paramagnetic centre can be modified by attaching a small synthetic probe containing a stable nitroxide radical. This spin labelling technique developed by McConnell was described by Dr D. Chapman (University of Sheffield). The method is based on the anisotropy of signals from the nitroxide radical which thus acts as a "reporter" of molecular motions (for example, whether the spin label is in a region of free or restricted movement). Applications have ranged from studying conformation changes in proteins to obtaining evidence for the bilayer structure of phospholipid membranes. Interaction of lipid membranes with drugs and anaesthetics has also proved tractable to the spin labelling approach. Chapman emphasized, however, that possible perturbation of the biomolecular structure by the spin label must be considered, and that the method should be considered as complementing rather than outmoding more classical techniques, such as polarization of fluorescence.

NERVOUS SYSTEM

Central Cholinergic Mechanisms

from a Correspondent

MUCH has been heard about the significance of central neurones, with monoamines as transmitters, for an understanding of neurological and psychiatric disorders and the action of centrally acting drugs. But cholinergic neurones, using acetylcholine as their transmitter, are no less important, being involved, for example, in ascending systems of neurones which may have an important role in attention, awareness and consciousness. Investigations, however, have been held up for lack of a sufficiently sensitive and specific chemical method for estimating acetylcholine. But at the international symposium on the effects of drugs on cholinergic mechanisms in the central nervous system, held at Skokloster, Sweden, from February 23 to 25, Dr D. J. Jenden (Los Angeles) thought that it should soon be possible to estimate picomolar quantities in tissue samples and fluids using a combination of gas chromatography and mass spectrometry.

Much of the meeting was taken up with an examination of the storage and release of acetylcholine and how they are affected by drugs, using superfused cortex, cortical slices and isolated nerve terminal synaptosomes. The synaptosome has turned out to be a most versatile organelle. Dr H. F. Bradford (London) explained how to make "reconstituted slices" from synaptosomes which have most of the metabolic properties of brain slices, including a large increase in oxygen uptake when electrically stimulated. He also showed that of the six or so uncombined amino-acids present in synaptosomes in considerable amounts, only those known to have transmitter-like effects on central neurones are released on stimulation. Dr M. P. Blaustein (St Louis) observed that in metabolizing synaptosomes the uptake of calcium ions is stimulated by potassium ions in a manner very similar to that of intact neurones. He considers that the metabolizing synaptosome has a normal resting membrane potential.

When the topic was the cholinergic receptor and its structural and functional relationship to acetylcholinesterase, Dr E. Heilbronn (Sundbyberg and Uppsala) described the morphological changes in brain slices which result from treatment with phospholipases. The pre-synaptic portions of the terminal membranes are selectively destroyed, leaving clumps of intact vesicle and synaptic clefts; such preparations should be a valuable new starting material for the isolation of the post-synaptic membrane, particularly if allied with the new high resolution separation techniques using zonal rotors described by Dr R. H. Mahler (Bloomington) and Dr V. P. Whittaker (Cambridge and Staten Island).

VIROLOGY

Where to get Monkey Viruses

MANY virologists still do not seem to be aware of the services available to them at the simian virus reference centre of the Southwest Foundation for Research and Education in San Antonio, Texas. Dr S. Kalter, director of the foundation's division of microbiology and infectious diseases, writes: The increased use of non-human primates in biomedical research prompted the need to develop a centre to which researchers could turn with their virological problems. As a result, a simian virus reference centre was set up in 1966 at the Southwest Foundation, with support from the World Health Organization; in 1968 the US National Institutes of Health added its support. The centre is called the Collaborating Laboratory on Comparative Medicine: Simian Viruses (*WHO Chronicle*, **23**, 112; 1969).

The centre aims to develop a working repository for simian viruses, and to provide a source of reagents such as strains of certified reference seed virus and specific antisera. At present there are reagents available for all accepted prototype simian viruses. We try to obtain new simian viruses as they are described, in order to prepare stocks and develop suitable antisera.

Consultation services are available to deal with questions about the existence of antibody to viruses of human and simian origin in various primates. There are also diagnostic services, including facilities for the identification and characterization of viruses for primatologists who are unable to identify their own isolates (this includes screening for human viruses). An information service is also available, and exchanges of organisms between primate centres and other health organizations can be arranged. The Texas centre also has facilities for the training of students in the procedures of primate virology. The address of the centre is: Division of Microbiology and Infectious Diseases, Southwest Foundation for Research and Education, PO Box 28147, San Antonio, Texas 78228.

VIRUS INFECTION

Good News on Poly-I:C

from a Correspondent

DURING the past two to three years the synthetic double stranded RNA, polyriboinosinic acid–polyribocytidylic acid (poly-I:C), which induces interferon, has been shown to have a significant antiviral effect in animals and tissue culture. In spite of previous indications of unpleasant side effects in animals, recent clinical trials have had hopeful results. Some good news was delivered by Dr S. Baron (National Institute of Allergy