

[Chairman: Mr. Oldring]

[10:02 a.m.]

MR. CHAIRMAN: Good morning, everyone. We'll call the meeting to order. I want to begin by welcoming Mr. Geddes and Dr. McLeod. Mr. Geddes is, of course, the chairman of the Alberta Heritage Foundation for Medical Research, and Dr. McLeod is the president.

We're pleased, gentlemen, to have you with us once again. We had very lengthy discussions, as I recall, last year. In fact, we extended a second invitation last year. We're pleased to have received your annual report, hot off the press — you can still smell that new ink — and we do appreciate the extra effort you made, I know, in getting it put together as quickly as you could for this appearance this morning.

Our process and format hasn't changed since you appeared last year. We extend an opportunity to both of you to open with some comments, and then we open it up for questions from the members. They are still entitled to one question and two supplementaries. So again welcome, and on that note we'll turn it over to you, sir.

MR. GEDDES: Thank you very much, Mr. Chairman. Well, in conformance with the informal protocol we've established in recent years in our appearances before you, I would attempt to make some brief introductory comments, following which Dr. Lionel McLeod, the president of the Alberta Heritage Foundation for Medical Research, will provide the committee with some additional supplementary comments.

Our remarks this morning will be brief since this is our third appearance before you in 1988, the previous appearances having been on January 8 and January 21, 1988, respectively, and as you noted, Mr. Chairman, those were lengthy attendances at which a broad range of questions were raised by members of your committee. So perhaps the larger portion of this morning can be devoted again to receiving questions from members of your committee. Both Dr. McLeod and I remain available, of course, for such questions.

The foundation's eighth annual report for the year ended March 31, 1988, including the financial statements for that year, has been supplied to you this morning. It would be clear, of course, that you would not have had an opportunity for any extensive discussion of those statements. Perhaps I could just touch on some of the highlights for you in those statements.

The financial statements reveal that the foundation's expenditures for the year ended March 31, 1988, amounted to over \$51 million, of which \$49.7 million was expended on the foundation's scientific programs. Of interest to the committee, I'm sure, will be the cumulative expenditures since the establishment of the foundation. In the eight years ended March 31, the cumulative expenditures strictly on scientific programs amounted to \$250,465,000. This year, for the first time, saw a reduction in the level of expenditures. In each of the preceding seven years there had been a consistent buildup in the amount of expenditures; 1988, for the first time, saw a reduction in expenditures. That reduction in program expenditures was a measured response on the part of the foundation to the challenge of establishing prudent spending guidelines which, while continuing to meet the needs of Alberta's medical scientific community, nevertheless keep in perspective the need to maintain the integrity of the foundation's endowment fund in order to meet future financial needs. This has been a very major preoccupation of the trustees in recent years and has been a major element in my own comments provided to the committee in our last three

appearances.

Now, in the appearance before you on January 8, I drew the attention of the members of the committee to the provisions of section 24(5) of the Alberta Heritage Foundation for Medical Research Act, which requires that after receiving the report of the International Board of Review,

the Select Standing Committee on the Alberta Heritage Savings Trust Fund Act shall reassess whether or not the amount of the Endowment Fund is adequate for [our] future requirements.

I indicated in early January that this was now the appropriate time for that reassessment to take place, and through you, Mr. Chairman, I requested that that reassessment be undertaken as soon as practicable. I then went on to explain the concerns the trustees of the foundation have to maintain the integrity of the program in perpetuity for the benefit of the citizens of Alberta and to provide a balanced program of medical research, which forms our mandate, and indicated it was my hope that we could have a start to discussions between us soon after you had had an opportunity to review that report. I would be less than candid, and I know you would wish me to be candid with you, if I did not fail to say we are disappointed that we have not made any progress in having substantive discussions concerning the issues we raised concerning the adequacy of our endowment fund. I would again want to place on record our concern that such substantive discussions would take place on a first-priority basis. I hope you'll understand, sir, the spirit in which those comments are offered.

Since our last appearance before the members of the committee, the Heritage Medical Research Building has been opened in Calgary, and in just a few days, on November 9, the heritage medical research building at the University of Alberta will be officially opened. That building will form part of what we are now advised will be known as the Heritage Medical Research Centre, which will incorporate the heritage medical research building and the accompanying building built on the adjoining property.

I am sure Dr. McLeod will provide you with encouraging information about the formation of medical research groups that in fact have moved into the facilities in Calgary and are now fully functioning. As well, we'll inform you of the substantial progress that has been made in the formation of medical research groups at the University of Alberta, which are poised to enter the new facilities.

The only other matter which I think might be of interest to the committee relates to the technology transfer arrangements. As members will know, we have taken the position that it falls within the area of interest of the foundation to take an involved interest in the process of commercialization by which university-based research is transferred into a commercial mode. To accomplish that, the foundation has a technology transfer program which is designed to offer Alberta's medical scientists, engineers, and business people an opportunity to transfer new scientific information and findings into commercial products for the benefit of Alberta's economy. That program and its awards are intended to promote university/industrial collaboration, stimulate technology innovation in Alberta, and produce products or services developed by Albertans, preferably in Alberta.

I can tell you that substantial progress has been made and increasing progress is made throughout 1988. We're happy to report that in addition to the funding provided by our foundation, scientists and entrepreneurs who have been involved with our programs have moved forward and have received further funding, in some cases through the government of Alberta, De-

partment of Technology, Research and Telecommunications; in other instances through the Western Diversification Office; and in other instances through the efforts of the Alberta venture capital community, including the Alberta Opportunity Company and, of recent date, I am pleased to say, Vencap Equities Alberta Ltd. So we remain optimistic that our initial efforts in that regard have been important stimulants to activity.

We continue to discuss ways in which we can be helpful in this process of accelerating the pace of commercialization. We're having discussions with others outside Canada who might be helpful in respect of strategic alliances and other forms of joint ventures with Alberta-based scientists. We're also having ongoing discussions with venture capital sources, largely outside the province, to see how we might be of assistance in facilitating the process of investment in Alberta-based enterprises, largely through our ability to perform assessments of the technology and assist in the due diligence process.

