Ultra-rare disease: an European perspective

Sergio Harari [1] and Marc Humbert [2,3,4]

Affiliations: [1]U.O. di Pneumologia e Terapia Semi-Intensiva Respiratoria, Servizio di Fisiopatologia Respiratoria e Emodinamica Polmonare, Ospedale San Giuseppe Hospital MultiMedica IRCCS, Milan, Italy. [2]Université Paris-Saclay, School of Medicine, Le Kremlin-Bicêtre, France. [3]Assistance Publique - Hôpitaux de Paris (AP-HP), Dept of Respiratory and Intensive Care Medicine, Pulmonary Hypertension National Referral Center, Hôpital Bicêtre, Le Kremlin-Bicêtre, France. [4]INSERM UMR_S 999 Pulmonary Hypertension: Pathophysiology and Novel Therapies, Hôpital Marie Lannelongue, Le Plessis-Robinson, France.

Correspondence: Sergio Harari, U.O. di Pneumologia e Terapia Semi-Intensiva Respiratoria, Servizio di Fisiopatologia Respiratoria ed Emodinamica Polmonare, Ospedale San Giuseppe, MultiMedica IRCCS, via San Vittore 12, 20123 Milan, Italy. E-mail: sergio@sergioharari.it

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Too little attention is still paid to ultra-rare diseases. It is important to disseminate the best information on less common diseases in order to improve the clinical managment and improve care. https://bit.ly/2NougE5

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In the past few years, interest in rare diseases has grown, as demonstrated by the agendas of politicians and health authorities, but too little attention is still paid to ultra-rare diseases. Although no legal definition of an "ultra-rare" disease has yet been established, this subcategory was informally introduced by the National Institute for Health and Care Excellence for drugs with indications for diseases that have a prevalence <1 per 50 000 persons [1–3].

In the respiratory field, there are several ultra-rare diseases, such as lymphangioleiomatosis, pleuro-parenchymal fibroelastosis, pulmonary alveolar microlithiasis, ataxia telangiectasia, pulmonary alveolar proteinosis, lysosomal storage diseases, pulmonary dendriform ossification, light chain deposition disorders, Birt–Hogg–Dubè syndrome, rare vascular disorders and vasculitis along with several others [4].

The research for new drugs to treat very rare diseases requires significant investments and the earmarking of highly sophisticated resources, a situation which raises ethical as well as social issues. It is indeed fair to wonder whether society and the public at large should bear the high cost of research activities benefiting a very small number of individuals, albeit affected by severe and chronic ailments, or whether this goes against the principle of equality (strangely enough patients with rare and often unknown conditions tend to absorb even higher resources than patients affected by more common diseases generally described as "normal") [4].

An important issue is how research should be carried out for ultra-rare diseases, along with the issue of quality. Although less stringent criteria may be adopted for orphan drugs than for drugs treating more common diseases, this should not be an excuse not to guarantee the best possible treatments to patients with rare diseases [4, 5]. A well organised, patient-centred, multidisciplinary approach is more patient friendly and generates better outcomes than the current care model where patients with rare diseases see different specialists at different sites and at different times [6].

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The *European Respiratory Review* has always paid much attention to ultra-rare disease, publishing selected reviews and series [4]. This year the journal is publishing a mini-series of reviews dealing with some ultra-rare respiratory conditions written by outstanding expert in the field: pulmonary capillary haemangiomatosis, cystic lung diseases and pulmonary alveolar microlithiasis. The first in the series, by Weatherald *et al.* [7], is published in the current issue of the *European Respiratory Review*.

It is not common that medical journals with a significant impact factor dedicate room to ultra-rare disease, because the number of citations for these topics can be low and the interest might be restricted to a particular audience of specialised readers. However, it is an important mission for a society journal to disseminate the best possible information on less common issues in order to improve awareness of more neglected area of research and support better care, education and translational research in the field of truly orphan diseases.

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