

[Chairman: Mr. Ady]

[2 p.m.]

MR. CHAIRMAN: We'd like to call our meeting to order. We have before us this afternoon two very distinguished gentlemen who represent the Alberta Heritage Foundation for Medical Research, being Mr. Geddes, the chairman, and Dr. McLeod, the president. They've appeared before the committee before, so they have a good understanding of the process we have. As a matter of fact, I believe they appeared twice last year. The foundation they represent has a great deal of interest for this committee.

We also would like to express appreciation to them for making their annual report available to us prior to this occasion and also for the very hospitable tour we had of facilities here in Edmonton. We were all enlightened by our visit there and enjoyed it very much. It certainly put the committee in a better position to understand what happens over there and to better develop recommendations to be debated by the committee.

We would like to give both of you an opportunity to make some opening remarks if you so choose, and then we will move into the question portion of our meeting. Just prior to that, if you would indulge for a moment, I would like to give the committee an opportunity to submit recommendations they may have prepared that can be read into the record.

The hon. Member for Clover Bar.

MR. GESELL: Thank you, Mr. Chairman. I'd like to provide three recommendations and read them into the record. Number one:

Be it resolved that a new division be created under the Alberta Heritage Savings Trust Fund, the environmental investment division, and that investments from this division be made for projects that will provide short- and long-term benefits to the people of Alberta through enhancement of our environment and through reduction of pollution.

Number two:

Be it resolved that the maximum amount which may be provided to a student under the Alexander Rutherford scholarship be increased to \$2,000.

Number three:

Be it resolved that a new program under the environmental investment division be initiated for the effective and comprehensive biological control of the annual forest tent caterpillar infestation. Thank you, Mr. Chairman.

MR. CHAIRMAN: Thank you.

Member for Lacombe.

MR. MOORE: Thank you, Mr. Chairman.

I'd like to add this recommendation to the one I gave yesterday:

Recommend that a policy be considered for the Leduc food processing facility that would include:

- (a) a user-pay plan be implemented to move the facility to economic self-sufficiency;
- (b) when the facility is operating at a profit, it would be privatized.

MR. CHAIRMAN: Thank you.

Member for Ponoka-Rimbey.

MR. JONSON: Yes, Mr. Chairman. I wish to read into the record the following recommendation:

Be it resolved that a scholarship program be established through the Alberta Heritage Scholarship Fund which would provide

recognition to outstanding students entering and pursuing study in nursing.

MR. CHAIRMAN: Thank you.

Are there any others? If not, we would welcome opening comments from you, Mr. Geddes.

MR. GEDDES: Good afternoon, ladies and gentlemen. As we've done in the past, I will make some opening comments, and my colleague Dr. McLeod will add to those.

This will be my last appearance before the committee, as my maximum statutory term of 10 years will be reached in just over four months. I would like to take this opportunity to express my thanks to you, Mr. Chairman, and to the members of this committee who have been very generous to us in the amount of time allocated to these appearances and who have been very supportive of our main activities in the committee's annual report.

As required by our legislation, we have prepared a triennial report covering the three-year period ended March 31, 1989, this being the third of such reports which is before you today, as well as the usual annual report for the year ended March 31, 1989. I would like to draw the committee's attention to an omission in our annual report which slipped through the proofreading net undetected. In the chairman's letter, I refer to the expiration of the terms of the remaining founding trustees, together with my own. The printed report, however, fails to include among the retiring trustees the names of Dr. Myer Horowitz, former president of the University of Alberta, and Dr. Norman Wagner, former president of the University of Calgary. I apologize for this oversight and would like to state that the expression of thanks for their exemplary service applies as much to these two gentlemen as it does to the trustees named.

This will also be the last appearance before you of Dr. McLeod, who has served the foundation for eight years as its first and only president. Dr. McLeod is leaving the foundation to take up new and challenging responsibilities in Vancouver. I want you to know that he leaves us with our best wishes for his future success in this new position and with our thanks for his dedicated leadership throughout much of the first decade of our existence. I can think of no better words to describe his period of leadership than to quote these few words from a recent letter which I received from Dr. René Simard, vice-rector, academic and research, of the University of Montreal: "He presided over the destiny of the foundation with elegance, diplomacy, sagacity, and wisdom." We endorse that from the standpoint of our trustees very much.

A selection committee has been struck to find a successor to Dr. McLeod, and because of the excellent reputation and standing in the Canadian scientific community of the foundation, we are confident an able successor will be appointed.

Dr. McLeod pointed out in his president's message that the quality of medical research now being carried out in Alberta has attracted new outside funding into the province to augment and complement funding provided by the foundation. It was pointed out in his report that new external funding for the two faculties of medicine alone has increased from approximately \$9 million a year to over \$31 million a year since the advent of the foundation.

Another important example was provided in the long-awaited announcement on October 26, 1989, by the Hon. William Winegard, Minister of State for Science and Technology, on the networks of centres of excellence. This point will again em-

phasize how our scientists have attracted funding from outside the province of Alberta but for the benefit of our local community. This initiative - that is, the centres of excellence initiative - is part of Canada's national science and technology strategy and, in the words of the minister, "will encourage the integration of research communities in industry, universities, and government into interrelated grids stretching across the country." That's the end of the quote.

One hundred and fifty-eight proposals, covering a broad range of scientific disciplines coming from a large number of university departments and from infrastructure organizations, were evaluated. Fourteen Canadian networks were approved in this new \$240 million program. The final selection was made by a peer review committee of 23 leading international scientists and an advisory committee of eminent Canadians. I'm very gratified to be able to tell you today that the University of Calgary and the University of Alberta were each included in seven networks and together were included in all but three of the 14 national networks. Of the 14 successful Alberta programs, a full 50 percent, or seven in number, involved programs in medicine. These were bacterial pathogenesis, in which both universities were involved, as well as ChembioMed Ltd., a University of Alberta spin-off company; the genetic basis of human disease at the University of Calgary; neuroregeneration and functional recovery at both universities; protein engineering at the University of Alberta; and respiratory health at the University of Calgary.

Every one of the 26 medical scientists from Alberta who will be involved in these networks has received some form of funding from this foundation, and 14 of the 26 hold major personal awards. There will be significant added funds coming into the Alberta research community as the result of the success these able scientists achieved in this very, very rigorous national campaign. So we believe that based on this evidence, the foundation's strategy is paying off; that is, of recruiting able scientists to the province, providing them with stipend support and establishment grants, but requiring that outside support from granting agencies be sought rather than having the foundation supply operating grant support. That's a fundamental consideration in our foundation, which has been the subject of discussion with your committee in previous years. Operating grant support is not provided. The strategy is to attract the very best people we can to come to the province, to provide establishment funds for the laboratories, and seek that they demonstrate their excellence by competing in a national arena among other granting agencies and in the industrial community for funding. They have been eminently successful in doing that.

I'm sure that at least some of you would be disappointed if I did not record some comments in respect to the adequacy of the foundation's endowment fund. We are moving toward the gradual development of a spending rate which is designed to preserve the integrity of the foundation's programs while at the same time returning some income to capital to recognize the decrease which has taken place during the year in the purchasing power of the dollar.

We should pause and recall that this foundation is unlike any other agency of its kind not only in this province but across Canada. It operates as an endowment on the basis that the integrity of the capital is preserved and only the income is used. In that respect it is unlike anything else, any other institution ever created by this Legislature or, in fact, any other Legislature in Canada as far as I'm aware. So our problem has been one of preserving the constant purchasing power of the endowment

funds in our hands.

That fund, originally established at \$300 million, at the end of March, as recorded in the financial statements, amounted to \$472 million, at the end of June amounted to \$505 million, and at the end of September amounted to \$509 million. That sum of money must, in our judgment, continue to grow in order that we are able to fund the programs on into the future. Clearly, if we had not adopted these strategies over the past decade, the fund today, had it been allowed to fall to the level of, say, \$300 million, with prevailing interest rates would clearly not do the job in our 10th year, not to mention what the consequences might be 10 years out.

You have recorded in your proceedings in previous years requests which I made, I think some four or five years ago now, that consideration be given to augmenting the endowment fund by the sum of \$150 million. That request still remains on the table, ladies and gentlemen. You might wonder why it hasn't been increased by reason of the inflation that's taken place in the last number of years. We still believe that original request should be dealt with and dealt with in the following manner. We believe that we should engage with you in a dialogue concerning the appropriate management of an endowment fund held in perpetuity to fund programs of this nature. I regret that we did not have an opportunity throughout the last 12 months to carry out those steps which I recommended to the committee last year, and that is that we reach agreement between ourselves, in company with government finance officers, as to the appropriateness of the methods which we have followed and which are outlined in some detail in our report. I would still urge that that step be taken to provide added reassurance to this committee as to the appropriateness of the steps we have taken.

