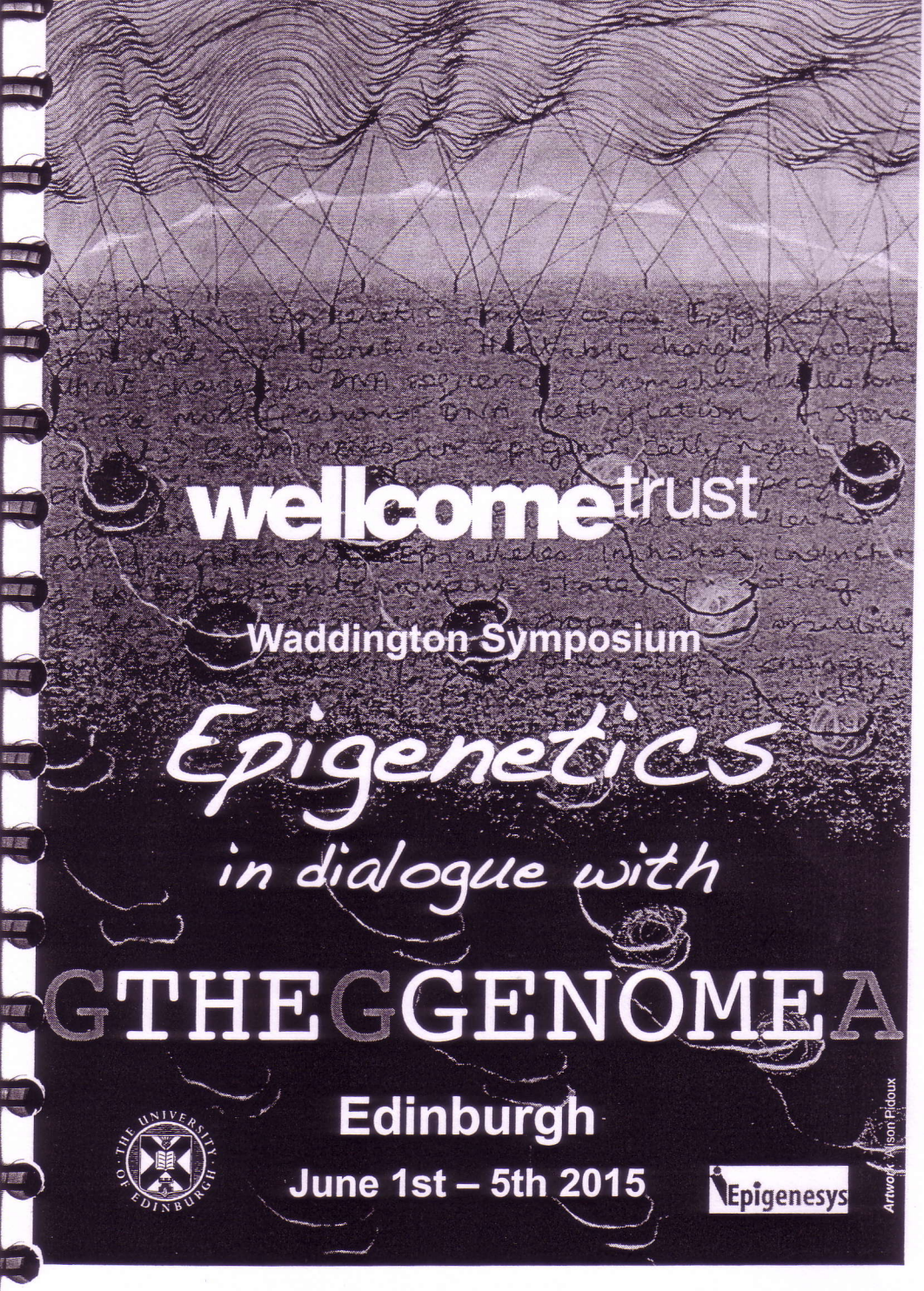
wellcome trust
Waddington Symposium
Epigenetics
in dialogue with
GTHEGGENOMEA
Edinburgh
June 1st – 5th 2015
THE UNIVERSITY OF EDINBURGH
Epigenesys
Artwork Alison Pidoux

The Wellcome Trust
Waddington Symposium

Epi-Genetics: in dialogue with the genome

Supported by
EpiGeneSys - www.epigenesys.eu
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Organisers:

Robin Allshire	University of Edinburgh
Adrian Bird	University of Edinburgh
Wendy Bickmore	University of Edinburgh
Tom Collins	University of Edinburgh
David Tollervey	University of Edinburgh

Registration Open - 10:00 at venue – Dynamic Earth, Holyrood Road, Edinburgh EH8 8AS

Ana Jeroncic, Ivana Mudnic, Ljiljana Maricic, Ozren Polasek, Mladen Boban
University of Split School of Medicine - Split

Wine and risk of cardiovascular diseases: could it include epigenetic mechanism?

Moderate alcohol consumption is associated with reduced risk of cardiovascular diseases (CVD). Besides known biological effects of alcohol and phenolics contained in alcoholic beverages, there is increasing awareness that alcohol-induced epigenetic gene regulation may play important role as well.
In this study we analysed associations of wine and beer consumption with selected hemodynamic indicators of CVD risk in apparently healthy and hypertensive subjects. From the population-based cohort of 1012 participants we selected non-drinkers and moderate drinkers of beer or wine (up to equivalent of 40 ml ethanol/day). Apparently healthy (n=286), and subjects with hypertension and no co-morbidities (n=190) were included. Haemodynamic measurements were recorded by the Sphygmocor device. Hemodynamic indicators: central systolic blood pressure (cSBP), aortic (cAIx) and radial (pAIx) augmentation index, and pulse wave velocity (PWV) were measured and data on alcohol consumption were obtained by a questionnaire.
Stepwise multiple linear regression models of pAIx, cAIx, PWV, or cSBP; were built separately in healthy and hypertensive group. Model of each biomarker, adjusted for known determinants, also included volumes of beer or wine consumed weekly or the equivalent volume of pure alcohol.

In both groups, the volume of pure alcohol was not significantly associated with changes in measured hemodynamic parameters. Volume of consumed wine was weakly associated with favourable changes in pAIx ($B \leq -2.7$, $P \leq 0.001$) and cAIx ($B \leq -1.2$, $P \leq 0.003$) both in hypertensive and healthy. No significant results were observed for beer.

Study suggests that non alcoholic components in wine are important for its biological effects. We believe that results of this and similar studies, besides classic approaches, should be also analysed in light of possible epigenetic mechanism.