Dear colleagues and friends, new and old members of the Lawson Wilkins Pediatric Endocrine Society and most welcome guests. The honor of serving as President of this Society carries with it the privilege and responsibility of formulating and delivering the annual Presidential address. What to talk about exercises one’s mind for several weeks if not months before the meeting. There are no guidelines and no published record of prior addresses. One can get an idea by perusing the titles in past programs. Or, one can try to emulate the topics of the President’s of like-minded if not identical societies such as the Society for Pediatric Research, the American Society for Clinical Investigation, their senior counterparts the American Pediatric Society and Association of American Physicians or our own particular senior counterpart, the Endocrine Society. Each publishes their annual Presidential address which makes for interesting historical and scientific reading. Whatever the group, the speaker generally focuses on one of four major themes.

1. A state of the art address on some clinical or research topic close to the heart of the presenter.
2. The concern for the “vanishing investigator” and the lament for inadequate funding generally. This is especially true for concerns to develop the next generation of dedicated physician-scientists in the face of ever increasing demands for clinical service and sponsored clinical trials.
3. A personal reflection of the recent past and a vision of the future.
4. A state of the union emphasizing strengths, weaknesses, opportunities and threats.

My colleagues from the division of endocrinology at the Children’s Hospital of Pittsburgh and the University of Pittsburgh School of Medicine, Allan Drash, Tom Foley and Peter Lee, all of whom have served as Presidents of this Society, have already addressed the first three- that leaves me with a “state of the union” genre.

I do appreciate this opportunity. To chart the course, allow me to give a brief history in time of the LWPES. (slide 1) LWPES was an outgrowth of biennial reunions begun in 1961 and organized by Drs. Robert Blizzard and Claude Migeon for alumni of the John Hopkins training program to which other pediatric endocrinologist were frequently invited. In a short six years, attendance rose from 35 to 100. In the spring of 1971, this group determined that a formal Pediatric Endocrine Society would be desirable, named it after the pioneer of pediatric endocrinology at Hopkins, Dr. Lawson Wilkins and set about building the infrastructure of by-laws, officers and committees. A membership of 160 approved the constitution and by-laws during 1972-1973, and the first official meeting of the new Society was held in San Francisco in May 1973 organized by Dr. Marvin Cornblath. I thank Dr. Delbert Fisher for permission to obtain this information from his yet to be published history of the Pediatric Endocrine Society. Some of you may have considered the founders of our Society as steeped in past history (slide 2).
As you can see they were the framers of the constitution and careful perusal shows familiar faces including Drs. Robert Blizzard, Mel Grumbach, Del Fisher, Jud Van Wyk, Lou Underwood, and Felix Conte—the center person is intended to represent Claude Migeon. They’re planning a bill of rights for children (slide 3). Today’s meeting represents 30 years of our Society and at 30 one supposedly reaches strength (slide 4). The quote is from the “Ethics of the Fathers” (ch.5-verse 25).

We have indeed grown to strength (slide 5). Membership is approaching or has exceeded 1000, depending on how one views emeritus and other members. We will likely exceed 1000 active members in the near future, a robust number if indeed members stay active in the affairs and well being of our Society. Our financial situation is very healthy, thanks in part to bequests. The number cited, net assets in excess of 1.5 million dollars, already have built into it anticipated expenditures including obligations for awards listed. Please note that this financial situation permits our Society to sponsor an additional scholar this year (slides 6 and 7). The quality, qualifications and number of applicants for the available awards have appreciably risen in the past few years, a very welcome trend. More importantly, a review of the current locations and careers of prior scholar awardees, particularly those dating back a decade or more, shows several already in academic leadership positions and the greater majority of recent scholar/fellowship awardees in research oriented academic careers. Several of these awards have only been established in the past three years or so, thanks to our corporate advisory board whose support is hereby acknowledged (slide 8). One award was withheld this year because it specifies a particular field of study, the thyroid, lately neglected. (slide 9) Neglect is unjustified because of:

A.) Our incomplete understanding of the molecular basis of thyroid gland organogenesis,
B.) Preliminary evidence that maternal hypothyroidism in the first trimester may impair intellect in the offspring
C.) The unresolved global issues of iodine deficiency and endemic cretinism, and
D.) The impact of changing patterns of iodine consumption in the USA on thyroid function and the interpretation of thyroid function tests. The opportunities clearly exist.