We have been moving in a slow and measured way toward developing a spending rate which recognizes the inflationary erosion which takes place over time. The spending rate for the year just completed amounted to 7.8 percent. In other words, the foundation's expenditures were 7.8 percent of the market value of the assets of the endowment fund at the commencement of the year. We should in fact be using a rolling average of the capital value of the fund. However, that would not produce a significantly different result at the present time. Our spending over the past three years, however, has been distorted by the nonrecurring expenditures on new medical research buildings in Calgary and Edmonton, one of which you saw just a few days ago. The spending rate applied to all programs and costs except for the buildings would result in a spending rate in the current year of 6.7 compared to 6.4 in the previous year. So that spending rate, in our judgment, must be slowly moderated and decreased in the event that the capital endowment is not increased.

As we are within a few short months of the completion of our first decade, I would like to make some remarks about a matter which I believe to be at the heart of the foundation's success over that period of time, and that is the existence of the foundation "at arm's length" from government, to use the words of former Premier Peter Lougheed. At the debate on second reading of the Act, Mr. Lougheed spoke of the foundation being, in his words, "at arm's length from the emotions, variables, and other factors of political pressures." There was a significant degree of unanimity about the importance of the arm's-length relationship, expressed first by the then Leader of the Opposition Mr. Speaker and by the late, distinguished Mr. Grant Notley, who stated:

I would agree that it is necessary to maintain an arm's length relationship, if for no other reason than the track record with

respect to medical research in Canada.

In short, there was significant support for this arm's-length concept at the birth of the foundation. Subsequent events have fully justified the confidence shown by your former colleagues in that debate, which incidently took place exactly 10 years ago tomorrow.

That concept of arm's length is in turn closely related to the concept of permanent endowment fund, making it possible to plan the operations of the foundation over longer periods of time than would be the case if the budgets were to be approved annually by the Legislature. Commitments to senior medical scientists for both stipend support and equipment needs are made over periods of up to five years and renewable thereafter. Such commitments can be made only if there is an assured source of funding. New scientists recruited to Alberta require such assurance. Leaders in our university-based medical research community can tell you of the intense competition for excellent people. They can tell you beyond any question that a major factor in Alberta's success in recruiting is due to the fact that we can make commitments and follow through on them without changing the rules of the game or renegeing on commitments. This central consideration must never be lost sight of.

To some, however, the arm's-length concept is equated to lack of accountability. Nothing could be further from the truth. Because of its singular nature, there are a number of mechanisms in place to assure maximum accountability, some statutory in nature. At this point, if you'll permit me, I think it is important to review with you once again what those measures are that relate to the degree of accountability that is present in this foundation.

First, let me speak about financial accountability. The foundation's short-term cash assets form part of the province's Consolidated Cash Investment Trust Fund and are returned to that fund at the close of each business day to ensure that at no time are there idle cash balances. Endowment fund assets are under both the custody and investment management of Alberta government investment officers. No member of the board of trustees or of our management takes any role in investment decisions; therefore, no potential for conflict of interest can possibly arise. As outlined in this year's annual report, we have undertaken to administer the Alberta medical innovations program. Funds advanced to the foundation under this program are similarly kept strictly segregated from the foundation's assets and, again, on a daily basis form part of the CCITF. These funds are subject to separate audit, and periodic statements of expenditures are required.

The foundation's financial operations, as you will know, are audited by the Auditor General of Canada. I have taken part in each year's meetings with the representatives of the Auditor General's office. These representatives have each year expressed to me their high level of confidence in the foundation's system of internal control and financial reporting, which are highly regarded as models of reliability in the public sector.

The reporting of our activities to the Legislature in our opinion is appropriate, and the nature and extent of our reporting is again in our opinion full and complete. Although the legislation establishing the foundation contemplates an appearance by us every three years, such as the appearance today, to submit a triennial report, we have willingly and enthusiastically met with you on an annual basis. This is the custom which evolved, Mr. Chairman, after our first appearance to provide an opportunity for this committee to raise any matters which are of concern. Certainly from our point of view

we have gained reassurance that any matters which should be raised or are of concern are being discussed with us on a timely basis.

Our legislation provides for a further measure of reassurance to the people of Alberta. Each six years we are required to establish an International Board of Review to review the foundation's operations in detail and to prepare a report to the Legislature commenting on the relevance and effectiveness of these programs. The first of such reports has been supplied to the Legislature and was the subject of considerable discussion at this committee.

Finally, then, what steps are taken to ensure that the granting function is carried on in a way which ensures the integrity of that function and ensures it is free from bias and interference? In the first place, a 13-member scientific advisory council, including representatives from the national and international research communities, reviews and advises the foundation on all major applications and policy decisions. Secondly, applications made to the foundation are reviewed by advisory committee members and recommended to the trustees for funding. The names of 56 senior medical scientists, largely from Alberta, who served us in this capacity in the past year are contained on page 17 of this year's annual report. This process which is followed is similar to that adopted by most granting bodies in North America. It ensures that decisions affecting scientists are made by the scientists' peers and on no basis other than scientific merit. Believe me, that standard is rigorously applied. This is the process, then, which is the indispensable characteristic of a body which operates at arm's length from government decision-making and which has been widely acclaimed as the most important factor accounting for the very high regard in which the foundation and its programs are held. It is a system which has the confidence and respect of Alberta's universities, since they produce the human resources to administer it at the working level.

Finally, the foundation believes it has a duty to inform Albertans about its programs and the results of our work done by hundreds of dedicated men and women whose scientific careers are so closely bound up with our foundation. This is done by bringing the results of funding decisions to public attention in a number of ways: by regular newsletters sent to a wide spectrum of the public, by regular media releases, by press conferences under the auspices of the foundation, which are designed to provide information about the progress of work being done in Alberta and its relevance to the health of current and future generations of Albertans.

In the last analysis, ladies and gentlemen, we remain accountable to the people of Alberta through its legislators in precisely the same way as a number of other Alberta Crown corporations and agencies. Our case rests on the evidence put before you and documented in the three triennial reports which have been submitted to you and upon the judgments of the International Board of Review which have similarly been placed before you.

I can think of no better words to conclude on than those of Dr. Jack Laidlaw, the executive director of the Canadian Cancer Society, the chairman of the International Board of Review. This is a quotation from Dr. Laidlaw's report:

The programs of the foundation have provided a unique medical research milieu that is likely not matched elsewhere in the world. Preserve and strengthen it at all costs.

Thank you for the opportunity to make those remarks, Mr. Chairman.

MR. CHAIRMAN: Thank you, Mr. Geddes.

Dr. McLeod, do you have some opening comments?

DR. McLEOD: I'll try to be brief, Mr. Chairman.

Ladies and gentlemen, it will indeed be my last appearance. One can't help but try to identify the major issues which I believe to be important in the future. I think the past is self-evident. It's been a tremendous honour and pleasure for me to have played this role, having had about 30 years' experience in Alberta's academic medical centres, and I think you must understand that the most exciting and rewarding portions of that period have been in the last 10 years. So it's been an outstanding matter. I think the triennial report – which was put together by a very expert person in this regard, Mrs. Lois Hammond of our office – gives ample examples of the sorts of issues which have come forward, the kinds of research accomplishments and, more importantly, their impact on patient care.

Another comment is warranted, and that is the interest and attendance and participation of the trustees of the foundation. I don't know whether many of you realize that Mr. Geddes, our chairman, has chaired all but two of 112 trustee meetings in the past eight years. I would think the attendance and interest of the trustees is exemplary, if not totally outstanding. It's become a remarkable team effort, therefore, between the scientific community on the one hand and the trustees, representing the public, on the other. I think that sometimes is forgotten in the shuffle.

I'd like to comment on perhaps three points. I will leave the major accomplishments for your reading of the report. The main points I wish to address are those which are most frequently brought forward to me in my executive capacity; therefore, I think they warrant comment here in order that you may understand or know at least our position on these questions.

The first is the correctness of the decision of the foundation to focus on personnel establishment training in the environment, rather than, as Mr. Geddes commented, on operating grants. He's made the point – I would like only to emphasize it – that, number one, this was the one and only way in which we could ensure the opportunity of Albertans to know that the scientists were competitive and of top quality. Number two, it was also the one way in which we could ensure that outside agencies always had a fair and equitable approach to the applications of Alberta scientists. So it was an important step. It was one which forced some limitations on the scope of Alberta's research, but it was the one way in which we could ensure adequate accountability.