I think I should stop there, Mr. Chairman, and ask my colleague Dr. McLeod to provide his supplementary remarks.

MR. CHAIRMAN: Good. Thank you very much, Mr. Geddes. Dr. McLeod.

DR. McLEOD: Mr. Chairman, gentlemen, it's a pleasure to again report. The time lapse has not been quite as significant as it was at earlier presentations; however, there are some highlights that I think are worth noting. I would add a few comments to Mr. Geddes's with respect to the technology transfer program, provide a little outline about how we are proceeding with our program management in the current constraint mode, and also talk very briefly about some of the new initiatives in clinical and patient-based research.

With respect to the two buildings, it is reassuring that they were on time and on budget. Mr. Geddes has indicated that there is movement afoot to fill them rather quickly. In fact, at the University of Calgary there are now a total of seven different research groups that make up approximately 50 percent of that building. For instance, there is a major resource group in epidemiology/biostatistics in one area; a major initiative in joint injury that involves both sports medicine and arthritis of various kinds; a neuroscientist group which deals with blindness and its control; a group directed toward research into aging and the brain, which of course includes Alzheimer's; and another group which works in spinal cord function and injury. Potentially important to us in the long run, a fourth group deals with molecular diagnostics, which is a group that while dealing with basic research, infringes into areas of new diagnostic agents to accelerate the rate at which one can make a diagnosis of an infectious disease; and another group deals with cell growth control that interestingly has some frontiers into a very common and very difficult skin disease called psoriasis. A final group is in formation at the moment, dealing with lung injury. This has its basis in Calgary's early interest in asthma, especially amongst the farming community and elevator operators. It has a long history, and we're hoping this new group may make significant advances.

As you may recall, we had two reserve floors in that building. One of those will now be taken on under the funding of the Alberta Cancer Board. The Alberta Cancer Board mounted a very successful initiative they call project alpha, in which they've been able to accumulate in excess of \$2 million for the completion of the fourth floor. That means that that floor will be dedicated to research in cancer jointly under the auspices of

the Alberta Cancer Board and the University of Calgary, and of course the foundation expects to receive applications for the support of the new scientists in that area.

At the University of Alberta there are three groups that are already fully formed. I mean, they can move into the new building following the official opening in November. The first one deals with lipid metabolism, the basis of atherosclerosis, that background disease that produces stroke and heart attacks. A second group deals more directly with cardiovascular disease of a different sort, newborn and prenatal disease, and also intersects with the Muttart diabetes group, a longstanding research group in Alberta that was supported originally by the Muttart family. A new heritage medical scientist supplements this group and will direct interest to the immunology of that disease and also into the first islet cell transplantations probably that will occur, the first in Canada. There is a neurosciences group which has worked on advanced robotic devices to improve gait disturbances in some people with stroke. That program has been highlighted regularly by the media, and I suspect members of the committee will be aware of it.

There is particular excitement in Edmonton presently because of the interest of one or more drug companies in a discovery of a new approach to the management of hepatitis B. Hepatitis B is a very common cause of infectious jaundice, and there is reason to believe that one of the scientists has a new and potentially very direct attack upon this virus.

You have interested yourselves in the past in the level of international recognition given to Alberta's community. I can attest by reason of the numbers of invited lecturers, the numbers of honours and awards, that that community, that recognition, is growing.

We report these findings regularly in our newsletter, which I hope you are receiving regularly. That newsletter has become a very popular document and receives accolades not only from the public but from scientific organizations across the world.

You've also interested yourselves in the rate at which our scientific community attracts funding from outside, from agencies such as the Medical Research Council of Canada. That continues to grow and grew by a full \$1 million in the past year.

Mr. Geddes commented on the technology transfer program. I would supplement that by noting that we've received 64 applications to that program, which I think is approximately twice what I would have predicted. We've approved 27 of them. You might be interested to know that of that group, 10 are from the private sector, with the remainder from the university communities. So our private sector would seem to be growing in interest.

The new funding Mr. Geddes has referred to I could only supplement by noting the number of new products. There is a so-called sleep apnea mask which is now sold as a result of a development at the University of Calgary. Raylo Chemicals has a new product which is in existence because of funding they've received through the foundation. There is an adjustable artificial limb, which we hope will prove successful in the marketplace, providing those with amputations with a much greater convenience. There is a device that's very close to marketing — it's certainly very interesting to market people — that deals with the management of postpartum breast engorgement.

We do need to extend this program, however. We would like to be able to go into what one might call a phase 3 whereby we can add an additional touch to the development, because we believe that additional touch might assist the private sector interest in those programs.

I'd like to turn briefly to our hopes for an increase in clinical and patient-based research. I hope you are aware of the fact that by reason of the foundation's ability to fund the clinician who's trained in science, we've become one of the main sources of new clinical expertise in the province. We therefore are a major initiator, albeit indirectly, of new patient-care programs in this modern day. We do need to broaden that spectrum of research. We need greater numbers of clinically qualified investigators. Our clinical investigator program is now about to be imitated by the Medical Research Council of Canada. I'm delighted with our colleagues in the universities who have been able to mount this program so successfully that they've been able to sell it nationally. It's interesting also that the gentleman who was on our international board of review is now a leading figure in the Howard Hughes Institute of medicine, and he tells me this is the one program they intend to add to their armamentarium in the near future. We would like to be able to further our work in pilot studies that might lead to clinical trials, those kinds of applied experiments where new drugs and new devices are tested. We need initiatives in the evaluation of new patient-care programs, including new technology, in order that we might round out the full spectrum of clinical research in this province.

With respect to our program management, we have curtailed program growth in the past year, with emphasis — not exclusively, but with emphasis — on activity for which funds could reasonably be expected to be forthcoming from other sources. I refer, of course, to our studentship fellowship program, which we have reduced by capping the numbers which we fund in the hope that additional funds will be found from other sources such as the Medical Research Council of Canada and others. We're giving considerable emphasis to the cost sharing of various programs with other foundations. For instance, the Weston Foundation shares a program with us at the University of Calgary; the Canadian Arthritis and Rheumatism Society is now cost sharing a program. We are acquiring assistance in the creation of new positions from agencies such as the Alberta Heart Foundation and others.

