

## THE LASER

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## The Fascination of the Beta Cell

“Unbelievably fascinating.” That’s what Dr. Chris Rhodes says of the pancreatic beta cell he’s been studying for more than twenty years. “The beta cell produces the only hormone—insulin—that will bring down glucose. It’s the major hormone that makes us store energy. And even though there are so few beta cells in the pancreas in its normal healthy state, without them we are left with a devastating disease—diabetes.”



Dr. Chris Rhodes

Rhodes is the Associate Scientific Director of PNRI. He is recognized internationally as a leading beta cell biologist. As soon as he begins talking informally about the focus of his investigations, the wonder of diabetes research becomes clear.

**Insulin Synthesis**

Under normal conditions, insulin production and distribution are extremely efficient. Rhodes explains that when the pancreas creates insulin, almost all of it is packaged and stored in tiny packets in the beta cell. These storage packets are called insulin secretory granules. “Secretory” because they

are also the capsules from which insulin is secreted on demand into the blood stream. There are roughly ten thousand of these secretory granules in each beta cell. Only about 100 are normally needed at any one time, so the beta cell has an enormous capacity for insulin storage. In turn, this considerable storage capacity provides a great fail-safe potential for insulin use. Since the pancreas stores far more insulin than it normally needs, the system also includes a complex process of turn-over. Constantly, the stored insulin is being refreshed and what is used is always new.

Rhodes began to study this process at the Joslin Diabetes Center in Boston. This early series of studies led him to subsequent investigations of the ways insulin synthesis and secretion are regulated. These lines of research are only what half the Rhodes’ laboratory does. The other half investigates mechanisms of beta cell growth and death. All of Rhodes’s research is focused on the same general area of interest—how the beta cell creates and delivers insulin the body needs. All is essential to the most fundamental problem people with both type 1 and type 2 diabetes face—how to get enough insulin to regulate the levels of glucose in their blood.

**The Path to Leadership in Diabetes Research**

Rhodes’s colleagues say that he is a “rain-maker.” He gets people together. He gets things done. “I’m proud of the work I do outside of the laboratory,” Rhodes says, and he points especially to his current and recent contributions to the American Diabetes Association (ADA) and the Juvenile Diabetes Research Foundation (JDRF).

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## PERSPECTIVES

by R. Paul Robertson, M.D.

Tribute to Dedication  
and Excellence:  
Yoshito Tanaka

Yoshito had a way of faintly grinning with a knowing look in his eye as he spoke softly about his scientific ideas. He worked quietly, efficiently, and tenaciously. During his post-doctoral years in my laboratory, he generated enough first-rate studies about oxidative stress and diabetes to fill two manuscripts in the premier journal, *Proceedings of the National Academy of Sciences*. His manuscripts are widely quoted for his seminal observations showing that antioxidant drug treatment and overexpression of glutathione peroxidase (the gene which produces the major enzyme that regulates levels of oxygen radicals) provide impressive protection against the toxic effects of high glucose levels on the pancreatic islet beta cell.

He was a loving family man dedicated to his two young children,

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## PNRI Laboratories and Their Major Areas of Research

### ■ Peter Dempsey, PhD

(Cellular communication, ErbB ligand trafficking and processing, disintegrin-metalloproteases, ErbB receptor signaling)

### ■ William A. Hagopian, MD, PhD

(Type I diabetes mellitus)

### ■ Senitiroh Hakomori, MD, PhD

(Aberrant cell recognition and signaling in cancer, based on changes in glycosylation)

### ■ Donald Malins, PhD, DSc

(Breast, ovarian, prostate cancer)

### ■ Vincent Poitout, DVM, PhD

(Pancreatic beta-cell dysfunction in Type 2 diabetes)

### ■ Christopher Rhodes, PhD

(Biochemistry of pancreatic beta cells)

### ■ R. Paul Robertson, MD

(Pancreas and islet transplantation, glucose toxicity of pancreatic beta cells)

### ■ Barton Wicksteed, PhD

(Alpha cell regulation)

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FROM THE EDITOR:

## Architecture and Science: a History of Imaginings

by Rich Murphy

When Dr. William Hutchinson opened the Pacific Northwest Research Foundation almost fifty years ago in the small First Hill house of Captain Ballard, he had a big idea. He wanted to create something that he knew was needed but that didn't yet exist. He imagined a laboratory in which practicing physicians, like himself, could explore medical research questions that arose in their practice and answer them in ways that would help both their patients and other doctors.