The second issue is the matter of the scope of Alberta's medical research. With the possible exception of pure administrative research, the trustees and the foundation at no time constrained or restricted the kinds of research which were appropriate for application. The Scientific Advisory Council took only the position that quality and excellence should be the main criteria. It was upon those criteria that the research enterprise you have within the province today was built. The outcome of that decision unquestionably favoured basic medical research with arms or infiltrates or extensions into clinical and applied. In so doing, I want you to know that from my perspective it ensured that the applied research was of the strongest character and not in any way wasteful. It undoubtedly not only brought recognition to Alberta's basic medical research but brought international recognition to the applied research that is conducted within the province. It also offered one more point which is often overlooked; namely, that the patient care programs that were developed from those research thrusts were of

exemplary quality. There were not protracted periods of experimentation, of trial and error, but rather they were introduced in a rigorous and solid fashion.

I would like to argue, though more difficult to prove, that the education that is granted the young health professionals in this province has been remarkably improved from 10 years ago. As the former dean of one medical school, I can absolutely assure you that's the case.

The issue of the role of basic medical research is a common question. I think it's important that we realize that most of us believe prevention flows almost directly from progress in basic medical research. It is only after there are established the mechanisms by which we maintain our health or acquire disease that in the past we've been able to intervene and produce benefit for the public. So while the foundation has grown into a focus on basic medical research, by no ways completely so, it has done so with its eyes open and understanding what is happening with that thrust. The third point was the scope of Alberta's investment in research. I'm commonly confronted with the issue that the foundation is amply or even generously funded. That might have been the case had Alberta's medical schools in the late 1970s been amongst the better funded in our country. That was not the case. Our medical schools in this province in the late 1970s were in the lower half to the lower one-third in terms of funding across the country. With the foundation's investment that has lifted those medical faculties and other faculties into a much more advantageous position, and now we are confronted with the issue of: how do you exploit what happens to be a very favourable position?

I hope this third triennial – and our ninth – annual report will reassure you that the foundation, with its unique relationship to government, its access to highly credible external scientific examination, is on the right track. It offers Alberta assurance of quality, the appropriateness of the lines of research, and their co-ordination on into the future. I certainly as a long-term . . . I've lived in Alberta for many years. I would hope that you would continue to support this thrust.

The concept of the foundation and the approach to funding in this fashion was one of those decisions that has withstood the erosive forces of time, but it does now need your help to exploit the very favourable position. It reminds me of a quotation made by one of the more prestigious academic leaders I've known in my life, Dr. Lewis Thomas, who was commenting in another vein altogether, but in applying it to this situation, it might read as follows: that the foundation stands as evidence of the capacity of a government to do something unique, imaginative, useful, and altogether right.

Thank you very much, Mr. Chairman.

MR. CHAIRMAN: Thank you to both of you for an excellent overview.

We'll now move to the question portion of our committee meeting. We'll recognize the Member for Edmonton-Centre, followed by the Member for Calgary Fish-Creek.

REV. ROBERTS: Well, thank you, Mr. Chairman.

It's really hard to launch in after such a formidable presentation, but I want to say at the outset – I don't know if on behalf of the committee, but certainly, Mr. Chairman, I'm sure you will as well express our deep gratitude both to Mr. Geddes and Dr. McLeod for their excellent work and years of service in these ways: Mr. Geddes in his thoroughness, as exemplified by your comments today, and Dr. McLeod's many contributions as

president and from his experience. Certainly British Columbia's gain is going to be our loss in Alberta. We wish you both well. Again, I can't say enough of our deep gratitude for your work in the foundation. [applause]

I'm sure during the course of the rest of the time there'll be a number of questions trying to nail down a number of specifics and particular questions that I know members would have, but I'd just like to begin by looking at it in a broader context, perhaps in a more global sense, in what I'm seeing as health critic in the province: the whole area of research into health matters. I'm a bit concerned that a lot of dollars are being allocated in a number of different ways and different fashions and that in fact there's a lot of fragmentation out there. I, as Mr. Geddes had said, would like to work to strengthen and preserve the work of this fund but also be cognizant of its place in the wider context of health research as it's developing in the province. So if I could just address it, Mr. Chairman, because I have a suggestion which I'd like their comment on with respect to this.

In terms of this fragmented approach, as I say, there's the \$300 million plus that you have; there's at least a \$1 million endowment for nursing research under the Department of Advanced Education; the \$2.8 million annual allocation for applied cancer research, which comes from the fund, going through the Department of Health; we now have this proposed \$200 million foundation for, among other things, research into drug abuse and family life; funding comes from the Medical Research Council of Canada into the province. Also, operating out of other funds, I'm sure there's research going on in hospitals, health units, colleges, and universities, all related to different health issues that are important to Albertans.

I would like, given this background, to get your response to a proposal I would like to make which would see the establishment of, in a sense, an Alberta health research council whose job and mandate it would be to co-ordinate a number of these efforts into research on health issues that are important to Albertans and also to advocate, as you and others have done, on behalf of the entire health research community. This would not be, as I would see it, a way to take away your arm's-length relationship as such, but I would see such a council in a sense being answerable to and through the Minister of Health to the people of Alberta in terms of what the health research community is doing, as well as saying to the Legislature what dollars they need and why they need them, but to do it in a broad context, which would help to co-ordinate what I see as a developing, very fragmented field out there.

MR. CHAIRMAN: Hon. member, I really feel you're asking these gentlemen to make a policy recommendation on a mandate that's very broad. I guess if they're comfortable in making it, I'll allow the question, but I feel it's asking them to go beyond what they may feel comfortable doing. So without further discussion on it, I will pass the question through, but on that basis. I certainly would understand it if . . .

MR. GEDDES: There aren't too many specifics offered as to financing of these additional programs other than that, as you point out, some of them are there now. Whether in the council which you propose those activities would continue to be funded on an annual basis whilst at the same time the foundation's endowment fund remains in place . . .

There is an issue that has caused us concern over the years, and that is the mixture of operating grant support with the

strategies that we have followed, which we believe have been quite successful; that is to say, essentially concentrating on stipend support, establishment grants, providing equipment. The mandate of our scientists is to seek funding in the broader arena from agencies, among which would be included the Medical Research Council of Canada, so that represents operating grant support. The Alberta Cancer Board's research funding is largely operating grant support. The nursing foundation's programs are rather dissimilar from ours, so I would just offer, without knowing more specifics about the funding: these programs don't conflict with our mandate; they simply represent another aspect in the medical research funding continuum.

Perhaps Dr. McLeod could express that more succinctly.

DR. McLEOD: Well, I'm not sure. I'd agree that it would need a little elaboration to know exactly what it is that you have in mind. Many people have tried to sort of, quote, co-ordinate research, and I don't have any difficulty with the concept that there is room for an ability to look at the actions of individuals within a broad spectrum. We're looking at medical research in a fairly biomedical mode at the present time. We're not happy with that. We would like to see that broadened. The issue there is training and manpower resources and not a question of lack of interest. I'm not sure that the co-ordination per se offers that much in a small province where each of those entities you describe have particular missions. I think it behooves government, the university community, others to ask themselves whether or not the needs of health care in its broadest circumstance are answered. Maybe that's the minister's job, as you've suggested, by the reporting mechanism. I'm not sure a council would do that, but again that would be up to the nature of the council.

I think the foundation took on a very important mission. Those of us who lived in the province prior to the advent of the foundation saw us without the resources even to provide the teaching base that was needed. It was nowhere near adequate to provide any sort of research of national or international calibre other than a sort of island kind of way. It was a very specific mission that was addressed, and it succeeded beyond our sort of wildest dreams. Now there's no question at all that those of us involved in it would like to see it spread. We would like to see the gains consolidated. I suspect I share one of your interests; namely, in having it strengthened in other parts of the spectrum. I think we are trying to do that at the present through the training programs, because we found ourselves unable to mount it through recruitment. There just are insufficient people in the country, in fact, to mount those programs and still have a return that justifies the dollar invested. So it's still to come.

MR. GEDDES: Maybe I could make a supplementary comment, Mr. Chairman. We understand that the report of the Hyndman commission will be delivered at the end of this month. We've discussed that, obviously, at some length. That would appear to us to be an opportunity to consider the range of issues that came before them at the public hearings. Certainly the administration of health care matters was an important issue raised before them. It may well be an opportunity, then, to reflect further upon what might be seen to be a multiplicity of organizations having responsibility for medical research or whose activities impinge on it to some degree.

MR. CHAIRMAN: Hon. member, please direct your sup-

plementaries to issues that affect the foundation.

