

# ANNUAL REPORT

## 1979-80

VETERINARY  
INFECTIOUS  
DISEASE  
ORGANIZATION  
**VIDO**





# BOARD OF ADVISORS' REPORT

To the Board of Advisors this Annual Report of VIDO is an important one — for it completes the Board's work.

From April 1, 1980, the affairs of VIDO are to be governed by a newly formed Board of Directors under the leadership of Ben Thorlakson, President of Thorlakson Feed Yards, Airdrie, Alberta. Mr. Paul Riese, Karmona Stock Farms, Selkirk, Manitoba, will be the Vice-Chairman. Several members of the previous Board of Advisors and Governing Committee will serve on this single Board.

This change of organization recognizes VIDO's maturity. During the past five year launching period, the Board of Advisors has worked closely with the Director and the Governing Committee in translating a concept to a reality. In looking back over this short period of time, it is with considerable gratification and some amazement that we can see a new research centre having been organized, and at the same time having attained scientific and commercial breakthroughs.

At a time when Canada is searching for ways to generate its Research and Development effort, it is worth reviewing some of the principles on which this institution was founded and the manner in which its success evolved.

Following the screening of a number of national projects seen as imperatives to tackling unique Canadian future needs, the reduction of common infectious diseases of animals was judged by the Devonian Group of Charitable Foundations as a venture worthy of support.

The initial organizational steps were taken in the belief that a University is the ideal place to carry out the full range of basic through applied research. It was considered, though, that in addition to the academic freedom traditional to this setting, that researchers and management needed to be provided with "organizational freedom". That is, a release from the administrative and teaching responsibilities normally carried by University researchers. Two further requisites were visualized — that secure funding be in an amount above the threshold where significant new advancements could be expected, and — that a major portion of these resources be allocated to attacking a single problem.

The remaining critical ingredients were seen as the bringing together of highly qualified researchers and strong leadership possessing a knowledge of the needs of potential beneficiaries of their work.

These idealistic pre-conceptions were applied five years ago.

With initial funding provided jointly by the Foundation and the Governments of Alberta and Saskatchewan, together with support from the University of Saskatchewan, VIDO was established on campus in proximity to the Western College of Veterinary Medicine and the Faculty of Agriculture.

Dr. Chris Bigland, the original proponent of the venture, transferred from W.C.V.M. to devote his full attention to VIDO and assembled an outstanding staff of bright young people. His early facilities were in trailers.

Two groups were formed to assist him — a Governing Committee to guide the business affairs and a Board of Advisors to recommend research priorities.

A high priority was placed on establishing close relationships with the livestock industry. VIDO's motto became "Serving the Livestock Industry through Research". The initial membership of these two groups was drawn from the founding organizations, but was soon to include members nominated by livestock associations engaged in cattle, swine, poultry and dairy industries from Ontario to British Columbia. The Board of Advisors held its meetings in these five provinces and gained the participation of people in the numerous agricultural fields. Elsewhere in this report will be found a list of all those who have attended our meetings this year. A large degree of VIDO's success can be attributed to the guidance and support provided by participants at our meetings. Public support of VIDO is exemplified by the fact that VIDO's total financial resources of \$8,398,000 have been received from 143 different sources, including 86 donations by individuals.

In addition to having developed scientific and financial credibility and accountability, the Organ-



*A.E. Pallister, Chairman*

ization has lived up to its motto. As a tangible illustration, the lives of thousands of calves were saved this year as a result of the application of VICOGEN vaccine against neonatal diarrhea. This discovery from VIDO's research and development, which was directed to the Canadian-owned Connaught Laboratories for further development, manufacture and distribution, will have a major impact, many times this figure on animal productivity in Canada and the world in the coming years.

The remarks of the Governing Committee and the Director which follow, describe VIDO's scientific achievements and future plans. The reports of the Auditor and VIDO Research Fund Trustee indicate the financial stability which VIDO has achieved and maintained.

In concluding the affairs of the Board of Advisors, it is timely and appropriate to look not only at the performance of this Organization, but to view its short history as a model of the type of initiative that needs to be fostered and can be achieved in this wondrous country when government, industry and university, through dedicated individuals, work together in common pursuit of a clear objective.

In this case, the catalytic sponsorship of a charitable organization helped make it happen. As events unfold, perhaps Devonian's greatest contribution will be seen as illustrating that new, concerted, approaches to research are possible and aspirations are attainable.

While many of the founding principles have proved to be valid, the most difficult challenge has been the establishment of good lines of communications between and within the segments of the very complex agricultural structure in place in this country. An incredible amount of energy has been devoted to this endeavor. Yet, as VIDO makes the transition to an established institution and attacks other diseases and in other species, we offer a final word of advice: "We recommend most strongly that VIDO continue to expend this energy in strengthening its relationships with the many hundreds of organizations and thousands of producers and consumers whose livelihoods and lifestyles will be enhanced by the reduction of morbidity and mortality of animals."

The Board of Advisors joins me in thanking the scores of people who have helped us do our job . . . Dr. Patrick McTaggart-Cowan of the Science Council of Canada who recognized the opportunity, Dr. Chris Bigland whose dream it was, to University of Saskatchewan President, Dr. Bob Begg, who backed

it through tenuous times, through visionary Provincial Ministers of Agriculture, Horner, Moore, Schmidt, Messer, Kaeding, and MacMurchy, who accepted the gamble, to Dr. Ole Nielsen and to the staff who, particularly in those early days performed under pressure with primitive facilities . . . to mention but a few.

I express my personal gratitude to the members of the Board of Advisors for the excellent advice they have provided while patiently introducing their geophysicist Chairman to the intriguing world of veterinary medicine.

A.E. Palliŝter, Chairman,  
Board of Advisors, VIDO.

