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Muscle profiles

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Jonathan B Weitzman
Email: jonathanweitzman@hotmail.com

Different skeletal myofibre types are known to express distinct muscle myosin isoforms. In the Early Edition of the Proceedings of the National Academy of Sciences, Porter *et al.*, from Case Western Reserve University, Cleveland, USA, describe a genomics approach to exploring the molecular signatures underlying skeletal muscle biology (Proc Natl Acad Sci USA 2001, 10.1073/pnas.211257298). They used high-density oligonucleotide arrays (from Affymetrix) to measure gene expression profiles in the extraocular muscle (EOM), jaw and hindlimb muscles of mice. A third of the genes examined were expressed in each muscle type. Profile analysis indicated that EOM is a distinct muscle allotype defined by the expression of 400 EOM-specific genes. These include genes implicated in sarcomeric organisation and excitation-contraction coupling. Thus, microarrays can be used to define the molecular basis for myofibre classes and to characterize genes contributing to skeletal muscle biology.

References

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