SOFTWARE SURVEY SECTION

Editor's Note: The following Software Descriptions have been
submitted by our readers in response to our call for an open
exchange of information on software programs. They are offered
without review or comment to provide a rapidly published, easily
accessible avenue of communication. Other readers with relevant
software packages are invited to complete and submit a Software
Description Form (found at the end of this section).

Software package BP-013-S87   ILEUM ver. 2.0

Contributor: Dr. I. Hughes, PIDATA, Leeds, United Kingdom

Brief description: ILEUM accurately simulates laboratory experiments which
investigate the effects of drugs on the vitro guinea-pig ileum. The in vitro
guinea-pig ileum preparation is commonly used to demonstrate and quantitate
the actions of drugs on intestinal smooth muscle. It has the advantage of
retaining its responsiveness for many hours, of having relatively little
spontaneous activity and of containing a great variety of receptor types.
Thus the actions of many different drugs can be demonstrated on this tissue
and simulated on ILEUM. Drugs available for the ILEUM simulation include a
dozen familiar agonists, which will contract the muscle, together with
blockers of various sorts. It is possible to mimic experiments to identify
"an unknown compound." For this the computer can select at random one of
the 20 "unknowns," some of which do not appear in the regular program runs,
although a key is given in the manual allowing deductions about the
compound(s) to be checked. Random elements are incorporated into ILEUM to
simulate the inherent biological variability in the response to the same dose
of agonist. ILEUM has the great advantage over the animal preparation that
the time between additions of drug can be reduced to seconds, so an entire
series of test can be carried out in a short time, rather than hours normally
required. However, good experimental design is still essential. ILEUM can
be used quantitatively or qualitatively and a permanent record of output can
be produced on a normal printer in the form of a "chart trace" which can
then be measured and processed using the usual statistical procedures.

Potential users: Students
Fields of interest: Pharmacology/physiology.

§ This application program in the area of pharmacology/physiology has been
  developed for Apple II, IBM PC, BBC B in BASIC. It is available on
  5-1/4", double-sided, double-density floppy diskette.
§ Distributed by Elsevier-Biosoft.
§ The minimum hardware configuration required is a printer. No user
  training is required. There is exensive external documentation. Source
  code is available.
§ The package is fully operational. The publisher is available for user
  inquiries.

<u>Software package BP-014-S87</u>   CARDIOLAB

<u>Contributor:</u> Dr. I. Hughes, PIDATA, Leeds, United Kingdom

<u>Brief description:</u> CARDIOLAB costs less than a single dog yet can be used
repeatedly to simulate the chart recorder outputs of experiments on
anaesthetized (normal or reserpinized) animals and pithed animals. The
simulated heart rate and blood pressure traces can be made on almost any
printer. The program allows "administration" of many agonist and antagonist
drugs. CARDIOLAB can also mimic stimulation of vagal and sympathetic
cardiac nerves. Effects of blockers "wear off" at a rate corresponding to
their $t_{1/2}$. "Overdoses" with agonists or blockers will "kill" the
preparation. Responses are subject to "biological variation" and are
influenced by cardiac compensatory reflexes if appropriate. Tachyphylaxis
is seen with relevant agonists. CARDIOLAB simulates the slow deterioration
of a preparation which may "die" unexpectedly after six hours of "preparation
time" (responses each take about 10s to be printed but represent about 3
minutes of "preparation time"). CARDIOLAB can provide "unknown" drugs for
characterization by students.

<u>Potential users:</u> Students.
<u>Fields of interest:</u> Physiology/pharmacology/medical.

§ This application program in the area of pharmacology/physiology/medical
   has been developed for IBM PC, Apple II, BBC B. It is available on
   5-1/4", double-sided, double-density floppy diskette. Required memory is
   128K (IBM PC), 48K (Apple II).
§ Distributed by Elsevier-Biosoft.
§ The minimum hardware configuration required is a printer. No user
   training is required. There is extensive external documentation. Source
   code is available.
§ The package is fully operational. The publisher is available for user
   inquiries.

NAME OF JOURNAL _____ **BIOCHEMICAL PHARMACOLOGY** _____

P E R G A M O N
SOFTWARE DESCRIPTION FORM

Title of software package: _____

_____

_____

It Is: [ ]Application program   [ ]Utility   [ ]Other_____

Specific area _____ (e.g. Thermodynamics, Inventory Control)

Software developed for [name of computer(s)] _____
in [language(s)] _____
to run under [operating system] _____
and is available in the following media:
[ ]Floppy disk/diskette. Specify:
      Size _____ Density _____   [ ]Single-sided   [ ]Dual-sided
[ ]Magnetic tape. Specify:
      Size _____ Density _____   Character set _____

Distributed by:_____

Minimum hardware configuration required: _____

Required memory: _____   User training required: [ ]Yes [ ]No

Documentation: [ ]None [ ]Minimal [ ]Self-documenting
                [ ]Extensive external documentation

Source code available: [ ]Yes   [ ]No

Level of development: [ ]Design complete   [ ]Coding complete
   [ ]Fully operational   [ ]Collaboration would be welcomed

Is software being used currently? [ ]Yes   [ ]No
   If yes, how long? _____ If yes, how many sites? _____

Contributor is available for user inquiries: [ ]Yes   [ ]No

                                                        (continued)

RETURN COMPLETED FORM TO:

                    Dr. David Stagg
                Department of Pharmacology
            Yale University School of Medicine
                    333 Cedar Street
                    P.O. Box 3333
                    New Haven, CT 06510

[This Software Description Form may be photocopied without permission]

Description of what software does [200 words]:

Potential users: _____

Fields of interest: _____

                         # # # # # # #

Name of contributor: _____

Institution: _____

Address: _____

         _____

         Telephone number:_____

                         # # # # # # #

Reference No. [Assigned by Journal Editor]_____

- -
[The information below is not for publication.]
Would you like to have your program:
                    Reviewed?   [ ]Yes [ ]No [ ]Not at this time
        Marketed and distributed?   [ ]Yes [ ]No [ ]Not at this time