We too rarely reflect on the delicate symbiosis between history and progress. We recognize that history depends upon progress because without it there would be nothing of note to record. Who would want to read tedious, repetitious pages through which stooped men and dreary women wander in well-worn ruts? But we are less cognizant that the converse is also true. Without a knowledge of history, there can be little progress. A clear perspective on what has gone before is an invaluable ally as we set out to conquer old scientific problems with new research technology. Without a knowledge of history, we are doomed to expend huge amounts of energy, resources, and time only to discover that our aim is off target or that, in an earlier time, a more perceptive soul with less fancy tools got much closer to the solution because he had a firm grasp of work published before.

It is ironic that Diabetes has faithfully played its part over the past 40 years in providing historical information for those searching for a better understanding of diabetes, the disease, but no one has taken time to write a history of Diabetes, the Journal. As far as I know, the only description of its history consists of a scant nine sentences in the recently published history of the American Diabetes Association, *The Journey and the Dream*. The opportunity has been missed to recapitulate the fascinating story of interesting personages and exciting experimental findings that *Diabetes* has told and continues to tell. Consequently, my swan song as editor-in-chief of the Journal will be to briefly examine its roots, development, and contributions since its inception. In the same sense that a literature review is invaluable for effective scientific direction, I hope this history of the Journal will help it see where it has been, where it is, and where it should go in its quest to become ever better.

**ROOTS AND RAISON D'ETRE**

The first volume of *Diabetes* was published in 1952, and in it, Dr. Elliot P. Joslin described the origins of the Journal (2). Before 1952, the American Diabetes Association published *Proceedings*, which appeared annually, and *Diabetes Abstracts*, which appeared quarterly. *Proceedings* was comprised of scientific articles read at annual meetings, whereas, *Abstracts* was a publication that abstracted diabetes-related articles appearing in other journals. The marriage of these two publications brought forth *Diabetes*. To put the advent of *Diabetes* into historical perspective, *Diabetes* began in the same year as *Metabolism*, whereas, *Endocrinology* and the Journal of Clinical Endocrinology and Metabolism had been in existence for 36 and 12 years, respectively; *Diabetologia*, *Hormone and Metabolic Research*, and *Diabetes Metabolism* would not come into existence for 13, 17, and 23 more years, respectively. In his commentary, Dr. Joslin pointed out that the circulation of *Proceedings* and *Diabetes Abstracts* was primarily limited to the United States and Canada and that it was the fond hope of its founders that *Diabetes* would circulate internationally and disseminate important discoveries made throughout the world. As a reminder of a more gracious time in biomedical publications, Dr. Joslin concluded his comments with quotes from Sir William Osler and Isidore,
Archbishop of Seville in the 7th Century. He used Osler to remind us that work is the master word in medicine and Isidore to exhort us to "learn as if you would live forever, live as if you would die tomorrow."

THE FIRST ISSUE
Pulling the first volume of Diabetes from our library shelf and opening it to Vol. 1, No. 1, I was greeted with a musty odor and the piercing gaze of Sir Frederick G. Banting on the cover. It was a reproduction of the portrait by Curtis Williamson shortly after Banting became Professor of Medical Research at the University of Toronto, not long after the discovery of insulin. Paging beyond the introductory remarks by Joslin, I discovered that the first editor of Diabetes was Frank N. Allan, MD, and his assistant editor was Rosemary Murphy, MD, both from Boston. Dr. Allan edited the Journal from 1952 through 1955, during which it appeared every 2 months. The articles in the first volume of the Journal start with the 1951 Banting Lecture (in which the inevitable typographical error appears on line 3 of the penultimate paragraph on page 4) written by C. M. H. Long, MD, ScD, Sterling Professor of Physiological Chemistry at Yale. In his lecture, Long considered the endocrine control of blood sugar. Subsequent articles offered a consideration of proper use of laboratory tests by Lukens, association of hyperglycemia and coronary thrombosis by Ellenberg et al., dermal reactions to insulin therapy by Paley and Tunbridge, protein electrophoresis in diabetic glomerulosclerosis by Rifkin and Petermann, control versus free diet in management of diabetes by Wilson et al., and a case report of the Houssay phenomenon in humans by Williams. Notwithstanding Dr. Joslin's exhortations for universality, all of these articles save one came from institutions in the United States. Next came abstracts of articles appearing in other journals and editorials about the glucose tolerance test, laboratory investigation of obesity, and a tribute to the former editors of Proceedings and Diabetes Abstracts. A biographical note on Arnoldo Cantani followed which described him as a Renaissance man from Italy who was competent as an investigator both in the laboratory and at the bedside. This was followed by recent statistics about diabetes, several book reviews, and an "Organization Section" led off with remarks by Arthur R. Colwell, MD, president of the American Diabetes Association. An arresting commentary on the anxieties of 1952 was provided by a notice at the end of the first issue about what diabetic people should do during an atomic bomb attack.

