in clinical research projects. He has also been invited to attend national or international congresses by some of these companies.

**References**


**Double or Dual Bronchodilation: Defining the Correct Term**

**Broncodilatación doble o dual: definiendo el término correcto**

To the Editor,

For some time, pharmacological treatment of chronic obstructive pulmonary disease (COPD) has been based on bronchodilation. Current guidelines recommend the use of a long-acting bronchodilator (LABD) as initial therapy for this disease.1 The guidelines also recommend adding a second LABD of a different class in specific cases to boost the clinical effect of improved bronchodilation.1 In recent years, ample scientific evidence and clinical experience has led to the acceptance of the novel approach of combining 2 LABDs in a single device.2

As in all new ideas, the concepts under consideration must be well defined to avoid confusion. This new treatment modality is currently known as dual bronchodilation.3 Yet the term “dual” implies a single substance with 2 different features or properties,4 while “double” describes a combination of 1 compound with another similar compound, that work together with the same aim.4 While a first reading might suggest that both terms have a similar meaning, there is a nuance that must be understood when discussing bronchodilators.

When 2 LABDs are administered together, we are in fact giving 2 different molecules. They are similar, in that they are both bronchodilators, but each one has its own characteristic pharmacology that works with the other to achieve the same objective: dilate the bronchi. Thus, the most accurate term for this treatment modality would be “double”. Indeed, according to the above-mentioned definition, a dual bronchodilator would be one that was capable of doing the work of two. These bronchodilators include the so-called muscarinic antagonist and β2 agonists (MABA). MABAs are a new family of molecules that really do have dual activity: they block muscarinic receptors, while simultaneously inhibiting β2 adrenergic receptors.3 Curiously, this new family of molecules has also been described in the literature as a dual bronchodilator,5 thus adding to the confusion. However, the mechanism of action of MABAs is completely different to bronchodilation achieved by the concomitant administration of 2 different LABDs, and, according to the above-mentioned definition, they may be authentically considered dual bronchodilation. We propose, then, using the term “double” to refer to the combined administration of 2 LABDs, and reserving the term “dual” for MABAs.

**References**


José Luis López-Campos, a,b,c María Abad-Arranz, a Carmen Calero-Acuña, a,b

a Unidad Médico-Quirúrgica de Enfermedades Respiratorias, Instituto de Biomedicina de Sevilla (IBIS), Hospital Universitario Virgen del Rocio/Universidad de Sevilla, Sevilla, Spain
b CIBER de Enfermedades Respiratorias (CIBERES), Instituto de Salud Carlos III, Madrid, Spain

c Corresponding author.
E-mail address: lcampos@separ.es (J.L. López-Campos).

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