2:01 p.m. Thursday, November 1, 1990

[Chairman: Mr. Ady]

MR. CHAIRMAN: We'd like to call our committee to order this afternoon and to welcome Mr. Al Libin, the chairman of the board of the Alberta Heritage Foundation for Medical Research, and Dr. Matthew Spence, the president. We're pleased to have them come before the committee. This is the first appearance for both of these gentlemen, so I anticipate that the committee will be very kind and considerate for their initiation before the committee. We appreciate them taking time to come before the committee today, and we look forward to the information that they will provide to the committee for their further deliberations pertaining to recommendations and other concerns that they may have.

Just prior to hearing from these gentlemen, are there members who have recommendations that they would like to read into *Hansard*?

Yes. The Member for Calgary-Fish Creek.

MR. PAYNE: Mine is very short compared to that of my colleagues today, Mr. Chairman. Be it recommended

> that the Alberta Heritage Savings Trust Fund establish an independent advisory board comprising a cross section of qualified Albertans with relevant expertise to periodically advise the investment committee on heritage fund investment performance and policy.

MR. CHAIRMAN: Thank you.

Just prior to acknowledging other members, the Chair has been made aware that some members have a considerable number of recommendations. Perhaps it wouldn't be necessary to read them all but to table them, and then they could be put into *Hansard* by record. That would save some time, if that's agreeable to the committee members. If anyone has some objections, the Chair would hear them now.

On that basis, Member for Edmonton-Centre, you have some recommendations?

REV. ROBERTS: Yes. Thank you, Mr. Chairman. We do, as you noted. We've circulated copies of it to all members, I believe, as well as yourself. We've put it in as one recommendation in seven parts so that when it comes time for debate, we'd like to debate the entire piece as a package, as one resolution with seven parts. I just wanted to make that clear.

MR. CHAIRMAN: Could the member advise which member is putting this forward?

REV. ROBERTS: I will for our purposes today.

MR. CHAIRMAN: Thank you. The Member for Edmonton-Centre will be putting forth this recommendation.

Submitted by Rev. Roberts:

> That the Alberta Heritage Savings Trust Fund be restructured as follows:
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> (a) the current various divisions of the fund be consolidated into two divisions, being
>
> (i) the securities and investment division, which would hold the assets currently held in the commercial investment division, the Canada investment division, and cash and marketable securities and would earn market rates of return for the purpose of revenue transfers to the General Revenue Fund, and
>
> (ii) the Alberta research and development division, which would hold the assets currently held in the Alberta investment division and in the various research funds of the capital projects division and would be directed to long-term research and development programs in human and natural resources as an investment to benefit future generations of Albertans;
>
> (b) no further expenditures be made through the capital projects division, that division be phased out, no longer reported as deemed assets of the Heritage Savings Trust Fund, and outstanding commitments for future budget years be made through the General Revenue Fund and the Capital Fund;
>
> (c) annually the Provincial Treasurer present to the Legislative Assembly for its approval the policy directions and objectives and the budget for the fund's two divisions;
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> (d) the overall investment strategy be socially and environmentally responsible and meet ethical standards similar to those of ethical growth funds;
>
> (e) a legislative office be created called the trustee general, whose office would have trust and fiduciary responsibilities for the management of all financial assets of the fund to ensure all investments were managed in accordance with the policies provided by the Legislature, with this office to be responsible to the Legislature through the Standing Committee on the Alberta Heritage Savings Trust Fund Act and responsible to table an annual report with the Legislature;
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> (f) the Standing Committee on the Alberta Heritage Savings Trust Fund Act would hold annual hearings with the Provincial Treasurer, the trustee general, and the Auditor General to ensure the fund benefited the people of the province of Alberta, and the committee would be empowered to call all such witnesses as it wished to appear at these hearings; and
>
> (g) a broad series of meetings and public hearings be held to receive further input on this proposal to increase the effectiveness and accountability of the fund.

MR. CHAIRMAN: Are there others?

The Member for Westlock-Sturgeon.

REV. ROBERTS: Could I just . . .

MR. CHAIRMAN: I'm sorry.

REV. ROBERTS: Before we leave that, maybe we'll circulate copies to our guests as well. I wanted them to be aware of the New Democrat view, which is that we should have two divisions to the fund, one being a securities and investment division, the other being an Alberta research and development division, which would bring together much of the research effort under a research secretariat and strengthen the work of medical research and other research efforts of the fund.

MR. CHAIRMAN: The Member for Westlock-Sturgeon.

MR. TAYLOR: Yes. I would like to file rather than read, because they're fairly lengthy, 14 recommendations from myself and 10 recommendations on behalf of Mr. Mitchell, who can't be here, for consideration by the committee later on.

MR. CHAIRMAN: Thank you, hon. member. I appreciate your willingness to table them as opposed to reading them. It'll save considerable time and allow the committee to spend more time with our guests today.

Submitted by Mr. Taylor:

That the Alberta Heritage Savings Trust Fund liquidate its equity position in Syncrude and that the resulting proceeds be used to pay down a portion of our provincial government debt.

That a new division be created in the Alberta Heritage Savings Trust Fund, the economic diversification division, and that investments of this division be made in projects designed to expedite the diversification of the economy of Alberta.

That the occupational health research and safety heritage grant program co-ordinate with AADAC and the Alberta family life and drug abuse foundation research into the use of alcohol and drugs in the workplace.

That deemed assets as distinguished in the Alberta Heritage Savings Trust Fund 1989-90 annual report be excluded from the balance sheet in the future and described only in a note to the balance sheet.

That the mandate of the Auditor General be expanded to include the evaluation of the effectiveness and efficiency of the Alberta Heritage Savings Trust Fund investments and expenditures.

That the Alberta Heritage Savings Trust Fund investment committee take the necessary steps to effect the return of $100 million of the $200 million loaned to Vencap Equities Alberta Ltd.

That funds spent on research into improving the yield and variety of dryland crops be increased to the equivalent now spent on irrigation research for yields and varieties.

That the Alberta government sell its 994-plus grain hopper cars, 50 per cent to Canadian Pacific and 50 per cent to Canadian National.

That a continuation be sought to the municipal recreation/tourism areas grant program by extending the fund for another two years, using the equivalent of two-thirds of the funds that were originally allotted to it.

That the Agricultural Development Corporation be liquidated and the government instead supplement private capital loans by way of sliding scale guarantees and interest subsidization and disposing of all commercial assets at competitive pricing as was done by Alberta Mortgage and Housing Corporation.

That the Minister of Forestry, Lands and Wildlife be instructed to stop all clear-cutting of poplar forests until more research is available as to the effects of clear-cutting on reforesting poplar areas.

That the Minister of Advanced Education approach the University of Alberta offering from the Alberta Heritage Savings Trust Fund library funds to pay for 50 per cent of the costs of an extension library if the University of Alberta would re-establish it.

That the Standing Committee on the Alberta Heritage Savings Trust Fund Act record in its annual report all resolutions presented, showing which ones were approved and which ones failed.

That one-third of the Alberta Heritage Scholarship Fund be set aside as achievement awards payable to those students whose parents and/or responsible guardians have family incomes at or below the poverty level, such awards to consist of free tuition at any postsecondary institution in the province for two years after high school graduation.

Submitted by Mr. Mitchell:

That the Alberta Heritage Foundation for Medical Research consider a program of research into sudden infant death syndrome.

That the Provincial Treasurer provide full financial disclosure of the operations of the Kananaskis golf course.

That the Alberta Heritage Foundation for Medical Research be directed to assist the Faculty of Pharmacy and Pharmaceutical Science of the University of Alberta with upgrading its research facilities.

That the Minister of Forestry, Lands and Wildlife provide figures indicating the return in total to grazing leaseholders in Alberta from oil, gas, and seismic related revenues generated from their leases so proper evaluation of funding for the grazing reserves program can be undertaken.

That the $200 million funding for the family and drug abuse program be administered by the Alberta Alcohol and Drug Abuse Commission rather than by a parallel bureaucracy, thereby avoiding costly duplication of bureaucracy.

Whereas the earnings of the Alberta Heritage Savings Trust Fund are improperly inflated by the receipt of interest on debentures from Crown corporations receiving General Revenue Fund subsidies, that the Provincial Treasurer permit the Alberta Mortgage and Housing Corporation, the Alberta Opportunity Company, and the Alberta Agricultural Development Corporation to pay interest on their Alberta Heritage Savings Trust Fund debentures only in years in which these companies are profitable without subsidies from the General Revenue Fund.

That the Alberta Heritage Savings Trust Fund provide a $100 million grant to establish a foundation for environmental research and life-style education, which would use the earning on this grant to do the following:

(a) research and develop technologies related to environmental protection and cleanup,
(b) transfer these technologies to commercially viable enterprise, and
(c) design and implement programs to educate Albertans in ways of reducing demands on the environment.

That the Alberta Heritage Savings Trust Fund immediately renegotiate the agreement under the Capital City Recreation Park program with the city of Edmonton to ensure sufficient funding to complete the Capital City Recreation Park system by the year 2000.

That the Department of Recreation and Parks provide a report to the committee indicating how many of Alberta's 17 natural regions are currently represented by Alberta's 11 designated ecological reserves, outlining the timetable by which all 17 natural regions will be represented, and indicating what Alberta Heritage Savings Trust Fund support would assist in completing this process.

That the irrigation headworks and main irrigation systems program of the Alberta Heritage Savings Trust Fund be transferred from the Department of the Environment to the Department of Public Works, Supply and Services.

MR. CHAIRMAN: Is there any other business to come before the committee? If not, for the benefit of our guests today, a little bit on the process. Normally we allow the guests to make some opening remarks, and then we move to a question period by the committee members through the Chair to those who are appearing before the committee. We'll leave it to the two of you to decide who will answer which questions as opposed to the Chair trying to determine that. Each member of the committee is allowed one question and two supplementaries. Then if they wish another question, they go to the bottom of the list and work their way back up again. So that's our process. We have until 4 o'clock, if the questions go on that long. Other than that, we'll adjourn when the committee have satisfied themselves that they've extracted all the information they can from the gentlemen before us.

Without any other preamble, which of you would like to lead off with some opening comments? Mr. Libin, please.

MR. LIBIN: Thank you for those kind opening remarks, Mr. Chairman. Good afternoon, gentlemen. It's a privilege and a pleasure for Dr. Spence and I to meet with the standing committee. This is the first time that either of us have had an opportunity to do so. In reviewing the appearances of our predecessors, Mr. Eric Geddes and Dr. Lionel McLeod, I note that Mr. Geddes made some opening comments and Dr. McLeod amplified on these. With your kind permission, we will follow the same format.