The remaining five issues for 1952 were published with covers featuring the portraits of Oscar Minkowski, Bernard Naunyn, Charles H. Best, Paul Langerhans, and Apollinaire Bouchardat. I was fascinated to discover a review of Robert H. Williams' textbook Endocrinology, a Banting Memorial Lecture on insulin by Best, an editorial documenting the steady growth in funds for research in diabetes-related areas, a manuscript by Bell asserting that hyalinization of the islets in diabetes is an associated phenomenon rather than a cause or effect of diabetes, notices about the first International Diabetes Federation Congress and the beginning of the Diabetic Association in England, and several articles dealing with the relationship of lipoproteins to atherosclerosis in diabetes. A brief blurb that virtually leaped out of page 116 of the second number was bound to catch any editor's eye. This was a quote from William Bennett Bean, MD:

Clinical research is predicated upon the belief that its significant results should be communicated and used by others. How miserably this is accomplished is any contemporary editor's tale of woe and any thoughtful reader's sorrow. The pseudo prestige of long and difficult words transcends the useful scientific term and diffuses widely through our papers. Simple things are made complicated and the complex is made incomprehensible. Chaos reigns. The so-called medical literature is stuffed with bursting with junk, written in a hopscotch style characterized by a Brownian movement of uncontrolled parts of speech, which seethe in restless unintelligibility. Every day we realize that the Iron Curtain which disbars us from sampling in adjacent fields of science is not so much the erudition of our colleagues as the tropical jungles of verbiage and gobbledygook in which this erudition lurks, unserved save by the initiated.

Some things never change.

THROUGH THE ENSUING YEARS
The next 39 volumes of Diabetes document the evolution of our understanding of diabetes mellitus and the increasing sophistication with which basic and clinical scientists approached the pathogenesis and treatment of this disease. A detailed description of these volumes is beyond the scope of this article, but I will try to briefly characterize the Journal during each of the periods managed by the eight editors-in-chief for the first 40 volumes (Table 1).

The Allan years (January 1952 to December 1955) reported important clinical problems in diabetes, with emphasis on detection and treatment but with only a small number of articles dedicated to experimental pathogenesis. The geographical distribution of authors of the articles remained predominantly in the United States and Canada, although articles began to appear from Denmark, Scotland, England, Sweden, Italy, and Iceland.

The Stadie years (January 1956 to January 1960) took place in Pennsylvania and continued to emphasize clinical diabetology. However, publications describing the use of animals, predominantly rats and dogs, became increasingly evident. Emphasis began to be given to biochemistry, electron microscopy, and insulin resis-

TABLE 1
Editors-in-Chief of Diabetes, 1952–1991

<table>
<thead>
<tr>
<th>Editor</th>
<th>Volumes</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank N. Allan</td>
<td>1–4</td>
<td>1952–1955</td>
</tr>
<tr>
<td>Harvey C. Knowles</td>
<td>16–21</td>
<td>1967–1972</td>
</tr>
</tbody>
</table>
tlbutamide enjoyed center stage as an investigational drug, with chlorpropamide in close pursuit. Of special interest was the article by Seltzer and Smith in November-December 1959 describing plasma insulin activity (glucose uptake from undiluted plasma by isolated rat hemidiaphragm) after glucose challenge in nondiabetic and diabetic subjects. This was followed in the July-August 1960 issue by the description of plasma insulin concentrations in nondiabetic and early diabetic subjects by Yalow and Berson with a new sensitive immunossay technique. Of particular interest to me was an article published by Kilgore in the September-October 1960 issue speculating about the mechanism of aspirin, which he noted dramatically lowered fasting blood glucose levels in six diabetic subjects. However, neither this article nor the accompanying editorial referenced the early work by Ebstein in 1876, who first established the beneficial effect of salicylate on urinary glucose excretion in diabetes.