REV. ROBERTS: Yes. As you'll see, this question and the next one are going to get right at the key to the foundation because it has to do with their \$150 million request, which I'm not prepared to support until I get some answers to these others. They might refuse to answer them but . . .

When the Minister of Health was before us and I posed a similar question to her, she, of course, referred to an internal committee which was looking at this co-ordination and the necessary funding levels, which was put together by the Minister of Advanced Education, by Health, and by TRT. I thought the only group that TRT was involved with was yourselves, so I'm wondering from that whether you have made any representation to that committee which is looking at this co-ordination issue and, if so, what more you'd like them to be cognizant of as they go about looking at this issue.

DR. McLEOD: I've done nothing.

MR. GEDDES: I was unaware of the committee.

DR. McLEOD: As I am.

REV. ROBERTS: Well, it's in the minutes of her comments here. When she referred to Mr. Stewart, I thought that was because of you folks.

Okay, it comes down to the last question then. I also am trying to develop some policy or guideline in terms of the percentage of R and D funding, in a sense, that should be prescribed to be devoted to research in the health field. Again, maybe you might argue that you're just looking at the medical side, but it's been suggested to me, for instance, a 2 percent figure of total health spending; at least 2 percent of that should be devoted to research. Now, again I'm not sure if you're going to say it's - well, you want to preserve your endowment and don't want to get into this operating side of 2 percent. But if that 2 percent figure holds, that should say to us in Alberta that we should be spending \$60 million a year on health research.

The minister wasn't aware of just how much is currently being spent, nor about the 2 percent figure or whether we were above that or below that or what it should be at. So I'd like to throw the question to you in a final sense, because again it's going to help me decide whether this \$150 million is appropriate. Have you looked at any guidelines along those lines to establish a percentage of what should go into research in the health field?

MR. GEDDES: Preventative health care, is that the particular focus?

REV. ROBERTS: No, it's to whatever.

MR. GEDDES: Because that's what your question was. Two percent of . . . Sorry, I didn't understand the . . .

REV. ROBERTS: Well, if we say \$3 billion is being spent annually in the province on health, 2 percent of that should be allocated for health research, in terms of what's an appropriate level of funding. I mean, you could spend the whole \$3 billion trying to find a cure for cancer and not find it. Or you could spend 50 percent or 10 or 2.

DR. McLEOD: A 2 percent figure. I've heard of that figure;

from whence I can't recall. It's certainly not a local figure. I've not participated in any of those kinds of discussions. I have heard of that figure in Ontario and in Quebec; they have a strong equivalent of the foundation in that latter province. Two percent would be about \$60 million, and I would estimate there's currently about \$35 million to \$40 million spent per annum in health-related research in the province. That's rough and a guess on my part.

I suppose my rejoinder would go something like this. There isn't much point in spending money unless you have the people who can do first-class research. So the major issue would be: can we develop the personnel resources to do the kinds of research that would warrant that sort of investment? I can easily foresee that that could become the case. I think it would take some five to seven years to get there, and it would mean some targeted training programs that would require at present not only training programs within the province but a co-operative arrangement with, let's say, some major U.S. and eastern Canadian institutions - why, even British Columbia might be included on that list - in order to generate the personnel. We have been unable to spend certain kinds of funds in the province because we haven't been able to mount the individuals.

Having said all that, if you have enough people, perhaps it's \$100 million; I really don't know. What's more important is: how many good questions can be asked by how many very good people?

REV. ROBERTS: Thank you, Mr. Chairman. I admitted that it was in a global sense when I asked those questions, and I appreciate the answers.

MR. CHAIRMAN: Thank you.

The Member for Calgary-Fish Creek, followed by the Member for Westlock-Sturgeon.

MR. PAYNE: Thank you, Mr. Chairman. Perhaps it'd be appropriate for me to endorse the comments of my colleague from Edmonton-Centre, which I can do very easily and readily. It's been 10 years since I was first elected a member of the government, and if I were to review the achievements of the government of which I'm most proud, obviously the work you gentlemen are about would be near the top of that list.

Perhaps a corollary to that. I'm sure I speak for the committee in expressing the hope that you would convey to your successors the obvious willingness of this committee to work with your successors to ensure that the work of the foundation continues unabated and, hopefully, enhanced.

MR. GEDDES: Thank you. We will.

MR. PAYNE: The 1988-89 annual report of the trust fund on page 22 quite properly contains a reference to what are described as two major new laboratory complexes, the Heritage Medical Research buildings in Edmonton and Calgary. It's my understanding, Mr. Chairman, that the Calgary medical research building is about three-quarters full now, although I stand to be corrected. I guess my first question would be to elicit from our guests today: what has been the delay in filling the building, and when do they anticipate that in fact that space might all be committed?

DR. McLEOD: There was planned within both buildings a reserve of space on the basis of experience across North

America that if you have an initiative such as the foundation represents, it almost always attracts other funding. That would seem to be the case in the sense that the community of Calgary, for instance, attracted private funds for the completion of one floor. There are negotiations with the pharmaceutical companies as to whether they might finance the completion of floors and the staffing of those floors. In fact, my colleague Dr. Watanabe in Calgary has made noises suggesting that further space will be required within the 10-year period and, therefore, that someone should be thinking about it at the present time. In Edmonton there are presently about two and a half floors that are on reserve. This report of the centres of excellence is likely to involve one of those floors, leaving one and a half left in reserve, so the amount of space that's left over really is potentially relatively small. My expectation would be that within five years or less those buildings will be fully occupied. Unless the foundation receives supplementation, however, the funding for that completion will have to come from other sources.

MR. PAYNE: Mr. Chairman, I'm wondering if I could ask a supplemental question on that theme. That is to say, what criteria or priorities are used by the foundation to evaluate and attract scientists and researchers to the Calgary facility or the Edmonton facility or whatever? If that's too broadly gauged a question, I'd be prepared to rephrase it.

DR. MCLEOD: Two approaches are made to recruitment. One is largely by the action of placing those programs in place. The academic community, having its own entrepreneurial spirit, begins to look at and examine its options with respect to the kinds of people that could be brought in. Alberta's academic communities are aware that the foundation concentrates on building to strength and building on frontiers, trying to avoid the trap of funding research that finds itself spending without useful outcome. So there is a fairly clear set of signposts, if you wish, for the faculties in their search for outside people.

In addition to that, there are so many individuals involved in our evaluation - members of council, members of committees, and external written peer review people - that there is a fairly regular inflow to Alberta of suggestions. A scientist in Toronto, aware that there is a very strong lipid lipoprotein group, for instance, in Edmonton, knowing that it is looking for new people, will find within his training program a very bright young person who can't get a better start anywhere than by coming to Alberta. So that Toronto scientist will suggest to this young person that they go and visit Alberta, Alberta having been advised that this is somebody you should really be interested in. As a result, there's a constant kind of magnet set up by the quality of the people in Alberta that continues to attract young people into the province. So the attraction of bright young people being the prime priority is part and parcel of the operation.

The evaluation part. Every application that comes to the foundation and that looks for support for a person, not in training but to do research, is seen by a committee consisting of about six to eight individuals, who presently are drawn largely from outside Alberta. To be a member one must have a very competitive, strong scientific record. The nomination must be suitable to the foundation's Scientific Advisory Council and to the trustees. They will examine an application, and then they require that the office send that application out to at least three, if not more, people who have particular expertise within the research of the applicant. So not only do you have in that way

a broad, multidisciplinary examination by a cross section of the scientific community but you also have the benefit of the experience of people directly within that narrow field of research.

Now, it seems to me that in comparing our processes with those of other agencies, that double-headed examination offers a tremendous advantage. You're not only looking at whether the specific little project that the scientist will do is likely to be done well and be useful; you also have a broader examination of: what is the potential of this person? What's his or her past track record? Is it strong? Does it show that productivity and high energy levels are there and are going to be maintained, or is this a flash-in-the-pan or a fly-by-night? So it's a very thorough examination, and in fact it's one that I think is more admired than any of the other procedures we've put together over the past eight years.

MR. PAYNE: That's very helpful information.
Thank you, Mr. Chairman.

MR. CHAIRMAN: Member for Westlock-Sturgeon, followed by the Member for Ponoka-Rimbey.

MR. TAYLOR: Thank you, Mr. Chairman. Hello, Eric and Dr. McLeod.

Eric, this may be toward you. I'd like to know what's still left in the fund. You had \$300 million to start with. Then I notice there was a request for more in '87, but I can't tell whether or not you got any more; I gather not. Then there was a request in '88 for an additional \$150 million. Did you get that? If you didn't get it, what's in the fund now?