Opportunities for scholarships awards targeted at diabetes mellitus also have expanded. Concerned at the declining number of pediatric graduates entering the field, and aware of the student’s burgeoning debt burden, averaging at least $75,000 nationally and about $125,000 annually in our medical school, the Juvenile Diabetes Research Foundation launched a program to fund three annual fellowships. These guarantee three years support, at $50,000 per year, for stipend and supplies and opportunities for funding for debt reduction (slide 10). In addition, a major program for funding diabetes research has been launched by the National Institutes of Health, including the creation of a new field of diabetes training programs. These newly funded programs are summarized in the slide (11).

The LWPES is officially involved in the selection of awardees for the JDRF program and members of LWPES participated in the formulation of the guidelines for the NIH programs. Together, the LWPES, JDRF and NIH funding opportunities have acted as strong inducements for career choices in pediatric endocrinology, reflected not only in the number of research and early career award applicants, but also in a significant surge in fellowship applicants to the 61 programs currently approved by the American Board of Pediatrics (slide 12). As shown on this slide, there has been a steady increase in pediatric endocrine fellowship trainees over the past 5
years and a dramatic 40% increase in first year fellows this immediately past academic year. Moreover, the percentage of American medical school graduates has appreciably increased from just under 50% to just under 60% (slide13).

These positive developments don’t just happen by spontaneous combustion. They reflect the tireless and timely input of dedicated individuals who voluntarily provide service on a number of committees. All are listed in the front pages of the Society’s directory. I would like to acknowledge the contributions of each and every member that permit seamless smooth functioning of our Society (slide 14 and 15).

The executive committee meets twice a year in January and immediately preceding this meeting but stays in touch continually via email and other means of electronic communication. Here are some highlights:

A) Funding for a summer school preceding or following the Endocrine Society for selected pediatric endocrine fellows. This program, carried through by Dr. Paul Saenger, the incoming president, is funded by Novo Nordisk.
B) Enhancement of web based information and links including access to presentations by speakers at the symposium co-sponsored by our Society and Serono. I would like to acknowledge the efforts of Drs. Larry Fox, Ernie Post and John Nakamoto in their efforts as web masters.
C) Creation of an annual Trans-Pacific lecture jointly involving the Australian Pediatric Endocrine Group and the Japanese Society for Pediatric Endocrinology –this new program is also supported by the Novo Nordisk company.
D) A consensus conference which last year was focused on adrenogenital syndrome and this year will be run jointly with the European Society for Pediatric Endocrinology and focus on diabetic ketoacidosis –this is funded in part by Aventis.
E) The start of the development of a strategic plan
F) The responses to allegations linking growth hormone treatment and cancer.

Another highlight is this annual meeting. It is now integrated into the Pediatric Academic Society permitting us to participate in symposia and state of the art lectures not previously possible. Careful attention has been paid to the integration of diabetes, endocrinology and treatment issues so as to empower and interest as many of our members as possible. In particular, note that there are sessions for billing and case discussions that are of tremendous importance to all of us especially those in practice. And who doesn’t practice by caring for patients these days?

All of these successes reflect a mature Society with strength - but with weakness as well.

**Weaknesses**
The momentum of our strengths, only some of which I enumerated, obscures possible weaknesses. And, in the short term, there are few obvious weaknesses. In the longer view, our Society should consider and review our mission and management structure. To reassess the membership’s needs, we may need to refocus on our mission statement; one version is listed in
this next slide (16) and I invite the membership to help shape it by submitting their ideas to Drs. Gilbert August and David Allen who chair the strategic planning committee.