## BOARD OF ADVISORS

Dr. A.E. Pallister — Chairman  
Board of Advisors  
Associate, Devonian Group of Charitable  
Foundations  
Calgary, Alberta

Dr. W.C. Weir — Director  
Veterinary Services Branch  
Saskatchewan Department of Agriculture  
Regina, Saskatchewan

Dr. H.N. Vance — Director  
Animal Health Division  
Alberta Agriculture  
Edmonton, Alberta

Mr. J.A. McCague  
Alliston, Ontario

Mr. P.V. Riese  
Selkirk, Manitoba

Dr. H.Z. Block  
Standard, Alberta

# DIRECTOR'S REPORT

The year April 1, 1979 to March 31, 1980 was one of remarkable achievement and progress in VIDO. Some of the highlights are as follows:

1) As a result of a tremendous effort by all of the VIDO staff and a like effort at Connaught Laboratories, the *E. coli* calf scours vaccine "VICOGEN" was licensed for sale December 13, 1979 (see feature story).

2) March 31, 1980 marked the end of the first 5 years of financial agreement establishing VIDO, by the Devonian Group of Charitable Foundations, the Government of Alberta, the Government of Saskatchewan, and the University of Saskatchewan. The Board of Advisors and Governing Committee established under that Agreement, have been melded into a 12-man Board of Directors which will continue governing VIDO in the future. Five members of the Board of Directors are from the livestock industry, three from Governments, two members at large and two from the University of Saskatchewan. By making this move, the original donors are in essence giving VIDO to the livestock industry. It will now be up to the new Board of Directors and VIDO management to put into place new agreements for funding for the next 5 years, during which it is expected expenditures will be between \$8-9 million.

We are confident that the livestock industry will continue to rally to the financial and moral support of VIDO as the "infectious disease research arm of the livestock industry". The Federal Government and the Governments of Saskatchewan, Alberta, British Columbia and Manitoba will be approached for core funding, as contribution from the consumers of livestock products — who are the ultimate beneficiaries of any reduced cost of production.

3) A new Constitution and By-Laws have been approved.

4) For the first time a budget of over \$1 million (\$1.2 million) has been approved for the year 1980-81.

5) Provision has been made in the new Constitution for the appointment of a Deputy Director (Research).

6) A new 10-year research plan has been formulated and approved by the Board of Advisors and Governing Committee for implementation by the Board of Directors. This includes continued major emphasis on neonatal diarrhea in cattle, expansion of research on shipping fever and respiratory infections in cattle, expansion of research on swine

respiratory diseases with emphasis on atrophic rhinitis and enzootic pneumonia; and a start on poultry disease research, pin-pointing hemorrhagic enteritis in turkeys and avian adenoviruses in chickens. Provision is also made for implementation of new research thrusts in future years.

7) Swine disease research was started with an International Symposium of experts representing all facets of the swine industry. Out of this Symposium grew the first major project on the management control of atrophic rhinitis and mycoplasma (enzootic) pneumonia. In addition, Dr. Fast and colleagues from across Western Canada have formed a Swine Technical Group, whose major objective is to advise the swine industry on building, management and disease control problems. This information is distributed through publications in livestock journals.

8) VIDO's income exceeded expenditures by \$529,000. This was due to the financial support of the livestock industry, royalty income from Connaught Laboratories, grants from the Government of Saskatchewan and British Columbia, and operating grants from the Alberta Agricultural Research Trust and the Alberta Agricultural Research Council.

All of these were matched by the Devonian Group of Charitable Foundations at 50 cents on the dollar. The generous offer of the Devonian Group of Charitable Foundations in 1978 of extending \$1.25 million on a matching basis, was completed as of March 31, 1980.



*Dr. C.H. Bigland*



9) A large number of distinguished guests visited VIDO among whom were: Premier Allan Blakeney of Saskatchewan, the Honorable Dallas Schmidt, Minister of Agriculture for the Province of Alberta, the Honorable Douglas McArthur, Minister of Continuing Education for the Province of Saskatchewan, the Honorable James Horseman, Minister of Continuing Education for the Province of Alberta, and Senator Sid Buckwold of Saskatoon. Visitors from the United States, England, Australia, Germany, Switzerland, France, Holland and the U.S.S.R. included Mr. P. Borodin, the Deputy Minister of Agriculture for the U.S.S.R. and Mr. N.K. Abenor, Deputy Minister for the Soviet State of Kazakn.

10) Publications included the Proceedings of the Second International Symposium on Neonatal Diarrhea. Fact sheets "VIDO VIEWS" were published on Calf Scours by Dr. Stephen Acres, Shipping Fever by Dr. Otto Radostits and Atrophic Rhinitis by Dr. Al Theede. To serve the livestock industry better, some of these were distributed as inserts in the "Cattleman" magazine, in this way reaching over 43,000 livestock owners, over and above those distributed through VIDO's mailing list. Other magazines and media have carried features about VIDO and our activities. Thanks and appreciation are acknowledged. There were also publications in scientific journals.

11) As part of the applied research of VIDO, international symposia are considered essential. The First Symposium on Swine Diseases was held on September 24-25, 1979. A Third Symposium on Neonatal Diarrhea is being planned for October 6-8, 1980 and the First Symposium on Hemorrhagic Enteritis was held May 6, 1980.

12) Some modifications have been necessary in the VIDO isolation units and laboratory, to fit the changing needs of research activities. Additional pieces of laboratory equipment have been purchased including fermentors, continuous-flow centrifuge, delivery van and a word-processor.

13) **Personnel** — Dr. Harold Fast of Steinbach, Manitoba and Delisle, Saskatchewan will concentrate on swine disease research on a ¾ time contract basis. Dr. Don McIntosh of Saskatoon joined the scientific staff temporarily as Field Veterinarian. Two senior technicians were appointed — Ms. Janice LeDuc in charge of Virology and Mr. Chang-Joo Lian in charge of Bacteriology. We regret the resignation of Dr. Bob Kapitany.