The risk in this, of course, is clear. We have dampened the momentum, and that has caused some increasing recruitment difficulty for our universities. The real risk of this period, and one that unfortunately is not measurable, is that we may very well be discouraging applications from the very best candidates from elsewhere whose options are so numerous. In the longer term, of course, that would become less advantageous for our province and for the development of medical research initiated so well in this past five years by the funding which the government of the province has provided to medical research through the foundation.

I'd conclude by noting that we have had some change in trustee membership since we last reported to you. In the forthcoming report you will note, when you read the annual report, the changes in the membership of our trustees.

Mr. Chairman, I'd be happy to respond to questions.

MR. CHAIRMAN: Thank you very much, Dr. McLeod. An excellent overview by both of you gentlemen. You're obviously making good use of the dollars you have and have come up with some creative ways to stretch them and match them, making sure we're getting maximum possible value, and we appreciate that. Also, Mr. Geddes, I made a note of your comments on the recommendations that relate to the triennial reviews, and I can assure you we'll be taking those steps as quickly as possible as well.

The chairman would recognize the Member for Vermilion-Viking.

DR. WEST: Thank you, Mr. Chairman, and good day, gentlemen. I hope this research goes on and discovers the fountain of youth, some drug, or some research that will extend our lives forever, perhaps. They are certainly working in some tremendous areas.

I look on page 2 at the market value of the endowment fund at the present time, \$483 million, knowing that it's been in place since 1981, a short eight years, and that you've had cumulative expenditures of \$250.464 million. To the people of Alberta that's an excellent statement, that they've been able to get some \$50 million worth of research developed every year and still have an integrity of the fund at \$483 million. But, at the same time, research is a very costly item, and you indicated that the endowment fund perhaps could use some expansion. Some would ask: how much more could you take out of the \$483 million along with the interest accumulation or investments in bonds and securities and still maintain the integrity of it over a longer period of time? You've gained about 6.5 to 7 percent and at the same time given away about 6 or 7 percent of the fund. Have you looked at taking any increased amounts out of the \$483 million without jeopardizing the \$300 million?

MR. GEDDES: The answer is that we have done so. Over probably the past 18 months we have been absorbed with this problem on a continuous basis. We have done a great many simulations. We have worked in close co-operation with the fund managers, who, as you know, are the same managers who managed the heritage fund investments, the officials of Alberta Treasury who are involved in investment management generally. We have been involved continuously with those officials in doing simulations and forecasts based upon differing investment assumptions and differing rates of spending.

You're quite right when you say it's an impressive record. I must be frank and say, however, that the foundation was endowed at a very critical and interesting time in the history of North American financial markets. I think it's fair to say that at no time in history have short-term interest rates been as high as they were in 1981. That was the most critical year in Alberta and elsewhere with respect to turbulence in the world financial markets, as a result of which short-term interest rates were in the range of 21 percent. They peaked in the range of 21 percent and stayed there for some time. So a good deal of the endowment fund of \$300 million which was provided to us in March of 1980 was invested in those kinds of instruments. Now, the reason that was done was not primarily because of any investment strategy that was adopted by our fund managers but, really, the absence of any understanding of what the trend of future expenditures would be. So, logically, they chose to deploy most of our investment holdings in short-term interest-bearing obligations which yielded extremely high rates of interest.

At the same time — and it's just a natural consequence of a new organization and communicating to the universities our objectives — the expenditures in the first year were quite modest. Of the \$250 million that has been expended in eight years, only \$4.987 million was expended on our scientific programs in that first year, and that amount only rose in the second year to \$13.021 million. So we had the two forces operating: the rapid accumulation of interest earnings and rather modest expenditures in relationship to what they have been in the last three years in particular. Our fund managers still could not dis-

cern what the total spending pattern was going to be. So as a consequence of that the fund has risen to the sum which you mentioned, \$483 million, and, remarkably, has maintained that even throughout 1988.

On page 2 there is a small table, quite prominent on that page, which shows that, remarkably, the endowment fund assets at cost have remained extraordinarily constant. In 1986 they were \$443 million; in '87, \$449 million; in '88, \$447 million. They've been remarkably constant. Over that time there has been some movement up and down in the market value of the foundation. In '86, for example, the market value was \$515 million. The following year, in 1987, the market value was \$529 million. In 1988 the market value was \$483 million.

In large measure that market value is reflective of the prevailing rates of interest, the interest rate structure. I'm not a prophet, but I think most observers would predict that interest rates in the next year or two will diminish; I think evidence would be very strongly on that side. If that were to happen, the market value of the endowment fund assets would tend to increase somewhat. Interest rates started down in the early part of 1988. Consequently, the market value of our assets dipped slightly to \$483 million. As interest rates rose throughout 1988, that market value has eroded somewhat, but I suspect that by the end of March we're going to see the number back up.

Now, we've taken the position — we explained that last year — that in line with what we believe are prudent and proper methods of endowment fund management, we ought to establish a spending rate and that spending rate should not be more than perhaps 5 or 6 percent of the market value of the assets which we have under jurisdiction. That spending rate, however, as low as that is, should only be adopted if agreement were reached as to the asset mix, that is to say the relative proportions of the endowment fund that are invested in equity securities compared to interest-bearing obligations. As hard as it is for us in 1988 to believe this, over long periods of time investments in equities have outperformed investments in interest-bearing obligations. With expert management and with the large amount of this foundation's assets — though again emphasizing that management is in the hands of the officials of the heritage trust fund — it would be my own conviction, my own opinion, that we should continue the movement toward investment in equities in the fund. That would have considerably different consequences in the longer term income. We've looked at that based on historical averages, or we've looked at projections prepared by Treasury officials in that respect, based upon varying levels of asset mix.

I would like to see us move to something like 40 percent of the portfolio in equities. It's much, much lower than that now. It's quite modest, in fact. The officials of other large endowment funds with whom we've consulted argue that the more appropriate mix would be in the range of 65 to 70 percent in equities with the balance in a mix of other investments, not confined simply to interest-bearing obligations but a wide range to the tune of, perhaps, 10 percent of the total in a range of other forms of investment. So we believe, therefore, that it would not be possible for us to live within a spending rule much less than, say, 7 percent. We're not comfortable with 7 percent, but we could live with a spending rate of 7 percent on an endowment fund value which would produce for us a steady state of income which would meet the scientific programs we've now identified.

