How much money do you want?

You decide. Just a few dollars a month in an Investors plan are all that's needed to start you on your way to financial success. The Man from Investors can show you how to have the money you want in ten, fifteen or twenty years. He'll get you off to the right start using money to make money while building your financial objective.

Investors has an extensive range of flexible plans specially designed to solve your problem of accumulating money. Start making money with your money the easy Investors way. See the Man from Investors today.

Investors
SYNDICATE LIMITED 120 BROADWAY, WINNIPEG

Distributor for:
INVESTORS MUTUAL OF CANADA LTD.
INVESTORS INTERNATIONAL MUTUAL FUND LTD.
INVESTORS GROWTH FUND OF CANADA LTD.
PROVIDENT STOCK FUND LTD.
PROVIDENT MUTUAL FUND LTD.
What happens if you ask your son, your brother-in-law, or your next door neighbour to be your executor?

Carrying out your wishes under your Will is the culmination of your life’s work, ambitions, frustrations, and achievements. Too often we’ve seen the problems of having relatives, friends, and business associates act as executors. For example, being brutal but realistic, chances are one or two of them are your own age so you can’t count on continuity of the executorship (as you could with a corporate executor). Again, relatives tend to be too close to the situation — it’s difficult (even embarrassing) to be completely objective. Finally, estate taxation is a very complicated subject for someone not completely familiar with changing taxation situations in major countries.

We suggest you name your executor. The foundation of our business is, and always has been, handling estates. You’re assured of continuity and objectivity. We have the special knowledge and expertise in investment management and taxation you need. And we have offices right across Canada and overseas, so your wife and other beneficiaries can establish themselves comfortably and without worry wherever they please.

If, on the other hand, having a large corporation looking after your family affairs seems a little too impersonal, remember, we at Royal Trust have wives and children, too.

### CONTENTS

8 Canadian University Enrollment
11 If You Could Make Your Own University — by Susan Foley
13 Immunology by Edward Urru
17 Medical Education Revolution by Susan Hoeschen
25 Installation Address by Dr. Ernest Sirluck
42 Lost Grads
43 Super Sleuths by William Gennett

### DEPARTMENTS

2 The University
22 About Books by S. Foley
45 Births
44 Marriages
20 Deaths
47 Through the Years

Published quarterly in February, May, August and November by the Alumni Association of the University of Manitoba.

Subscription rate $3.50 a year to non-members. Copies to all graduates of the University.

Editorial and circulation enquiries to the Alumni Journal, University Center, University of Manitoba, Winnipeg 18, Phone: 515-555.

Advertising representative: W. George Turner & Associates Ltd., 500 Clapham of Commerce Blvd., 177 Lombard Avenue, Winnipeg 2. Phone 666-8228.


Postage Paid as second class mail. Permit No. 1174. Return postage guaranteed.
Hugh Penward, 22 years old,  
Arts, history major

I wouldn’t have a University like this. It would just be a very small thing. A few professors, a few teachers, and a few students. We would learn. It would be an in-depth thing. You would be living together, with them.

The learning bit could be an endless process if you wanted it to be—it wouldn’t have to be just three years. Students could read and converse, read and converse, the whole time.

For the people who just want a piece of paper, you could have textbooks, computers and television sets, which is all that there is now.

---

Israel Lyon,  
UMSU President

What would I make? WOW!

Considering my interest, concerning the physical environment and town planning—I wouldn’t make a University. I would just have a group of people interested in the various aspects of regional planning and a big bus. We would just travel all over the place and stop in at various cities to talk to people with specific expertise, concerning subjects that we’re interested in. It would be just meeting people and seeing how different people live and listening to their problems and going to speak to experts.

---

Eleanor Mellish, 21 years old,  
Senior Lady Stick, Home Economics,  
Fourth year human development

Come back tomorrow!

I would make it an unstructured program where you wouldn’t have to get a degree at all. It would be a University that would offer sources of information combined with experience in a related field—making it a very fluid program. It would also be a year-round type of semester, and you could come and go whenever you wanted to. There would be a general sort of program, a type of degree that would say how you had put in your time.

Another thing would be getting rid of the professors and the structural timetables, and having the student organization quite powerful.

It is all a question of your value of University life—whether you see this as a degree, or as an education, or as an experience that enhances the individual’s interests. And I think that the individual’s interest should be “a first thing” and this is why a closer student-professor liaison, in planning an individual student program would be important.

You have to get away from the role system, whereby the student knows nothing, the professor has all the knowledge, and he directs the students only what he wants to direct to them.

The University is not a sanctuary from the law, nor anything else this world presents.

---

Immunology

BY EDWARD L. UNRAU

"This is Canada's first university-based department of immunology"  
and our interviewer talks with  
Dr. Alec Schoen, Head of the Department.

THE establishment of Canada's first separate Department of Immunology in the Faculty of Medicine of the University of Manitoba a year ago is a recognition of the need for a continuous and organized teaching and research program in this biomedioal science, said Dr. Alec Schoen, head of the department.

"Most of the exciting discoveries in immunology have been made within the past 10 to 15 years... This is Canada's first university-based department of immunology... created through the vision and efforts of Dean T. W. Fyles.