However, prior to making my opening remarks, I thought it might be helpful to those members of the committee who may not have met either of us or know us to briefly review who we are. I am Alvin Libin and have been chairman of the board of trustees since April of this year. Prior to that I was chairman of the board of management of the Foothills hospital in Calgary for 10 years. I am vice-chairman of Crownx Incorporated, a Canadian corporation which operates internationally in health care and financial services, and a director of several other Canadian companies involved in petroleum, computer technology, finance, and the oil service industry.

Dr. Spence has been in the saddle as president of the foundation since August of this year. After receiving his MD from the University of Alberta in 1959, Dr. Spence did postgraduate work at the Montreal Neurological Institute and subsequently earned a PhD in biochemistry at McGill University and the institute. A physician and medical researcher, Dr. Spence most recently was a member of the medical staff and chief of research at the Izaak Walton Killam hospital for children in Halifax and professor of pediatrics and biochemistry at Dalhousie University. He has been and continues to be an active medical researcher whose specific interest is inherited diseases of children.

That's who we are, gentlemen, ladies. I think we bring a substantial, complementary expertise with regard to management and leadership in medical research and to the broad issues that trouble the health care system today.

In my opening comments I would like to allude briefly to the early history of the foundation and to the previous appearance of Mr. Geddes and Dr. Lionel McLeod. I would then like to turn to the annual report of the foundation for 1990, entitled Eye on Health, and some of the items highlighted in it. Finally, I should like to turn from a consideration of the annual report and the present to the challenges facing the foundation today and our vision for the future. In these opening remarks I will be providing only a skeleton outline. Dr. Spence will be putting the flesh on the bones and colouring between the lines.

When one looks at the impressive range and high quality of research outlined in the annual report or walks through the halls of the heritage research buildings in Edmonton and Calgary, as I understand some members of this committee have done in the past, it is hard to believe that all of this activity is a result of an initiative begun only 10 years ago. Mr. Lougheed, his advisors, and the government of the day were committed to the concept of permanent endowment funding, making it possible to plan the operations of the foundation over longer periods of time than would have been the case if the budgets were to have been approved annually by the Legislature. The reality of a permanent fund and the long-term stability which it provides has been critical in the successful recruitment of excellent people by our universities and hospitals. I think it's fair to say that without this promise of long-term, stable support the quality and quantity of the medical investigators recruited to Alberta would be vastly different than it is today.

Along with the permanent endowment was the concept of an independent, arm's-length management that was to be free of the emotions, changes in direction, and other factors of political pressure. There was significant support for this arm's-length concept at the birth of the foundation, and subsequent events have fully justified the confidence that your former colleagues placed in this type of initiative. Those establishing the foundation recognized that if it were as successful as they hoped, it would require additional dollars at some point in the future. Thus there was a directive in the Act that consideration should be given to supplementing the endowment fund at a later date.

2:11

I probably need not remind committee members that Mr. Geddes and Dr. McLeod stressed the importance of supplementation at every presentation they made to this committee and that the urgency of this requirement rises with every passing year. The spending policies adopted by the previous trustees were the minimum necessary to catapult medical research in our province to the pre-eminent position it enjoys on the national and international scene at the present time. The previous trustees husbanded the resources wisely, and the original $300 million endowment now stands at close to $500 million. Even with this prudent management, however, the purchasing power of the endowment has been steadily eroded, and the present value of the $490 million endowment in 1990 stands at only $280 million in 1980 dollars according to the financial experts in the Alberta Treasury. It looks like a lot of money, ladies and gentlemen, but in point of fact we can do less than we could do in the early '80s at a time when your government and society are presenting the foundation with exciting new challenges which must be taken up. Dr. Spence and I will allude to these new challenges at a later time.

Turning to the present and the annual report of the foundation which is before you, the affairs of the foundation have been

carefully scrutinized by the Auditor General of this province and have been found to be in order. As in past years this report provides a detailed breakdown of the revenues and expenditures of the foundation, including details of expenditure in the various categories of research. The latter continue to be critically reviewed by the foundation's scientific advisory panels, and only the very best investigators and research projects are supported. It is a fierce competition, and it is nationally and internationally acknowledged that to be a foundation scholar or scientist is a mark of the highest approbation. The scientific activities of these scholars and scientists are outlined in the pages of the annual report, and we'd be pleased to provide further details if you'd be interested. Dr. Spence will comment later on the impact of these heritage funded investigators on patient care and education in our province.

I'd like to comment briefly on the economic impact. All of these investigators compete very successfully for research funds to carry out their daily activities. These funds are obtained from national and international agencies in Canada and abroad. Between the two universities and their affiliated teaching hospitals over $50 million in external funds have been attracted in the past year. I think it's fair to say that at least one-half of this would not have been forthcoming had it not been for the presence in these institutions of heritage funded individuals. This external money is spent in Alberta on jobs and supplies and is a direct infusion into our provincial economy. There is over a dollar returned for every dollar the foundation has invested, and this is a direct boost to our economy that would not otherwise be realized.

Turning now to the future, I think it is critical that we continue to nurture and protect this impressive beginning. We will do this by constantly reviewing the progress of our researchers and gently retiring those who are not performing at the highest possible level. In order to ensure the infusion of new blood and new ideas, without which the system would rapidly become archaic and out of date, we will also continue to recruit new, young investigators to take the place of those who have moved to other activities. To do so will take every resource the foundation can muster and possibly even more.

At the same time, ladies and gentlemen, the foundation is moving to accept and expand activity in the area of health care research. Such research includes the evaluation of present technologies, prevention of disease as opposed to the treatment of disease, and research into the management of the health care system and the containment of costs. These issues are front and centre in the public perception and with government and have led to the establishment of the Premier's Commission on Future Health Care for Albertans, The Rainbow Report, and the Department of Health's report of the Advisory Committee on the Utilization of Medical Services. Both of these reports have attached a high priority to expanded and enhanced research in health care as the only way to rationally and effectively deal with the spiraling costs of health care and at the same time preserve and protect the excellence in health care which we currently enjoy and which we are developing for the future. Both reports highlight the need for a health research agency to serve as an advocate and as a granting agency for health care research, and both singled out the AHFMR as a model on the way to proceed.

We are committed to a renewed and expanded effort in this field of endeavour. We have the previous experience, expertise, and some of the programs necessary to support the development and maintenance of this type of research and the ability to develop new programs and to respond appropriately to any requests for new initiatives that may be required. However, we cannot assume this additional responsibility without additional resources. As I pointed out, the present endowment looks impressive on paper, but the actual purchasing power of the fund is being eroded by inflation. As much as we would wish to do so, to divert substantial resources from biomedical research to the health care area at the present time would seriously damage the biomedical research effort in Edmonton and in Calgary at a time when the local, national, and international impact of this initiative is only beginning to be realized.

We recommend to the committee that the existing endowment be supplemented and the increase in interest be used to stimulate and fuel the expanded activities in health care research. The success of the original initiative in setting up the Alberta Heritage Foundation for Medical Research is a vital testament to the value of this type of support and strongly supports a new initiative of the same type for the future. We will be recommending a target figure in the support of health care research of $8 million to $10 million per annum for our province over the next five years. If this is to be derived from an endowment base, an additional endowment of at least $200 million is required.

Recommendation 14 of The Rainbow Report clearly assigns the responsibility for the support of health care research to the foundation. The foundation is prepared to meet this challenge immediately and looks forward to working together with the government and the citizens of this province to realize a shared vision of leadership in innovative medical and health care in Alberta.

With your permission, Mr. Chairman, I'd like to ask Dr. Spence to expand on my opening remarks.

MR. CHAIRMAN: Thank you.

Dr. Spence.

DR. SPENCE: Thank you very much, Mr. Chairman, and thank you, ladies and gentlemen, for the opportunity to be able to talk to you this afternoon. I should point out at the outset that I'm speaking from a vast seniority of two and a half months in this position. It's been a very steep learning curve, and I must say that it's been one of the most exciting learning curves that I've ever had in my life. I thought working on the wards of a children's hospital was lots of fun, but believe me, I've had even more fun in the last while learning what's going on in the province of Alberta.

I'd like to share with you for just a few minutes, if I may, some of the excitement that I have run into in the last while and which has been very well documented in the document Eye on Health, which is the annual report of the foundation. I thought I might just take about three examples of the sorts of research that are going on that I've been particularly excited by. I could go on forever, but I promise you I won't and will just talk about three of them.

The first one that I'd kind of like to talk about is Pac-Man. You remember that Pac-Man is the little animal you see on the video screens that goes along going chomp, chomp, chomp. I'd like to talk to you about Pac-Man and cancer. We've got a very talented group of individuals out there who are looking at the immune system in our bodies. The immune system is the thing that fights off disease, and what you don't realize is that as you walk around, particularly, I suspect, in the halls of the Legislature but also on the streets of the city and in your home towns, you're continuously deluged by germs. They come flowing at you from all sides. It's your immune system that fights them off, and it's a truly remarkable device. Not only does it fight off

disease, it also causes disease because it's the immune system that probably causes things like arthritis, which I'm sure many of you are familiar with, or the joint inflammations that you develop when you're playing tennis or some of the other sports that some of you indulge in and many other things that we fall heir to. So understanding this immune system is incredibly important.

We've got people in our schools now who are looking at this system and are particularly studying how the immune system fights off cancer, because as near as we can tell, that's what's wrong in cancer. It's cells that get away in the body and get out from underneath the surveillance of the immune system and start to grow. The immune system does this by coming alongside the cancer cell and firing a letter bomb, and that letter bomb destroys the cancer. The question that we're now asking is: how do we create artificial letter bombs, if you like, and destroy cancers with them? Alternatively, how do we stop this process from going haywire in conditions like arthritis?

2:21

Now, that sounds pretty esoteric, but it's pretty practical if you've got arthritis or some similar disease, and it's being applied directly in the corridors and halls of our hospitals at the present time. We have physicians in the hospitals using the tools that have been developed by these immunologists to gain new insights into arthritis and its diagnosis and also into the prevention of flu. Yes, ladies and gentlemen, we're looking at trying to prevent flu and how the elderly in particular respond to the flu virus and how we might ward off attacks of this type.

