Conference Report

Eur J Hum Genet 1994;2:191–192

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Obernai

A European Research Conference on the Inherited Disorders and Their Genes in Different European Populations

A number of developments seemingly unrelated to each other have recently begun to make the genetic study of different human populations both more meaningful and of greater urgency than before. Polymorphisms in nuclear DNA now offer yet another tool to study the origins of our ancestors. Previously unavailable sources of information are the maternally inherited mitochondrial polymorphisms and the paternally inherited Y chromosome polymorphisms. In the absence of recombination, these provide new means of studying inheritance and mutation. Population genetics used to be the playground of a few theoretically inclined, mathematically oriented researchers working with exotic populations. This picture is now rapidly changing, as disease genes and their mutations enter the scene. While the study of disease-causing mutations rather than of silent polymorphisms would not appear to be very different, it is the involvement of large numbers of molecular, cytogenetic, and clinical researchers in this area that makes the difference. The population-genetic implications of the frequency and distribution of the prevalent ΔF508 mutation in the CFTR gene causing cystic fibrosis is already becoming a classic. Similar equally fascinating stories about the origin and spread of single and multiple mutations of numerous other genes are being unveiled. Importantly, the different mutations often lead to different clinical features, and many may affect selection.

While these developments are occurring on the scientific scene, the society in which we live is undergoing rapid changes that have a bearing on the distribution of our genes. For instance, in Europe the growth and stabilization of the European Union may begin to make our continent a genetic melting pot. In contrast, in some parts of Europe, particularly in the former Soviet Union, strong and determined forces favor nationalism as a means of cultural, ethnic, and political survival. This could lead to genetic neoisolation. Finally, population movements of considerable magnitude continue to create new founder groups with or without significant admixture with the receiving populations. In Europe, the more industrialized northern nations have received and continue to receive millions of people from further south who arrive in search of work and security, mimicking the great overseas emigrations of Europeans in the past. These gene movements have both medical and social implications not only for the immigrants themselves but also for the countries in which they settle.

The conference brought together over 100 participants who were mainly population, molecular, or clinical geneticists. In the quiet setting of a recreation resort, the conference provided participants ample time to practise nonassortative dining and panmixis. In situ observations suggested that instead of the usual ethnic and linguistic selection of coffee break and meal partners, both random Brownian movement and chance events helped create crossovers of general behavior patterns. Whether these events created such recombinations that were needed to ensure the success of the conference or that of the next conference in the series, remains to be determined. In any event, a second conference will be held in 1995 under the chairmanship of the vice chairman of this conference, Pro-

This conference was organized in Obernai, France, 26–30 November 1993, by the European Science Foundation (ESF) cosponsored by the Commission of the European Community.

Received: January 11, 1994
Accepted: January 11, 1994

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1018–4813/94/
0023–0191$8.00/0

fessor Peter Harper. At the Obernai conference, two sessions were devoted to the planning of the second conference.

Many ESF conferences last for 5–7 days. As a tribute to the crowded schedules and hectic lifestyles of most human geneticists, this conference lasted only 4½ days. Consequently, participants were made to work hard. In spite of early morning starts and programmes lasting right up to dinner time or after, attendance and wakefulness were remarkably high. A listing of the main sessions and key speakers follows:

- Spread and development of human populations in Europe (Derek F. Roberts, Robert Sokal);
- Linkage disequilibrium as a tool to study gene flow and map genes: multifactorial inheritance (Eric Lander);
- Cystic fibrosis (Xavier Estivill, Giovanni Romeo);
- The population genetics of malformations (Leo P. ten Kate, Claude Stoll);
- French genes in France and Canada (Charles Scriver, Claude Laberge, Josué Feingold, Kenneth Morgan, Arnold Munnich, Laurence Blanc);
- Thalassaemia in Europe (Antonio Cao);
- Phenylketonuria (Flemming Güttler);
- The Basques (Jaume Bertranpetit);
- Mutation (Friedrich Vogel, Michael Krawczak, Tiemo Grimm, Marie-Paule Lefranc);
- Genes and diseases in Jews (Arno Motulsky, Gregory Livshits);
- Diseases and genes in Finns (Reijo Norio);
- Gypsies (Vladimir Ferak), and
- How emigrant Europeans spread their genes overseas (Trefor Jenkins, Tobias Gedde-Dahl, Nicole Feingold, Francesc Calafell).

In addition to the key speakers listed above, over 30 other participants gave brief presentations. Over 50 posters contained material that could be only partly or not at all accommodated in the spoken sessions. Unusually much time (15–70 min per session) was allocated to discussion. The participation of 16 young researchers was significantly sponsored by the ESF; in fact about half of the participants might qualify as 'young'.

A major feature of the conferences organized by the ESF is that no written material is assembled or distributed; that is, there are neither abstract books nor proceedings. In the present climate of polypublication this principle is a welcome one. Those who wish to obtain more information are asked to contact the key speakers directly. Addresses are available from the chairman of the conference:

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Members of the organizing committee were Helena Kääriäinen, MD and Reijo Norio, MD. Those who wish to make suggestions regarding the 1995 conference should contact its chairman:

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Finally, information regarding these conferences in general can be obtained from the ESF:

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