The Graef years (February 1960 to December 1966) in New York witnessed an increasing focus on laboratory methodology. Articles appeared describing light and electron microscopic studies of skin capillaries of diabetics, increasing use of animal models, controversies regarding mechanism of action of sulfonylureas, the localization of glucagon in α-cells by immunofluorescent techniques, the often-cited two antibody system for immunossay of insulin by Morgan and Lazarow, and studies of insulin structure. The year 1965 marked the advent of monthly publication of Diabetes, giving testimony to the steady growth of diabetes-related research. The Journal continued to maintain a concentration of clinically related articles and some early and truly elegant examples of clinical investigation. Nowhere was this more evident than in a series of publications about gestational diabetes and the adverse effects of hyperglycemia on the offspring of diabetic mothers.

The Knowles years (January 1967 to January 1972) opened in Ohio with a bang. In the January 1967 issue, Lacy and Kostianovsky published their frequently cited method for isolation of pancreatic islets. A steady cascade of articles too numerous to cite marched through this era that spanned the full gamut of clinical and basic research. Areas that caught my eye were immunosassays for glucagon, defective first-phase insulin secretion in diabetic patients, regulation of pancreatic islet hormone secretion by endogenous factors, studies of the Pima Indians, controversies regarding vascular basement membrane thickness in diabetes, studies of proinsulin and C-peptide synthesis and secretion, considerations of abnormal α-cell function in diabetes, and tortuous arguments about the University Group Diabetes Program findings. A balance between clinical investigation and basic research persisted, but the case reports that characterized earlier issues of the Journal had all but disappeared, and statistical analysis of data was given much more emphasis.

The Kipnis years (January 1973 to December 1978) in Missouri continued the recording of a broad array of information about physiological regulation of fuels, substrates, and hormones as well as the pathophysiology and treatment of diabetes mellitus and its secondary complications. However, at the beginning of my perusal of this era, my eyes were immediately arrested by a poignant tribute to Solomon A. Berson published by Jesse Roth. Shortly thereafter, Johnson and Stevens published observations on a topic that currently sparks a great deal of debate: the role of islet amyloid in the pathogenesis of non-insulin-dependent diabetes mellitus. Topics receiving emphasis in subsequent issues included pancreatic islet transplantation; HLA antigens in patients with diabetes; insulin receptors; artificial endocrine pancreas; relationship of aging to diabetes mellitus; regulatory effects on insulin secretion of somato-statin, prostaglandins, and epinephrine; maturity-onset diabetes of young people; anomeric specificity of glucose-induced insulin secretion; diabetic ketoacidosis and hyperosmolar diabetic coma; HbA1c; fetal pancreas transplantation; virus-induced diabetes mellitus; somatomedin; pancreatic islet cell antibodies in patients with diabetes; counterregulation of hypoglycemia; and C-peptide secretion in patients with juvenile diabetes.

The Foster years (January, 1979 to December, 1983) took place in Texas. During these years, Diabetes began publishing "rapid" publications, the first of which appeared in April 1979 and was entitled "Glycosylated hemoglobin:s increased glycosylation of hemoglobin A in diabetic patients" by Gabbay et al. During these years, Diabetes underwent an unparalleled spurt in growth. Consequently, because rapid publications are supposed to report observations having the highest degree of scientific impact, I will use only rapid publications to describe the Foster years and those following. Rapid publications appeared describing glucagonlike polypeptides in canine brain, portable insulin infusion pumps, spontaneous diabetes in BB/W rats, endorphin and morphine actions on the islets, prostacynin production by isolated adipocytes, localization of the insulin gene in humans, alterations in basement membrane proteoglycans in diabetic animals, restriction fragment–length polymorphism of the insulin gene in diabetes mellitus, studies of amyloidosis in insulin-dependent diabetic patients, effects of sorbitol on lenses of diabetic rats, and identification of a point mutation in the human insulin gene giving rise to a structurally abnormal insulin.