This strategic plan should also reassess our standing amongst the other major regional Pediatric Endocrine Societies listed on this next slide (17). We are the only Society not immediately recognized as representing our regional grouping. One new suggested name is Pediatric Endocrine and Diabetes Society of North America (PEDS-NA).

A relatively urgent matter is the management structure of our Society (slide 18). Presently, our secretary is a member, elected for a six year term. The secretary receives no salary support despite extensive and growing administrative responsibilities that now occupy about 25% effort. Secretarial office support is provided at half time salary plus office supplies, such as a computer, phone, fax, etc. This model worked well in the past, but continues to serve us well because of the extraordinary team of Hintz and Hintz-Ray and Carol – to whom we owe a debt of gratitude for bringing their talent, experience and commitment to this task. Ray and hence Carol, have one more year to serve. How and who will be able to replace them? What alternative models should be considered? Should we consider a full time secretary/administrator reporting to the executive committee to ensure the successful implementation of our strategic plan? I believe that discussion concerning these issues should exercise the minds of the membership and be conveyed to the elected representatives during the coming months – they are too extensive to be fully debated and decided on at our brief annual business meeting.

However, planning and responding to these potential weaknesses represents one of our biggest opportunities.

**Opportunities**

Other major opportunities that need exploration include:

1. (slide 19) Building a clinical research network to facilitate collaborative research on issues important to pediatric endocrinology and their patients. Initial funding has already been provided by a private endowment. We have appointed a planning group to establish governance and operating principles.

   We wish to benefit from the experience of other groups that have established such research networks and we believe that such a network would facilitate evidence-based medicine.

   This initiative is being spearheaded by Dr. Gail Richards who has prepared a handout available to all. Our executive committee has appointed a group to work with her. Again your input is welcomed.

2. (slide 20) Another opportunity is the potential for research core databases and genotyping centers that could provide valuable research and management tools for unusual conditions such as maturity onset diabetes of youth, neonatal diabetes and hyperinsulinemic hypoglycemia. I use these as examples because I am often asked whether a patient with a particular syndrome could be genotyped for confirmation. At the present time, I know of no way to get these achieved unless there is a specific laboratory with research interest in the particular area. We might also consider similar such centers for adrenal, pituitary and other conditions.
3. Another opportunity is the formal recognition of our Society as the organization representing pediatric endocrinology with voice and vote in organizations such as the Endocrine Society and the American Diabetes Association. These organizations do value pediatrics – 3 of our members, Drs. Mel Grumbach, Del Fisher and Maria New have served as Presidents of the Endocrine Society and Drs. Allan Drash and Francine Kaufman have served as Presidents of the American Diabetes Association. Nevertheless, as our Society grows, it deserves formal recognition as the representative of pediatric endocrinology. As representatives we did provide input and were in part instrumental in the JDRF scholarship program and the NIH initiatives that spurred new funding for pediatric diabetes training and research.

Finally, I come to threats.

**THREATS**

There is currently debate, more so in the European Pediatric Endocrine community than in the USA, as to whether diabetes and endocrinology are separate specialties. Some passionately contend that diabetes mellitus is a separate distinct entity and that management of children with diabetes mellitus is so time-consuming that it precludes focus on other classical endocrine disorders of the pituitary, thyroid, adrenal etc. The central role of the hormone insulin in growth, reproduction, and longevity is somehow not considered classical endocrinology. The argument that managing diabetes mellitus is so time-consuming as to preclude academic consideration dates back to the early period of pediatric endocrinology. Diabetes mellitus was not included as an endocrine disorder in Dr. Wilkins first textbook and clinics for children with diabetes mellitus were not initially part of the endocrinology service at Johns Hopkins. Dr. Allan Drash who did take on diabetes mellitus and carbohydrate metabolism at Hopkins in the early sixties has stated that “diabologists were considered different. Most were purely practitioners rather than academic teachers and investigators”. In other words, diabetes lacked or seemed to lack a strong scientific underpinning.