14) VIDO is now advertising for a Research Im-

munologist, a Research Bacteriologist, Research Virologist, and a Field Veterinarian to increase our research activities.

15) VIDO research is also continued more widely by an excellent group of VIDO research collaborators. These include: Drs. Lorne Babiuk, Peter Stockdale, Henry Tabel, Otto Radostits, Eugene Janzen, George Forsyth, Jim Bellamy, Bob Saunders and Dudley Osborne at the Western College of Veterinary Medicine, Dr. George Khachatourians at the College of Medicine, and Drs. Jeremy V.W. Greenfield and John Robinson of the B.C. Veterinary Laboratory. In addition, scientists from other units are welcomed to use the VIDO isolation and isolator facilities when working on infectious diseases of food-producing animals. These include: Dr. D. Armstrong and Dr. Sue Friend of the Western College of Veterinary Medicine, Dr. Henry Klassen, Department of Animal and Poultry Science, Dr. Claire Youngs of the National Research Council, Prairie Regional Laboratory. The vacuum fumigator has also been used by the Western Development Museum and the Ukrainian Museum in Saskatoon.

16) VIDO was asked to become part of the Saskatchewan Economic Development (SEDCO) research park "Innovation Place". SEDCO is endeavoring to attract industrial research projects to its 80 acre research park adjacent to VIDO.

#### **Future Concerns**

1) Continued core funding of VIDO will be needed to guarantee full research activities at VIDO for the next 5 years.

2) Expansion of the scientific staff is essential to continue present research and expand into new areas. The objective of VIDO has always been to attract the best scientific brains in the particular targeted area. With the scarcity of such specialists, acquisition of such a staff may be slow.

3) Decisions on research direction and priorities to best serve the livestock industry with funds and personnel available is still a major challenge. The new VIDO Constitution provides for the establishment of research advisory boards. These will augment our present program scientific committees.

4) Farm facilities for infectious disease research and vaccine testing is becoming more critical. Exploration of utilizing a portion of the University's Goodale Farm is continuing; however, limited land resources available for veterinary research is recog-

nized. VIDO is at present utilizing rented facilities at the Dundurn Feedlot for vaccine testing work. We are investigating the year round rental of these. However, with the danger of spreading infection to other animals either at Dundurn or the Goodale Farm, together with some necessity for confidentiality, it may be necessary for VIDO to consider purchasing or long-term rental of land specifically for VIDO purposes.

5) VIDO's Agreement with Connaught includes the option of testing of each lot of vaccine that is produced for sale by Connaught or its subsidiaries. This clause was introduced to protect the livestock industry and ensure that a high quality product is put into their hands. Although routine, this testing is very time-consuming and demanding on VIDO research personnel and facilities. It is recognized that a separate staff may have to be hired and assigned to this duty.

#### Future Endeavors

1) In March, 1980, the Turkey Marketing Agency donated \$200,000 to VIDO, which was matched by the Devonian Group of Charitable Foundations. They suggested work on Hemorrhagic Enteritis in turkeys, which is costing their industry between \$3-9 million annually. This is the largest donation received from any facet of the livestock or poultry industries.

With the direction given at the Symposium on Hemorrhagic Enteritis; work will begin immediately to build a staff and start work on the prevention of this disease. The objective is to develop an effective vaccine that can be applied to baby birds and prevent the costly effect of death, retarded growth, poor grades and increased feed consumption and days-to-market. The vaccine must be easily mass-produced and of a quality that can be satisfactorily licensed for inter-provincial and interstate trade.

2) Although the VICOGEN vaccine is effective in controlling 30-50% of the mortality caused by calf scours; viruses and protozoa and other bacteria can cause scours even in calves protected by VICOGEN. Research will be conducted in the hope of preventing these other causes of calf scours.

3) Although VIDO has ample laboratory and office space for the near future, consideration should

be given to the development of the unused basement area for additional office and laboratory facilities, laboratory animal holding facilities, storage area, and staff recreation. The mechanical plant was designed to serve the basement area and can easily be extended to provide all services needed.

4) A new patent and inventions agreement is being prepared for signature by all VIDO personnel and research collaborators. Some provision is being made by the Inventions Committee of the Board of Directors to share a percentage of inventions income with the VIDO scientific staff.

5) The Director has been granted 6 months sabbatical leave from July 1, 1980 to December 31, 1980 to work on a book of history of the Western College of Veterinary Medicine. The day-to-day management of VIDO will be handled by Dr. Stephen Acres (Deputy Director, Research), and Mr. Paul Hodgman (Executive Officer) during this period.

#### Summary

VIDO is now in a strong financial position as far as reserves in the Research Trust. Income from the Connaught Laboratories Agreement on the production and sale of VICOGEN and matching grants from the Devonian Group of Charitable Foundations have swelled the reserve. The final portion of the extra \$1.25 million pledged by the Devonian Group of Charitable Foundations in 1978 has now been received, fulfilling all present obligations by the Devonian Group. The first 5 years Agreement by the original donors has now been completed and the initial Board of Advisors and Governing Committee have been melded into a 12-man Board of Directors, 5 of which represent the livestock industry. An effective vaccine, called VICOGEN, against the pathogenic *E. coli* form of calf scours was tested, licensed and put on sale by Connaught Laboratories in time to protect calves of the 1980 calving season. Already the savings are estimated at between \$4-8 million — more than the entire cost of VIDO.

A new Constitution and By-Laws have been approved, which in essence, gives VIDO to the livestock industry who will be responsible for its continued operation.

