COMMENTS ON THE IUPHAR DOCUMENT ON CLINICAL PHARMACOLOGY
EDITED BY MICHAEL ORME AND FOLKE SJOQVIST

Guilherme Suarez-Kurtz, MD, Doct Med
Head of Pharmacology
Brazilian National Cancer Institute
Rio de Janeiro, Brazil

The IUPHAR document, published in Basic & Clinical Pharmacology (107: 531-559, 2010) is a valuable source of information on the background, development, goals and present status of clinical pharmacology. The document covers relevant aspects of the training of clinical pharmacologists and their roles in research, clinical care, government and industry. I was asked to offer comments specifically targeted at “Clinical Pharmacology in Developing Countries”, and would like to emphasize the extreme diversity of “developing countries” in many areas relevant to clinical pharmacology, such as demographics, culture, health policies, medical practice and education, technological development, economy, etc. The IUPHAR document (p. 538) refers to the “increasing problems with poor quality drugs and combination therapies for chronic diseases such as HIV/AIDS and tuberculosis in developing and emerging countries”. However, Brazil’s pioneer policy of universal access to state-or-art HAART therapy, free of charge, to all that needed treatment for HIV-AIDS, has been adopted by developed countries. Also, counterfeit drugs, a distressing problem in least-developed African countries are of less concern in Brazil. These examples highlight the distinct challenges for clinical pharmacology in different developing countries, and in the following I will comment on these challenges as they apply to education/training, research and clinical care in the developing world.

Regarding education, the IUPHAR document (p. 538) correctly points out the “poor access to trained medical staff in developing and emerging countries”. However, trained clinical pharmacologists are also scarce in several developed countries, many of which do not have a discipline of clinical pharmacology in their medical curricula of doctoral programs. I suggest that education/training of clinical pharmacology in the developing world should focus, for the present time, on undergraduate medical students. At the Federal University of Rio de Janeiro, we offered for years a 15-session clinical pharmacology course during internship (11th semester of the 6-year medical course), featuring “therapeutic case discussions”, preceded by a brief review of the relevant drug classes.
This is one of the formats listed in the IUPHAR document (p. 539), and in our case involved close collaboration between the departments of pharmacology and internal medicine. I fully agree with the notion that “an e-learning approach is foreseen to be of high relevance in resource-poor countries with chronic lack of educated staff” (IUPHAR document, p. 540). In this regard, I strongly recommend WHO and IUPHAR to create, or to provide the incentive for creation of e-learning programs for education in clinical pharmacology, with free access globally. This would, in my opinion, be of great benefit for the development of clinical pharmacology throughout the developing world.

Regarding to the topics of clinical pharmacology research listed in the IUPHAR document (p.536-537) I suggest that drug utilization studies, pharmacovigilance, pharmacoepidemiology and pharmacoconomics are incipient, at best, in most developing countries. These areas need incentive and recognition of their importance for promoting the rational use of drugs. Counterfeit drugs must be viewed as a major target of investigation in many least-developed countries. A number of research centers, both public and private, in the developing world display state-of-art facilities and equipment, as well qualified personnel for conducting clinical trials – often, but not always, sponsored by multinational pharmaceutical companies – and pharmacokinetic, pharmacodynamic and pharmacogenetic studies in human volunteers, of high ethical, scientific and technological standards. These centers provide excellent opportunities for training of clinical pharmacologists from the developing world in their native country or in another country of similar economy, culture, ethnicity and/or medical/technological standards.

Clinical pharmacology is not a recognized medical specialty in the vast majority (if not the totality) of developing and emerging countries, and only a handful of hospitals, essentially academic, have a clinical pharmacologist in their staff. In general, the responsibilities assigned to clinical pharmacologists in the IUPHAR document (p. 540-542) are carried out by medical practitioners, pharmacists, nurses and biologists. This situation is unlikely to change in the short term, considering the chronic shortage of medical doctors, the incentive to embrace specialties perceived as more relevant, profitable or traditional, the non-recognition of clinical pharmacology as a medical specialty and the lack of training programs in clinical pharmacology in most developing countries. I would suggest that training/education in clinical pharmacology (see above) is the key to promoting recognition of the unique profile and expertise of the clinical pharmacologist across the developing world.