The laboratory—today known as the Pacific Northwest Research Institute (PNRI)—soon outgrew its modest first home. It took up residence down the street in Eklind Hall, sharing space with the fledgling Fred Hutchinson Cancer Research Center, which Hutchinson had also founded, and testing ideas as far-reaching as kidney dialysis, heart-lung machine technology, and radically new prosthetic design and function.

Hutchinson retired from his leadership of the Fred Hutch in 1987 and turned his energies to directing PNRI once again. He knew it needed a new facility, so he commissioned Callison Architects and Lease Crutcher Lewis to design and build a striking new laboratory facility two blocks away on Broadway. Six stories of granite, marble, and glass, the new building embodied Hutchinson's ideas grown bigger. The new

space would house pioneering investigations into breast cancer, cell signaling, immunology, and functional genomics.

When Paul Robertson joined PNRI as its new President and Scientific Director in 1997, his image of scientific collaboration prompted yet another architectural development in the Institute's history. With the help of Callison Architects—and Lois Jean Broadway, who has since become an Institute Trustee—Robertson renovated two floors of laboratories. He made the physical shape of the labs wide-open and conducive

to collaboration, inviting scientists to share equipment and instruments, research results and possibilities.

Today PNRI is dedicated to a new vision, the eradication of diabetes. Accomplishing this vision will require the expansion of its already excellent science. It will take substantial financial growth as well. The establishment of broad-reaching community partnerships and robust scientific collaboration will also be neces-

sary. But what will its physical shape be? What building, what space, what aesthetic will embody this vision? The image is not yet fully formed, but one thing's for sure. It is a new phase in PNRI's history of imagining big ideas—ideas about the aspirations of science and the improvement of medical practice and patient health.



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Special thanks to the following for their help in preparing and distributing this issue: Lois Jean Broadway, Brandi Clark, Bridget Haba, Karen Knight, Chris Rhodes, Paul Robertson, David Rood, Sheryl Stiefel, and Mike Toney.

Photo credits: Nancy Levine and Gavin Sisk.—Design: Sheila Van Nortwick.—Printing: Alphagraphics.

## Trustee Lois Broadway

Along three planes of a wall partition at Taylor Gregory Butterfield (TGB), Lois Jean Broadway's Edmonds-based architectural office, is a frieze that captures the spirit of her work.

*The architect walks a knife-edge between art and science, between originality and memory, between the daring of modernity and the caution of tradition. Architects have no choice but to live dangerously.*

—Renzo Piano

"We struggle every week with these issues," Broadway says by way of explanation. Being conservative is too safe. Being too innovative often disregards the client's need. "What architects must strive to do," she says, "is to step into other people's shoes, to see the world through their eyes, and then to give them something that serves them."

Broadway is one of the newest members of PNRI's Board of Trustees. She brings with her that knife-edge ethos of architecture. She has played a key role in building the Institute's current facilities. She has developed a professional practice that is dedicated to many of the fundamental principles that guide PNRI. She also has a personal connection to diabetes that animates her commitment as a new Trustee.

In 1986, early in her career, she worked for Callison Architects in Seattle when they were commissioned to design a new laboratory building for Dr. William Hutchinson. In 1998, she was invited back by Dr. Paul Robertson to renovate two of the laboratory floors giving them open space and light. Over the years she has come to specialize in healthcare design, planning both research spaces and care facilities. In each, she knows that her success depends on listening to her clients deeply.

"I've learned I can affect the outcome," Broadway explains. "Architecture can be exercised like a gamma knife and go right to

the heart of a solution. Light, the baffling of noise, space to work and interact with others—these are environmental interventions that can affect the work of surgeons and the health of patients," not to mention the concentration and productivity of bench researchers. "Architects and neuroscientists," she says, "have become allies. We make a difference in the way people think and feel and thus in what they are able to do."

