# A.P.S.M.
# 4th
# Annual General Meeting

## INTRODUCTION

*The 4th annual general meeting showed a significant change in format from previous meetings. A major drive to get people to come to Athlone on the Friday night proved very successful and a most congenial evening was had by all. This was, no doubt aided by the buffet supper reception hosted by John Early of Electramed.*

*The scientific sessions started bright but not too early on Saturday morning with a variety of talks ranging from curves strip teases to noisy knees. The increase from 15 to 20 min. per paper lead to a more relaxed presentation and discussion from all speakers and both scientific sessions were a great success. After afternoon tea, we had our first ever round table discussion, headed by Noirin Sheahan on the problem of radioactive pollution on the Irish sea. This provided an interesting hour of debate on this topical subject.*

*With the hard work over, members began the serious task of enjoying the annual dinner (courtesy of Des Martindale of Perlemar, and I.G.E.) and the subsequent few pints.*

*The A.G.M. the following morning suffered from the excesses of the previous night (or more correctly, those of earlier that morning!) and started late. Nevertheless Dr. Jim Malone brought the meeting along at a business like pace and by 12 noon we were ready to hear our guest speaker, Dr. Jim Gosling from U.C.G., speak on the topic of enzyme immunoassay.*

*After lunch and a couple of push starts, a bunch of happy A.P.S.M. members made their way home. Let's hope next years A.G.M. is as successful.*

## A NEW ITERATIVE TECHNIQUE FOR POLYEXPONENTIAL CURVE STRIPPING

Linear models are commonly used to describe drug/radioisotope disposition kinetics. These models give rise to polyexponential expressions. The parameters of these expressions are best estimated from experimental data using nonlinear least squares regression. The initial parameter estimates required for nonlinear regression are frequently derived using graphical or computer aided curve stripping. However, curve stripping assumes that the magnitudes of the exponential rate constants are widely disparate. Violation of this assumption would be expected to result in biased parameter estimates.

A new iterative curve stripping technique which does not make any assumption about the relative magnitudes of the rate constants, has been developed. It has been programmed in BASIC and runs on an Apple IIe microcomputer. Both computer simulated and real laboratory data were used to evaluate the performance of the new method.

**Adrian Dunne**
**Department of Pharmacology,**
**University College Dublin,**
**Foster Avenue, Blackrock, Co. Dublin**

## SELF INDUCED VIBRATIONS IN NORMAL KNEES

In the presentation the aetiology and mechanism of production of Physiological patello-femoral crepitus was described. This is the name we have given to the fine creaking sensation (vibration) that can be felt over the patella when any normal knee is moved slowly. Recordings are made using an accelerometer based transducer system, as described at a previous meeting of this association.

It was demonstrated that, during physiological crepitus, the patella vibrates back and forward about a transverse axis like a see-saw, as the upper half of the patella moves out the lower half moves in. Consequently on the transverse axis across the middle of the patella there is a nodal line with greatly diminished movement. The detected direction of this patellar movement changes according to whether the knee is being bent or straightened. The mechanism was explained using a model, and the cause was shown to be stick slip friction.

The conclusions were that physiological crepitus is a normal phenomenon, caused by stick slip friction, which produces a self induced rigid body vibration of the patella. The clinical significance of these findings are being investigated.

**D. E. Beverland, W. G. Kernohan, R. A. B. Mollan**
**Department of Orthopaedic Surgery**
**Musgrave Park Hospital**

## SAFETY OF ELECTRICAL SUPPLIES IN PATIENT AREAS

The legal requirements for safe electrical wiring in hospitals is met by installations that conform to standard domestic and industrial regulations: This applies even in patient areas where major protection is presumed to be provided by the use of equipment conforming to BS5724 (IEC 601-1) standards.

Conformity to the standard regulations (IEE 15th. Edition) gives protection to equipment and wiring and also protects people from macroshock, safety being effected by a complete cut off of power. The potential dangers of microshock, when people have low conductivity in baths or showers, is avoided by forbidding switches and accessable fittings in such areas.

Scanned with CamScanner