MR. GEDDES: The original endowment fund of \$300 million was established in March 1980. It has not been supplemented since that time. I can tell you, because I've been talking to Treasury people in recent days, that the market value of that fund at the end of September was \$509 million. At the end of our year-end it was \$472 million. The vagaries of the market are such that, particularly in the past two to three years, there have been at least two calamitous drops in markets. Our holdings, I might say, are largely in fixed-debt instruments. Our equity component is something like 16 percent of the total, so we have a rather defensive type portfolio. There has been some fluctuation. I would expect that it would remain, certainly over the balance of this year and into the reasonably foreseeable future, growing slightly from the \$500 million figure.

When this was first raised was in 1984. Our 1984 appearance was the time of the first triennial report, and I stated then that based upon our evaluation of the situation we were going to have to seek some augmentation. That first request came in 1985. We had made a reasonably close determination at that time, in consultation with Treasury officials, as to what would happen with the trend of our spending, and we learned that toward the end of the decade we would be in serious difficulty if the predicted rate of spending increased. So we've had to moderate our spending so as to build up the capital of the fund.

The short answer to your question is no, it was not increased. The value of it at the end of September, the most recent date for which I have a number, is \$509 million at market value, and that is because we have moderated the spending and have chosen to return to capital what would amount now to \$209 million in value that would otherwise be available to us.

MR. TAYLOR: Thank you. That's interesting and possibly leads to the second question. With such a good return on that, how are the mechanics set up for the continual investing and reinvesting of your funds? Is there one department of government that does it for you, or do you have your own reinvestors that operate separately from the Treasury?

MR. GEDDES: It's done by the same Treasury officials who look after the investment function for the main heritage fund: Alberta government Treasury officials.

MR. TAYLOR: I see. So you're part of the whole heritage . . .

MR. GEDDES: Yes. Our fund, Mr. Taylor, is segregated, and our securities are earmarked. So it's a distinct portfolio but within the umbrella of the much larger heritage fund. Custody is under their control, and management decisions are made by them. It is, as I've said, a portfolio that remains very defensive. We have taken advice from experts in the field, and it's quite clear that the extent of equities in our portfolio is very low in relation to portions that are considered appropriate by endowment funds of this size, university and college endowment funds.

So the point I'm making is that it's a very conservatively managed fund, part of the reason for that being some uncertainty about where we're going in the future on the part of Treasury officials.

MR. CHAIRMAN: Final supplementary.

MR. TAYLOR: Yes. The final one is a complete change of pace, and probably to Dr. McLeod. On page 29 of this exotic-covered thing here you mention "Ancient Wisdom Meets High Tech." Being somewhat interested in game farming, I'm just wondering if there has been any research done on the rehabilitative powers, regenerative powers, and all the rest of the powers of ground up elk horns.

DR. McLEOD: Sure; if there's some funding available, we could direct somebody's attention toward that.

In actual fact, Mr. Taylor, I think the people in that work have now found that there is an antihypertensive component to some of the material they've examined and also a blood sugar lowering compound that they are now trying to identify and in turn determine whether there is any advantage over that which is presently available. So there are some interesting things coming out. But, no, I don't know anything about ground up elk horn, I'm afraid.

MR. CHAIRMAN: Dr. McLeod, we'll ask you to be sure and keep the Member for Westlock-Sturgeon apprised of any new developments in that area. He obviously has some interest there.

We'd like to move on and recognize the Member for Ponoka-Rimbey.

MR. JONSON: Yes, Mr. Chairman. In Mr. Geddes' opening remarks he referred to the selection of the University of Calgary and the University of Alberta for recognition under the federal program of centres of scientific excellence. I'm sure that you gentlemen take satisfaction in that selection, and you certainly have the right to do so in view of your exemplary work in your various roles.

I'd like to ask a couple of questions really just seeking more

information on this particular program. Some years ago I, in a very minor way, was involved in meetings where this particular program was being discussed. Although the meeting, or conference, that I was at expressed a great deal of support for the establishment of centres of scientific excellence, right now I'm not just sure what the actual nature is of this particular program that's being launched by the federal government. So my question, Mr. Chairman, would be: would our guests elaborate on what the interfacing - I guess that's the catchword these days - or the relationship will be between this federal program and the university and the foundation for medical research? What are the exact connections there? How do funds flow? How do they work together, as you see it?

MR. GEDDES: Well, I take it the funds would flow in somewhat in the same way as operating grant support comes from other Canadian granting agencies such as NSERC or the Medical Research Council of Canada; there will be allocations made.

You may know that in these centres of excellence there is an administrative centre mentioned and a number of what are called nodes across Canada. This is not the administrative centre. In Alberta we do not have the administrative centre for any of the 14 networks. That, in my judgment at least, is not a serious matter. So there are 14 centres across Canada which will have an administrative centre. There are networks, including a number of universities. In some instances there might be as many as 10 or 12 or 15 players in the network. So the funding would be for operating expenses. It would be divided among the various constituent people within the 14 components. I'm not certain how the allocation of funds will go within the program. As I've said, it's a \$240 million program. It gets divided among 14 subprograms, and then beneath that it gets divided among another set of departments. The people who are involved in Alberta are not all in the same department. They're with the same university but not in the same department. So there will be funding flow into our two universities. No one can yet gauge how much that is, but it will be significant. It will be multimillion dollar funding extending over a period of years.

As I've said, there are 26 Alberta scientists in our medical schools who are involved in these networks. Fourteen of them are directly funded by us and all of them, all 26, have some involvement with us. This would not have any impact upon us. There's no additional requirement for funding from our standpoint. This additional outside funding simply reinforces and complements the funding that has been made available by us.

MR. JONSON: I would thank our guests for that answer, Mr. Chairman, and my second question would be: is there any policy direction from above connected to the allocation of this money, or are the centres that are chosen completely free to develop their proposals from - I don't if "grass" is the right term - the grass up or from the bottom of the structure up?

MR. GEDDES: On the centres of excellence?

MR. JONSON: Yes.

MR. GEDDES: No, these were all proposals that were made. They were very detailed proposals that were examined by national and international experts over a long period of time. So the proposals have already gone in.

The only thing that surprised me about the successful propos-

als was the relatively small number of corporations involved in the final successful groups. The point about the whole program was to link private business with universities, with other research establishments and government laboratories into a network. It surprised me that there weren't more corporations. You will know here of two Alberta companies that were involved with these successful proposals. One is Myrias Research, which has received support from the government of Alberta, and the other, of course, is Chembiomed, which similarly has received support. Both of those companies were successful parts of the networks.

I can't answer directly as to the R and D component. I would think, because of the requirement to network with private industry, that was at the forefront of what the sponsors of the plans had in mind: to bring together, to cause more synergy to exist between the private sector and the purely academic side of the research community.

MR. JONSON: Mr. Chairman, I don't have a second supplementary because it was going to be on the degree that they'd met their objective of bringing the academic institutions together with private industry, and that's been answered.

Thank you.

MR. CHAIRMAN: Thank you.

We'll recognize the Member for Edmonton-Meadowlark, followed by the Member for Clover Bar.

MR. MITCHELL: Thank you very much, Mr. Chairman. I would like to echo the comments of my colleagues with respect to the achievement of both these men and personally thank them very much and thank them very much on behalf of the people of Edmonton-Meadowlark. I would also like to congratulate them on the discretion with which they have used their foundation funds. To learn today that they have - what? - some \$200 million-odd more in their fund than what they started with is truly an accomplishment and says something about the discretion with which they have approached the undoubted pressure from research requests.

I would like to caution you that with all that money hanging around you, you shouldn't brag about it or I'm sure the Treasurer will be scooping it out to put it against his burgeoning deficit, and we'd all hate to see that. We may hire you to manage it.

MR. CHAIRMAN: Hon. member, if you've finished your rhetoric, would you please move to the question?

MR. TAYLOR: Geddes for Treasurer.

MR. MITCHELL: Geddes for Treasurer is right.

I would like to pursue this statement made on page 22 of the most recent - you'll know, you don't have to refer so much to it. But it says that, "In addition, the Foundation funds an aggressive technology transfer program." I wonder if . . .

AN HON. MEMBER: Which one?

MR. MITCHELL: Actually, it's in this one. It's the heritage trust fund annual report. I'm just referring to your technology transfer program. I wonder if you could flesh that statement out by giving us an indication of how much you fund it by, how it's structured, whether you have business people who work with . . . How does that technology transfer program work?