How many of you have taken aspirin as a painkiller or some sort of antiarthritis drug? I suspect all of us have swallowed aspirin at one time or another. What you may not be aware of is that these medications frequently punch a hole in your stomach. For the unfortunate ones in whom it punches a real hole, you develop an ulcer and it can bleed. But for many of us it doesn't go quite that far. We develop a little hole and it bleeds a little bit and we're walking around with a ticking time bomb in our stomach. So the question is: how do you avoid getting a ticking time bomb in your stomach? Well, the only way is not to take the medication, and if you've got a sore shoulder or a sore hip, that's not a very satisfactory alternative. The other thing is to put a tube down through your throat and into your stomach and take a look at your stomach. If any of you have had to swallow a tube like that, it's no fun and you don't want to do it.

We have a very talented group of researchers in Calgary who are developing a blood test so that you can very simply tell whether this ulcer is starting to appear in the stomach before it ever appears and change the medication so you no longer have to take it. Now, this is so exciting that one of the drug companies has bought into this. They've plunked about a quarter of a million dollars into Calgary, and they're proposing to up the ante to almost a million, because they're really excited about what our Alberta researchers are doing: a very practical spinoff of the research work being funded by the heritage foundation.

How many of you know people who have had heart attacks? We all know that you can at least help to prevent heart attacks by modifying your diet, by changing the amount of cholesterol you take in, by modifying the fats you take in. But what about the unfortunate people like myself who have gone on forever and ever abusing our diets so our arteries are all sludged up? What do you do about the person whose arteries are sludged up?

Well, we've got a very talented young lady working in our system at the present time whom we sent away with heritage money in order to study the use of lasers to take the clots out of your bloodstream. What she's studying is the use of laser technology to actually remove the sludge from your arteries. What they do is put a laser in there and pulse the clot. The clot answers back with little shiny lights, if you like, and it tells you what's in it. Knowing what's in it, you can dissolve it. This is very, very exciting. Now, she's not doing that on people. It's much too early. She's doing it on chickens. You can say, "Well, what's that got to do with the diseases that I have?" It's a very practical thing, because ultimately this type of technology can be used to clear obstructions in your vessels. It's also been the source of an industrial grant from the foundation to start another small industry in this province. They're using the chicken model to test other ways to open up blood vessels.

Finally, ladies and gentlemen, if I might just comment on diabetes, you probably know that, thanks again to heritage funded scientists in this province, Alberta is in the forefront of diabetes research. Approximately 45 years ago Banting and Best discovered insulin in Canada, and I think it's only fitting that the next wave of advance should also be occurring in Canada. In the province of Alberta at the present time there is a lady who had diabetes, and her prognosis was to continue to take insulin for the rest of her life by injection. I'm pleased to report to you, ladies and gentlemen, that she has been 70 days off insulin thanks to the transplantation of insulin-producing cells into her body.

Now, it's much too early to say whether this type of therapy is going to be the answer for everybody, but I think it is a very exciting testament to the effect that the heritage foundation has had in the province of Alberta and to the wisdom of your colleagues and yourselves in setting up this initiative. You enjoy some of the finest health care in North America, and that is because you've got the finest research. Research is the absolute fundamental base of first-class health care. Without it you simply do not have first-class health care; you have a second-class activity which is inadequate, I think, for a forward-thinking province in the 20th century.

Having said that, I would like now to turn to the other side of the health care spectrum that Al Libin just briefly alluded to. At the same time that we've been developing this very impressive front in the biomedical area, there's been the growth of a number of other vexing problems. I just want to mention a few of them to you. One is the skyrocketing expenditures for health care. I think we're all very conscious of the fact that there are substandard indices of population health. Why in one of the wealthiest provinces in North America do we still have pockets of population who suffer from ill health? We have an uneven quality of care. It's not the same all the way through, everywhere. We have an unfavourable geographic mix of physicians. We have physicians in the cities and not in many of the small towns or smaller communities. We have a changing mix of health problems caused by an aging population. In other words, we're seeing a different spectrum of diseases than we used to. These are enormously costly, and we are not dealing with them well. We do deal very poorly with chronic disease and particularly with long-term medical and psychiatric problems.

These problems are a pressing concern to all of us, and they've led to the Premier's commission, The Rainbow, and also to the report of the Advisory Committee on the Utilization of Medical Services. Now, all of these reports have attached a very high priority to expanded and enhanced research into health care. You can say, "Why do health care research?" Well, ladies

and gentlemen, it's a little like the wagon trains in the early days or, if you like, the army column moving through the west in the days of the Indians. The only people who survived in this were the people who put out their scouts and figured out what was going on in advance of the column. Research is the scout of health care activity. Health care research tells us how to solve things that are likely to occur in the future in terms of problems. It enables us to seek the answers to problems and to perhaps avoid having to cap things and having bed closures and so on, which result in a real howl from our population and a real concern with the direction that the health care operation is taking.

All of the reports have highlighted the need for some type of health research agency to serve as an advocate, and all of them have used the model of the Alberta Heritage Foundation for Medical Research. The foundation stands committed, ladies and gentlemen, to supporting activity in a range of research topics as broad as the determinants of health and illness.

Health care research is not strong in Alberta, and we simply have to build this. We need people, we need research projects that are focused on the health care areas, and we need the dollars to support the people on the projects. The people we can recruit from around the world using the types of program that we have already successfully used to build up the biomedical area. We can also train them, and we will have to train them. This will be a long-term thing: taking Albertans and sending them away for the best training possible. Also, because there simply aren't enough people out there, we will have to very effectively network with our colleagues across the world and throughout North America.

What types of research will we do as health care research? Cost effectiveness studies of health care: how to do things smarter with fewer dollars. We will investigate the quality, outcome, and effectiveness of care: what are the best ways to do these things to get the maximum bang for the buck? We will want to develop health promotion and prevention strategies, because it's a helluva lot easier to be healthy than to be sick and it's a lot easier to prevent disease than to cure it or treat it. We will want to look at regionalization and rationalization of services, and we will also want to look at habilitation and rehabilitation of the aging and the chronically disabled.

We are really committed to this health care initiative, and if I could, I would divert dollars from the present income to that purpose, but if I do, I will damage, severely damage, the superb base that we have already developed that is touched on in this annual report and that we all take so much pride in. It is an extremely difficult choice. We can try to squeeze a little, but to go very far will irreversibly damage the system and send out a shock wave from which our universities and hospitals may never recover.

2:31

Accordingly, we really need a new initiative. We need for health care research a minimum $8 million to $10 million per annum and an endowment of $200 million underneath it to provide that kind of income. The advantages of endowment funding I think are obvious. The endowed support provides the long-term stability in planning and programs that is critical to attracting the best minds to our province, and it really is a competition to get those minds. The success of the original initiative that I've just told you a little bit about, and which appears in the annual report, is a vital testament to the value of this type of support and the fact that I think the foundation can do it.

Ladies and gentlemen, everyone is saying the same thing, that we must have health care research. They have identified the foundation as the vehicle. I think the challenge is clear, as is the opportunity to put Alberta on the forefront in this area, and I would welcome the opportunity to seize it.

Thank you very much.

MR. CHAIRMAN: Thank you to both of you for an excellent overview. As you were telling us of some of the things that you're doing over there, it rekindles the interest and excitement that all of the committee experienced last year when we visited your facility and saw some of the exceptional things that are happening there in research. I'd now like to acknowledge the members of the committee for questions. We'll recognize the Member for Edmonton-Centre first, followed by the Member for Calgary-Fish Creek.

REV. ROBERTS: Thank you, Mr. Chairman, and welcome to both Mr. Libin and Dr. Spence in what I know has been a year of great transition and change at HFMR. I wish you both well. Most challenging, and as the Chairman said, it rekindles a lot of excitement just to hear you go through your presentation today.

I also heard a very interesting statistic over the weekend: that fully 85 percent of all scientists ever living are living today and that there are, in fact, over 1,000 research papers being published each and every day as we live. So you can imagine, coming into this forum of the Legislature, what a challenge it is for us as legislators to try to get the best possible handle in terms of limited public dollars for what is a proliferation of very exciting scientific and medical and health research in so many directions. But we do want to get handles on that, and we do want to support HFMR in the work that's begun and needs to continue to carry on.

I was a bit disappointed with Mr. Libin's description of the Watanabe and the Hyndman reports' calls for increased health research when in fact we as the New Democrats have been calling for this for at least the last two years. It's nice to see others coming on board. We were for some time saying that medical research and biochemical research are important but that there are other aspects to health research, as you talk about both in your annual report as well as in your comments today. So in some ways that makes the whole situation a lot more difficult, talking about this need for supplementation.

Can I ask you, then, Mr. Libin, to comment a bit further on what Dr. Spence is saying in terms of diverting existing funds, the $280 million in purchasing dollars that you have now. Are you and your board, within that limited pot, constraining as it is and with the pressures on it that exist, prepared to divert and reallocate some of those financial resources into doing other health care, epidemiological outcome analysis kinds of studies which so many of us now are saying is important and needs to be done?

DR. SPENCE: Perhaps I might respond to that. I probably indicated my own personal view of it and what my advice to the board would be. I feel that the Alberta-based biomedical activity, which has really basically hilted the income of the foundation at the present time, if we are to avoid erosion – the problem is that we are spending $30 million at the moment. You have to add another $20 million to that to counteract the erosion of the main fund. So it really means we're spending to the hilt. That's just to maintain that activity out there, to allow it to continue to go, get a few new people and the new blood that is essential, and we gently retire out those that are no

longer quite as good. Now, they're still excellent scientists, but we're setting an extremely high standard for the foundation.

It is now getting an international reputation and an impact, I think, in terms of the health care system in Alberta which is just beginning to pay off. My own personal feeling on this is that to divert any major amount of money – and I'm talking, you know, more than a very tiny fraction – over to the health care area would seriously damage what is going on in those universities and in the hospitals and throughout the community at the present time. I say this very reluctantly, because I think you can sense that I'm very committed to the idea of moving on the health care research area. But the problem is that to do the health care research adequately, it is an area where we're really going to have to go it alone. For the medical research we can get help from the Medical Research Council of Canada. We can get help from the feds in the sense of the money that we attract into the province. In the health care area there's almost no money, and the feds are cutting back. They've cut that program severely this year, and they continue to cut back. Now, whether this is a signal to the provinces – you're going to have to go it yourselves – or what, I don't know. But this program is going to be expensive. To get into the health care area, we have to fund the nurse in the public health unit in Lloydminster or the physician or the social worker in Ponoka or Rimbey. We have to fund those activities with operating funds wherever they may occur in this province, and that's quite a different ball game than we've been in before. That's going to require major dollars, and there's no way we can take that from the endowment without causing what I would view as very unfortunate damage to what's out there.