The Goodner years (January 1984 to December 1986) took place in Washington state. Here the Journal maintained the progress in growth and excellence seen during the Foster years. Rapid publications included articles about localization of the human glucagon gene, phosphorylation of insulin receptors, closed-loop glycemic control with a wearable artificial endocrine pancreas, galanin's effects on insulin secretion, prevention of diabetes in BB rats by silica, prevention of kidney graft diabetic nephropathy by pancreas transplantation in humans, immunosuppression with cyclosporine to support pancreatic islet allografts, adverse effects of cyclosporine on glucose tolerance, and encapsulation of rat islets to prolong xenograft survival in mice.

Having encountered an extreme corner of mainland USA, the Journal ricocheted eastward and landed in Minnesota where the Robertson years (January 1987 to
December 1991) began. The popular "Perspectives in Diabetes" articles first appeared in January 1958 with a piece by Metz "Is protein kinase C required for physiologic insulin release?" This series was begun to provide focused overviews to assist the general reader in keeping up on rapidly moving areas of diabetes-related research. Rapid publications during these years were concerned with the polyol pathway in mesangial cells, use of nuclear magnetic resonance spectroscopy to examine galactose nephropathy, regulation of insulin-receptor mRNA levels by glucocorticoids, use of cryopreservation to prolong islet xenografts, destructive effects of cytokines on rat islets, adoptive transfer of diabetes by NOD marrow stem cells to resistant mice, enhanced expression of class I MHC proteins by reovirus infection in human β-cells, characterization and regulation of glucose-transporter genes, arachidonic acid metabolism in isolated human pancreatic islets, autoantibodies to the 64,000-M, islet antigens, three-dimensional imaging of isolated islets with confocal microscopy, production of endothelin by retinal endothelial cells, glucose stimulation of 64,000-M, islet cell autoantigen expression, normal insulin-receptor cDNA sequence in Pima Indians with NIDDM, use of the polymerase chain reaction to partially sequence and amplify exons of the human insulin-receptor genes; effects of amylin on insulin resistance, insulin independence after islet transplantation in a type I diabetic patient, amylin secretion and NIDDM in nondiabetic humans, evidence against altered expression of GLUT1 or GLUT4 in skeletal muscle of patients with obesity or NIDDM, and lack of islet amyloid polypeptide regulation of insulin biosynthesis or secretion in normal rat islets. Through its 40 years, Diabetes has published obituaries of many scientific giants and beloved researchers who worked in diabetes-related areas. Surely, none of these was greater or more beloved than Albert E. Renold, whose obituary was written in the September 1988 issue by Orci and Wolheim. Interestingly, these writers concluded their comments about Dr. Renold by quoting Isidore, Archbishop of Seville, with the same passage Dr. Joslin used 37 years earlier: "Learn as if you were to live forever, live as if you would die tomorrow".

This description of the changing profile of Diabetes through the years is meant to provide only a thumbnail sketch of its continually changing emphasis and direction. A determination of whether the Journal has published the best science or the most important articles in diabetes-related research is impossible. However, one can conclude by Science Citation Index rankings that, since 1975 when these rankings became available, Diabetes has always ranked in the top 4th percentile of cited journals. It remains there today, currently ranking in the 2.71st percentile (1989 ranking) out of 4,469 journals in the world. This ranking places Diabetes in a strong position compared with its competitors such as Endocrinology (3.22nd percentile), Journal of Clinical Endocrinology and Metabolism (3.51st percentile), Diabetologia (3.87th percentile), Diabetes Care (8.46th percentile), Metabolism (12.13th percentile), Hormone and Metabolic Research (36.12th percentile), and Diabetes Metabolism (45.16th percentile).

THE PAST, PRESENT, AND FUTURE—A PERSONAL PERSPECTIVE

By any standards, the first 40 years of Diabetes have been a grand success. It began with lofty aspirations and only a handful of highly clinical articles published every 2 months written predominantly by physicians in the eastern United States. From that beginning, the Journal has evolved into a highly respected, monthly scientific publication that reports work from all over the world. Perhaps it's been a necessary evil, but the Journal has lost some of its earlier charm. One was much more apt to read historical notes about famous men and institutions relevant to diabetes and much more likely to encounter philosophical offerings from thoughtful scientists in earlier issues. Given the modern tendency to rely on computer searches for articles rather than browsing through libraries, perhaps the history and philosophy provided by earlier volumes of the Journal are more of a loss than we might imagine.