Dr. C.H. Bigland  
Director, VIDO

# AUDITOR'S REPORT

To the Board of Directors of the  
Veterinary Infectious Disease Organization:

I have examined the balance sheets of the Research Trust Account and the Capital Trust Account for The University of Saskatchewan — Veterinary Infectious Disease Organization as at March 31, 1980 and the statements of income, expenditure and unexpended funds for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the University of Saskatchewan — Veterinary Infectious Disease Organization as at March 31, 1980 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Regina, Saskatchewan  
May 13, 1980

W.G. Lutz, C.A.,  
Provincial Auditor.

**Statement 1**  
**VETERINARY INFECTIOUS DISEASE**  
**ORGANIZATION (V.I.D.O.)**  
**RESEARCH TRUST**  
**BALANCE SHEET**  
As at March 31

	1980	1979
<b>ASSETS</b>		
Cash in bank	\$ 6,016	\$ 147,196
Investments — short term		
— at cost	1,480,000	660,000
Accrued interest income	24,210	12,324
Contributions receivable		
— Devonian Group of Charitable Foundations	212,989	421,894
— Research and development	37,745	200,000
— Royalties	31,932	—
— Alberta Agricultural Research Trust	16,572	24,950
— Other donors	231,000	—
	<u>530,238</u>	<u>646,844</u>
	<u>\$2,040,464</u>	<u>\$1,466,364</u>
<b>LIABILITIES</b>		
Due to University of Saskatchewan		
— Operating Fund	\$ 151,884	\$ 107,253
<b>EQUITY</b>		
Unexpended funds (Notes 1 and 7) (Statement 2)	1,888,580	1,359,111
	<u>\$2,040,464</u>	<u>\$1,466,364</u>

See accompanying notes

**Statement 2**  
**VETERINARY INFECTIOUS DISEASE**  
**ORGANIZATION (V.I.D.O.)**  
**RESEARCH TRUST**  
**STATEMENT OF INCOME, EXPENDITURE**  
**AND UNEXPENDED FUNDS**  
Year Ended March 31

	1980	1979
<b>INCOME</b>		
Grants and donations:		
The Devonian Group of Charitable Foundations	\$ 396,529	\$ 853,471
Livestock Industry Provincial Governments	337,902	235,021
— Alberta	1,000	—
— British Columbia	6,902	23,848
— Saskatchewan	250,000	250,780
Alberta Agricultural Research Trust (Note 3)	62,049	75,337
Farming for the Future Fund of Alberta	30,700	—
National Research Council	—	5,000
Other Individuals and Foundations	777	18,695
	<u>1,085,859</u>	<u>1,462,152</u>
Research and Development		
Revenue	134,000	250,000
Royalties	88,287	—
Interest Income	159,507	53,125
Animal Services	34,636	—
Miscellaneous	6,000	19,060
	<u>1,508,289</u>	<u>1,784,337</u>
<b>EXPENDITURE</b>		
University of Saskatchewan: (Notes 1 and 2)		
Salaries and Fringe benefits	446,414	306,103
Materials and Supplies	184,477	163,639
Equipment (Note 1)	122,369	95,547
Travel	54,324	49,176
Animal Services	89,354	—
Other	48,607	15,039
	<u>945,545</u>	<u>629,504</u>
Alberta Agricultural Research Trust (Note 3)	33,275	24,850
	<u>978,820</u>	<u>654,354</u>
Excess of income over expenditure	529,469	1,129,983
Unexpended funds, beginning of year	1,359,111	229,128
Unexpended funds, end of year (Statement 1)	<u>\$1,888,580</u>	<u>\$1,359,111</u>

See accompanying notes



**Statement 3**  
**VETERINARY INFECTIOUS DISEASE**  
**ORGANIZATION (V.I.D.O.)**  
**CAPITAL TRUST**  
**BALANCE SHEET**  
**As at March 31**

**Statement 4**  
**VETERINARY INFECTIOUS DISEASE**  
**ORGANIZATION (V.I.D.O.)**  
**CAPITAL TRUST**  
**STATEMENT OF INCOME, EXPENDITURE**  
**AND UNEXPENDED FUNDS**  
**Year Ended March 31**

ASSETS	1980	1979
Current:		
Cash in bank	\$ 13,018	\$ 27,819
Investments — short term		
— at cost	160,000	300,000
Accrued interest income	2,040	1,091
Due from University		
— Capital Fund	6,174	—
Total current assets	<u>181,232</u>	<u>328,910</u>
Capital Assets (Note 1)		
Site and improvements	133,590	133,506
Furnishings, fixtures and equipment	276,041	248,322
Buildings (Note 4)	<u>3,868,245</u>	<u>3,843,884</u>
Total capital assets	<u>4,277,876</u>	<u>4,225,712</u>
	<u>\$4,459,108</u>	<u>\$4,554,622</u>
<b>LIABILITIES</b>		
Due to University of Saskatchewan		
— Capital Fund (Note 4)	\$ —	\$ 137,713
— Operating Fund	12,040	—
<b>EQUITY</b>		
Equity in Capital Assets (Note 4)	4,277,876	4,225,712
Unexpended funds (Notes 1, 4, and 7) (Statement 4)	169,192	191,197
	<u>\$4,459,108</u>	<u>\$4,554,622</u>

See accompanying notes

INCOME	1980	1979	Cumulative Total To Date
Grants:			
The Devonian Group of Charitable Foundations	\$ —	\$510,000	\$2,180,000
Province of Alberta	—	—	1,870,000
Interest income	<u>30,159</u>	<u>53,144</u>	<u>397,068</u>
	<u>30,159</u>	<u>563,144</u>	<u>4,447,068</u>
<b>EXPENDITURE (Notes 1 and 2)</b>			
Sites and improvements (Note 1)	84	99,261	133,590
Furnishings and fixtures (Note 1)	27,719	176,334	276,041
Buildings (Note 1 and 4)	<u>24,361</u>	<u>426,806</u>	<u>3,868,245</u>
	<u>52,164</u>	<u>702,401</u>	<u>4,277,876</u>
Excess of expenditure over income (Note 4)	22,005	139,257	169,192
Unexpended funds, beginning of year (Note 4)			
— As previously stated	271,197	330,454	—
— Less: retroactive adjustment	<u>80,000</u>	<u>—</u>	<u>—</u>
— As restated	<u>191,197</u>	<u>330,454</u>	<u>—</u>
Unexpended funds, end of year (Statement 3)	<u>\$169,192</u>	<u>\$191,197</u>	<u>\$ 169,192</u>