MR. GEDDES: Well, it has a committee. Up to now we've had two phases: phase 1, phase 2. Phase 1 grants are up to \$25,000, phase 2 up to \$75,000. We have just, on November 1, closed our first competition under phase 3. Phase 3 will provide for grants of up to \$500,000. That is the Alberta medical innovation program. That was the funding, you'll recall, that flowed through to the Alberta government as a result of the amendments made in Canada's drug patent legislation, Bill C-22. There were sums made available to all provincial governments; \$9.3 million will flow to Alberta. Alberta has chosen to place those funds in our hands. We've received them in trust, we've agreed to administer that program, and so it is the third component of our technology transfer programs.

We're going to have a significant job on our hands to assess those proposals. We're quite clear that in the first set of competitions the entire amount of the fund has been requested. We're clearly going to have to use some discretion, judgment, about how that gets handled over the years. So we haven't quite coped with that yet.

But getting back to the phases 1 and 2 applications, we've had people from the private business sector sit in on our committees. That is really the first and most significant case in which outside parties sat on our committees. Those have been people - at least one from the venture capital community; at least one highly experienced individual from the Calgary oil community. We have continued to have one Calgary businessman sit on our committee, and we've tried to select from among our trustees those who have had a degree of business experience who could bring some measure of assessment capability to the table.

We've also been very fortunate to have as one of the principal advisers to the committee - and a full member of the committee, I might add - Dr. William Drucker. Dr. Drucker has been on the panels for the National Institutes of Health, which administer a similar kind of program called the small business innovation research program, SBIR. It's a highly successful program in the United States which is designed to foster the commercialization of medical research. Dr. Drucker, throughout the first years of this committee - I think largely through collegial considerations related to Dr. McLeod - agreed to come and did attend all of our meetings. It was immensely valuable to us. We've had other people, nontrustees, from the medical communities of both Edmonton and Calgary who have similarly served us. I think we've had an effective committee, working with proper inputs.

MR. MITCHELL: Excellent. Thank you.

Why would it be that Chembiomed, owned by the government of Alberta, would receive the funding you mentioned earlier when Biomira, for example, not owned by the provincial government, hasn't received such assistance?

MR. GEDDES: I think I could tell you that Biomira has, in fact, applied for funding under phase 3, which is a very large program. They have a very major activity under way which will require very large sums of money. So they indicated to us some time ago, and have in fact applied for funding under our phase 3 of the Alberta medical innovations program.

MR. MITCHELL: I'm not an expert by any means, but I am aware of Biomira and what it does do, and it seems to me to be the kind of company that has the potential that we would like to exploit and promote. I don't know. But it's good to hear that they have applied, and I'm sure they will receive consideration.

My third question relates to questions that have been asked earlier, in different ways perhaps, but I have a slightly different emphasis. Maybe one background statement, Mr. Chairman, if I might. My concern would be, and this would always be a concern, that we have handed \$300 million, now \$500 million, to a group very well intentioned; no question about it. But that group that doesn't necessarily have accountability directly to the public can make decisions about what would be interesting research and what wouldn't be interesting research. How is it ensured that the research priorities of this group, your group, are consistent with the social demands of the public of Alberta, the requirements of the public of Alberta at any given time? What input do you encourage and do you listen to in establishing those priorities? I, as you know, am concerned or interested in SIDS research. I would like to know, for example, if that weren't happening, what kind of proper input could be undertaken to bring the group's attention to it.

MR. GEDDES: Perhaps Dr. McLeod could add a more detailed reply to this. I would simply like to say that it's very important to understand that we react to proposals made to us by the universities, and those proposals are formulated based upon the excellence of the groups that are present in the province. But it has to be understood that these proposals are made to us. We do not conduct any intramural medical research as is done, for example, by the National Institutes of Health in the United States, which is not only a granting agency but also conducts its own research. This decision was made by those who formulated the entire concept of the Alberta Heritage Foundation for Medical Research that we would not be, in the words that I recall so well at the time, a bricks and mortar institution. So that's the real answer. Maybe your question, then, should be addressed as to how the universities make those judgments, and there's no one better to tell you that than the ex-dean of the Calgary medical school, Dr. McLeod.

DR. McLEOD: Well, Mr. Mitchell, it's a very good question, and it's a recurring question. I think that it would be difficult for us if we had operating grants. If we had a large operating grant program which, no matter how large it was, couldn't possibly front the entire range of medical research that's ongoing in medical science, under those circumstances it would be necessary for any agency, foundation, or otherwise to try and limit its mandate and target its operation. But because of the status of Alberta's medical research community in 1980-81, the decision was made. We agonized over it. It was a very difficult decision; it was not one made lightly or easily. Trustees were involved, the council was involved, and representatives of the nonmedical faculties of the two universities were involved.

The decision was taken that our best chance to do our best work, have the broadest possible impact, was to focus on the personnel. We could have, at that time I guess, turned around and said: "Well, now, let's discuss which personnel. The personnel that limit themselves to oncology? It's a major problem." Anyone who's had exposure to anyone with a heart attack, a cardiologist would immediately tell us that that's the major problem mankind faces: "Let's focus on it and it alone." The decision was made based upon what's happened in science since the 1950s, after World War II, when this enormous thrust was put into it, namely that you really need very bright young people. You need very well-trained, bright young people, and hopefully they've got some creativity and an ability to see a problem in a different light. And if you can wed them with

experienced, productive, competitive, hard-nosed people, you have the greatest possibility of making the greatest contribution to the greatest numbers in the long run. In a way it ducks your question, but it explains why it is where we are.

Now, if tomorrow someone were to come along and say to the foundation, "Here; we want you to take on a new task, and we're prepared to give you X dollars, but the range of your front is, let's say, the health care delivery system," then that problem that you bring forward would be there in spades and would be a difficult but marvellously challenging situation. With what's happened by building on the strengths that are in Alberta and by building on the young people that were attracted to the province, there is in fact a range of biomedical research that, you know, crosses an enormous number of boundaries. I mean, as Mrs. Hammond probably knows even better than I - she interviews all our scientists at regular intervals - it is a range that allows us to sort of point to an endeavour in one city or another in most major areas; not all areas, but most major areas.

MR. MITCHELL: Thanks.

MR. CHAIRMAN: The Member for Clover Bar, followed by the Member for Edmonton-Avonmore.

MR. GESELL: Thank you, Mr. Chairman. Good afternoon, gentlemen.

I wanted to take this opportunity to talk a little bit about the foundation. I wanted to say, first of all, that I'm extremely impressed with the work that the foundation has done, and I do not at all agree with the comments made by the Member for Edmonton-Centre that the foundation simply hasn't done a good job in researching new and important areas of concern. I think we are in fact on the leading edge of discovery, not just on the edge. I think we're at the leading edge.

MR. PASHAK: Point of order, Mr. Chairman. I don't think the Member for Edmonton-Centre said that, and I just would hope that we'd check the record later.

REV. ROBERTS: Agreed.

MR. CHAIRMAN: Perhaps the member could move on with his comments.

MR. GESELL: Thank you, Mr. Chairman.

I wanted to discuss the matter of how priorities are set, but you've responded to that to a question from the Member for Edmonton-Meadowlark.

But one area that I wanted to ask about specifically is seniors. Now, I expect maybe you have received some proposals for programs to look at that. I feel that we have a rapidly increasing average age of our population generally, and I think that threatens some dramatic increase in our health care spending overall. I'm wondering if you could elaborate on whether the foundation is looking into that problem, or is that something that you have coming up?

MR. GEDDES: I'd say Dr. McLeod and I both have a much sharper interest in that topic than we might have had 10 years ago and, indeed, than you would probably have had.

DR. McLEOD: There are a number of initiatives that . . . You're question's very well put, because it is a major forthcom-

ing problem in terms of health care delivery and how it's done and where it's done and by whom it is done. The approach to that area at the moment from the foundation is to concern itself in the training of individuals who can better do that kind of research. We have, however, supported a number of initiatives that do interface with the elderly.

I think perhaps the only organized Alzheimer's clinic in the province is run by Dr. Irma Parhad, supported by Dr. Arthur Clark and others at the University of Calgary. It's almost entirely funded by foundation personnel. These were very well-trained people that were recruited from the United States in that area. It's a very busy clinic now and probably should be expanded by the addition of new personnel. I'm not familiar with the health care side of their activities other than the fact that they're there. At the old Edmonton General hospital there is a program that addresses the problems of urinary control in the elderly. One of the major difficulties of caring for elderly people has to do with the problems of urinary incontinence. It's a grim problem for families. It's a grim problem for the patients, those who understand their loss of dignity. There's a program there that is expanding which attempts to address why this happens and what sorts of ways one might interfere to prevent the development of the sorts of difficulties that they have.

There are two other programs that impact on the elderly. One has to do with the psychological disturbances that are often associated with the aging process that are unrelated to senile dementia and to Alzheimer's. There is another that deals with osteoporosis, with the difficulties in bone metabolism of the elderly that lead to the high rate of hip injuries, hip fractures, and so forth. So there are a number of specific targets that are funded by the foundation.