Now, you can say: "What about the priority? If you do feel that strongly about it, put your money where your mouth is." I guess I'm in the unfortunate position of the guy with the *Queen Elizabeth* sitting there floating and you're asking me to take money to build another liner. What I'm saying to you is that if I take two boiler plates off this one, she's going to sink, because once you start to unravel it, it falls apart.

MR. LIBIN: Rev. Roberts, another point in that issue is that at the present time, unless we receive additional supplementation to the original endowment, the trustees are going to have to take a look at our present spending rate which will have to be slowed down in order to keep the fund whole into the future. So we have kind of a two-pronged problem there.

REV. ROBERTS: Well, it is a very difficult and disconcerting problem. I wish there were some easy answers here, and there aren't.

One that I would like to see pursued . . . We could talk a lot further about this at a more macro level. I think it was Dr. Spence that talked about getting the bang for the buck both in health care and in medical research funding. Is there a way to help you and help us to make those kinds of difficult determinations of where the dollars should go because we're going to get the biggest bang for the buck? Are there not methods, which I understand to be in the field of what they call outcome analysis, outcome studies, both in the current existing health care field as well as perhaps in terms of outcome benefits of certain research projects?

Now, it's hard to know whether cancer research or diabetes or arthritis – you know, which has a better outcome. They're all so important. But I'm aware of the surgical process outcome study of Dr. McMurtry, I believe, and others at the Foothills hospital in Calgary. I think it's a fabulous, outstanding initiative which is going to help us get a better handle on: if we're going to have cardiac surgery, who is going to benefit the most from that? I just call this getting a handle on this biggest bang for the buck. Could you not better support that kind of research in HFMR to benefit both health research as well as medical research and help us as legislators and policymakers to know where the funding should best go?

MR. LIBIN: One of the lines I was looking at in my opening remarks was "the prevention of disease as opposed to the treatment of disease." I mean, you've got two really major priorities here. I know that at the time I was chairman of the Foothills hospital, and in a submission by the Foothills medical centre to the Hyndman commission, we talked about the need; that in a province where the health care budget is somewhere in excess of $3 billion, it was not an unreasonable thing to spend at least 1 percent of that on R and D spending, research and development, in the delivery of health care in all the segments that we believe are so important. So I think that somewhere in that size of a spending mode one should be able to find the kind of money we're talking about.

2:41

MR. CHAIRMAN: Do you have a final supplementary?

REV. ROBERTS: Well, was Dr. Spence going to respond?

DR. SPENCE: If I just might, Mr. Chairman. I had the opportunity to speak to the group in Calgary the other day, and I have been familiar with Dr. McMurtry's studies in the past. I can assure you, Rev. Roberts, that if we had a health care program going at the moment, Dr. McMurtry would probably be the first in line and I suspect would be also one of the first to be funded, because that's the type of activity we're talking about. In other words, do you do cardiac bypass surgery? Do you do this? Do you that? That's really what we are looking at.

I'm not convinced that we would stop the spiral from moving, but at least we would slow it up sufficiently. I think we would all feel a great deal more comfort, as you alluded to, to the fact that the types of decisions we are making are rational ones rather than a general damping down of the system, which hurts the excellent as well as the poor, and that's where the problem comes in. You would like to be able to do some judicious weeding rather than sort of an overall broadbrush approach – if you like, the rapier rather than the saber.

REV. ROBERTS: My final one is an update of whether you have been apprised of what I understand to be this tridepartmental study on research between Advanced Education, Health, and Technology, Research and Telecommunications. There has been an internal review of this kind of question of public policy around research spending and research funding and particularly with respect to Health. I think if there's going to be movement for increased funding for your endowment or additional supplementary endowment for health research, people who are involved in that tridepartmental study are probably the ones to have the most clout to do that. Are you aware of what they're doing? Have you made representation to them? Are there other ways you know of that we can pressure them to help pressure government to get the additional funds that are needed here?

DR. SPENCE: I'm not aware of that study, so I can't really comment on it.

MR. CHAIRMAN: Thank you.

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

MR. PAYNE: Thank you, Mr. Chairman. I think it's safe to say that the heritage fund select standing committee has held a consistently high regard for the foundation and for Mr. Libin's and Dr. Spence's eminent predecessors. I'm sure I speak for the committee when I indicate that we look forward to our periodic association with our guests today.

I recognize, Mr. Chairman, that through the foundation exceptional work has been done over this past – what? – 10 or 11 years, and through that effort Alberta has obviously staked out a strong position on the leading edge of contemporary medical research.

Customarily members of this committee concern themselves with specific medical research projects like those highlighted today by Dr. Spence in his introductory remarks and with associated awards and grants. With your forbearance, Mr. Chairman, I'd like to make a comment and pose a question about our health care system in a broader context. I find myself in the unusual situation whereby one of my prepared questions, that I worked on through the lunch hour, was in effect at least partially answered in the opening remarks of both Mr. Libin and Dr. Spence. The question that I wanted to pose was from the perspective of getting more value out of our hard-pressed health care tax dollar. I planned to ask if the foundation would be prepared to undertake any research into our province's overall health care system. Of course, I infer an affirmative response from the opening remarks of both Dr. Spence and Mr. Libin.

I should clarify, Mr. Chairman, that I'm not suggesting that the foundation duplicate the effective work of the Premier's Commission on Future Health Care for Albertans. What I am suggesting is that the foundation's proven record and methodology in data analysis has the potential to make a significant contribution to our obvious need in Alberta not necessarily to contain health care costs but to do whatever we can to strengthen and improve our health care system and ensure that we in fact are getting the best value for our health care expenditures. Can we safely conclude, Mr. Chairman, that with the provision of some additional endowment funding the foundation would in fact be fully prepared to undertake this additional and broader-in-scope research?

DR. SPENCE: I can assure the hon. member that not only would we be prepared to do so; I think I can speak for the foundation and for the trustees in saying that we would welcome the opportunity to do so. Because when I agreed to take the position of president, this was one of the areas that I identified as being of a high priority insofar as I was concerned. I've had an opportunity to do a little bit of this in the maritimes, and I would welcome the opportunity to look at this on a much wider scale.

I should also point out that the people who are going to do the research, if you like, or carry out those studies will be the people in our universities, our hospitals, and in our public health operations throughout the province, because this is the natural laboratory. What the foundation will be is the vehicle through which these things will be possible through the sorts of programs that we've been able to use so successfully in the past and through new programs which this type of endeavour will undoubtedly require. I can assure you we would welcome the opportunity to move on this one. I think the time is now, and the sooner the better because this is not a situation that is likely to go away, as I'm sure you can imagine. I would hope that the Legislature of tomorrow would be facing a different set of problems. I'm sure problems will never go away, but at least we would have, if you like, some battle plans and strategies in place with respect to the health care system that have been thoroughly tested, evaluated, and looked at.

MR. PAYNE: By way of my first supplementary, Mr. Chairman, I hope you'll allow a related but somewhat hypothetical question regarding let's call it the health research agency and its relationship to government in general and to the Department of Health in particular. Let's assume for the sake of argument that the health research agency is functioning, it's developed a comprehensive, ongoing program of data analysis, and has now concluded that there are some, say, procedural modifications that are warranted in the system. I'll just use that generic language for now. What structure or mechanism would our guests foresee in getting these research observations and conclusions into the system?

DR. SPENCE: If I might, Mr. Chairman, I think the only way that you can do this is to involve in the study itself the people who are going to actually use the information in the future. This is where the power of Dr. McMurtry's type of study, that was alluded to earlier, comes in. Because if you involve, for example, the physicians and nurses in a hospital in the evaluation of a particular technology or way of doing things, they buy into it because as the study goes on, they realize as the results come out that this is the best way to go, and they will then start to use that. They have credibility with their peers and with the other groups in the province – for example, you know, politicians listen to politicians; surgeons listen to surgeons; surgeons don't listen to politicians, and they certainly don't listen to civil servants. So to have it legislated from above, it's unlikely to be successful. I think that's the history of the western world: that we cannot do things by fiat even if we would like to.

So what happens, then, is that if you involve the stakeholder – that's the word that has been used in The Rainbow Report, and I think it's a very good one – the stakeholder has a commitment to this and they carry through the activity, and they have the credibility with their peers. I think that's really the only way that you can see it going. We can talk about the advances in Scandinavia or the advances somewhere else, but until you bring them in, evaluate them, research them within your own environment, and become convinced yourself that they are going to work, you don't buy in. So I think it's the citizens of the province who have to buy into this one or the people in the health care system. Alberta Health by itself cannot do this. It cannot be imposed from above.

MR. PAYNE: Mr. Chairman, you may recall that when the Minister of Health met with our committee about two weeks ago, in her discussion of the factors that are driving upward the costs of health care delivery, she indicated that one of those factors is technology, that with each new technological advancement or development there seems to be an added dimension in cost. The way of delivering a particular diagnosis or prognosis is a lot more costly now. It's better, but it costs a whole lot more than some pretechnological era methods. I'm interested: would the proposed or mooted health care agency have the potential to impact in any way on this sector of our health care system costs?

2:51

DR. SPENCE: Well, Mr. Chairman, I am fond of pointing out that I think there are three technologies in medicine and health care. There is what I call the low technology, which is a very

important part of medicine. It's the sort of thing that the general practitioner of many years ago used to practise and many of us still have to practise today because we don't know anything about the disease we're treating. It consists of holding the hand, of standing by, of providing a wise shoulder and comfort but basically watching the disease take its course because you can do nothing. That consumes an enormous amount of the health care dollar, in beds and in other efforts, and it's very frustrating for the practitioners of medicine and for the families that are so affected.

Then we come to the medium technology of medicine and of health, and that is the one that catches the eye. It's the glamour one. It's the heart transplants. It's the kidney transplant. It's the bypass operation. These are characterized by some knowledge. We've started to understand it, and we know how to tinker with it a bit and start to fix it. People are attracted to it, and they call it high technology, but it's really just middle technology, and it's characterized by a little bit of knowledge and an enormous cost.

When you finally break through into what I call the high technology of medicine and you truly understand it through research, then it becomes pennies instead of dollars.

Now, most of you are far too young to remember the polio epidemics, but I remember them very well. There was a young physician who died in an iron lung in this city who was my role model before I went into medicine. We were going to fill every damned hospital in this province with iron lungs pumping away on our citizens. That was the medium technology. It was going to be so damned costly it was going to break the whole system. Along came Jonas Salk, Salk vaccine, the Sabin oral vaccine, and polio was a thing of the past.

