[8]National Hospital Organization Kurihama, Alcoholism Center, Yokosuka, Japan
[9]Department of Epidemiology & Biostatistics, Erasmus Medical Center, Rotterdam, The Netherlands
*Contact details: sboccia@rm.unicatt.it

**Background**
Individuals homozygous for *2 variant allele of aldehyde dehydrogenase 2 (ALDH2) are unable to metabolize acetaldehyde, that prevent them from alcohol drinking, while *1*2 heterozygotes have 6-fold higher blood acetaldehyde concentration post-alcohol consumption with respect to *1*1. If acetaldehyde is pathogenetic, *2*2 should be protected from head and neck cancer and *1*2 being at higher risk. Since this polymorphism is distributed randomly during gamete formation, according to the principle of 'Mendelian randomization', its association with head and neck cancer should be not confounded by smoking. We carried out a meta-analysis of ALDH2 and head and neck cancer association studies, and we investigated the consistency between the expected odds ratio (OR) for head and neck cancer among drinkers from the largest pooled-analysis among never smokers, and the observed OR from our meta-analysis.
**Methods**
We searched Medline and Embase up to 31 January 2008, for all relevant studies on ALDH2 polymorphism and head and neck cancer. Authors of the eligible papers were invited to provide genotype data stratified for selected covariates. Meta-OR and 95% CI were calculated by random effects model. Consistency between the expected and observed OR was assessed by an interaction test.
**Results**
Six studies were selected (945 cases, 2917 controls). Risk of head and neck cancer was reduced among *2*2 homozygotes (OR 0.64; 95% CI 0.39–1.03) relative to *1*1, and increased among heterozygotes (1.83, 1.21–2.77). The expected OR for head and neck cancer due to alcohol intake was 1.40 (0.89–2.21) in *1*1 individuals, similar to the observed OR from our meta-analysis (1.56, 0.97–2.56) among *1*1 compared with *2*2 ($P$ for interaction = 0.75).
Conclusions Besides demonstrating the effectiveness of the Mendelian randomization approach, these findings support the theory that alcohol raises head and neck cancer risk through the carcinogenic action of acetaldehyde.

### Mortality and causes of death among asylum seekers in the Netherlands in 2002–05

**Irene van Oostrum**

*IEA Van Oostrum*, H Koppenaal, ESM Goosen*
Department of Community Health Services for Asylum seekers, GGD Nederland, Utrecht, The Netherlands
*Contact details: IvanOostrum@ggd.nl

**Background**
Asylum seekers constitute a vulnerable population due to pre- and post-migration risk factors. Monitoring their health status is important, routine statistics do not give insight into the asylum population's state of health, so we set up a specific notification system to monitor mortality and causes of death among asylum seekers. The aim of this study was to assess mortality among asylum seekers in order to identify their health risk factors.
**Methods**
Asylum seekers spent 222 511 person-years in reception centres in the Netherlands during 2002–05. Primary death causes were assigned (ICD10) to 374 registered deaths. Direct standardization for age- and sex-allowed comparison with the general population in the Netherlands (data obtained from Statistics Netherlands).
**Results**
After standardization there is no difference in overall mortality between asylum seekers and the standard population. Mortality in the younger age-groups (15–30 years) 2–3 times higher than in the standard population (significant), whereas decreased mortality is seen in higher age-groups (40–65 years) (SMR 0.65; CI 0.52–0.80). Important primary death causes like neoplasms and cardiovascular diseases contribute less to mortality than in the general population. Infectious diseases (SMR 6.22; CI 4.28–8.74), congenital anomalies (SMR 1.78; CI 1.03–2.86) and external causes of injury (SMR 1.88; CI 1.50–2.32), attribute significantly to the mortality of asylum seekers. Perinatal mortality (8.3/1000 births), infant mortality (9.94/1000 births) and maternal death (SMR 14.48; CI 2.95–41.75) are higher than in the standard population. Multivariate analysis revealed differences in mortality between regions of origin. Young Africans (0–30 years) have a high risk of infectious diseases (RR 5.13–7.31) and death related to birth and delivery. North and East Africans and East and Central Europeans have increased risk to die of external death causes (RR 1.86).
**Conclusions**
We found excess mortality among asylum seekers for specific causes, in specific age-groups, and for different regions of origin. Preventive programmes for asylum seekers should address the risk factors found.



# F.4. Workshop: Genome-based innovations in public health: brokering basic research into policy and practice in Europe

*Chairs: Angela Brand* (Germany), Joao Lavinha (Portugal)*
**Organizer: EUPHA Section on Public Health Genomics**
*Contact details: angela.brand@fh-bielefeld.de
The growing use of life sciences and biotechnology for the development of drugs, recombinant vaccines and innovative therapies represent a huge potential that launch technological revolutions that in turn create leading industrial or commercial sectors. It is predicted that the sixth Kondratiev wave in economics would comprise this area of biotechnology. During its 2000 Lisbon meeting, the European Council finalized a new strategy for innovation and growth and stressed that Europe must aim to become 'the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion.' In 2005 the Lisbon Strategy was re-endorsed as the EC was setting up a new agenda for innovation and growth in the 'Knowledge-based Bio-Economy'. In the 2007 Bio4EU-Report, the EC-JRC concludes that modern biotechnology is one of the key industries for the new Lisbon Strategy. The success of both the Lisbon and the Knowledge-based Bio-economy approach depend on the strength of Europe to translate basic research in the life sciences into applications, which are designed to help citizens. The feasibility of technologies under every day conditions is a necessary step for the marketing of innovations. In the particular field of genomics, the economic success of products and processes fully depends on their effectiveness in a particular area of indication. In the 'Life Sciences and Biotechnology—A Strategy for Europe' communication (2002/C55/03) the European Commission has highlighted the goal of a personalized and preventive medicine that includes genome-based approaches. The paradigm shift

which goes along with these tasks requires a broad understanding of health and concrete transferral of health into all policies. Still, the emerging knowledge in biotechnology has not yet diffused in the relevant public health and policy areas. Public Health Genomics is closing this gap. It can be defined as the responsible and effective translation of genome-based knowledge and technologies into public policies and health services for the benefit of population health. Thus, the workshop of the section 'public health genomics' aims to identify and discuss the influences on, and the ways and responsibilities of translating emerging genome-based health information and technologies into timely policy options among European member states and different stakeholders.

