

**Highlighting the need for each excipient to appear under a unique name in all products that contain it to guarantee its identification**

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To the Editor,

It is a fact that any chemical compound can be found under different names in the ingredient information of products. This is especially relevant when it comes to those molecules that act as excipients contained in the formulation of medicines and cosmetics or that act as food additives.

The aim of this letter is to call attention towards the need to unify the nomenclature for the excipients and additives in such a way as they always appears under the same name in all the preparations containing to ensure its identification and prevent future reactions in sensitized patients.

To give two examples, carboxymethylcellulose can be found in the product ingredient information under the names carmellose, croscarmellose, colloresine, carboxymethylcellulose ether or thylose, among others. Secondly, aspartame, which in addition to being an excipient in pharmaceutical products, is found in diet soft drinks, fruit drinks, yogurts and chewing gum, may appears in the technical data sheet as L-aspartame-L-phenylalanine methyl ester, E951, Canderel or Nutrasweet, among others.

The complete list of names or synonyms related to a chemical compound can be seen by accessing PubChem [1].

The PubChem database of the National Center for Biotechnology Information (NCBI) of the National Institutes of Health (NIH) is an open archive that contains information on a wide range of chemical compounds. It is a useful resource to obtain a detailed description of each molecule as it offers information on its identifiers, structure, synonyms, molecular weight, chemical and physical properties, etc. Additionally, PubChem links its records to PubMed articles indexed with Medical Subject Heading (MeSH), so biomedical literature related to any PubChem record can be obtained [2].

In Table I (view online only supplementary table), we present PubChem links corresponding to some of the excipients previously reported in the literature to be responsible for severe hypersensitivity reactions [3-6].

From an allergological point of view, information on the synonyms by which an excipient or additive can be found is relevant to ensure its identification. This is of vital importance for sensitized patients. A patient sensitized to a molecule has to be able to recognize its presence in the composition of any medication, cosmetic or food to avoid it and minimise the risk of reaction. Likewise, a clinician must also be able clearly identify it to choose a therapeutic alternative for the patient that does not contain that molecule.

Additionally, with the same focus on the safety of sensitized patients, the existence of groups of excipients that may be related by cross-reactivity deserves a comment. This fact affects the patients sensitized to polyethylene glycol (PEG), and, due to cross-reactivity, to other molecules whose chemical derivation uses ethylene oxide. Among them include PEG sorbitans (polysorbates), PEG castor oils (e.g. cremophor), poloxamers and PEG laureths [5,7]. These molecules have been implicated in severe hypersensitivity reactions

and they are contained in a wide number of medicines and cosmetics. Therefore, patients sensitized to ethylene oxide derivatives are at a great risk, so they have to ensure these excipients are not found in any product they are going to use and this is not always easy, since molecules to avoid may be hidden if they are labelled with synonyms not known to the patient. Hence, the need to standardize the nomenclature used to declare the presence of PEGs or other related molecules, as other authors have previously proposed [8]. In this sense, as a suggestion, a label warning that the product contains ethylene oxide derivatives could strengthen security to avoid reactions.

In conclusion, we suggest that, at least in the pharmaceutical and food industry, a consensus should be reached so that a chemical compound that acts as an excipient or additive appears with the same name in all products that contain it to ensure its identification and preventing reactions in sensitized patients.

### **Conflict of Interests**

Dr Caballero declares that she has no conflicts of interest.

Dr Quirce has been on advisory boards for and has received speaker's honoraria from ALK, Allergy Therapeutics, AstraZeneca, GlaxoSmithKline, Novartis, Chiesi, Mundipharma, Teva and Sanofi.

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