



Klaus Lindpaintner

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Humboldt University in Berlin, and serves on the editorial board of several scientific journals. Klaus Lindpaintner lives near Basel, Switzerland; he is married to an internist, and has two daughters.

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Klaus Lindpaintner was born in Innsbruck, Austria, and graduates from the University of Innsbruck Medical School with a degree in Medicine and from Harvard University with a degree in Public Health. He pursued postgraduate training and specialization in Internal Medicine, Cardiology, and Genetics in the United States and Germany and holds board certifications in these specialties. He practiced cardiology and pursued research in the area of cardiovascular disease genetics, most recently as an Associate Professor of Medicine at Harvard Medical School in Boston, Massachusetts. He joined Roche Basel in 1997 as Head of Preclinical Research in cardiovascular diseases. Since 1998, he coordinates, as Director of Roche Genetics, the company's global efforts in genetics, genomics, and proteomics. He has co-authored more than 150 scientific papers, holds adjunct and honorary professorships at Harvard University in Boston, University of London, and

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Genetics and Genomics - Impact on Health Care: Opportunities and Challenges

- Opportunity: genetic approaches will provide molecular understanding of disease and drug action - a more sophisticated and biomedically relevant level of differential diagnosis, subdividing as well as combining conventional (clinical) disease definitions;
- Opportunity: molecular disease understanding will redefine and substantially increase the role of in-vitro diagnostics;
- Opportunity: molecular disease understanding will allow better prospective risk assessment and, consequently, to shift health care emphasis from treatment to prevention.
- Challenge: while the molecular tools are available, the genetic epidemiology work that needs to be performed to understand which few thousand of millions of SNPs now known are ultimately disease-relevant is intimidatingly large and will be complex, expensive, and time-consuming;
- Challenge: public perception of common complex disease genetics - based on monogenic disease models and determinism, rather than on probabilistic assessment and odds ratios-will need to be addressed in open dialogue to provide objective information to allow acceptance of opportunities
- Challenge: need for internationally harmonized legal framework regulating what is proper and improper use of medical information, to protect individuals.