I respectfully submit, ladies and gentlemen, that those things that we most thoroughly understand through research in point of fact cost very little. It's hard to persevere through the costly part, but if you do and you break through, then it does really tumble down. When we can truly prevent coronary artery disease, there will be no more bypasses, there will be no more angioplasties, and hopefully there will be no more coronaries. If I do my job right and Al Libin does his job right and we all do our jobs right, we should be able to close every one of these damned hospitals and all go home.

MR. PAYNE: As one who's very close to the coronary set, I am encouraged by the optimism of that final comment. Thanks, Mr. Chairman.

MR. CHAIRMAN: The Member for Westlock-Sturgeon.

MR. TAYLOR: First of all, I enjoyed the presentations and the answers by both Mr. Libin and Dr. Spence. I'm quite intrigued with the way the line of the conversation has been going along because it's, in a way, the question I want to ask. We're talking about spending money, priorities, cost of medicare.

I don't know the doctor. I'm sure he's familiar with Dr. Ilyich's work out of Mexico that tries to prove that if you were to close the hospitals and get rid of the doctors, people would be a lot healthier. But I don't think you want to go that far.

In spite of Dr. Ilyich, though, it does bring onto the scene, as the Member for Calgary-Fish Creek mentioned, the cost and your answer to it, the question of ethics, bioethics or medical ethics. In a society that has discovered so many mechanical methods of keeping people alive, how much do we spend? In other words, if somebody has smoked all his life, is it worth while putting him on an iron lung? Or just say: "Well, you've paid the price. You took the thing; you took your choice"? That may apply to other things too. That shouldn't be done, and I'm sure the medical profession doesn't want to do it. I don't know if the ministers want to do it. They'd rather bury and marry people than really tell you what's right and wrong. I think all of society is trying to get out of the job of laying down the responsibility, yet it seems to be creeping up on us.

Therefore, I come to my question. Is there any thought – Mr. Libin may be in a better position with this – to divert any funds to a medical ethics study, bringing in these different groups and putting them down and saying, "Okay, what do we want for the years 2000, 2050, 2100?" If indeed science can say who we can keep alive and who we can't, we need some ethics in here. Is there any thought of spending any money in that line, that type of research?

DR. SPENCE: The area of ethics is an extremely important one, and as medicine and health and society grow in complexity, the ethical issues of almost everything we do steadily confront us. Like all of these things, with awesome knowledge comes awesome responsibility. I think there is no question that the health area generally is very conscious of the ethical issues surrounding health and the sorts of decisions you're talking about. In other words, what is the ethical stand that may be taken for an individual who has flouted every rule of good health throughout life and is finally faced by serious ill health? As a physician I duck that sort of decision. I have been trained to preserve life at all costs, and I go ahead. Damn the cost; I just go ahead full bore. But as a citizen and a taxpayer I have to look at the broader issue as well.

We're fortunate in this province. We've got two developing areas of ethics expertise, one at each university, with John Dossetor here at the University of Alberta and with Doug Kinsella at the University of Calgary. We're also fortunate in Canada in having the Medical Research Council and the Royal College of Physicians and Surgeons taking an interest. They've established a national council on bioethics which meets fairly regularly and attempts to deal with some of these issues on a national basis. Because our problems are not unique here. I mean, we need to exchange the dialogue. As a matter of fact, Dr. Kinsella from Calgary happens to be a member of that group. The foundation is certainly very interested in the whole area of ethics and in the responsibility of the individuals whom we fund, and indeed of the whole system, to continue to search and to evaluate and look at the sorts of things that they're doing. I think it is an area that we should continue to be interested in and try to provide support to because it is an area that I think is going to get increasingly complex as time goes on and one which is fraught with a whole host of various types of values depending on what background you come from.

Finally, if I might comment on your comment about Dr. Ilyich, whom I enjoy reading: I'm reminded of a tombstone that I once saw which said, "I died of my physician."

MR. TAYLOR: He is quite a character. I had the benefit of meeting him a few years ago in Mexico, but he does take off at length after doctors and teachers.

I appreciated your answer, and I think that the Member for Calgary-Fish Creek put it so well: with the costs involved. I think it falls back to maybe ethics are going to have to start being looked at by the politicians. Some people would say that they're the poorest group in society to trust ethics to; nevertheless, it looks like that will be what'll come about.

Would it be at all reasonable, then, for your foundation to work maybe a little more closely, being that health is financed by the province, not by the federal – and I think leaving ethics to the federal might end up like many other things we've left to the federal government . . . Would you maybe think of pursuing trying to get something off the ground provincially in that whole school of medical ethics?

3:01

DR. SPENCE: Well, I could perhaps allude to an initiative that the foundation is exploring at the moment, which has been spearheaded by one of our former trustees together with the foundation, as we are looking at establishing a lectureship in the area of the medical/legal. I might put it together as law, medicine, and ethics and combining these, because they all rub the same way. What we are looking at is ways of catalyzing, getting our legal brethren involved together with our medical brethren in a consideration of some of the legal, moral, and ethical aspects of some of the things we do. So yes, we are definitely interested in moving on this, and I was not for a moment suggesting we abrogate the responsibility to the feds. Having come from the maritimes and originally from Alberta, I am a firm believer in the real resources we have in our local area. What I'm really pointing out is that there's a national concern as well and we share many of these concerns across the country. I think it's wise to exchange the information and the experience, because what they're doing in one place we may learn from. I'm a great believer, you know, in going out and robbing the ideas of others and adding an Alberta spin to it and using it. I think that's the way you become great.

MR. TAYLOR: Thank you. The last supplementary is maybe a little lighter but more subjective. On page 9 of your report you mention that "last year a U of A team identified what appears to be a new factor to account for about one quarter of all hypertension." I thought that was interesting. I hope it's not the 11 o'clock news, but I was just wondering what it was.

DR. SPENCE: What we're learning more about is the control of blood pressure. Blood pressure is controlled by a series of little protein hormones actually in your blood stream. It's one of these factors that they've stumbled across. I looks as though it's got a role in control that we have not really appreciated before but is present there. This is the sort of thing they're looking at. It turns out that the control of blood pressure is incredibly complicated. It makes these sewage pipes they're worried about, whether they flow backwards or frontwards, look like a piece of cake. So it's really trying to understand that, because the minute you put in a drug and start altering one, one of the other ones turns on and you've got a complication in the process. They're sort of slowly sorting it out, but it's like a Rubik's cube, you know, in 15 dimensions.

MR. CHAIRMAN: Thank you.
Edmonton-Meadowlark.

MR. MITCHELL: Thank you, Mr. Chairman. I would like to ask a question about . . . Well, all three of my questions, but the latter two in particular, really will address the issue of how research priorities are set to some extent.

My first question concerns the faculty of pharmacy at the University of Alberta. I don't know whether Dr. Spence has had a chance to walk through that facility, but it is very, very old. In fact, the research facilities could be construed as being dangerous to the health and safety of the people who work there, not to mention that they're probably inadequate for the level of research to which those people could and do aspire. The research work of the faculty of pharmacy has two benefits: one, medical, of course, and two, clear-cut economic spin-offs. Both SynPhar and Biomira are high-tech firms, if you will, that are prototypical of what we want to achieve in Alberta and what has been achieved to some extent elsewhere through your foundation as well. I'm wondering whether the foundation is in a position to assist the faculty of pharmacy in upgrading its research facilities or in providing it space in the clinical research building or elsewhere. What's the relationship you have with the faculty of pharmacy, and how is it that you might be able to assist?

DR. SPENCE: The faculty of pharmacy at the University of Alberta is one of the health facilities – all right? – so as such it is, of course, able to take advantage of any of the foundation programs. The activities in pharmacy which the foundation funds at the present time are the infrastructure support to the Slowpoke reactor. This is a small atomic reactor which generates radiopharmaceuticals. They happen to have a real skill in making pharmaceutical compounds which are tagged with radioactivity. We also provide a general infrastructure grant to them for the maintenance of equipment in the faculty of pharmacy, and we are providing a number of studentships to very bright students. I have actually read a couple of the reports that they submitted, and they're extremely good students in the faculty of pharmacy. The faculty is also eligible to apply for the other programs of the foundation, the various personnel support programs we do have. So they have, I think, an equal opportunity to go after these, and they have been able to gain some of the resources. I am hopeful of being able to encourage them to make further use of these, because as you well understand, all our programs are competitive. We allocate these out and the best win; it's like any other competition. What I would hope is that the faculty of pharmacy would be successful in finding, you know, very good things to put forward that would be successful in the competition. They clearly have done this with the students. They've got some very good students in there.

I also think it's a very important activity both from the point of view that you have mentioned, of course, of the potential industrial spin-offs and also because the pharmacological treatment, if you like, of disease or maintenance of health is an extremely important part of the overall activity.

I also have a rather soft spot in my heart for the faculty of pharmacy because many, many years ago the dean of the faculty was Merv Huston and he used to play alongside me in the university symphony orchestra. He used to plunk away on his bassoon and scare the hell out of me. I used to play alongside him, so I have a long association with the faculty of pharmacy. I have not had the opportunity to visit it, but I've been invited and am hoping to visit with them fairly shortly.

MR. MITCHELL: Thank you. I would like to pursue that just one step further. It seems to me, Dr. Spence, that your answer relates to support for operating costs, personnel costs, and doesn't address directly beyond support for the Slowpoke reactor perhaps the need for capital expenditure to improve their labs, for example. Am I misunderstanding you to that extent, or is there support potential for their capital requirements? Or is it possible for them to get some of the space that exists in that clinical research building which is available to medical researchers on some basis?

DR. SPENCE: As you know, the university has the title to the buildings. The foundation has a say about who goes into it for the first 10 years of the life of the building. We have identified the fact that research groups will go in there, and the foundation is always open to proposals for the type of group. So what would be necessary would be for the faculty of pharmacy, for example, to come forward with a group initiative that would be of a high calibre and this would be seriously looked at by the foundation.

In terms of the renovations of the buildings themselves, these are university buildings, and apart from the two buildings we built because of the necessity to have space, the foundation has, I think quite properly, really tried to stay away from the bricks and mortar issue. Buildings have a way of eating up enormous amounts of money, and I think the foundation quite correctly has made the decision that people are the gold of the system and has invested in people. So I think it would be a lower priority in terms of the renovation, even recognizing the very real need. Probably we would get on a priority basis a bigger bang for the buck by funding people than by funding buildings.