I hope that's not too verbose an answer. I find it difficult to answer this kind of question without going into some detail. It's

a complex issue, not one which lends itself to a quick answer. But I hope I've emphasized that we do wish to continue to maintain the integrity of the fund, to adopt a spending rule which is based upon the market value of the fund, and if that market value were increased in the approximate amount of \$150 million, and it could be done over a short period of years, that would provide a market value in the capital fund which, when we apply a prudent spending rate to it — hopefully, down as low as 6 percent — would produce an amount of income which would be equal to the task of funding the programs as we now see them.

DR. McLEOD: Mr. Chairman . . .

DR. WEST: Thank you. That's a very comprehensive answer and appreciated.

MR. CHAIRMAN: Just one moment, please.  
Did you want just to add to that answer?

DR. McLEOD: One other observation is that we do have an audience that examines our thinking in the longer term with some care, and that is, of course, the scientific community whom we both fund directly and those whom we wish to attract. The apparent stability of the foundation into the long term is very important to that process.

MR. CHAIRMAN: Thank you.  
The Member for Vermilion-Viking, supplementary.

DR. WEST: Yes; it's quite aware by your answer that the ongoing demands on medical research are going to be heavy and that the costs derived from this fund with the lower interest rates are going to come under heavy fire. Have you looked at — and perhaps you are right now, and I've missed it by going through this. But the large pharmaceutical companies out there are doing tremendous research and development of drugs for congestive heart failures and cholesterol inhibitors and what have you, and of course with our new drug Act there is a bit of incentive, you know, to look at investment in research. Is there any way of leveraging almost the start of a second endowment fund, like we do in Education, where you could encourage these companies to work with you and double up these dollars?

MR. GEDDES: That in fact is happening. Our experience has been the following: if we bring in first-rate investigators and establish them as independent scientists in this province, they bring with them a network of connections, often with multinational drug companies or other business interests. We can point to quite a strong track record in that regard. Our heritage medical scientists are established scientists who come with excellent connections.

I could mention some of those to you. For example, the new head of the department of physiology at the University of Alberta, Dr. Pang, came to Alberta from Texas. He was established by us and has been highly successful in arranging financing from two Japanese pharmaceutical companies in two separate transactions within the last year to 18 months. These have been significant sums of money. The first arrangement, with Taiho Pharmaceutical of Japan, in turn triggered some additional matching funds from the Natural Sciences and Engineering Research Council of Canada, NSERC. So there was this grossing up, if you like, of matching funds. So we've seen that

happen in that case.

I mentioned earlier that within the last few days Vencap made an investment in a company called IatroMed, which is a Phoenix-based company. That company in turn has entered into an undertaking over the next three to five years to fund Dr. Cy Frank at the University of Calgary in an amount between \$300,000 and \$500,000. So that is additional money coming into the system which I regard as a form of leverage.

Some of these matters relate not so much to issues of industrial secrecy but perhaps a question of confidence. I don't know whether Dr. McLeod would be prepared to mention one or two items at the universities of Alberta and Calgary that he's aware of.

DR. McLEOD: There is a number. I think the question is well founded, but it emphasizes the important role the foundation plays. We fund, through the university, the scientist. The scientist in turn becomes the operative key in attracting further funds in order to accomplish the research.

At the University of Alberta there's a very significant interest in the possibility of controlling hepatitis B, which I referred to. There are two companies interested in that program, talking in terms of \$1 million, in that range. There are other examples of that, but that is the way the leverage is working. The problem I have is the need for us to bring in the scientist, fund him and establish him, and then allow him to apply that leverage.

DR. WEST: Over the years and with the university we've come through a very buoyant time in Alberta, and I think in some ways our institutions have abrogated their responsibility in collecting money from the private sector and working in union with them. I think in the future we'll see a lot more of that in Alberta and Canada.

One other thing just before I leave. In the statement of revenue surplus, on page 24, there's a \$7,893,759 surplus. At the end of the year what happens to that surplus when you've drawn out the original \$58 million transfer from the fund and you're left with that at the end? Does that go back into the fund, or do you carry that forward?

MR. GEDDES: We have have some short-term cash in our hands as opposed to the Alberta heritage foundation trust fund. We draw down from time to time from that fund, and funds remain in our hands on a daily basis. However, we operate under what is known as a zero cash balance. At the end of each day our cash is returned to the same CCITF, the Consolidated Cash Investment Trust Fund, as is operative under the heritage fund management. So we therefore never have idle funds, in that the funds are returned to the Consolidated Cash Investment Trust Fund daily and returned back to us the next morning.

MR. CHAIRMAN: The Member for Calgary-Forest Lawn.

MR. PASHAK: Thank you, Mr. Chairman, and good morning, gentlemen. Since there is some \$300 million of public moneys invested in the foundation for medical research, I would like to know the extent to which the public interest is protected as a result of any research activity that is conducted as a result of expenditures from the fund. Specifically, I'd like to know what the foundation's policy is with respect to patents. Does the province or the fund itself derive any immediate financial return from the application of patents?

MR. GEDDES: In the first instance, our funding largely goes to the universities. It would largely be administered under trust funds that relate to the principal investigator that is concerned in the particular medical discipline. Now, that university-based individual must operate under the rules that relate to his or her particular institution; largely speaking, the University of Alberta or the University of Calgary. Both of those institutions have rules with respect to what is in academic circles generally described as intellectual property, which includes patents, trademarks, copyrights, and other things. So that individual is bound under the terms of the intellectual property rules — the patent policies and other policies of the institutions — and must abide by those.

To the extent that the public interest is involved in ownership, as a generality I could say that a university-based investigator may pursue a patent on his own initiative. It is not done frequently. The other case might be where the university officials themselves might proceed to undertake a patent. To shortcut the whole process, I simply say to you that it is based upon the institution's own rules with respect to that. The foundation per se has taken the position that it should not assert any ownership right over intellectual property rights which arise. That is the same process, I might say, as with the Medical Research Council of Canada, the National Research Council, and other national granting bodies who make unconditional grants to university-based people without claiming any right to the property that arises.

