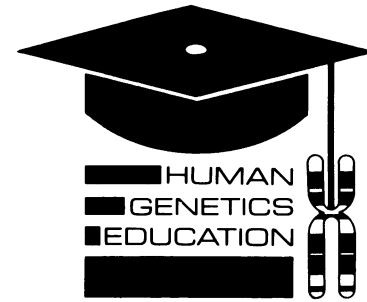


## **EDITORIAL**

# **Geneticists' Responsibility to Other Health Care Professionals and to the Lay Public**

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With this, the second Human Genetics Education (HGES) A.C. (after Carl), all of us who are in the field of human genetics and/or education realize what a momentous task lies ahead. The amount of new information available in all areas of human genetics continues to increase weekly at a staggering rate. For this information to be directly and widely utilized, it is necessary that many segments of the population understand its uses, implications, and possible adverse effects (Garver and Garver 1991; Billings et al. 1992; Harper 1992; Holtzman and Rothstein 1992; Natowicz et al. 1992; Reilly 1992).

The pristine innocence and isolation of basic research and clinical genetics and the Herr-Professor attitude of academics (which was still prevalent when K.L.G. was in medical school) have all disappeared, as have the horse and buggy. Most of us realize quite clearly that one of our roles as geneticists requires us to assume the responsibility of disseminating the new information in understandable terms to all strata of the population. Those who require constant updates and new information concerning the techniques available in human genetics include physicians in private practice, in academics, and in other full-time positions. These are the people who are at the front line of health care and who see the patients who might need the practical application of the new advances and techniques. As has been mentioned in previous issues of HGES and elsewhere in the genetic literature, most physicians have never had a course in medical genetics and understand very little about the modern applica-

tions, particularly when it comes to the new cytogenetic, molecular, and biochemical genetic techniques. Because of the exponential increase of information from the Human Genome Project, which could have clinical implications, it is mandatory that we provide the information to these practicing physicians so that they can know what is available and can either refer patients or call for advice.

Also included in the list of groups that we should be responsible for educating are nurses, social workers, other health care professionals, and college biology teachers. To make certain that the upcoming graduates are familiar with human genetics, we should play an active role in teaching.

The feature article in this issue of HGES is an excellent summary by Jon Hendrix and Thomas Mertens of their 20-year experience in evaluating the educational impact of programs designed to increase the scientific understanding of the competencies of teachers and secondary school students. As the authors describe in their Summary, this accountability model is facilitated through (1) identifying the educational needs of the population of teachers to be served, (2) articulating goals and measurable objectives to meet these needs, and (3) designing and implementing pre- and posttest questions to measure whether the objectives have been achieved.

The second article in this section, "A Problem-based Learning Approach to Teaching Medical Genetics," by Charleen Moore and Don Barnett, describes their newly developed problem-based medical genetics course that is integrated into the fourth-year medical school curriculum at the University of Texas Health Science Center, to provide a basic genetic background to the clinical rotations. A supplemental computer tutorial is required during the second year. The authors describe how they have found that these two formats

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prepared the medical students to recognize genetic diseases, to provide basic genetic counseling in their daily practice, and to refer patients to genetic specialists appropriately.

The third article in this section, "Twice-told Tales: Stories about Genetic Disorders," by Abby Lippman and Benjamin Wilfond, is an interesting and fascinating look at how the selected messages about health and illness, transmitted by written materials, have great potential in influencing attitudes of behavior. The authors state that we must recognize that every description of a genetic disorder is a "story" that contains a message.

The final part of this section is a letter to the editor, "A Candid Look at Down Syndrome," by Bob Baumiller. In many ways this letter complements and expands on the previous article by Lippman and Wilfond.

Your editors hope that all of our readers will share with us your teaching experiences and, in particular, innovations or follow-up you have in teaching at any of the levels that we have mentioned. One of us (K.L.G.) became concerned about the lack of knowledge and current information about human genetics among practicing physicians and other health-care professionals. Nine years ago, the March of Dimes was approached with the suggestion that a quarterly newsletter be instituted. The newsletter, *Genetics in*

*Practice*, is now in its ninth year. Each issue contains a review of four to six current topics. Most of the articles reviewed concern conditions or genetic diseases that are seen frequently by primary care practitioners. There is frequently an article containing a medical genetics research topic, particularly one that is close to clinical applications, that is reviewed so that the practitioners are kept current. Any readers who are not familiar with these publications and would like to see a copy can write to the National Foundation March of Dimes, Professional Services Department, 1275 Mamaroneck Avenue, White Plains, NY 10605.

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