstițial, care circulă în spațiile dintre celule, precum și plasma sanguină care se amestecă liber cu fluidul interstițial în pereții capilarelor. Fluidul extracelular aprovizionează celulele cu substanțe nutritive și alte substanțe necesare funcțiilor celulare. Dar, înainte ca celula să poată utiliza aceste substanțe, ele trebuie să fie transportate prin membrana celulară.*

The paragraph above is describing the organism's and cell's fluids. As it can be seen, with some exceptions, most of all the words used are very similar between the English and Romanian versions. The exception regards a part of the paragraph on the extracellular fluid. The data described in the Romanian version is not entirely presented in the English version just because some information in English would be regarded as redundant. Another difference is the word "spații" that would be translated as "spaces". Nevertheless, taking into account that the proposition is about the capillary membrane the word "spaces" would have been considered out of the subject or as inappropriate, so the author preferred to use the word "pores" instead [3,4].

English version: *A system is called uniport if it mediates the transport through the membrane of a single substance. A system is called cotransport if it mediates the transport through the membrane of a substance coupled with the transfer of another substance. If both these substances are transferred in the same direction the system is called symport and if the directions of transfer of the coupled substances are opposite to each other, the system is called antiport.*

Romanian version: *Sistemul se numește uniport, atunci când acesta mijlocește transportul prin membrană a unei singure substanțe. Sistemul se numește cotransport atunci când mijlocește transportul prin membrană a unei substanțe cuplat cu transferul unei alte substanțe. Dacă ambele substanțe sunt transferate în aceeași direcție sistemul este simport, iar dacă direcțiile de transfer al celor două substanțe cuplate sunt opuse, sistemul se numește antiport.*

The systems mentioned above are very similar, like uniport, symport and antiport. All these systems are similar with the Romanian version also because the international scientific language is considered to be the English language, and as a consequence a lot of "scientific" words have been imported into Romanian language [5,6].

English version: *cGMP (guanosine 3'-5'-cyclic monophosphate) is another cyclic nucleotide acting as a second messenger. This molecule is produced under the influence of an enzyme called guanylate cyclase, located both in the membrane and in the cytosol. cGMP specific phosphodiesterase is located in the cytoplasm, in contrast with the one for cAMP, which is bound to the membrane.*

Romanian version: *GMPc (guanozin monofosfatul ciclic 3'-5') este un alt nucleotid cu funcție de mesager secundar. Această moleculă este produsă prin acțiunea guanilatciclazei localizată atât în membrana celulară, cât și în citosol. Fosfodiesteraza specifică pentru GMPc este localizată în membrana celulară, cât și în citosol. Fosfodiesteraza specifică pentru GMPc este localizată în citoplasmă, spre deosebire de cea pentru AMPc care este legată de membrană.*

The above paragraph illustrates a difference between the English and Romanian abbreviations. This is due to the orientation of words regarding a certain substance or structure. In our example we have the cyclic Guanosine Monophosphate (cGMP) and cyclic Adenosine Monophosphate (cAMP) that are slightly different in the Romanian version, presented as GMPc and AMPc. This is the effect of the adjective „cyclic” that in the English version comes before the noun, instead of the Romanian version where is presented after the noun GMP or AMP. Another well-

known abbreviation is the DNA noun that represents the „Deoxyribonucleic Acid” and it’s Romanian equivalent ADN corresponding to “Acid Deoxiribonucleic” [7,8].

English version: *These proteins, capable, by hydrolysis of ATP, to cause the folding or unfolding of proteins have been called chaperonines.*

Romanian version: *Aceste proteine, capabile ca prin hidroliza ATP să provoace deplierea sau plierea proteinelor au fost denumite chaperonine.*

This term „chaperonine” is derived from the French word „chaperoner”, which means „to escort somebody, offering him protection”. This term has been imported as a neologism in the Romanian language, like most all of the newly-discovered medical or biological terms [9,10].

### Conclusions

All these medical and biological terms are very similar also because they are derived from the Latin or from a Latin-related language.

Concluding, an accurate translation of a “technical” text would require the cooperation of a both a philologist and a specialist, especially in the biological and medical field.

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