

Highlighting the Need for Each Excipient to Appear Under a Single Name in All Products That Contain it to Guarantee Identification

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To the Editor:

Chemical compounds can be found under different names in product ingredient lists. This is especially relevant when it comes to molecules that act as excipients in the formulation of medicines and cosmetics or as food additives.

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

Two clear examples are carboxymethylcellulose, which is found in the product ingredient list under various names (eg, carmellose, croscarmellose, colloresine, carboxymethylcellulose ether, and thylose), and aspartame, which in addition to being an excipient in pharmaceutical products, is found in diet soft drinks, fruit drinks, yogurts, and chewing gum and appears in the technical data sheet under names such as L-aspartame-L-phenylalanine methyl ester, E951, Canderel, or Nutrasweet. The complete list of names or synonyms related to a chemical compound can be accessed online via the PubChem database of the National Center for Biotechnology Information of the National Institutes of Health [1].

PubChem is an open archive that contains information on a wide range of chemical compounds. It provides a detailed description of individual molecules, offering information on identifiers, structure, synonyms, molecular weight, and chemical and physical properties. Additionally, since PubChem links its records to PubMed articles indexed with a Medical Subject Heading (MeSH), biomedical literature related to any PubChem record can be obtained [2].

In Table I (view online only supplementary table), we present the PubChem links to some of the excipients previously reported in the literature as being 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 appropriate 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 in order to avoid it and minimize the risk of reaction. Likewise, a clinician must also be able to clearly identify the molecule in order to choose a therapeutic alternative that does not contain it.

Additionally, given our focus on the safety of sensitized patients, it is worth commenting on groups of excipients that may be related by cross-reactivity. This is particularly important in patients sensitized to polyethylene glycol (PEG) and, through cross-reactivity, to other molecules derived from ethylene oxide. These include PEG sorbitans (polysorbates), PEG castor oils (eg, Cremophor), poloxamers, and PEG laureths [5,7], all of which have been implicated in severe hypersensitivity reactions and are contained in a wide number of medicines and cosmetics. Therefore, since patients sensitized to ethylene oxide derivatives are at great risk, they must ensure that these excipients are not found in any product they are going to use. However, 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 proposed elsewhere [8]. In this sense, a label warning that the product contains ethylene oxide derivatives could strengthen safety and thus prevent reactions.

In conclusion, we suggest that, at least in the pharmaceutical and food industries, 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 prevent reactions in sensitized patients.

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Conflicts of Interest

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

Dr Caballero declares that she has no conflicts of interest.

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