Modeling Mutagenicity status of a diverse set of chemical compounds through Envelopes

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1 Introduction

2 Materials and Methods

2.1 The data

The 508 chemical compounds in our dataset consists of

2.2 Envelope models in analyzing the data

3 Results and discussion

All analyses were done on MATLAB version R2010a[2].

4 Conclusion

We have demonestrated through simulation that the distorting effect of antihypertensive therapy in studies of quantitatively measured blood pressure can lead to loss of statistical power in the Single-marker analysis approach of QTL mapping. Among the adjustment methods considered, ignoring the problem altogether and analysing observed BP in treated subjects as if it was the underlying BP, excluding affected or treated subjects from analysis, or fitting a mixed model with treatment as a binary covariate perform very poorly and thus should not be used. Finally we have concluded that adding an estimate of the reduced BP due to medicine can reasonably nullify the reduction of powers.

Acknowledgement

I thank Prof. Dennis Cook for his guidance and valuable inputs throughout the project and Xin Zhang for sharing his MATLAB codes for logistic envelope analysis.

References

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2. Mathworks Inc. MATLAB Version 7.6 (R2008a), 2008.