MR. MITCHELL: My third question concerns how it is that you specifically choose to fund research into one given area or another. I know it's in part on the basis of competition or interest or what minds are available and are interested in a given area. But I have an interest that's been kindled as a result of the experience of a constituent family in the area of SIDS. It's very difficult to get a handle on what kind of research is being done in SIDS – probably not a lot, I think, or it's just in an elementary stage. How is it that an area like that could come to the attention of the foundation, could be elevated in the set of foundation priorities for funding? What does a group that's interested in SIDS have to do to capture your imagination?

DR. SPENCE: Well, I think what the group would want to do would be to focus attention on the hospitals and medical schools, because these are the people who, if you like, turn to the foundation and access the foundation programs. The foundation doesn't actually start a thrust by itself. The history of targeted research has been rather poor anywhere in the world. I mean, if I knew the answer to something, I would go in that direction, because I'd just love to go to Stockholm and get the Nobel prize, and every investigator would. So if we knew the answer, we'd go right away.

3:11

But the point is that it's really putting together a whole bunch of little building blocks. If you look at the background behind the Nobel prizes, it's taking a whole bunch of unrelated pieces of information – if you like, a bunch of bricks – putting them together and building a house. Now, 10 years ago if you'd told me that I as a researcher was working in an area that was relevant to SIDS, I would have said, "You're crazy; I am not doing anything with SIDS." What I was looking at was energy metabolism in children, how children build up the energy they require to make their hearts beat and their brains develop and so on. Now, it turns out that approximately 5 to 10 percent of the children that have died in our children's hospital in the maritimes in the last little while with SIDS turn out to have a metabolic defect, if you like, a defect in their energy metabolism right along the lines of the research I was doing. Yet I did it for 10 years without ever knowing that it had any relevance to SIDS whatsoever. So all of a sudden it came into conflux.

So the best thing we can do to support the activity in any disease is support it on a fairly wide base, because you never know where the whole stuff is going to collect together. If somebody had told you 10 years ago that the work Mike James, let's say, was doing over at the University of Alberta, X-ray crystallography of protein, would have anything to do with AIDS, he would have burst out laughing. But in point of fact, the structure of the AIDS virus is critically important and crystallography is important to that type of activity. So it falls into place. But when you target, the only time you're ever successful in targeting is if you know exactly where you want to go, and for most of these diseases we don't. With SIDS, for example, I think the part I was looking at is a very small part of the spectrum. SIDS is a very broad thing, and there are a lot of other things in it. But we'll pick them off one by one. It'll take time, but we will get it.

MR. CHAIRMAN: Thank you.

The Member for Edmonton-Centre.

REV. ROBERTS: I'd like to turn attention to the technology transfer grants out of the heritage medical research, and just for the sake of discussion I would like to have more information than is provided on page 27 of the report. Am I to understand that by these technology transfer grants in a sense what's basically happening is that high-risk, highly unproductive research in terms of investment return goes on at public expense, and then when it becomes profitable in the health care field or industry, private industry picks it up and takes it on and markets it for the betterment of health as well as for the betterment of their bottom line? I'm sure that's probably phrasing it too cynically, but can you fill me in a bit more just in terms of where an intellectual property ends and where profitability begins with technology transfer?

DR. SPENCE: The technology transfer initiative. What we're basically talking about is taking the bright idea of the researcher and bringing it out to commercial feasibility. I would point out that I think that activity involves 15 percent science, 50 percent marketing strategy, and probably 40 percent luck, if those numbers add up right. Okay? The intellectual property – and you're quite right; that's the nub of the matter: where does the patent licence and so on lie? That lies with the investigator and with the institution. So generally, if you like, the intellectual property is retained by the institution or the investigator. Where it is given to a private company insofar as these grants are concerned, we ask for a payback. So in other words, we get the grant paid back to us. If the advantage lies to the university, then we don't ask for a payback and we make the assumption that the university will be able to increase its academic activity. Because universities are not supposed to be profit-making foundations, they will be able to increase their academic activity and that will go appropriately.

We try as much as possible to ensure the economic advantage to the province of Alberta, and if there is not to be an economic advantage to the province of Alberta in terms of a subsidiary company or a licensing agreement which has part of the activity spin-off in Alberta, then we would not be interested in it from the point of view of the technology transfer. If it were to go off island, I think we would probably ask for a payback, because it's quite possible it would move out.

The idea of the technology transfer is to get it so that it's sufficiently exciting, that somebody big will move in and buy in. That's the idea of it. So if you like, it's like running a chunk of

meat through a school of piranhas. What you hope is that somebody's going to bite hard and come in in a major way.

REV. ROBERTS: Well, somewhat related to that then, I want to get back in a sense to where we can get some more money for you guys. I must tell you, sitting next to these Tories as I have for the last couple of years, I don't think we're going to get it out of this government. I'm just not optimistic that government is going to move to increase your endowment, and despite what Hyndman and the rest say, health research isn't going to get much either. Maybe I'll be surprised.

What kind of approach have you taken? This is a good Tory question, I might add. What sort of approach are you taking to major players – the piranhas, so to speak – in the health care field? In a sense if they're going to benefit from technology transfer at some level and the rest or other efforts you're doing, to what degree can, say, Crownx corporation or big pharmaceutical firms or the rest through their capital endowment funds help to donate to heritage medical research funds? Let's hear from Crownx.

MR. LIBIN: Well, my understanding of that problem is that the way the fund was originally established through the Act in the Legislature prohibits us from getting money from anyone with the exception of the government of the province of Alberta.

REV. ROBERTS: Is that right?

MR. LIBIN: We have no ability to go to the private sector or take charitable money; we're a nonprofit organization. I think at the time it was established – and we alluded to that earlier – there was the understanding of: let's see how this develops and then look at it again in regards to inflation and in regards to the growth possibility. I suppose at the time my understanding was that there was $300 million taken from the Heritage Savings Trust Fund and advanced to the endowment with the thought that at a future date, if we were successful, that would be revisited to take a further additional sum out of the Heritage Savings Trust Fund and bring it to the endowment.

MR. MITCHELL: Point of order.

MR. CHAIRMAN: Point of order.

MR. MITCHELL: Mr. Chairman, we were concerned that this might occur. Here's an idea that possibly we'd like to make a recommendation about, but given the deadline of 4 o'clock this afternoon, it makes it reasonably difficult to do that as effectively as we might. Is there any chance for an extension, or are you going to make us hand scrawl something?

MR. CHAIRMAN: If the Chair recalls correctly, we allowed amendments to recommendations after the deadline last year for one day. So perhaps if the member would make up a recommendation, we'll read it in at the end of this meeting and you could amend it to the legislative secretary tomorrow.

MR. MITCHELL: I won't pursue it further, but . . .

MR. CHAIRMAN: That would allow you to put in a recommendation within the time requirements, if that's acceptable.

REV. ROBERTS: My understanding is that Mr. Libin is saying that's right in the Act. It would take an amendment to the Act, not just a recommendation from this committee, although we could recommend to amend.

MR. CHAIRMAN: You have a final supplementary.

REV. ROBERTS: Yes. In some sense those questions are from last year's report and going from bench to marketplace, and I have some real trouble with that. I'd like to go from bench to bedside and see how more of these innovations and research projects can really help health for patients in the hospitals and the rest.

3:21

It came to my attention last week, I believe, that there's been some terrific work done with interleukin II, a cancer drug which has had good public funding for pure research around it, good funding for applied research. Now it's about to be implemented at the bedside and there's no money for it. There are 16 people who have cancer in Calgary who can't benefit from this because there's not $149,000 available for its implementation at the bedside. Do you see this anomaly continuing, that in fact you and your researchers might be developing a number of things, whether it be for diabetes or arthritis, all the things you discussed and others, but when it actually comes to the application of them at the bedside, the implementation through operating funds of hospitals and the rest, in fact there's no money. The research in a sense has to wait on the shelf until more bedside moneys are available. Is that happening more and more and with the interleukin case as well?

DR. SPENCE: Well, the type of study you refer to is what we sometimes call a clinical trial. What happens is that a researcher gets an idea for, let's say, a new form of therapy. We can use interleukin II, for example, if you like. This is a small protein molecule that turns on some of these white cells that chew up things in your body. Indeed, the thought is that if you could turn on these things appropriately, they would destroy a cancer. Now, you get this idea and test it out on a small experimental animal or some small system and see that it works. Then you go into the various phase trials of it, which means that you must try it out in a number of experimental systems, usually in an experimental animal, before you can take it to man and try it there. You have to try it on a fairly large number of individuals to prove that it's effective and does no harm. This is an expensive process. It's underwritten in part by the drug companies, if they happen to be interested. If it happens to be something that a drug company is not prepared to buy into, then it is funded a lot by organizations like, for example, the Medical Research Council or others. By us it would be funded probably through the medical innovation fund, if you like. That would be part of the technology transfer process, because this is part of the technology transfer process.

There is a very rigorous set of criteria for putting these things in place. In other words, medicine is full of things that have gotten in there without ever being tested and should be taken out. So now, rather than let things in, they put in a lot of hoops, if you like, that it's got to go through to make sure it works and to make sure it's not dangerous and everything else. That is the sort of thing that is competing for a relatively limited number of dollars in terms of putting it in place. I recognize the problem – okay? – and with more resources perhaps one could address it, but I would defend the system because I as a physician don't particularly want to be using that type of therapy unless it has been totally and thoroughly sorted out and proven. There's a

competing series of priorities for this. It may be that there is another idea and that one sounds very attractive, but it may be that there are two or three other ideas that have a higher priority in terms of the number of individuals affected, in terms of the disease burden, in terms of the likelihood of it working and they have misplaced it. It's a question of priorization, which unfortunately is something we all have to deal with every day.

If I might just turn to another one, just make a comment on another point you have raised, which is the likelihood of this or any government in providing additional resources. Let me point out that governments are elected by people and that the people of this province and of this country have sent a very clear signal to the political system that they value the health care system and health above everything else, because they have clearly shown this in their voluntary giving and in everything they do. I think the public is onside, and I would respectfully submit that if the political system doesn't come onside, it will be in trouble.

MR. CHAIRMAN: The Member for Westlock-Sturgeon.

MR. TAYLOR: Thank you, Mr. Chairman. I guess this would be along Dr. Spence's line. We have much to do in this committee – I should say "to-do" by fuss, in the old maritime idea, rather than work – on the question of drug research. We have an alcohol foundation which we think is doing a good job. However, the government has dreamed up more for PR glitz and that, that there is a vast number of people out there worried about children and their friends being subverted by substance abuse, which may or may not be true. The point is that in medical research – I wanted to ask you whether we are doing anything in this foundation in the line of drug or substance abuse either on the material itself, what the substance does, or the psychological. I think a recent *Atlantic* magazine, for instance, came out and said that most of it is up here and we're wasting a lot of our money chasing the substance. I was just wondering if you had done anything along that line or are thinking of anything along that line.