Now, with respect to our technology transfer grants, we do take note of the public interest there, and in cases where the university's rights are not acknowledged in the arrangements, we will generally require that additional amounts be repaid to the foundation. This might take the form of requiring that double, or in some instances more, the amount of the technology transfer grants be repaid to us in order to sustain the fund in its ongoing activities.

I hope that answers your question.

MR. PASHAK: Thank you very much. I find that a very comprehensive answer.

My questions all deal with different matters. There's some mention, I believe in your opening statement, about one area of research which has to do with mental illness, and I would like some comment on that. Is it just purely from perhaps a neurological point of view that this research is conducted, or are we looking at some of the research that is being done elsewhere in the world looking at perhaps other causes of important types of mental illness like schizophrenia and manic depression. I ask this question, I guess, because there is an estimate that one in four Albertans will be afflicted by these conditions at some point in their lives.

DR. McLEOD: Mr. Chairman, at the outset we in the foundation decided to give emphasis to quality and not attempt to direct the nature of the research. So we have played the role of the advocate of quality and not the role of director of the nature of the research. We were quite comfortable doing that, knowing the range of skills within our universities in the research areas.

The upshot of that over the years is that yes, we have research in the psychological/behavioural area, and it's in several forms. One, there are people who deal very fundamentally with the nature of new drug design, attempting to fashion the molecular characteristics of drugs to fit receptors that are associated with mental depression. So that's one cut at the picture. An-

other one that comes to mind is that we have a psychologist who has spent the last five years studying learning behaviour and attempting to modify learning amongst autistic kids, which is not quite in the area but, nevertheless, it does represent a very important behavioural problem in society.

A third example comes more directly, I think, to the interest behind your question, wherein we have funded an individual in epidemiology in the department of psychiatry at the University of Alberta whose whole game plan is the recognition of depression, which of course is the commonest ailment we suffer, and the ways in which that can best be attacked. Also within that there is an element of trying to decide what is done now that is most useful, what is done now for treatment that is less useful. So there's a full range of activity in that area.

Finally, there is a neurochemical unit that was originally funded largely by the Mental Health Advisory Council, to which we've added personnel. This is a chemical unit that's based at the University of Alberta that's linked between the faculty of pharmacy and department of psychiatry within the medical school. We've been adding personnel fairly regularly to that program.

So my answer is yes; it's a broad cut at it. It is not all basic and biological.

MR. PASHAK: Thank you very much again. My final question, Mr. Chairman, would have to do with my layman's perception that there is a fair amount of research going on in the area of medicine in the province at the moment. It seems to me there are a number of agencies doing this, and I would like to know if there is any co-ordination going on between these agencies that are doing research and if there is indeed any need for a commission not to regulate or oversee in any administrative way but purely to provide co-ordination.

DR. McLEOD: Within the university structures there is fairly careful monitoring of the activities of research on a departmental and faculty basis. Because of the need for a collegial arrangement whereby — you can't do research nowadays off by yourself. I mean, it really has to be done with the collaboration of a host of other people. We deliberately set out to try to ensure communication, for instance, not only between faculties but between the two universities, to sort of add to that. Now, when it comes to the fact that we do not provide operating grants — we do not fund the ongoing costs of research; we fund the individuals to do research — the foundation itself is a little to the side of the main question. However, that being the case, because the main flow of funds for research comes from very distinctive agencies with quite significant, clear-cut sets of objectives, there really is a co-ordination that goes on by reason of the funding. I don't think there's a gain to be made by an overall agency. The Americans have tried that for many years and find it is inhibitory rather than complementary to the processes that go on. They've become much more dependent upon this collegial process and the university structure.

MR. CHAIRMAN: The Member for Lethbridge-West.

MR. GOGO: Thank you, Mr. Chairman. Welcome, Mr. Geddes and Dr. McLeod. As you're aware, I think, Mr. Geddes, this committee last year made a recommendation, being number 2, that a review of the funding, in accordance with the statute, be proceeded with as quickly as possible. I think you're probably in possession of that report by this committee. So that's an out-

standing item.

With regard to the investment mix which was raised earlier regarding returns to the fund, I simply draw your attention to resolutions 6, 11, and 14 of this committee last year, which encouraged the Provincial Treasurer — and the limit to which this committee can function is to recommend — to invest in equities, both nationally and internationally, with a view to getting a better return on the fund. I would be at a loss to understand why, with the nature of your medical foundation, which is long term in nature, those recommendations wouldn't apply to investments by the investment committee for the heritage foundation. It goes without saying, if one looks at the past 50 years, investment in equities overall is always more beneficial under our system than debt security. So I would take it as a given that the Provincial Treasurer would recommend to the investment committee that action should be taken with regard to the investments of your foundation.

[Mr. Hyland in the Chair]

I wanted to ask Dr. McLeod something that's puzzled me for some time. As you know, the government has committed substantial resources to the matter of AIDS, primarily from the point of view of information, prevention. It raises a question in my mind with the disease control centre at Atlanta, which has done, I guess, a tremendous amount of work both in the investigative nature but more on the clinical side. Is there collaboration between any of your fellows and the disease control centre at Atlanta? Could you comment as to what the degree might be?

DR. McLEOD: The disease control centre, of course, provides an information base, an information source, and it does attempt to ensure that any new findings are rapidly communicated through the field over and above and beyond the normal kinds of publications in scientific journals. Anyone interested in AIDS automatically acquires a built-in, I suppose you might say, pipeline to the Atlanta centre. There are two individuals in Alberta who are funded by the foundation, both of whom are involved in AIDS and AIDS control, and both are integral parts of that network that runs out of the Atlanta centre through our own federal department of health and welfare. So yes, there is a fairly close connection. I think that's to be expected. It would happen almost without thought. The advent of AIDS was such a remarkable and unusual event and something quite so deadly that any individual interested in viruses, in slow viruses, in the immune response of the human being to virus infections, to the ways in which the immune response is blunted — those people just automatically caught on to that pipeline. It works exceedingly well. It really does.