See accompanying notes

**UNIVERSITY OF SASKATCHEWAN**  
**VETERINARY INFECTIOUS DISEASE ORGANIZATION (V.I.D.O.)**  
**NOTES TO FINANCIAL STATEMENTS**  
**March 31, 1980**

**1. Summary of Significant Accounting Policies**

**(a) Fund Accounting**

The accounts of the Organization are kept in accordance with fund accounting principles. This enables presentation of restrictions placed upon resources by contributors. Those principles require classification of resources into 'funds' to reflect the various designated uses. Two funds are presented; the Research Trust and the Capital Trust. Funds are transferred from the Research Trust as approved by the Board of Advisors and from the Capital Trust as expenditures are incurred.

**(b) Capital Assets**

Capital assets are expensed when purchased as Capital Fund expenditures. The same assets are recorded in the Capital Fund balance sheet as assets offset by entries to the 'equity in capital assets account.'

Equipment purchased with Research Trust monies are expensed as purchased without the corresponding balance sheet entries referred to above.

The agreement referred to in Note 2 below also states that all buildings and facilities constructed for the Organization shall be used by them in accordance with the agreement and upon termination of the Organization, the buildings, facilities and equipment therein shall remain the absolute property of the University of Saskatchewan.

**2. Establishing Agreement**

The Organization was established by an agreement dated August 11, 1975, between the Devonian Foundation, the Province of Alberta, the Province of Saskatchewan and the University of Saskatchewan to conduct research on indigenous infectious diseases of food producing animals.

Effective April 1, 1980 the Organization has adopted a new Con-

stitution which replaces the agreement referred to above and the original constitution. The new constitution provides for a Board of Directors to assume the responsibilities formerly performed by the Board of Advisors and the Governing Committee.

**3. Alberta Agricultural Research Trust**

The research grants as received from the Alberta Agricultural Research Trust (A.A.R.T.) are transferred to the University of Saskatchewan and are administered on behalf of the grantees for purposes of research conducted by V.I.D.O. In order to receive the level of financial support as provided it was necessary for V.I.D.O. to provide industry support in the amount of \$33,275.

**4. Retroactive Adjustment**

During the year it was determined that Capital Trust building expenditures incurred in 1979 in the amount of \$80,000 were not accrued in 1979. As a result, a retroactive adjustment has been made to the 1979 comparative figures having the effect of increasing Buildings, Equity in Capital Assets, Building Expenditure, and Due to University of Saskatchewan — Capital Fund by an amount of \$80,000 and decreasing Unexpended Funds — Capital Trust by \$80,000.

**5. Administrative Services**

The accompanying financial statements do not include expenditures for administrative services provided by the University of Saskatchewan.

**6. Commitments**

As at March 31, 1980 the Organization had commitments of \$7,280 in the Research Trust and \$3,700 in the Capital Trust.

**7. Certain 1979 comparative figures have been reclassified to conform with the financial presentation adopted for 1980.**



# GOVERNING COMMITTEE'S REPORT

This constitutes the last report of the Governing Committee. During VIDO's formative years, this group worked together with VIDO's Director, C.H. Bigland, and his staff to establish VIDO's administrative procedures, research program and laboratory facilities. During this same period, the Board of Advisors served as a senior body developing policy and long-term plans and approving the essential elements of VIDO's fiscal and research program.

Once VIDO became firmly established with respect to both facilities and operating procedures, it became desirable to develop a more streamlined senior board management structure. Following extensive consultation between the Board of Advisors and the Governing Committee, a new constitution has been developed, and was implemented on April 1, 1980. This was approved by the founding partners, namely, the Devonian Group of Charitable Foundations; the Governments of Alberta and Saskatchewan; and the University of Saskatchewan. This new constitution provides for a single twelve man Board of Directors chosen as follows: five from the livestock industry, three from government, two from the university, and two at large. Clearly the Board structure assures that VIDO is an organization for livestock producers that will respond to the needs of the industry and live up to its motto of "Serving the Livestock Industry through Research."

An important objective spelled out in the constitution is the extension of results of VIDO's research to producers. This past year the inclusion of center folds in a prominent Canadian farm magazine, giving information about the control of calf scours and the Shipping Fever complex, was an innovation that was particularly effective.

VIDO's fundamental research strategy has been to focus or target its research on a very few of the most important diseases of the Canadian livestock industry. The first target was calf scours and the successful development of management techniques and a vaccine to control *E. coli* scours represents a veritable bull's-eye. This experience has reinforced the wisdom of a sharply focused research strategy. Since VIDO's inception, the Governing Committee and the Board of Advisors have required the development of a long-term research plan and its periodic review. The present plan extends ten years and continues to focus on a limited number of important disease problems; namely, intestinal disease in the near and medium term and respiratory disease and techniques of preventive medicine in the medium and longer term.