Now, I'm hopeful that when Mr. Hyndman's report comes down, one of the major thrusts of that report will focus on the ways in which we care for the elderly, not necessarily the research into these sorts of specific kinds of entities but how it is that they're cared for and what are the best ways which might be introduced. I'm quite optimistic for the same reason that you articulate. The numbers of elderly in our population are such that I would expect Mr. Hyndman's commission to focus on that rather sharply.

MR. GESELL: If I may, Mr. Chairman, a separate question. I'm somewhat digressing from the initial question. What I wanted to ask you gentlemen really was - we're engaging in research, and I'm asking about the research results, the intellectual property so to speak. What happens to that intellectual property that we might generate? Do we provide it to other areas, to other countries, and is there a reciprocal agreement in place whereby we share that type of information? I appreciate that when we're on the leading edge of something, it's difficult to share information because others may be somewhat behind us. But there should be some complementary arrangement with respect to that intellectual property. Could you elaborate on that?

MR. GEDDES: It's a fundamental principle of ours, and we share this with most national granting agencies - in fact, all national granting agencies - that our contributions to medical research are made by way of grants. We do not reserve unto our foundation any residual rights, such as intellectual property rights, that might arise in the course of development. We leave that issue to the universities. Both of Alberta's universities have

well defined policies in place that govern the relationship between the individual investigator and his institution. For example, at the University of Alberta an individual investigator is free to pursue a patent or some other form of protection of his intellectual property rights on his or her own initiative. There is a defined sharing of the income that flows from that, but ownership can and does reside, on occasion, with the individual investigator.

Another alternative is to seek patent protection through the university patent office. That is occasionally done. But the entire problem is one which we leave to the universities. We're happy to do that, and we still believe that is the correct approach to take.

MR. GESELL: Thank you, Mr. Geddes.

I do not have a third supplementary, but I wanted to just indicate that I'm very proud of the work and the achievement of this foundation.

Thank you.

MR. CHAIRMAN: Thank you.

The Member for Edmonton-Avonmore, followed by the Member for Lacombe.

MS M. LAING: I think we can all be really proud of the work of this group of people, but I have a couple of questions. In looking at the names of the trustees, the names on the list of the advisory council, and also the names of people receiving grants and/or funding, I note a dearth of women's names. Inasmuch as women are 52 percent of the population and often bring a different perspective and different emphasis and concerns to issues such as medical research, I'm wondering if there has been any consideration of making the board of trustees equitable in terms of gender representation and the advisory council again attempting to have more women represented on that council and that there be affirmative action in terms of finding the recipients for granting. I think the evidence for the bias that can slip into the research, when it is done mainly from a male perspective, is on page 25 of this particular study when it in fact says: "It's not always mothers' age which causes chromosomal abnormalities . . ." I think we've known from the beginning of the time we've known how babies are made that a sperm and an egg come together, and that the problem may come from both or either one, and that in the past there's only been one focus for that research.

So I'm wondering what kinds of steps would be taken to correct this gender bias.

MR. GEDDES: Well, let me talk first about the board of trustees and the problem in general, and Dr. McLeod can talk to it in particular.

Among our trustees have been Dr. Horowitz, past president of the University of Alberta and Dr. Wagner, past president of the University of Calgary. Both of those gentlemen are very receptive and understanding of the question that women academics have faced and the steps that have been taken to ensure equality at our Alberta universities. They bring that point of view to our table continuously. I can tell you that we regard as part of our policy to bring to the attention of government the names of women in the Alberta community who would be able to serve as trustees. We believe there should be more women represented on our board and have taken steps to draw to the attention of government the names of women to increase

the numbers. So we agree completely that there should be more women on our board of trustees, and I for one have always supported that.

I think if I can find, before the day's out, those scientists whom I mentioned, the 26 scientists, who were successful to form part of the centres of excellence, you'll find a significant number of women represented among the scientists. Those are the people who rise to senior positions themselves in the university community, and it's from those senior scientists that others are drawn who serve on the applications advisory committee. So it's a problem that is evolving. With our total support there are, as I'm sure you're aware, some very eminent women scientists in this province. Women, however, are underrepresented in science right across Canada. There are organizations in this province such as WISEST, which has been very active in trying to promote an interest in young women in entering careers in science.

So we're very supportive of it, and perhaps Dr. McLeod could add to that.

DR. McLEOD: I think the correction's already in the mill. For instance, there are a number of medical schools in Canada now where the numbers of females outnumber the numbers of males within the undergraduate class. Having a daughter practising in Calgary, I wouldn't dare make any other comment and still survive. But it is being corrected, and the other point I think that is important is that, for instance, 22 of our 80-odd scholars are female. You know, I'd almost be wondering whether or not there wasn't a little informal correction under way because . . . And they've done so very, very well. I am very proud of that particular group of scientists. So I think the correction is built into the application rate. We do keep an eye on the distribution of approvals and rejections against the application rate, and I would think at the moment that it's almost kind of favourable to be female by the look of the approval rate.

MS M. LAING: I thank you very much for that. I think you can understand, however, looking at some of these lists that one could be concerned.

The other area that I would like to address is the whole area of research into mental health issues: Now I see again in the area . . . On page 25, Clues to Mystery Diseases, you state that one in three people will suffer from a psychiatric disorder, and I think we would all recognize that that's a significant number of people. We don't know the lethality in those disorders, but when we understand the connection between mental and physical health and how closely interconnected they are, I'm wondering why maybe there isn't more emphasis on research into mental health issues?

DR. McLEOD: I am uncomfortable responding to that — because it is a perfectly good question. Unfortunately the approval rate again reflects the application rate, and I'm uncertain why we haven't had stronger applications. We do have a quite powerful epidemiologist working in the department of psychiatry at the University of Alberta. We have had a very remarkable lady scientist at the Glenrose working with autistic kids and their learning disabilities and so forth. We don't have a balanced emphasis, but it reflects the application rate.

I'm spending time next week with the department of psychiatry at the University of Calgary exploring with them where the young people are that they could encourage into research training, who in turn could apply to the foundation for funding.

It's one of those endeavours that my successor is going to have to pursue, meaning that he or she must introduce the issue to those departments and ask them: where are the young people? I'm concerned about it. I'm confident it's not a problem of the foundation; I'm confident it's not a problem of the, quote, general university community, but I think it is a problem of role models. There aren't solid research oriented individuals in the health professions who are attracting young people into research training. Part of it may well be a reflection on a concern that all of us have. The attrition rate due to retirement from our academic communities is going to mount substantially in the next 10 years. Young people in sufficient numbers are not going into the health professionals educational programs as they were 10 and 15 years ago. The drop in the United States is really quite dramatic. If it happens here, I don't know what steps will have to be taken to encourage greater entry. It is a very complex problem.

MS M. LAING: Okay, thank you. I won't carry on.

MR. CHAIRMAN: Thank you.

Member for Lacombe, followed by Member for Wainwright.

MR. MOORE: Thank you, Mr. Chairman. I, like my colleagues before me, want to thank the two gentlemen for their contribution to medical research, and I can tell you all Albertans and all Canadians are indebted to both of you. We wish you well in your further careers as you move on.

Now, your very thorough overview and your excellent replies to questions have covered a lot of the major concerns that I had, but in your overview you did mention that outside funding to the two facilities had increased from \$9 million to \$31 million today. That is an indication of how the public has accepted it and respects this program you're on. Where does that come from? What is it basically coming from? You say it's outside there. I have one area that I'm concerned about: is the federal government making a contribution in there? That's a major jump, you know.

MR. GEDDES: The majority of that funding would come from the federal government. It would also include industrial contracts. It would come from voluntary agencies such as the Canadian Red Cross, the Heart Foundation, and so forth, but a significant part of it would come from the granting agencies under the national government control.

MR. MOORE: Mr. Chairman, to the two gentlemen here. Do you feel that because we have the heritage fund endowment fund and we're looked at as a have province, do the federal people give more percentage-wise to other provinces because they haven't got our fine facilities and our program here? Do they say, "Well, we'll sort of balance it off with others"? In other words, are we missing out on our share of federal funding because of the endowment fund here?

MR. GEDDES: Dr. McLeod could probably get these figures more precisely, but the medical schools at both of our universities now are in the top five in Canada. They've come up very substantially as opposed to other provinces and other leading universities in other parts of Canada. The University of Calgary's growth has been more dramatic than that of the University of Alberta, but they've both come from well back in the pack to in the top five in Canada, which is a very significant

achievement.