Presently, Diabetes enjoys its highest submission rate in history. In the past 4 years there have been 2,384 regular articles, 296rapid, 48 perspectives, and 37 "other" manuscripts submitted for publication—a total of 2,765 or an average of 691 manuscripts per year (Fig. 1), which is roughly a 23% increase in the submission rate over that experienced during the Goodner years. Not only has the Journal become increasingly popular among potential authors, it has also become increasingly difficult to publish in. Rejection rates have ranged between 60 and 65% for regular manuscripts and between 68 and 77% for rapidsover the past 4 years (Fig. 1).

Two chronic complaints about biomedical journals involve the time required for articles to be reviewed and the time required for accepted articles to appear in print. Currently, Diabetes requires an average of 7 weeks to send a decision to authors about whether their manuscript will be accepted, rejected, or invited for resubmission as a revised manuscript. Although this may seem inordinately long, this figure is not entirely unreasonable. On average, 6 days are needed for the editorial office to
process a submitted manuscript, which includes initial perusal by an editor and obtaining verbal commitments from reviewers. On average, the first reviewer returns his or her critique by 23 days, but the second reviewer requires an average of 42 days. An additional 6 days are needed for an editor to read and digest the manuscript and reviews and for the editorial staff to process this material before the decision letter can be mailed to the authors. This adds up to 7 weeks. Things are quicker with rapid manuscripts, which require an average of 2.5 weeks for a decision to be made and mailed to the authors. Although these delays may seem excessive, one has to keep in mind that editorial assistants need vacations and can become ill and that editors, although not impervious to vacations or illness, also need to attend scientific meetings and are not always immediately available to make decisions when both reviews have been received. Although this still may not convince the skeptical author, there is one other hard truth to swallow. The major delay in publishing articles occurs after final acceptance of the manuscript and receipt by the publisher. This is referred to as the publication delay time (Fig. 2), which requires a minimum of 4 months. When the Journal first arrived in Minneapolis, the publication delay time was hovering around 6–7 months and reached 8 months on occasion. Over the past 2 years, we have succeeded in decreasing this delay to 4 or 5 months, which is the minimal time required by the Publications Department of the American Diabetes Association for processing manuscripts. Currently, a move is underway by the Publications Department to diminish this figure to 3 months.

My personal view is that this issue of quickness of publication is overblown. I cannot think of many scientific articles I have read that would have had greater impact had they been published 1 or 2 months earlier. Preoccupation with rapid publication can be an obsession of authors and editors alike. I think we are better advised to place greater emphases on accuracy and decipherability of data during the review process. This is not to say that the current editors and our reviewers feel we have a privileged insight into truth! That is a particular form of arrogance that we have tried to avoid by being perfectly willing to reconsider any manuscript that we have rejected if its authors feel it has been unfairly judged.

I believe the future for Diabetes is robust. Analysis of articles published in 1987 and 1988 (Fig. 3) indicates that the Journal is maintaining an even balance of human, animal, and bench research. This balance fosters needed communication between investigators focusing in either basic or clinical research. The steady growth of the Journal in size and excellence will be augmented by the ever-increasing sophistication of diabetes-related research. The Journal will soon travel down the Mississippi River to return to Missouri, where Philip E. Cryer, MD, will be the next editor-in-chief in January 1992. Dr. Cryer’s talents as a highly organized and skillful clinical investigator and his deep appreciation for careful management of the Journal bode well for its future.

Because this is to be my swan song, I would like the closing verse to sing sincere praise for my associate editors—Drs. Elde, Nuttall, Rich, Rizza, Seybold, Sorenson, and Steffes. They have been an incredibly reliable source of sound scientific advice and comradely support. In turn, the eight of us gratefully acknowledge and deeply appreciate the impossible jobs superbly performed by Luci Mittag and Sheryl Olsen, who served as our editorial assistants at the University of Minnesota. Their friendly and persuasive voices over the telephone and their sensitive handling of manuscripts will be remembered by reviewers and authors alike. We thank Christine Welch, our managing editor, for her unfailing efforts to provide prompt and sensitive help during the publication process. But most of all, it is the authors and reviewers that all of us wish to thank for the privilege of being a part of their intense intellectual and invaluable interchanges about science and diabetes.