Review of: "The pros and cons of utilizing crude herbal preparations as opposed to purified active ingredients, with emphasis on the COVID pandemic"

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The manuscript by M. Haran and A. Berrebi deals with a very important issue in the field of modern medicine and pharmacopoeia, namely the strong reticence on the part of physicians in using herbal preparations for therapeutic purposes or to support modern pharmacological therapies. Although the millennial use of many phytopharmaceuticals has demonstrated not only high tolerability, but also evident efficacy and safety in the treatment of numerous pathologies, the distrust of clinicians in the use of phyto-derivatives is mainly due to the lack of randomized controlled trials on a large scale.

According to modern medicine, the treatment of human pathologies must be carried out using drugs tested in large-scale randomized controlled trials or whose efficacy has been documented through evidence-based medicine (EBM), i.e. case reports, small studies, studies in vitro, etc. Furthermore, modern medicine assumes that pharmacological treatments must be "precise", i.e. based on drugs produced in a reproducible way, containing purified active ingredients, at constant concentrations, and according to the dosages described in the trials or reported in clinical cases.

The authors rightly point out that precision in pharmacological treatments is not always appropriate as biological systems, such as the human body, are far from being precise. In fact, in the pharmacological treatment of human disease, it is important to evaluate the coexistence of other pathologies, drug metabolism, pharmacological interactions with other drugs and foods, ethnicity, age. It should be added that, according to Gender Medicine, in clinical management it is essential to also consider the influence of biological (defined by sex) and socio-economic and cultural (defined by gender) differences on the state of health and disease of each person. In fact, many diseases common to men and women very often have different incidence, symptoms and severity, can have different responses to treatments and different adverse reactions to drugs. However, in randomized clinical trials, all these parameters are rarely considered simultaneously and subjects with very similar characteristics are often enrolled, excluding entire groups of populations which could instead give different responses to treatments.

Furthermore, the authors underline that the distrust of modern medicine towards phyto-complexes is based on the fact that such preparations often cannot boast a constant chemical composition (of active ingredients and pharmacologically effective concentrations) due to the fact that they are actually affected by intrinsic factors (e.g. linked to the genetic heritage of the plant itself) and extrinsic factors, such as environmental and conservation variables (places of origin, cultivation conditions, climate, seasonality, harvesting, conservation and preparation methods).

However, it is important to add that numerous herbal preparations are currently available in standardized form, which allows for the reduction of the variability between the preparations and ensures comparable phyto-therapeutic products in composition and biological activity, always guaranteeing the same efficacy. In fact, through the standardization, the botanical species to be used, the spontaneous or cultivated origin, the drying method, the preparation method, the suitable solvent and the concentration of the active ingredients (titration) are correctly defined and precisely identified. The application of these standardized preparation and production processes enables the production of preparations with a relatively constant composition and, therefore, with a reproducible biological effect.

The new standardized phyto-preparations known for their therapeutic properties, the high safety profile and the potentially significant beneficial effect thanks to the centuries-old use in traditional medicine could therefore be used in modern therapies as adjuvants and it would be desirable for them to be tested in large-scale clinical trials, just like modern drugs.