We have regard for that consideration you raise. We think about it: whether our applicants are being disadvantaged in any way by reason of some historical views that Alberta has an abundance of resources in the heritage fund, that we can do the job here in our own province without . . . We're not seen, perhaps, as being as needy as other provinces. We hope that's not being reflected in any bias against Alberta applicants to national funding.

MR. MOORE: A supplementary, Mr. Chairman. In the area of scholarships, I note on page 9 of part II of the third triennial report it shows that the expenditure on scholars has dropped almost \$1 million over the last three years. Now, that raises some questions. Has the number of scholars declined? If so, why? What is happening in that area? Or is it just that the interest in that program is dying out?

DR. McLEOD: Mr. Chairman, that reflects the fact that the line item includes scholarships and establishment grants. When a scholar enters the program, he or she is granted these additional funds to set up their laboratories, hire their first technicians for the first couple of years, buy minor equipment, pay for chemicals, and so forth. By the second or third year of their appointment, those moneys are spent, they're finished, and as a result we get a relief in our payments to the university. So what's happened is that there's been a slowing down in the numbers of new people coming into that category, and at the same time, some of those who have been in the program have finished their establishment grants. So there's a drop in our total funding. The amounts that we're paying for stipends is continuing to increase.

MR. CHAIRMAN: The Member for Wainwright.

MR. FISCHER: Thank you, Mr. Chairman. I, too, would like to welcome Mr. Geddes and Dr. McLeod. It's a bit sad that this is the last appearance for both of them. Certainly they've done great work for this heritage foundation, both in preserving the integrity of it and in the operation of it, and I commend you both for the good work you've done with that.

I'm very proud to say that Dr. Lionel McLeod was born and raised in Wainwright. There are a lot of good folks come from that country, as you know. I have to say that certainly he didn't get all of his education there, but he did get quite a foundation to begin with. I do wish both of you well as you move into your new fields.

The tour that we went on was interesting. I really enjoyed our tour over at the university here, especially with some of the seminars we had, the one with Dr. Dennis Vance and the work he was doing with controlling cholesterol. It was amazing to see those little rats' hearts pumping away there by themselves, working on their own; it was amazing to see that. I'm sure that more people should go and see those kinds of things; they would have a little bit more appreciation for our medical research.

AN HON. MEMBER: Question.

MR. FISCHER: Look who's talking.

One item that I had was . . . We did look at one of the heart machines there - it looked very elaborate to me - and it was mentioned that we had to replace it, that there was a lot more modern equipment coming out. The cost, I believe, was \$4

million or \$5 million. I'm sure that our research equipment itself is very expensive in that hospital. Does our heritage research fund get into the capital expenditures on equipment like that?

DR. McLEOD: Well, the major line of equipment expenditure from the foundation has to do with laboratory equipment. I would guess that must come close to 85 percent of our expenditures. From time to time there are scientists whose research requires equipment that's used in a patient setting. That equipment may very well enter a hospital and become a part of a hospital's inventory, but it only will do so after there's been a site visit by external scientists who work in that field. They'll review the application, they'll come in and interview the scientist, and they'll try to make a determination as to the proportion of an equipment's operation that would be dedicated to patient service and how much of it would be dedicated to research. If that group of external scientists determines that there's a significant percentage of the usefulness of the equipment that provides patient service, then the foundation will say to the institution, "Look, we've determined that this equipment is important to the research, but we've also determined that it's important to patient care, so let's discuss a payment system that would reflect that proportion." We've a number of instances now - not many; only a few - where others have put up maybe 50 percent more or less of the cost of that equipment and/or its replacement because of the division of responsibility that is identified in the use of the equipment.

MR. FISCHER: In your report you mentioned that more support is needed. Is it needed in that area more so than in actual physical research?

DR. McLEOD: It's hard to say. I think the major need for additional support is for the growth of the personnel. We've tapered our support for personnel because of the pinch on our spending rate. It would be very important that we not overpinch it, that there is a continuing inflow of new young people, because only in that way will we have a vigorous, dynamic community. On the other hand, there will still be the need for updating scientific equipment because new equipment allows new things to be done, and a great deal of new findings are functions of approaches to problems.

So, willy-nilly, there's going to be the need for continuing support for equipment. I don't think it will be at the level we've experienced in the past, because when the foundation was implemented, the Canadian scientific community had had precious little money for equipment. Its equipment had a lot of downtime; it was badly worn and needed replacement, and so in the early phases of the foundation's story we spent more money on equipment than we probably will need to do in the future. That won't take away, however, the need for occasional significant investment.

MR. FISCHER: Thank you.

In another area: it's mentioned in our annual report that there's an "aggressive technology transfer program." Is that a problem - transferring that technology?

REV. ROBERTS: Mr. Chairman, that question has already been asked.

MR. CHAIRMAN: Dr. McLeod, you did deal with that, and I

think Mr. Geddes did as well.

Perhaps you can find the response that you need in *Hansard*.

MR. FISCHER: I'll pass.

MR. CHAIRMAN: The Member for Athabasca-Lac La Biche.

MR. GEDDES: Before we go on, Mr. Chairman, [inaudible] a moment.

Mr. Fischer has given me an opportunity to draw to your attention the work that we did in diabetes. In this volume the three gentlemen whose pictures are shown on page 4 all happen to be native Albertans, a very distinguished group. They've attracted more attention to the foundation's programs than any other single matter. I'm sure Mr. Fischer would be proud to know that the gentleman who founded the group, in the middle, was also born and raised in Wainwright. So there's more than Dr. McLeod to be proud of.

MR. FISCHER: Thank you.

MR. CHAIRMAN: Thank you.

The Member for Athabasca-Lac La Biche.

MR. CARDINAL: Thank you, Mr. Chairman. I, too, would like to commend the team for the fine work they're doing.

I just have one comment on Nick's concern there: don't spend too much more time and money on research; I'll pass onto them some Indian medicine that I know works.

Just a quick comment on the cost efficiency of our present health care system. Of course, as you're aware no doubt, one of the priorities of this government is to look at ways of making our health care system more affordable without compromising quality. There is a great need for research into the health care programs, their cost benefits, and appropriateness. Is the foundation conducting research in this area?

DR. McLEOD: We have four young people currently in training who will have specific capabilities in that area. I'm very hopeful that the opportunity will arise to have them return to the province. We also have an opportunity to provide infrastructure to co-operating hospitals which might also address that aspect. One of the hospitals, the Foothills hospital in Calgary, has established a centre called the Centre for Advancement of Health, which in fact is directed by one of our heritage medical scientists, Dr. John Remmers. They have attracted considerable interest, and we're hopeful that a program of a similar nature will develop at the University of Alberta hospital.

So the short answer is that we're not doing as much as we would like, but the longer term looks more favourable because there will be an increase in the numbers of people who can do that kind of research in a productive manner.

I agree with you with respect to its importance.

MR. CARDINAL: I also understand that the foundation is attracting some of the best talent around to Alberta. What does the medical research foundation offer these people that other provinces or states do not?

DR. McLEOD: Oh, I think there are two answers to that. One is the fact that there is now an establishment of very high-quality experienced scientists, and those people attract young people. Number two, there are very few places in North America where you can establish yourself as a young scientist, acquire the necessary equipment, and have it put in place in an effective and quick manner. Most places the young scientist goes, he gets a bit of equipment now, a bit of equipment later on. He staggers into competition and very often finds that the competition has moved on beyond him. So in coming to Alberta, he or she sees an opportunity to walk right into a productive situation.

Those are the two main reasons why we're continuing to attract the very best young people.

MR. CARDINAL: Would you indicate, then, that our centre would attract more young scientists than other parts of Canada?

DR. McLEOD: Yes.

MR. CARDINAL: Thanks.

MR. CHAIRMAN: Thank you.

In view of the hour, I believe it's necessary to bring to a conclusion our committee meeting today.

However, prior to doing that, as chairman of this committee and hopefully on behalf of all the committee chairmen and committees that have had you two gentlemen before them over the years, I'd like to commend you on the leadership and direction you've given to the foundation and certainly for the outstanding financial management that has taken place when, in fact, the endowment has grown under your direction. It is certainly something to be commended. A great deal has been accomplished in the life of the foundation during the tenure of both of you gentlemen, and certainly all Albertans are indebted to you for your contribution in the field of medical research. I know you'll get commendation from the minister, and I know you've received it from each member here today, but on behalf of the whole committee and committees that have previously met here, we'd like to commend you and thank you for the work you've done and for the co-operation that this committee has always received. Thank you again. [applause]

Member for Ponoka-Rimbey, a motion for adjournment. Thank you.

[The committee adjourned at 4 p.m.]