MR. GOGO: A moment ago, Mr. Pashak made a reference to mental illness, mental disease, and made the comment that one in four either suffers from mental illness or will suffer from mental illness. One immediately thinks of three of one's friends who are apparently all right, and one begins to worry. I look around this committee, and I guess there are three that have a problem with mental illness. It raises a question, however, Dr. McLeod. From the point of view as an MLA, I've had many people come to me who have loved ones afflicted with Alzheimer's. Mr. Moore, I believe, had said at one time that about 65 percent of all seniors who were admitted to auxiliary hospitals were having Alzheimer or dementia problems of some



kind. I'm very encouraged—I think it's on page 15 of your report—to see that that's actively being worked on. However, the concern I have is that I don't know who else knows about that, which raises a question in my mind for the foundation, and that is the public relations component of the foundation. Who in Alberta is aware of what is being done other than the people in a very narrow circle, and what has the foundation done or is doing in terms of informing the public? Because constantly since we've gone into this recession there seems to be the attitude by government to control its expenditures, which means perhaps reducing programs. At the same time we have substantial funds committed and a request for additional funds committed.

So it seems to me that there's a role to be played by the foundation—maybe it's being played; I'm simply not aware of it—as to what the medical research foundation is doing to inform the public of Alberta about its activities.

DR. McLEOD: We agree it's a very important role, and in fact the trustees very early in my appointment discussed this at length as to how we might best address this. At the present time we do maintain a public relations officer whose entire time is committed to the translation of stuff—communications, research proposals that are done in the scientific language—into language that's more understandable. We have a very regular press release system to the media of the major communities, and in fact we also have a regular mailing to the smaller newspapers scattered throughout the province. We have worked with the high school science fairs to try to ensure that there is... Well, we award prizes at the high school science fairs in order to identify the foundation as a source of information through the high school system. Our newsletter, which you receive, we've moved up now to six a year rather than the four. It's not an inexpensive contribution. It's mailed to every school, to a rather lengthy list of individuals. Many of you acquire extra copies for your offices.

Have I missed something?

MR. GEDDES: I think the only other thing I would add to that is the press releases and press conferences that are arranged by us. Often what appears in the daily press is a result of that process where we bring together the journalistic community with our officials. We arrange interviews in our offices. We have the scientists come to our offices and put them together with the journalists. And because we are aware of that process, we know that many of the things that appear in the daily press largely are the result of that process.

We believe, as you do, in the great importance of providing publicity of what is being done in some of these important areas, and ones you mentioned are concerns of ours as well. We're very open to any suggestions made from any quarter. Whenever it is raised with me, I ask whoever raises it to let me know what further steps we might take, and they would certainly be communicated to our trustees and to our officials for corrective action.

But is an ongoing matter that receives daily attention. As Dr. McLeod said, we have an experienced public relations official who on a daily basis is concerned with this process. We think it's very important.

MR. GOGO: Final question, Mr. Chairman. As Mr. Geddes and others are aware, just a couple of years ago we had Mr. Fonyo running for cancer; before that we had Terry Fox: both

outstanding young gentlemen. Substantial funds were raised in Alberta, the most recent, I suppose, by Mr. Hansen with regard to the handicapped. Alberta contributed some \$2 million on condition it be used in Alberta for research. Would those types of funds find their way to the medical foundation, or do they go to the Cancer Board, or do they go to other organizations? It would seem to me—and this, I think, ties a bit into what Mr. Pashak was mentioning, not recommending—a co-ordinating type of group to co-ordinate activities both ways in terms of inflow of funds and outflow of information. I suppose Dr. McLeod, as executive officer, would answer the question. Do those funds find their way to a place like the medical foundation?

DR. McLEOD: Not directly, Mr. Gogo. But on the other hand, because we fund people and those funds generally support operating costs, there is an intersection. For instance, in the rehabilitation and neuroscience unit at the University of Alberta, led by Dr. Richard Stein, there are three foundation-funded scholars. At the present time in Calgary there are three people in the unit, two of whom are funded by the foundation. The research of those individuals is dependent upon those very funds. So the co-ordination comes out pretty neatly in the sense that you can't distribute those funds other than where there are qualified people to manage them, and because of the past eight years, we're funding a clear majority of those individuals.

MR. GOGO: Thank you, Mr. Chairman.

MR. CHAIRMAN: The Member for Lacombe.

MR. R. MOORE: Thanks, Mr. Chairman. Well, gentlemen, you certainly have an excellent program and have been carrying it out very well. Our laymen really don't understand the research end of it as much as you people do. I do understand dollars and cents though, and I understand this: there are great demands for research and great demands on the dollar. In that area I can't see why the foundation has its entire revenue—and I'm looking on page 24, your revenue statement—from the heritage trust fund. That's the only revenue you indicate coming in to you. I've listened today that there are various matching dollars coming in from drug companies who they supplement along the way. However, if we look at medical research across North America, there's a lot of corporate funding outside of drug companies that will stand to benefit that goes into this. Your foundation—and I think if you got your story out, what you do and what your work is, I can't see that we can't tap that corporate funding. I'd like to know if you've looked at that area.

[Mr. Oldring in the Chair]

The other area, as a second question, relates to the same thing. Everything you do in research benefits mankind, if you want to put it. That takes in all Canadians, not just Albertans. And I come back, as I came back last time on this. I'd like to know why, somewhere along the way, the federal government doesn't come in. Because I can see Alberta paying their portion for Albertans, but I don't think it's the responsibility of Alberta citizens for all of Canada. The federal government has a bearing on all Canadians and should be helping with some of that funding. So on the revenue statement I'd like to see a federal portion coming into this work, because it's very, very important

work. Those two areas — corporate funding, not just from drug companies and matching with the research people, but coming into this area here.

MR. GEDDES: You've raised a number of interesting questions, Mr. Moore. One question you raised early was other funds coming into the foundation. Just yesterday at our trustees' meeting we considered this matter, and we think there probably will be some form of response from us to that issue a short number of months from now. At the present time there is a great deal of concern about our status as a foundation were we to receive outside funding. The question as it has been examined from our point of view has more to do with perhaps receiving funding which might be deployed in the furtherance of technology transfer activities, and that might be done in some other way. But at the present time there are some difficulties associated with the foundation as such accepting public moneys.