DR. SPENCE: The foundation does support a number of investigators who are working quite directly in this area. As you know, most substance abuse is because it feels good; in other words, the individual gets a high. What this involves is playing appropriately with certain pleasure senses, if you like, in the brain. We're just slowly beginning to understand this. We have a density of people in this province who are really great in brain research, both in Edmonton and in Calgary. We've got first-class investigators in this area, and they're probing the mysteries of what turns on the brain and turns it off. So ultimately when we understand this pleasure versus pain versus addiction, hopefully – hopefully – one then will be able to design a more rational way of coming at it, because addiction is a terrible thing. Once you're hooked on it, it's very difficult to turn away from it. Physicians are a high-risk group. Anesthetists sniff their own gas – this sort of thing – and this is a group that should know better. It's a complex field, but it's certainly one that we are very interested in and one where we support a number of very competent investigators that I think are making a real mark in this area.

REV. ROBERTS: Do you know what turns Nick's brain off?

MR. TAYLOR: I wish you luck, because there are other things that turn on and feel nice and we haven't been able to stop that in a few thousand years.

MR. CHAIRMAN: I would ask the member not to enlarge on that.

DR. SPENCE: Mr. Chairman, I wouldn't want it in the record to say that I was against pleasure. I'm sorry if I gave that impression.

MR. TAYLOR: We did think there was a Calvinistic school coming out there for a minute or two.

I'd like to switch the next couple of questions over to Mr. Libin then. It's on income again. He mentioned that he didn't think the heritage trust foundation was set up to take money from private. I noticed one of the [inaudible] that takes some joy out of the fact of that laser cutting machinery entrepreneurship. Are you set up to derive any income from patents, or is there any effort to try to patent from the results or some of the successes made by the foundation?

MR. LIBIN: Our aim in the technology transfer piece that we're doing, Mr. Taylor, where we're doing some funding, is to try to recover our money. In some instances we'll ask for two times our money to cover our costs, but it's not anticipated to make a profit.

MR. TAYLOR: I'm sorry. You say that there hasn't been any effort to patent . . .

MR. LIBIN: We're not basically set up to make a profit.

MR. TAYLOR: I see. So there's been no real pursuit to try to make money out of the research. Maybe we could go on that further, because this all helps us if we're going to get you money.

I hope the water went down the wrong way because of the question I was asking, for money, rather than massaging your brain for joy here.

MR. CHAIRMAN: Hon. member, finish this question.

MR. TAYLOR: On the last question again, after income. Is there any effort made to milk – I don't like that word – co-operate with the federal government for funds to the foundation, to derive funds from the federal government that may be available for research?

DR. SPENCE: Most of the investigators that we fund are actually very successful in attracting federal money. For every dollar the foundation is putting in, we are getting back at least a dollar in federal funds. Let's say we invest $27 million. Those guys are pulling $27 million to $30 million back from the federal government and voluntary agencies which comes into the province. It wouldn't come in here otherwise; it would go somewhere else. It would go to Ontario, maybe even to the maritimes, but it wouldn't come here. So in other words, for every dollar we invest, there's another dollar coming back in from the federal source. We're basically, if you like, returning two for one. I think it's a fairly substantial economic lever, if you like. In that sense it is a very co-operative activity, because they are funding the projects and we're funding the people. We work in synergy. We also have very close liaison with the feds. For example, the president of the Medical Research Council will be in Alberta next month and will be meeting with our investigators here and myself and others. We enjoy a good working relationship, and many of our investigators serve on their

committees and so on. So I think we're trying to maximize that one.

3:31

I should point out that the take from Alberta, I think largely because of our heritage fund investigators, has been going up in the federal sense, whereas Ontario and even Quebec have been holding stationary. So Alberta is the only province that has been increasing its take from the feds, you know, at the expense of some of the others.

MR. CHAIRMAN: Thank you.

The Member for Wainwright, followed by the Member for Three Hills.

MR. FISCHER: Thank you, Mr. Chairman. It's been a very interesting afternoon listening to all of our research problems. I am hopeful that you will be working on curing the cold pretty quick. I'd like to see that cured tomorrow morning, if we could.

My questions are a little more on the management process. If I can refer you to page 35, I notice in the revenue you've got $29.3 million in 1990 and $34.7 in '89. Why is there that difference? Why is it down? I guess what I'm getting at: I'd like to know the process of transferring from the endowment fund to your budget here.

DR. SPENCE: You're quite perceptive. What you're seeing there is the difference in the transfer down from the main fund. What we do is advise Treasury of our projected requirements for the next while, and then we ask them to transfer down funds, if you like. We transfer down funds at a certain rate. The difference between 1989 and 1990 really reflects a difference in the revenue surplus at the beginning of the year, and this is why we transferred less funds, if you like, in this year than we did last year. We had transferred more in anticipation of the fact that we were going to require a little more. It didn't get used simply because there wasn't the number of meritorious things that we felt were appropriate for funding. Therefore, that was carried into the next year, and we didn't transfer as much.

We try not to transfer any more out of the main fund, if you like, than we have to in order to preserve the corpus intact and of course to try to generate as much interest as possible. I just wish it would generate a little more, because the erosion is there. It's sort of steadily being nibbled at, unfortunately. Despite Mr. Crow, it seems inflation is still with us.

MR. FISCHER: On the bottom line there your deficiency is in a minus position both years. So then you go back to the board of trustees and ask them to transfer a little bit more out of the fund for that deficit?

DR. SPENCE: No. If you look across at the top of page 36, you see the revenue surplus at the beginning of the year, and it becomes $5 million at the end of 1989. In 1990, because of that deficit of $4,222,000, we're down to $926,000 surplus. So what's happening is that we're just pulling that down by transferring a little less.

MR. FISCHER: Okay. My last question then. We were talking about attracting research dollars and private-sector dollars. Do you feel that there are a lot of private-sector donations we're not getting at that we could get at if we changed things around? Do you feel they're wasted out there or that we should be getting hold of them? Could you elaborate on that a little?

DR. SPENCE: Yeah. I guess the only thing I could say about that is – I've only been in this job two and a half months, but I have been down to Ontario to talk to the people in PMAC, the Pharmaceutical Manufacturers Association of Canada. We've talked to them about investing in Alberta and getting interested in Alberta. For example, that ulcer thing that I referred to: there's a drug company putting over a million dollars into that. There is a contract now at the University of Alberta for $1.5 million from one of the drug companies looking at hepatitis B and a new vaccine for that particular form of hepatitis. It's a venereal disease that is with us. There are a number of these that are being worked on.

I think we can increase the take, and I think that the heritage is one of the lodestones, because what they look like is the brain trust, if you like, that we've been able to set up with the heritage and what's flowing out of it, and it's attractive for those companies to come in this direction. I think we have to work a little harder at it, but I'm hopeful we will be able to access it. The one thing I would point out is that this is enormously competitive. You're competing with the world in this regard, and of course if a multinational can go to Italy or Basel or Korea, they will go. So we have to have that extra wrinkle, the Alberta topspin on it, if you like, to try to get them here.

MR. FISCHER: Does that . . .

MR. CHAIRMAN: Final question.

MR. FISCHER: How many questions have I had?

MR. CHAIRMAN: I believe you've had three questions, hon. member.

The Member for Three Hills. [interjections]

MRS. OSTERMAN: Thank you, Mr. Chairman. I don't know whether my colleagues are going to continue to have a discussion here or whether we should carry on.

MR. CHAIRMAN: No. Hon. Member for Three Hills, please proceed.

MRS. OSTERMAN: Good afternoon, gentlemen. It has been most interesting listening to the discussion this afternoon. I think it was Leonardo da Vinci who said that if you want to see the whole picture, you have to keep backing away far enough until you can finally see it. I feel like I'm flying at about 50,000 feet, and I still haven't seen the whole picture.

Research is, first of all, the escalation of the discoveries and also the amount of funding that is, I think, in a global sense going into research and has contributed to all of that. We're very proud of the critical mass you are now part of that is attracting people from many, many places and particularly of seeing the names of people that I understand are Albertans who 20 or 30 years ago we would have seen go somewhere else in terms of their work and are now able to be here. I think of Dr. Warnock – is he not an Albertan? – who is in the islet transplantation research and so on. So with that kind of background, I guess again looking at the big picture and how we utilize the brain trust we have here and the sharing of information, that I suppose creates a synergistic relationship.

Is there actually an information bank, a computer that you can plug a subject into? You go to it, you put in some information that deals with the subject area, and it pulls up the papers that have been published. I'm hearing the facts that so many

thousands of papers are published. I have family that is in the research area, and I am boggled by what is happening. I look at a son's mail practically every day, and I'm saying to myself, "How will he read all of this in order to further the work he is in?" It happens to be in a medical area. Is there such an information bank? How do researchers keep in touch?

DR. SPENCE: Well, I'd say it's a very complex process, and it's actually kind of fun. The fastest one is word of mouth. In the immediate area in which you work you generally know the experts. For example, in the diseases that I'm interested in, I know the people around the world that would know something about it, so I'm able to pick up the phone and phone, you know, Marie Vanier in Lyons or somebody else in Shanghai, et cetera, and get what they're doing right now in terms of the immediate information. But that's a very tiny segment in my own specialized, little, wee area that, you know, at 50,000 feet you'd miss entirely.

In terms of the larger picture, then, I would go to scientific meetings. All scientists go to scientific meetings and listen to their colleagues and look at the papers that are being presented and listen to the information. But even that is not enough. Finally what I do is go to the library, which is our ultimate resource. We are fortunate in North America to have the national Library of Congress, which is a vast medical library and maintains almost every medical magazine that has ever been published. They have a computer network which is tappable from anywhere in North America, so that we can go in – for example, if I wanted to ask a question about AIDS, I'd probably get 10,000 articles spit back at me, but I can keep narrowing down until I finally get the information I want.

3:41

So you're quite right; you just get deluged with data and facts. But with a certain amount of hard work you can cone it down and get the relevant information. You can even ask the computer if you can afford the cost. You can even ask the computer to spit out the articles at you, and it will print them, but most of us can't afford that kind of on-line cost and we end up finding out where the articles are and then going to our own library.

So that's the sort of way we try to keep up, because the last thing you as a scientist want is to reduplicate something that somebody else has done. That's the kiss of death, because you're then behind the eight ball and nobody really wants it. You want to be out there right in the front: the novel and new idea.

