

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

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## Double or Dual Bronchodilation: Defining the Correct Term<sup>☆</sup>



### 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.<sup>1</sup> The guidelines also recommend adding a second LABD of a different class in specific cases to boost the clinical effect of improved bronchodilation.<sup>1</sup> 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.<sup>2</sup>

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.<sup>3</sup> Yet the term “dual” implies a single substance with 2 different features or properties,<sup>4</sup> while “double” describes a combination of 1 compound with another similar compound, that work together with the same aim.<sup>4</sup> 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  $\beta_2$  agonists (MABA). MABAs are a new family of molecules that really do have dual activity: they block

muscarinic receptors, while simultaneously inhibiting  $\beta_2$  adrenergic receptors.<sup>5</sup> Curiously, this new family of molecules has also been described in the literature as a dual bronchodilator,<sup>5</sup> 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.

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