### Genome-based innovations in public health: the contribution of systems biology

**Jeantine E Lunshof**

*JE Lunshof**
Department of Molecular Cell Physiology, Faculty of Earth and Life Sciences, VU University Amsterdam, Amsterdam, The Netherlands
*Contact details: jeantine.lunshof@falw.vu.nl

### Genome-based innovations in public health: the contribution of epidemiology

**Roza Adany**

*R Adany**
School of Public Health, University of Debrecen, Debrecen, Hungary
*Contact details: adany@jaguar.dote.hu

### Genome-based innovations in public health: the contribution of public health genomics

**Tomris Cesuroglu**

*T Cesuroglu**
GENAR, Hacettepe University Science Park (Teknokent), Ankara, Turkey
*Contact details: tcesuroglu@itt.gen.tr

### Genome-based innovations in public health: the contribution of European law

**Tobias Schulte in den Bäumen**

*T Schulte in den Bäumen**
Public Health Genomics European Network (PHGEN), German Center for Public Health Genomics (DZPHG), Bielefeld, Germany
*Contact details: tobias.schulte_in_den_baeumen@fh-bielefeld.de

# G.4. Workshop: The major and chronic diseases report 2007: state of the art of major and chronic diseases information in Europe and the way forward

*Chair: Coen van Gool**
Deputy leader of the EUPHA Chronic Diseases section, RIVM, The Netherlands
**Organizer: NIVEL – The Netherlands Institute for Health Services Research and the EUPHA Section on Chronic Diseases**
*Contact details: m.verschuuren@nivel.nl

In 2006, DG SANCO requested the task force on major and chronic diseases (TFMCD) to produce a report on the state of the art of major and chronic diseases information in Europe, highlighting the contribution of TFMCD projects to this European health information. In 2007 the report was produced by TFMCD project leaders, covering the following diseases/conditions: (i) atherosclerotic cardiovascular disease, (ii) autistic spectrum disorders, (iii) cancer, (iv) dementia, (v) depression, (vi) diabetes, (vii) haematological malignancies, (viii) maternal and child health, (ix) multiple sclerosis, (x) musculoskeletal conditions, (xi) oral health, (xii) sexual and reproductive health and (xiii) life expectancy with chronic morbidity. The report has been published by the European Commission on 6 June 2008, and was made available at the EU Health Portal and the DG SANCO website. This workshop aims to present the report. The state of the art of major and chronic diseases information in Europe as described in the report—including gaps in health information—will be presented. To conclude the workshop will focus on needs for future research on and development of European public health monitoring based on the experience of the report. The added value of the workshop is: (a) showing to the participants the specific contribution of Commission funded major and chronic diseases projects to European Health Information by providing a clear and comprehensive picture of the state of the art of major and chronic diseases information in Europe and (b) providing insight into the areas for future action identified by the public health experts and how this relates to DG SANCO's policy priorities.

### The major and chronic diseases report 2007

**Marieke Verschuuren**

*M Verschuuren, W Devillé*
Department of International and Migrant Health, NIVEL – The Netherlands Institute for Health Services Research, Utrecht, The Netherlands

In 2006, DG SANCO requested the Task Force on Major and Chronic Diseases (TFMCD) to produce a report on the state of the art of major and chronic diseases information in Europe. The TFMCD is one of the implementing structures of the Health Information Strand of the Programme for Community Action in the field of Public Health 2003–08. The aim of the report is 2-fold: first, to make visible the contribution of TFMCD projects to European health information, and second, to describe the state of the art of major and chronic diseases information in Europe, focussing not only on the monitoring systems implemented and data available, but also on gaps in information as well. In 2007 the report was produced on a voluntary base by several TFMCD project leaders—those able to allocate the necessary time and resources—often together with their expert colleagues. A template, covering the most important epidemiological aspects of major and chronic diseases information (e.g. prevalence, morbidity, mortality) was developed for the chapters to enhance comparability of results across the different diseases/conditions described in the report: (i) atherosclerotic cardiovascular disease, (ii) autistic spectrum disorders, (iii) cancer, (iv) dementia, (v) depression, (vi) diabetes, (vii) haematological malignancies, (viii) maternal and child health, (ix) multiple sclerosis, (x) musculoskeletal conditions, (xi) oral health, (xii) sexual and reproductive health and (xiii) life expectancy with chronic morbidity. The report has been published in June 2008. In this presentation, the aim and the structure of the report, as sketched briefly above, will be explained in more detail, providing the workshop participants with the necessary insights to understand the status of the report, and with a framework for the further contents of the workshop.

### The state of the art of major and chronic diseases information in Europe

**Herman van Oyen**

*H van Oyen[1], S Giampaoli[2]*
[1]Unit of Epidemiology Scientific Institute Of Public Health Brussels, Belgium