"Before coming here most of us were members of different departments with no administrative commitment for continuity of programs and with no possibility for developing meaningful and cohesive set of courses and research programs."  

Initially six principal investigators came to Manitoba from McGill University bringing with them research grants, research equipment, postdoctoral fellows, graduate students, and technical assistants. This "instant" department was installed in a newly constructed, but temporary, annex just west of the Faculty of Dentistry Building, on Bannatyne Avenue.

Immunology—what's that?

Dr. SCHON defined immunology as a "bio-medical" science, which deals with the different aspects of the immune response of the body. By immune response we understand the overall reaction of a living organism to "foreign" substances or bacteria.

"These foreign elements are referred to as antigens. When antigens gain access into a mammalian organism, such as man, specialized cells of the lymphoid system recognize the "foreignness" of the antigen—i.e. the "not-self" as compared with the "self" of the host.

"Once this recognition takes place a complex mechanism is activated—the immune response."  

He explained that the immune response consists basically of two different manifestations occurring simultaneously or successively.
sively. One of these is the manufacture by the body of protein molecules, termed antibodies, which have the ability of combining uniquely and specifically with the corresponding antigens, while the other is the production of immunologically committed or sensitized cells that are capable of reacting directly with the antigen.

The difference between antibodies and sensitized cells is similar to the difference between bullets and soldiers, he said. Antibodies are molecules the body "hurls" at antigens, while sensitized cells are "soldiers" which engage antigens in a kind of cell-to-cell combat.

An antigen may be a virus or a bacterium responsible for one of the many infectious diseases; it may be environmental in nature such as allergy-inducing pollen or house dust; it may be the mosaic of cells of a transplanted organ; it may be a component of a cancer cell; or in the extreme case it may be a "self" antigen towards which the host's own cells react as if it were foreign, as in the case in auto-immune diseases, such as rheumatoid arthritis. In all cases, the presence of the antigen elicits an immune response.

In general, immunology is concerned with the nature, activities and reactions of antigens and antibodies, with the basic factors governing the mechanism and regulation of the immune response, and with the manifestations of the immune reactions both in the test tube and in the body.

Interdisciplinary approach

The diverse aspects of the immune response and the various facets of research in this area, at both the molecular and cellular levels, have made an interdisciplinary approach a necessity. For example, Dr. Sehon, originally trained as a physical chemist and now recognized as an immunologist, heads a team of researchers several of whom hold doctoral degrees from different scientific disciplines. The original specialized areas of training of the other staff members of this Department are given in brackets after their names: Dr. Brian G. Carter (Zoology), Dr. Eduardo B. Centeno (Pharmacology), Dr. M. David (Pediatrics), Dr. Arnold Fross (Biophysical Chemistry), Dr. George Holme (Biochemistry), Dr. Edris Subhadass (Surgery) and Dr. Kam J. Tee (Medicine).

He said that an "understanding of immunological principles is essential in several approaches to the problem of rejection in being taken by the use of non-specific immunosuppressives. This approach affects the entire immune system and the patient often dies of rejection, but of infection due to the fact that his entire defense system has been undermined. It is clear that a specific inhibition of the immune response, exclusively to the antigens of the transplanted organ, must be a future target."

Cancer control

Perhaps one of the most exciting fields of modern immunology is the recent evidence of the role of immunological processes in controlling cancer. It appears that the body recognizes cancer cells as being foreign and in this way an immunological "surveillance" reaction is triggered in an attempt to control the growth and spread of malignant cells. It is suspected that malignant cells are produced continuously throughout life but are eliminated rapidly by the body's immune processes. However, if the immune response cannot be alerted in time to destroy the initial foci of the fast growing tumors, the cancer will spread throughout the body.

"Clearly, this concept provides a rational approach to the treatment of cancer, which should be based on an attempt to enhance the immunological response of the body against cancer cells so as to keep the fine balance between malignant cells and immune cells in favor of the latter."

Dr. E. R. Centers and Dr. J. Diment looking at a Biochrom Preparative Disc, an electrophoresis instrument.
Medical Education Reformation

BY SUSAN HOESCHEN

1970 was the year to enter Medicine in Manitoba. This is the year of change and the 75 students who entered first year Medicine at the University of Manitoba in the fall are the beginning of an exciting educational reformation.

While students all over the world picketed, burned and staged strikes, the faculty in the University of Manitoba School of Medicine anticipated and accepted the challenge. The school is one of the leaders in the revolution in medical education taking place in Canada today.

The medical school is instituting far-reaching changes in the methods and approaches to teaching which answer many of the criticisms of radical reformers.

"In the institution of curriculum reform, Manitoba is as far ahead as any other school in Canada," Dr. T. W. Fyles, Dean of Medicine, said in a recent interview.

He described the basis of the curriculum changes simply: "We have reviewed the whole basis of how we teach Medicine."

"...a profound change is evident in the attitudes of the nation's (United States) 37,750 medical students. Hundreds of the most earnest, intelligent and vocal of them are clamoring for major reforms in the purpose and methods of medical education. They are demanding that the schools design a more rational, effective health-care system, and more relevant training for a new breed of practitioners."