EDITORIAL

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The history of Arabia has been shaped by centuries of population inflow into the region. Not surprisingly, the Arab population comprises of a group of peoples with differing historic identities, and is characterized by such indicators as high rates of fertility, consanguinity, and congenital and genetic anomalies. Of late, genetics education and awareness has increased significantly in the region, with most countries offering at least the basic neonatal screening services. Genetic studies, however, tend to continue to remain at the clinical level, especially in relation to the Gulf Arab counties. The Arab countries of North Africa and the Levant are, however, moving towards performing more molecular genetic studies, thanks to their scientific collaborations with European and North American countries.

Ever since its origin in 2003, the Centre for Arab Genomic Studies (CAGS) has strived to lessen the burden of genetic disorders in the region, by disseminating information to both clinicians and researchers, and the laypeople. One of the major projects undertaken by CAGS, the Catalogue for Transmission Genetics in Arabs (CTGA) Database, is a continuously updated catalogue of bibliographic material and observations on human gene variants and inherited genetic diseases in Arabs. To date, the processes of data collection and curation have been completed for four Arab countries. After the United Arab Emirates, Bahrain, and Oman, the newest country to find its complete genetic disease profile in the CTGA Database is the State of Qatar. Currently, the partially completed database recognizes the presence of 955 different genetic diseases in the Arab population, which include 113 disorders from Qatar. A cursory comparative analysis of the data originating from these four neighboring countries, described in detail Chapter 3, shows the common preponderance of clinical data, autosomal recessive disorders, and congenital abnormalities. However, the disease profile seems to be different between these countries, with a large number of unique disorders in each country.

In 2006, CAGS planned to launch the Arab Variome Project, following the Human Variome Project. This is a huge undertaking that calls for the collaboration of all regional geneticists and clinicians. Results of a pilot study undertaken by the CTGA Group are available in Chapter 6. This study looks at the genetic variation at

the level of a single country, in this case Qatar, as well as the diversity at the level of a single disease, in this case, beta-thalassemia.

We are fortunate to have in our fourth edition of this book, three chapters from authors who work in Qatar, and who are able to give us an internal perspective of the situation with respect to genetic disorders in that country. Not only is the rate of consanguinity in Qatar extremely high, it has also been shown to have increased from the previous generation to this. Studies described in the book show how this high rate of inbreeding is associated with risk of common diseases, as well as cancer. Details can also be found of the Qatari national expanded neonatal screening program, initiated in 2003, in collaboration with the University Children's Hospital of Heidelberg; the first program of its kind in any Arab country.

Genetic disorders constitute a significant health care and psychosocial burden for the patient as well as the health care system of the country. Implementation of effective prevention programs is the only practical solution. This, in turn, requires an increase in the level of genetic literacy, not only among the patients and their families, but also among the medical practitioners. Simultaneously, it is high time for regional researchers to get together and pool their resources in order to be able to delineate the molecular basis of the genetic disorders affecting Arab populations.