

INTRODUCTION

Locomotor Behavior: Numbers, Numbers, Numbers!

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RELATIVELY recent applications of technical developments for the automated measurement of motor activity (1) have resulted in large volumes of data (2) that require computer management for reasonable interpretation. In order to share insights, solutions to problems, and, at times frustration, a variety of speakers were invited to participate in a Satellite Symposium entitled *Locomotor Behavior: Numbers, Numbers, Numbers!* held on November 9th, 1986, at the Society for Neuroscience Annual Meeting in Washington, DC. The approaches to data management which were discussed extensively and published in these proceedings included a microcomputer based system, described by Michael Forster, a similar system using a microcomputer for data acquisition with a link to a larger DEC VAX 11/785 for data management, described by Carl Boast, and a video based system utilizing a dedicated DEC VAX 11/750 as well as a DEC MICROVAX, described by Phyllis Mullenix. Full length presentations at the symposium were also made by Barbara Lerer (Dupont) and Larry Reiter (EPA), but are not published here.

Several shorter presentations were also given during an open-discussion section at the symposium which gave

examples of the utility of being able to manage large amounts of data relatively simply, and, in some cases providing further insight into the reliability and availability of specific aspects of motor activity measurement. Specifically, Sanberg *et al* described the use of measures of thigmotaxis and stereotypy in a Digiscan automated system, while Ossenkopp *et al* described the time course and reliability of motor activity changes after repeated measurement. Other applications described included characterization of the motor activity effects of the radioprotector WR-2721 (Landauer *et al*), use of motor activity to select genetic lines of mice with differential sensitivity to ethanol (Crabbe *et al*), and the effects of neural transplants of striatal tissue on motor activity (Hagenmeyer-Houser *et al*).

Together, these papers represent considerable advances in the utility of approaches to the automated assessment of locomotor activity. The symposium was co-organized by Carl Boast and Paul Sanberg, with Dr Boast serving as symposium chair. The present compilation of papers has been edited by Drs Boast and Sanberg. The Third Annual Satellite Symposium was sponsored by Omnitech Electronics, Inc of Columbus, OH.

REFERENCES

- 1 Sanberg, P R. Locomotor behavior. New approaches in animal research. Proceedings of a satellite symposium to the 14th Annual Meeting of the Society for Neuroscience. *Neurobehav Toxicol Teratol* 7: 67-100, 1985.
- 2 Sanberg, P R. Locomotor behavior. Neuropharmacological substrates of motor activation. Proceedings of a satellite symposium to the 15th Annual Meeting of the Society for Neuroscience. *Pharmacol Biochem Behav* 25: 229-300, 1986.