At the conclusion of its first five years of operation in March, 1980, VIDO had spent about 4.3 million on capital projects and 2.2 million on operating. The budget for the current year is about 1.2 million and should increase in the next five years to 1.8 million annually if funds become available to take advantage of VIDO's existing research capacity. In the five-year period 1980-85, VIDO will require a total of at least 7-8 million dollars for operating and possibly an additional 1 million dollars for capital projects including farm facilities and the development of the basement area at VIDO. In the longer term, by 1990, it is projected that VIDO would require an annual budget of about 2.8 million if it is to realize its full potential. While this seems to be a rather substantial amount of money, it is modest in comparison to the size of the livestock industry and its importance to Canada. Canada's livestock are valued at 6.6 billion dollars. The Canadian government has embraced the objective of devoting 1.5% of GNP to research and development. Total livestock research in Canada is estimated presently to cost 60 million. This represents only 0.9% the value of farm cash receipts from livestock.

Over half of Canada's farm income comes from livestock and totals over 6 billion dollars annually. Since disease constitutes one of the most serious and continuing threats to this resource, it is imperative to protect this industry and investment through appropriate research and development.

VIDO has the goal of having five years of assured operating funds in hand or pledged at any one time. Presently, two years of operating funds are in this category. Until now major funding for VIDO has come from the Devonian Group of Charitable Foundations, the Governments of Saskatchewan



Dr. N.O. Nielsen, Chairman

and Alberta, producer organizations, individuals, research granting agencies and invention revenue. In the years ahead, VIDO will need continued support from these sources and it is hoped that other provinces and the federal government will find it desirable to participate in VIDO's operation and help attain its funding goal.

VIDO's constitutional by-laws provide that royalties or fees arising from VIDO's research will be reinvested in the organization's research plan. It is a pleasure to report that invention revenue will probably provide from 10-15% of annual operating expenditures in the near term. This revenue reflects the indirect support of producers through the purchase of **E. coli** vaccine. Continued support from governments will recognize the benefits of VIDO's research to consumers who reap the majority of the benefits of VIDO's research in the final analysis.

Another important facet of VIDO's research strategy is to assure that its work is complementary to that going on at other Canadian veterinary research institutions and thereby does not lead to unnecessary duplication. One important tactic to achieve this purpose has been the organization of highly successful research symposia. In addition, less formal meetings with research scientists have been held to plan research. Furthermore, VIDO actively fosters collaboration with research scientists in Canada's veterinary colleges and government institutions where this is mutually desirable by providing research funding, facilities, or both. VIDO was founded with the aspiration of having the world's best scientists working on its research program and this continues to be its objective.

Since this is the last report of the Governing Committee, a few acknowledgements are in order. The contributions of producers to the Governing Committee has been essential. In particular, appreciation is due to Mr. Gary Jones who is a retiring member. We benefited enormously from the best administrative talent the University had to offer; namely, President Bob Begg, Vice-President Jack Pringle, Dean Ken McCallum, Dean Jake Brown, Dean Bruce Schnell, and Dr. David Eidinger. All are retiring members. It is worth noting that these men gained valuable insight into the nature and needs of the livestock industry. The help of Mr. Mac Shepard, the University Controller and Trustee of VIDO, has been invaluable. Ben Thorlakson, Orest Lukey, Jack McFaul, Ernie Pallister, and myself will bring

the experience of the Governing Committee to the new Board of Directors. Finally, the Governing Committee had the good fortune to work with a talented and dedicated management team led by Dr. Chris Bigland and with Ernie Pallister, the Chairman of the Board of Advisors, whose vision, energy and talent were an inspiration to all.

N.O. Nielsen, Chairman,  
Governing Committee, VIDO

## GOVERNING COMMITTEE

Dean N.O. Nielsen — Chairman  
Governing Committee  
Dean of WCVM  
University of Saskatchewan

President R.W. Begg  
University of Saskatchewan

Vice-President J.A. Pringle  
University of Saskatchewan

Dean K.J. McCallum  
Graduate Studies and Research  
University of Saskatchewan

Dean J.A. Brown  
College of Agriculture  
University of Saskatchewan

Dean B.R. Schnell  
College of Pharmacy  
University of Saskatchewan

Dr. D. Eidinger — Head  
Medical Microbiology  
University of Saskatchewan

Mr. J.Y. McFaul  
Saskatoon, Saskatchewan

Mr. G.L. Jones  
Crane Valley, Saskatchewan

Mr. Ben Thorlakson  
Airdrie, Alberta

Mr. O.E. Lukey  
Acme, Alberta



# VICOGEN — A SUCCESS STORY

As a result of a tremendous effort by all of the VIDO staff and a like effort at Connaught Laboratories, the *E. coli* calf scours vaccine "VICOGEN" was licensed for sale December 13, 1979.

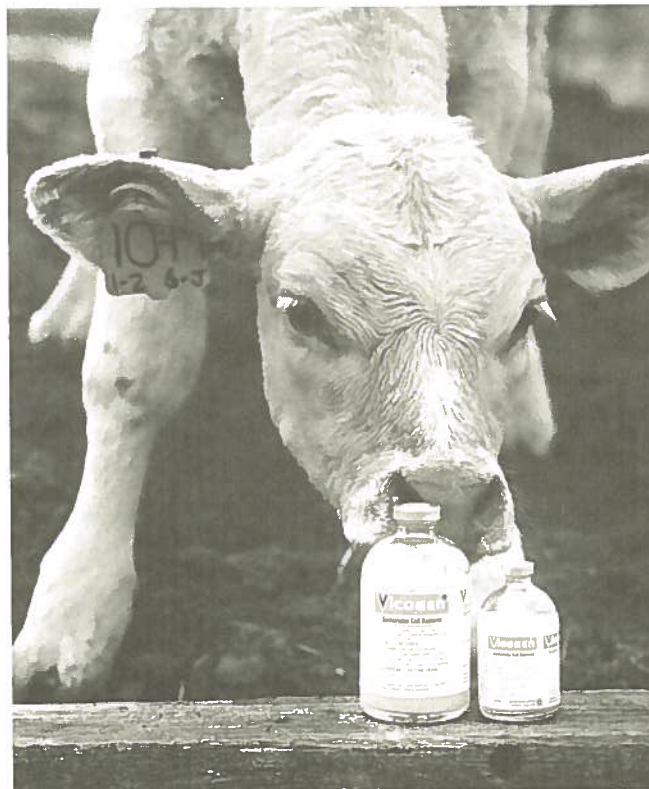
This simple statement reflects an almost unprecedented achievement in the production of biologics. It necessitated, at VIDO, the concentration of all the staff on the production of initial lots of the vaccine, the development of tests for K99 and other antigens in the vaccine and other aspects for antibodies produced by the vaccine in cattle and laboratory animals; testing of dilutions of the vaccine in cattle with challenge of the calves as the yardstick of efficacy, together with parallel studies in mice and rabbits; and the testing of the vaccine for safety and efficacy in dairy and beef cattle in 6 different provinces of Canada. At Connaught Laboratories it meant pulling a highly dedicated staff from other areas of the operation to "scale up" the laboratory model vaccine to large-scale production; co-ordination of testing procedures with VIDO; the purchase of large quantities of equipment and modification of buildings; the preparation