A second observation I would like to make is this. Dr. McLeod referred earlier to what I would describe as the dramatic success that took place in the Calgary community within recent months in raising somewhere close to \$2.5 million, moneys which were raised from the Calgary community and funneled into the University of Calgary to be used to complete the fourth floor in the heritage building in Calgary, which will be entirely devoted to the programs of the Alberta Cancer Board. So that is a direct example of how private sources, that kind of money — I would suspect the larger amounts of money would come from corporate sources and some individual sources — is being tapped.

Finally, in regard to the federal contributions, in fairness it must be noted that there are very significant sums of federal funding that go into the selfsame programs that we are funding. We will fund parts of programs, as Dr. McLeod said. We do not provide operating funds. Our strategy from the start has been to attract independent scientists to this province, the best we can attract, to establish them in this province — and this is a costly process — to provide those scientists with the fellows and students that work in their programs but require them to go to other granting councils to obtain their funding, and they do this. So they go to the Medical Research Council of Canada, primarily, and other national granting bodies and are attracting into our province significant sums of outside funding.

I think it has been said before that, as an example, the largest group funded by the Medical Research Council of Canada is the protein function and structure group at the University of Alberta. That's the largest single group funded by the Medical Research Council of Canada. So there is a significant federal component. We would hope that if we continue to attract better than average, superior people into our system in Alberta, they're going to compete in a better way than others across Canada, and we're going to see an increasing amount of national dollars coming into our province, both from the federal government per se and from granting councils such as the Canadian Red Cross or the national cancer foundation and others. Does that cover the ...

DR. McLEOD: Yes. My best guess is that if one had a balance sheet for medical research in the province of Alberta, we are probably putting about \$1 in every \$4 into the system. The federal government, either through the cost-sharing system for educational support, the MRC, and others, is probably putting in another \$2.50 or thereabouts. That's a guess because I don't

have access to those figures.

I really only wanted to make the point that this is a balance sheet of the Alberta Heritage Foundation for Medical Research, but it in no way encompasses the total input to medical research in the province.

MR. R. MOORE: Mr. Chairman, just in another area. I was glad to hear the Member for Lethbridge-West bring up Alzheimer's disease. It's a major issue. [interjection] My friend to my left says it happens to most politicians, so we should be concerned.

It is a major, serious situation to the public. Because you fund individuals and scientists, you can then direct in what area your thrust is going to be, so you have control of that. There are areas like Alzheimer's disease you're looking at. But when we look down the road, with the increased demand from every area, in the medical field they're all serious situations, and it's crucial that we get research into them. You're limited to what you can take on. My question is: when you're looking at that, do you seriously consider what you have on your platter now, so to speak, rather than bringing in more? What I'm saying is that, you know, you can help a lot of people a little bit and not do much good, but you can help a few and do an excellent job and follow it through until we have net results. Don't get our base too wide so that we can't fund anything. That's the danger, because of the demand, we don't want to get into. And they're all there. They're all very, very serious areas that demand research. I wouldn't like to think we'd keep expanding out and funding this and funding that fellow, and finally we've got a base so wide we can't fund it.

DR. McLEOD: Mr. Moore, I guess the quick answer is that the main reason for which we offered construction funds was to acquire the opportunity to focus. And as a result, those multidisciplinary groups within the new buildings are our direct attempt to try and focus on some very major problems. Those groups, the acquisition of new personnel for them, a review process of their progress, are all sponsored by the foundation. And we hope to keep a very sharp focus on those research thrusts.

Having said that, because young people — young, bright, quick minds, recently and well trained — are the very essence of research, I would hope we would always have a place to be able to pick up and position the extra individual who represents, perhaps, the frontier tomorrow. If we're going to maintain the quality of our groups and our research community as a whole, we're always going to need that opportunity.

Having said that, I agree with you that we do hope the major emphasis and our sharpest focus will come from those multidisciplinary research groups.

MR. CHAIRMAN: Member for Cypress-Redcliff.

MR. HYLAND: Thank you, Mr. Chairman. I had, when the meeting started, what I thought were three good questions. Being down the list, they've all got used up.

So, knowing that the door is always open to the chairman's office and the president's office for any questions or comments we may have and that there seem to be only government members in the Assembly at the present time dealing with the trust fund, I would move that we adjourn.

MR. CHAIRMAN: Before we do that, I do have three other members on the list, and I don't know if they're still interested



in speaking at this time or not. Member for Ponoka-Rimbey.

MR. JONSON: Mr. Chairman, I do have a question, but some of my colleagues are challenging your procedure. You'd better deal with them.

MR. CHAIRMAN: Member for Ponoka-Rimbey.

MR. JONSON: Well, just one question, Mr. Chairman. It deals with the task ahead of us, and that is that we are obliged to — and I certainly would make it a top priority, I'm sure — doing a review of the future funding for the foundation. Certainly, in our role as MLAs, both on this committee and as part of the government, we have the political considerations to deal with. But the question I have is: could our guests comment on what they would see being involved in a review? How do you view this particular item, this stage in the existence of the foundation? Do you see other sources of information that we should have besides your own excellent report? Do you think there are any indicators we should be looking at in making our judgment?

MR. GEDDES: I think one thing that might be useful is to do a historical review going back what now might be close to 10 years. We would be happy to provide you with the matters we have reviewed. That would include statements made in the Legislature by then Premier Lougheed and others, discussions which took place, the results of meetings which occurred in the time period leading up to the organization of the foundation.

There is a considerable amount of background that led up to the decision which was taken by the Legislature at that time to do something that was quite different from anything that had ever been done in this province. I don't think this foundation has a parallel here or anywhere else in Canada of which I am aware. I can tell you with great conviction that people with whom we've discussed this matter, whether they be members of our International Board of Review, our scientific advisory committee, or visiting scientists, without exception applaud this method of organization. They believe it to be the most visionary form of organization they have ever seen; that is, the endowment of a fund to be held in perpetuity for a purpose that benefits the citizens of the province.