MRS. OSTERMAN: Mr. Chairman, just moving on to another point, I think of two and a half million Albertans indirectly supporting the research that is going on, and that really is quite tremendous. I wouldn't want us to underestimate that today, because as Alberta, like any other place, sees its ups and downs in a fiscal sense, we have to be mindful of what our base of population can support. As meritorious as all the things that are going on are by way of support, we have all these other things that we must juggle as individual MLAs. I think all of us smiled as you talked about the brain; I think we looked at each other, saying, "Maybe they'll find out what's wrong with him." Obviously, we need to have a sense of humour about a very serious subject as well, because health is something we certainly take very seriously.

As I read about the discoveries and visit with my own family, I have this incredible sense once again that we are almost making discoveries faster than we can afford implementation. As quickly as something is built – whether it's a diagnostic tool or something – there's another thing on the horizon. So would you say that that kind of discussion in terms of what it is that will be implemented . . . I mean, just imagine the 83 lay people – if all of us come from different fields – who arrive at this Legislature. We are to make comments on a budget in health that is over $3 billion – we're now talking about close to a third of the Alberta budget – and all over the province people are crying out for something. It's not necessarily in health care, but a lot of it is in health care. Where and how would you – and I'm particularly looking now at Dr. Spence – say that lay people who must take these responsibilities put it into focus with respect to making judgments about how much funding is appropriate?

DR. SPENCE: Well, I think it's a very awesome responsibility to have to do that sort of thing, and I wouldn't for a moment presume to try to tell people who are very experienced with this type of decision-making process how to do it. I can tell you how I do it, and that is that I try to get the best advice I can from people whose opinions I value. For the foundation we have an international advisory panel made up of the best scientists we can find around the world, and for the financial side of things we go around and talk to the best people who can advise us on the financial side. They will tell us that this is a good area or this is not such a good area. What I'm hoping is that they guess right 75 percent of the time. There will be a number of times that we will go down blind alleys, but that is the nature of human endeavour. So I guess you do your best with the best advice you can get.

What I would hope is that the members of the Legislature would feel that the advice they're getting from the heritage foundation is good advice, but I would welcome the opportunity to have others comment on this one as well. I do think that the health area is important: I mean the priorization of trying to figure out ways to manage it, if you like, or handle it, or work within this $3.5 billion and have the feeling that we're doing it wisely and well. I think we all want that. What I'm saying is that I think research is an almost indispensable part of that. Because you've got this $3.5 million engine, you've got to figure out where it's going, and that means somebody's got to go out in front and pilot, figure out some of these routes, take a look at them. That's the nature of research: try out something on a very limited scale before you divert the whole system over in that direction, try out something else, and try to come up with the best path and the best advice you can give in terms of directions to go. That's the nature of research. It's really asking the questions where, why, and how. When you get the answers, then hopefully you know which way to go with this massive juggernaut.

I think the last thing I would want to do would be to advocate a course of action that was going to damage that system or disadvantage the people of Alberta. But I truly do believe that the research area is the way to go. That's the knowledge for tomorrow. I mean, that's what we will pass on to our children, and I think that it's a fundamental human activity. We all do it; we're all curious. I think it is, if you like, the life belt of the system.

MR. CHAIRMAN: Final supplementary.

MRS. OSTERMAN: I appreciate those comments, Mr. Chairman. I think that in a very basic way one of the things we

wrestle with is not whether research has merit or not. It is: what is the balance in terms of the actual delivery in the system, and how much research should be done? As we look at the demographics and we hear more and more about how many of us will be needing health care in our elder years on past the year 2000 – and there are a number of us sitting in this room that will be in that situation – the question to be asked is: is there an age at which you say there will be no more consideration of a heart transplant, or there won't be this or there won't be that? There are so many very expensive processes that one could undertake, and I don't know whether it remains for us to put a lid on the amount to be spent in that area.

I think you made the comment earlier, Dr. Spence, that you're just going to go along, and you're going to deliver, that your job as a doctor is just to serve the people; it is not to make a judgment about whether they have abused themselves to the extent that we judge whether or not they get service. I guess we will be left to our own sense of balance, listening to people like you and, obviously, Mr. Libin in terms of partially the business end as well as the foundation as to what that balance would be. I guess that's what makes an afternoon like this afternoon very important as we consider those kinds of things.

Thank you, Mr. Chairman.

MR. CHAIRMAN: Would you like to make a comment?

MR. LIBIN: Yeah. One of the things, I think, that's worthy of thinking about is that we talk about a $3 billion-plus Health portfolio. To the best of my knowledge, there is very little revenue being spent on R and D in health. This is what we're really talking about here: this major portfolio being taxed to the limit by its needs of this very vast system. This was one of the points that was made by the users, the health providers in the province, to the Hyndman commission, that we should be taking some percent – and we started off with a minimal 1 percent – and say: let's spend this 1 percent on R and D in health. This is really what we're talking about, because right today we're not concentrating on and we're not trying to develop a wellness program; we're trying to treat sick people. But unless we can start to keep people out of the institutions and keep them well . . . And that has a direct cost.

I think if one could dream a little bit here and look down the road and spend what we're talking about getting involved in, if we were able to gather a number of health care researchers to the province of Alberta in the same way that we have brought basic researchers, biomedical researchers here, this would have a direct benefit. We'd be directly able to see the linkage between the costs and what you're spending on health care.

Going back to my hospital time, we know that today 40 percent of the surgical procedures that are done in the Foothills hospital in Calgary are done on an out-patient basis. That's absolutely something brand new, and that's because of the initiative that's been taking place down there and the cost consequences of trying to examine: why do we treat this patient in this way; are we doing the right thing, or is there a better way to do it? This is really what we're talking about.

MRS. OSTERMAN: I appreciate that. Thank you.

3:51

MR. CHAIRMAN: Thank you.

In view of the time – we're drawing close to the time of adjournment – the Chair is going to take the liberty of digressing for just a moment and letting two members read in their recommendations. Then, if we have time, we'll revert to questions, and we can end the questions. I think it's quite important that these members get an opportunity to read their recommendations in today.

The Member for Calgary-Fish Creek, followed by the Member for Edmonton-Meadowlark.

MR. PAYNE: Thanks, Mr. Chairman. I should explain I'm returning to Calgary this evening and won't be back in Edmonton until early next week, so I welcome this chance to get back in with what will be my final recommendation.

It is recommended that additional endowment funding be provided to the Alberta Heritage Foundation for Medical Research to conduct systematic, ongoing research into the Alberta health care system with the objective of enhancing the system's effectiveness and efficiency.

MR. CHAIRMAN: Thank you.

The Member for Edmonton-Meadowlark, with your recommendation.

MR. MITCHELL: Can I ask a question before I propose this recommendation?

MR. CHAIRMAN: No, I'm sorry, member for . . . You are the next one up. I'm sorry, but don't run us past two minutes to 4, however you want to do it.

MR. MITCHELL: If I get a yes or no answer then I can make this recommendation or not make it. I'd just like to ask Mr. Libin . . .

MR. CHAIRMAN: Is this your question?

MR. MITCHELL: Yeah, this is my question, if you would permit me, because I won't make the recommendation unless I get an appropriate answer.

MR. CHAIRMAN: Okay. But this is the question that you're being recognized, hon. member.

MR. MITCHELL: I'd like to ask one question and then read the recommendation, if that would . . .

SOME HON. MEMBERS: Agreed.

MR. CHAIRMAN: All right, agreed.

MR. MITCHELL: Thank you.

To Mr. Libin. With reference to your point earlier that you're not able to solicit funds from the private sector, is that something that you think would be appropriate for the medical foundation to do? It certainly seems to me to be the case that it would be appropriate.

MR. LIBIN: I believe one would have to study that completely, because I think it has just a very substantial consequence to where we've been and what we've been doing and the planning of the model that was created in 1979 by the Act. So I don't believe there's a simple yes or no answer to that. I think we have looked from a legal point of view at what options might be available to us in a change of the legislation, but at this time, I'm sorry, I can't give you an answer that it would be . . . I think we could look at that issue.

MR. MITCHELL: We're limited in what we can recommend. If we recommend to allow you that possibility, then you may or may not do it, depending on whether it's reasonable to do. So I'm going to proceed with the recommendation

> that the legislation governing the operation of the Alberta Heritage Foundation for Medical Research be amended to allow the foundation to pursue private-sector funding to supplement its research funding initiatives.

MR. CHAIRMAN: Thank you.

Hon. members, I think we had agreement from Edmonton-Meadowlark that that would be his question. I'll allow one question from Edmonton-Centre, without any supplementaries, and we'll wind up the afternoon.

REV. ROBERTS: It's just some quick update. I am continually plagued by this concern about medical research into genetics and mapping out of the human gene and all that that is entailing. Now, we don't have five minutes to get into all of that, but can you give us a quick update in terms of where that sits with the medical research foundation? Is the research into mapping out the gene and all that is going to entail for genetic engineering and medicine in the future?

DR. SPENCE: Some of the foundation scientists are certainly actively involved in the process of mapping or locating things on the human gene. The situation at the present time in terms of mapping the human gene: it has the sort of detail that we know the location of about, say, three places in Canada. I mean, it's really a very coarse map. We're sitting out at satellite distance trying to look at detail, so that the map is just slowly being filled in, and Canadians are contributing to this, as are Albertans as well.

At the same time there is a very active dialogue about the bioethics of the whole field of genetic engineering, transplantation, and so on. But I have enormous faith in the biomedical community. I think they recognize the strengths and the dangers of the sorts of things they're doing, and I think they will work together with the general public to ensure that appropriate safeguards are in place. I don't think it's the sort of decision that can be made by scientists themselves.

MR. CHAIRMAN: Thank you.

To our guests, on behalf of the committee, I'd like to say that I know that your visit with us today, the two hours you've spent with us, has renewed our interest in the work you're doing over at your foundation. I think you have some avid supporters here on the committee for the work that's happening there. We appreciate you coming here and giving us the insight that you have, and look forward to having you come before the committee next year. Perhaps the committee may opt to visit some of your facilities again next year to see what's happened in the time from 1989 to 1991.

The Chair would entertain a motion for adjournment from the Member for Three Hills.

MRS. OSTERMAN: I would so move, Mr. Chairman.

MR. CHAIRMAN: Thank you. All agreed?

HON. MEMBERS: Agreed.

MR. CHAIRMAN: Opposed? The meeting stands adjourned until Tuesday, November 13, at 10 a.m., when we will begin to debate the recommendations before the committee.

[The committee adjourned at 3:57 p.m.]