of labels, insert materials, and advertising; and the concentration of sales staff in Canada and exploration of sales in other countries.

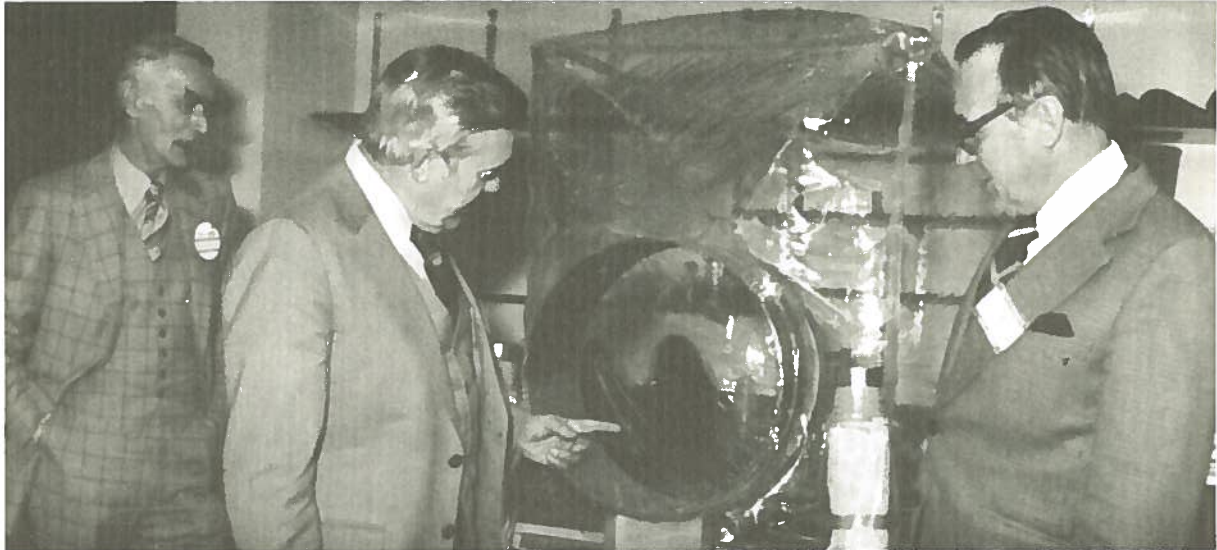
Distribution of VICOGEN was rapid after the December 13th licensing and in the first 4 months, over 800,000 doses had been utilized in Canada's cow population. Even this amount is calculated to save between \$4-8 million in preventing calf sickness and death.

VIDO has entered a normal business agreement with Connaught Laboratories of Toronto with regards to the *E. coli* bacterin called VICOGEN. This agreement covers only this invention and product. VIDO has received royalties from Connaught Laboratories and it is hoped that royalties next year will pay for 10-15% of the VIDO research activities.

VIDO is extremely pleased with the co-operation and efforts that Connaught has made with regard to the marketing and distribution of VICOGEN. It is hoped that within a year the product will be licensed in the U.S.A. and generally will be available on a worldwide scale.



# CURRENT VIDO RESEARCH PROJECTS



*Dr. R.W. Begg, The Hon. Allan Blakeney and Dr. C.H. Bigland inspect the facilities at VIDO.*

## Projects Conducted by VIDO Scientific Staff

(Drs. Acres, Forman, Fast)

1. Development of a Vaccine Against Bovine Rotavirus — partially funded by Farming for the Future.
2. Rota and Coronavirus Vaccine Testing
3. Field Testing of **E. coli** and **Rotavirus** Vaccines
4. Development of a Multiple Strain **E. coli** Vaccine
5. Routine Quality Control Testing of VICOGEN
6. Investigation of Diarrhea Caused by **Cryptosporidia**
7. Investigations into the Control of Calf Scours by Management
8. Field Trial to Determine the Optimum Time of Vaccination of Cows with VICOGEN
9. Resistance of Cattle to **Pasteurella pneumonia** (Shipping Fever) — partially funded by the Saskatchewan Horned Cattle Trust Fund
- 10 The Epidemiology of Shipping Fever
11. The Swine Herd Health and VIDO Nursery Project
12. Investigation of Enzootic Pneumonia of Swine
13. Investigation of the Use of Nurseries in Swine Herds
14. Swine Technical Group

