Public Health Genomics Journal: Adjusting the Agenda to Future Needs

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Public health genomics (PHG) in the future will be quite different from PHG in the past!

The highly technology and computational sciences-driven dynamics of genomics as a ‘moving target’, starting from the Human Genome Project to the Personal Genome Project, is currently changing public health research, policies and practice in a substantial way.

Rapid scientific advances and tools in genomics, such as in the light of epigenomics, microbiomics and systems biology, not only contribute to the understanding of disease mechanisms and to the characterization of each person’s unique clinical, genomic and environmental information, but also provide the option of new,

promising applications in human health management during the whole life-course. In fact, what was little time ago a vision for a new era of public health, in which advances from the -omic sciences would be integrated into strategies aiming at benefiting population health, is now responding to the very pressing need for the development of effective personalized healthcare going even beyond personalized medicine. While the utility of most genetic tests and biomarkers is still not evidence-based, the real take-home message stops here and is a different one. In the personalized medicine setting, the traditional assessment and evaluation tools just do not work anymore.

Thus, we clearly face the need for a new paradigm because we start to understand that: (1) what we call common complex diseases might be a sum of 'rare diseases', and 'rare diseases', in the sense of Mendelian disorders and monogenetic diseases, might be indeed very complex; (2) we move from diseases towards diseasomes; (3) we move from risk factors to individual pathways or networks; (4) we move from clinical utility to personal utility [1].

However, the real paradigm shift depends on the willingness to restructure policies and on the ability to train practitioners from various professions. The P4 medicine, the future vision of Lee Hood [2], being predictive, personalized, preemptive, and participatory, is not around the corner yet, and there is a clear urgency to prepare health care systems and policy-makers in time.

In short, it is becoming more and more difficult to get an overview about the complexity of the field of 'omics', and to translate the scientific knowledge into public health, which remains the major task of *Public Health Genomics*.

This is the reason why our Journal, being the leading international one in this field, will adjust its agenda and will start with specific topic issues matching the need for a clearer overview on different areas in the field. In the last two years, we published special issues in the areas of Pharmacogenomics and Human Papilloma Virus (HPV). The positive feedback of our readers on these special issues encouraged the editorial team to continue and even extend this approach. From the six journal issues per year, in the future, three issues will be topic-specific looking at a single topic from different disciplines or approaches, bringing together pieces of evidence and providing a comprehensive, holistic and 'all-inclusive' picture of the topic in the end. Some topics may be covered by already submitted articles. For others, we will select authors based on their specific expertise, and we will ask for their contributions. This new mix will certainly enrich our Journal and increase its attractiveness. The next issue of the Journal is already such a specific-topic issue and will focus on Health Literacy. The personalization of risk prediction, using family history tools, individual drug response and the changing understanding of the etiology of diseases, challenges the role of citizens in the direction of proactive and self-responsible consumers. Therefore, genome-based knowledge and technologies require a new degree of health literacy, potentially widening health and socioeconomic gaps amongst different strata of society.

The increase of knowledge and its complexity has also led to progress in concrete applications of PHG. Regarding the implementation of PHG at the national and re-

gional level, the 'Institutes of Public Health' play a key role. In general, every country has such a scientific-oriented institution to give policy advice and ensure government action in health. At the same time, these institutions are at the interface between new scientific knowledge and the assurance of nationally appropriate public health strategies. Furthermore, in those European countries which are strongly decentralized, regional Institutes of Public Health are increasingly involved in the implementation of PHG.

Thus, these 'new' actors in PHG are a very important target group for our Journal, and their relevance in the field of PHG is expected to even increase in the near future. The Institutes of Public Health already benefit in their daily work from our past special issues, especially the issue on HPV. In the future, the Journal will provide such a platform for articles not only for these institutions, but also for policy-makers and the private sector in order to facilitate push-pull functions between academia, private sector and governmental bodies. Being supported by the Genome-Based Research and Population Health International Network (GRaPH-Int) [3], the Journal will continue to publish best practice programs, policies and communication tools as well as international, multidisciplinary research that enables the translation of genome-based knowledge and technologies into population health benefits. Recently, the administrative hub of GRaPH-Int moved from the Public Health Agency Canada to Maastricht University, and the Editorial Office of our Journal moved from Montreal to Maastricht.

The adjustment in the aims and scope of the Journal, as well as the Editorial Board, goes along with the new agenda of *Public Health Genomics* and responds to the needs of an evolving field where new sciences and advances-driven population-based programs will greatly improve human health. Indeed, PHG in the future will be quite different from PHG in the past, as will (hopefully) be the Journal!

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References

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