If that was the case then, it isn’t the case now.

On a previous occasion before this Society I proposed that the divergence of diabetes and endocrinology converged in the findings that growth hormone action and insulin were mediated by insulin like growth factors (slide 21). And the time consuming aspects of diabetes are now mirrored in the time needed to manage children with growth hormone deficiency so that classical endocrinology and diabetes mellitus have converged (slide 22).

This concept was elegantly presented in the Lawson Wilkins lecture by Dr. Derek LeRoith yesterday. Progress in understanding insulin action has only strengthened conviction that insulin is a key hormone in growth, reproduction, longevity and fuel economy.

In the 1970’s, when insulin receptors were first identified, Pierre De Meyts created a classic cartoon as shown on the next slide with his permission (slide 23). As you see, insulin action in 1977 was barely known beyond the fact that insulin bound to it’s receptor and then there was a big black box which allowed something to happen in order to achieve an effect. Compare the black box with a fairly up to date concept of insulin action as shown on the next slide (24). As
shown here, remarkable progress has been made and a paradigm for understanding hormone signaling pathways and their divergence has been created even if Dr. De Meyts is not entirely satisfied (slide 25).

When the insulin receptor is selectively deleted in the brain, food intake increases in females, males and females develop diet-sensitive obesity with increased body fat, increased leptin levels and hypothalamic dysregulation of LH leading to impaired spermatogenesis and ovarian follicle maturation. This is from the paper by Dr. Kahn’s group published in Science (Slide 26).

When selectively deleted in adipose tissue, mice display increased longevity without caloric restriction as shown on this slide taken from a more recent paper from Dr. Kahn’s group also published in Science (Slide 27).

An insulin-like signaling system (daf) in the nervous system regulates the life span in C. Elegans as shown on this slide also from Science (Slide 28).

More recently, Science magazine had a special section in its February 28, 2003 issue (volume 299, pages 1339-1359) devoted to aging with one of the four reviews devoted to endocrine regulation of aging by insulin-like signals. These are illustrated on the next two slides. (Slide 29, Slide 30).

No wonder that the New Yorker magazine in its March 10, 2003 issue can envisage an encounter between a physician and a patient (Slide 31) with the physician inquiring “how long do you want to live”. I would propose, tongue in cheek, of course, that this physician is an endocrinologist who has learned to modulate insulin action?

The point of all this is to emphasize how integral insulin action is to classical endocrinology as well as to diabetes mellitus. And how particularly disruptive to our Society it would be to carve out diabetes mellitus— or, for that matter other subspecialties, from pediatric endocrinology in general. “Beware the dangers of Balkanization”.

In this state of the union address, I’ve given a very personal view of some of our strengths, weaknesses, opportunities and threats. The Society is poised to assume a defining role in advocating for children with hormonal disorders and for training the next generation of physician scientists who will be leaders in this field. This year’s outstanding program is a testament to the advances and opportunities in our field. Joe Majzoub and his program committee including Marsha Davenport, Henry Anhalt and others have done an outstanding job for this year’s thirtieth anniversary meeting in presenting innovative science, state of the art plenary and clinical sessions with sensitivity to the needs of every sector of our diverse membership.

The unity in this diversity is our ultimate strength.

If thirty years is the time when one comes to strength, forty is when one begins to acquire insight and wisdom (slide 32). Part of my talk was intended to be a call to action to the membership – to assure that the membership becomes involved so that we move in the direction for acquiring wisdom. If the members care for this Society more than just by attending an annual meeting, I’m confident we will.
It has been a privilege to serve as your President during this past year. I look forward to working in the Society’s affairs this coming year as the immediate past president and with every confidence in the leadership of Paul Saenger the incoming president.

Thank you all.

(I would like to acknowledge the assistance of Hameed Aziz, a third year medical student at our medical center, and my colleague, Dr. Oscar Escobar in our endocrine division in preparing some of the slides. The secretarial support of Kathy Wypychowski is gratefully acknowledged).