So what we think is involved here is to reassert the conviction you have now, some 10 years later, that this is still the correct thing to do and that based on the evidence that can be presented, it deserves strengthening and continuation. I think that decision should be confirmed. We'd be very happy to present you with the materials we have developed in the course of perhaps developing our own historical documentation. That's the first thing.

Then I think we could together examine the consequences which flow out of that. I think discussions could take place with Alberta Treasury officials — and I might tell you that we have had discussions with those officials — to obtain the benefit of their advice, whether or not they concur in the presentations we have made. The core of those presentations has to do with the determination of the spending rate, the determination of appropriate asset mixes: do they concur with this; are there any concerns on their part? We have consulted academic sources as well, and we find no dispute with our view of proper endowment management. As I say, if we could therefore agree, through your committee but representing the Legislature as a

whole, that these are appropriate and proper concepts of endowment management — we are asserting to you that they are, but we are publicly appointed trustees and must be responsive to the wishes of the Legislature. We assert to you that these are the proper concepts to manage this foundation whose assets you have entrusted to us, and we would like to have that confirmed and that understanding reached. That can be done by consultation with your own officials in Treasury, with academic sources. You could call witnesses, if you wish, who could provide further insights into that conviction.

Then we might examine together alternative methods of supplementation. It will be recalled that a number of members of this committee have raised possibilities to do that, which range all the way from using lottery funds to supplementing it through annual payments out of general revenues and so forth. Now, there are many complexities that you will raise from your standpoint. As you are well aware, this endowment fund forms part of the heritage trust fund, and whether that causes any issues to be raised in your minds is a matter for you to raise.

So I hope that generally describes the way in which I would hope the dialogue would occur between us. We are quite ready and willing to provide you with further information which would make those types of discussions productive and helpful.

MR. JONSON: Thank you.

MR. CHAIRMAN: The Member for Innisfail.

MR. PENGELLY: Thank you, Mr. Chairman. Good morning, gentlemen. As a new member of the committee, I would like to know, Dr. McLeod, how you attract, recruit medical scientists for research in whatever area you wish to do.

DR. McLEOD: The recruitment process has a whole series of starting points. One of them lies within the university research community. A scientist who has a productive research program looks about and finds it's important that that program have new blood, have new expertise. The scientist may approach it in that particular fashion.

The second point that assists in the recruitment process is that the existence of the foundation is very widely known. The fact that this unique initiative is in this province is exceedingly well known. I mean, there isn't a scientific establishment in the western world that you can't phone and they'll know something about it because of the productivity of the past eight years. That attracts people to approach the university community, approach us. We put each other in touch with new and interesting people in this fashion.

That process then moves on, with a university or the Alberta Cancer Board or an affiliated hospital, with their initiative. They make a contact. They explore with the individual what their expertise is. They look at their own needs and determine their own level of interest. If it's highly compatible, then usually a series of visits takes place between that scientist from outside and this local community, and that process then unfolds over time.

The second and most important thing we do is fund a very significant number of young Alberta people in training in medical research. This may take place within the province or it may take place outside the province, depending on the needs of the training program. That now constitutes a very significant pool of potential candidates for positions as they mature and as they complete their training. We are now, after eight years, begin-

ning to see the benefits of that. Mr. Geddes referred to Dr. Cy Frank. Dr. Cy Frank graduated from the University of Calgary, took his research training sponsored by the foundation, and is now, I would guess, one of the pre-eminent and one of the most important orthopedic scientists in Canada. We're just hanging on to him, he's becoming so very well known. So that whole pool of trainees constitutes a new and very important part of that recruitment process.

MR. PENGELLY: A supplementary, Mr. Chairman. Dr. McLeod, then you do solicit medical scientists for certain research?

DR. McLEOD: Yes, through either ourselves or the university community.

MR. PENGELLY: A final supplementary. Has any solicitation been made for medical science to research amyotrophic lateral sclerosis, better known as Lou Gehrig's disease or ALS?

DR. McLEOD: There are two groups of people who are dealing with spinal cord function and disturbance of spinal cord function, of which amyotrophic lateral sclerosis, Lou Gehrig's disease, is becoming an increasingly common problem. They are working on quite fundamental levels, trying to understand, first of all, how those cells operate in order that they can determine where that disease process intersects. There is a second group that's very interested in the possibility that both multiple sclerosis and Lou Gehrig's have some immunological background, that it's as the result of some immune mechanism or a disturbance in the tolerance. And finally, there's one person, who may be returning to Finland, actually, to maintain a linkage with our scientists here and the Finnish group because of their interest in the so-called slow virus phenomenon, where one attracts a virus, has it within one's body, has it for many years without manifestation of disease. That's one of the theories of the possible background to those kinds of disorders. That's a third approach that's being taken, yes.

MR. PENGELLY: Thank you, sir.

MR. CHAIRMAN: Member for Wainwright.

MR. FISCHER: Thank you. I just have a short question, and that would be on our new building coming up here in Edmonton. What kind of plans do you have for the use of that? Do you move people into it that you're already funding here, or are you going to expand your programs? Could you just run that by us?

DR. McLEOD: There is a bias for people from Wainwright, to let people know, but anyway . . .

MR. GEDDES: Dr. McLeod is a native of Wainwright, just to clear that up.

DR. McLEOD: Nice to know another part of the Wainwright mafia.

Three groups have been established and are occupying interim space that's makeshift. Most of them are within what was the old Alberta Research Council building, which is now called the Newton building. They're in very makeshift arrangements for their needs, and they will be moving into the new building. They will be supplemented by new outside people attracted through the recruitment process.

MR. FISCHER: Part of the new dollars we're talking about, then, would be to help fund that.

DR. McLEOD: Help fund new people.

MR. FISCHER: Am I the last one on the list, John? Then I would like to move adjournment of the meeting.

MR. CHAIRMAN: Before I accept that motion to adjourn, again I want to thank Mr. Geddes and Dr. McLeod for being with us this morning. I think it was once again very helpful, and I'm looking forward to some ongoing discussions in the next little while. Thanks very much.

A motion to adjourn by the Member for Wainwright. We stand adjourned until this afternoon at 2, at which time we're going to hear from the Hon. Neil Webber, Minister of Energy.

[The committee adjourned at 11:29 a.m.]