15. Investigation of Drug Removal in Poultry Feeds
16. Development of a Vaccine for Hemorrhagic Enteritis of Turkeys

## Projects Being Conducted by VIDO Collaborators

1. The Molecular Virology of Bovine **Rotavirus** — conducted by Dr. Lorne Babiuk, Dept. of Veterinary Microbiology, WCVM
2. Production and Testing of a Live Low-Virulence **Salmonella** Vaccine for Cattle — Dr. Jeremy Greenfield, Veterinary Laboratory, Abbotsford, B.C.
3. The Effect of Avian Adenoviruses on Table Egg Production and Shell Quality — Dr. John Robinson, Veterinary Laboratory, Abbotsford, B.C.
4. Control of Intestinal Secretion in Colibacillosis of Pigs — Dr. George Forsyth, Dept. of Veterinary Physiological Sciences, WCVM — jointly funded by VIDO and the Alberta Agricultural Research Trust
5. Studies on the Prevention, Epidemiology and Diagnosis of Bovine **Hemophilus** Septicemia — Drs. J.R. Saunders and E. Janzen, WCVM — jointly funded by VIDO and the Alberta Agricultural Research Trust
6. Purification of **E. coli** Polysaccharides — Dr. J.W. Costerton, Department of Biology, University of Calgary — funded by Alberta Farming for the Future





**Back Row:**

*Darren Clancy, Sandy Remmen, Dr. Harold Fast, Dr. Tony Forman, Dr. Steve Acres (Deputy Director — Research), Lynn Ashley, Cathie Pound, Sandy Feschuk, Janice LeDuc, Chang-Joo Lian*

**Missing:**

*Molly Denson, Audrey Munroe*

**Front Row:**

*Raul Tabelon, Carol Dodd, Patty Merkel, Debra Novakovski, Dr. Chris Bigland (Director), Paul Hodgman (Executive Officer), Margot Buckley, Kathy Nestor, Phyllis Zoerb, Maureen Kumph, Jan Cartier.*

## Scientific Publications

1. Bigland, C.H., M.M. Warenycia, and M. Denson. Specific immune gammaglobulins in the control of *Mycoplasma meleagridis* in turkeys. *Poultry Sci.* 58(2): 319-328. 1979.
2. Radostits, O.M. and S.D. Acres. The prevention and control of epidemics of acute undifferentiated diarrhea of beef calves in Western Canada. *Can. Vet. Jour.* Accepted for publication.

# GUESTS TO VIDO BOARD MEETINGS

Dr. Lloyd Barber, President  
University of Regina,  
Regina, Saskatchewan

Dr. John Bowland, Chairman  
Alberta Agricultural Research Trust  
Edmonton, Alberta

Mr. Gary Carlson, Secretary  
Saskatchewan Federation of Agriculture  
Regina, Saskatchewan

Mr. Keith Colburn, Chairman  
Saskatchewan Commercial Egg Producers'  
Marketing Board  
Delisle, Saskatchewan

Mr. Jim Fish  
Devonian Foundation  
Calgary, Alberta

Mr. Brian Freeze  
Planning & Research Secretariat  
Saskatchewan Department of Agriculture  
Regina, Saskatchewan

Dr. Jeremy Greenfield  
Veterinary Laboratory  
Abbotsford, B.C.

Mr. Patrick Harvie  
Priddis, Alberta

Dr. Bruce Jeffery, Secretary,  
Beef & Dairy Sub-Committee  
Alberta Farming for the Future  
Edmonton, Alberta

Dr. G.G. Khachatourians  
Department of Medical Microbiology  
University of Saskatchewan

President (elect) L.F. Kristjanson  
University of Saskatchewan

Mr. Charlie Leask, Director, Livestock Division  
Saskatchewan Wheat Pool  
Regina, Saskatchewan

Mr. Don Mackay, Past President  
Canadian Lacombe Association  
Aberdeen, Saskatchewan

Dr. R. Mapletoft  
Department of Veterinary Clinical Studies  
University of Saskatchewan

Mr. Jim Morris, General Manager  
Saskatchewan Hog Marketing Commission  
Saskatoon, Saskatchewan

Mr. Bob May,  
Saskatchewan Department of Agriculture  
Horned Cattle Trust Fund  
Regina, Saskatchewan

Dr. H.H. Nicholson  
Animal and Poultry Science  
University of Saskatchewan

Dr. Jim O'Donoghue  
Deputy Minister, Alberta Agriculture  
Edmonton, Alberta

Dr. A. Olson, Secretary, Agriculture Research  
Council of Alberta, Farming for the Future  
Edmonton, Alberta

Dr. O. Radostits  
Department of Veterinary Clinical Studies  
University of Saskatchewan

The Honorable H. Rolfes  
Minister of Health  
Regina, Saskatchewan

Mr. D. Sansom, Vice-President  
Connaught Laboratories Ltd.  
Willowdale, Ontario

Dr. J.R. Saunders  
Department of Veterinary Microbiology  
University of Saskatchewan

Mr. G. Schlichemeyer  
Special Projects Accountant  
University of Saskatchewan

The Honorable Dallas Schmidt  
Minister of Agriculture  
Edmonton, Alberta

Mr. M. Sheppard  
University Controller  
University of Saskatchewan  
Saskatoon, Saskatchewan

Dr. D.L.T. Smith  
Department of Veterinary Pathology  
University of Saskatchewan

Mr. Gordon Stephenson, General Manager  
Canadian Western Agribition  
Regina, Saskatchewan

Dr. H. Tabel  
Department of Veterinary Microbiology  
University of Saskatchewan

Mr. Ben Valkenburg  
Barrister  
McKercher & Co.  
Saskatoon, Saskatchewan

Mr. Brian Walton  
Executive Assistant to Honorable Dallas Schmidt  
Edmonton, Alberta

Mrs. J. Watrous, Personnel Office  
University of Saskatchewan

Mr. Jim Webster  
Saskatchewan Department of Agriculture  
Regina, Saskatchewan

Mr. Matt Webster, Controller's Office  
University of Saskatchewan

Dr. J.G. Manns  
Department of Veterinary Physiology  
University of Saskatchewan