What PNRI does is diabetes research, and that cuts to the heart of Broadway's experience as well. Her mother (Japanese-born) and father (English) both developed type 2 diabetes. She herself had gestational diabetes during her pregnancy with her now seven-year-old son. But perhaps the most moving experience she has had with diabetes has been watching her best friend struggle with the type 1 diabetes of her three-year-old daughter. "It's so painful to see," Broadway explains. "Their family moves through incredible extremes. Watching their daughter alternate between coma and migraines, never sleeping more than two hours at a time at night. It absolutely drives their life."

As a new Trustee at PNRI, Broadway is eager to understand the experience of her family and her friend's family through the lens of science. She knows how to listen to people. She now is listening to researchers. She wants to learn what they need and to imagine how she can serve them. In helping PNRI achieve its vision of eradicating diabetes, she is motivated by the same desire that animates her professional work. "With evidence-based design," she says, "I know I can affect the outcome. At PNRI, I may not be able to save the world, but I can work to help save a sliver of it."

Which is just the kind of ambition you might expect from an architect responsible for designing PNRI's physical spaces. It's what she and TGB do every day. They link art and science. They make buildings, as Broadway puts it, "for health and healing."

## Hagopian WBBA Talk: "Immune Defenses Gone Wild"

In May, PNRI Principal Scientist Dr. Bill Hagopian addressed the breakfast education series of the Washington Biotechnology and Biomedical Association (WBBA). The subject of his talk was the convergence of immunology and type 1 diabetes science. The immune system—evolved brilliantly to protect us against all sorts of pathogens in our environment and working normally with exquisite sensitivity and adaptability—sometimes goes very wrong. In the case of type 1 diabetes, it attacks the body's own beta cells and eliminates them, destroying the body's capacity to make insulin and thus regulate its own blood sugar.

Hagopian outlined the research he and his team are conducting to try to understand and correct this immune failure. New technology allows his researchers to identify children genetically predisposed to developing type 1 diabetes and then to screen these particular children as they grow for the appearance of autoantibodies that signal an auto-immune attack in progress. Hagopian explained the general goals of his research to WBBA's business and biotechnology audience. If the immune damage that leads to diabetes can be seen before the clinical onset of disease, then new therapies may be able to be used to protect the remaining beta cells from immune attack and thus prevent the full development of type 1 diabetes.

**PNRI**

# PNRI Tribute Gifts

January – March 2005  
(Tribute name is listed in bold)

## MEMORIALS

### **Thelma E. Berg**

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### **Catherine Viles Watt**

The Seattle Foundation  
Robert D. Watt

### **Norma Jean G. Wissmann**

Vincent A. Mattson

thank you! memorials

# An Evening of Wine

flights of  red & white

*"Imagine good friends and superb wine at a beautiful location on a summer evening for a special cause. Too much of a good thing can be wonderful."*

**Carol Heimkes, PNRI Trustee and Wine Event Co-chair**

On August 4, 2005, PNRI will celebrate its second annual wine event. New auction packages and wineries, a Sip and Sample hour, and festive atmosphere are the entertainment side of an evening dedicated to raising awareness and funds for a very serious cause—advancing research to prevent, predict, and improve treatments for all forms of diabetes.

## Expanding opportunities to volunteer time and treasure

Event Co-Chairs PNRI Trustee Carol Heimkes and Community Volunteer Ryan Allison, owner of AWineStore.com, have built upon the successes of last year's event. By expanding the size of our special event committee, PNRI has dramatically increased participation from wineries and individual donors. Community support for this year's event is also unprecedented. More than \$13,000 in underwriting has been secured, including almost \$3,000 from PNRI Trustees who have collectively sponsored the "Name That Wine" game. Additional sponsors are **Burroughs Hutchinson Investment Managers, Taylor Gregory Butterfield Architects, MetPartners, LLC, Callison Architecture, Gene Colin, and Paul and Peggy Robertson**. PNRI is proud to partner with Seattle Magazine, as media sponsor.

## Great Food and Wine

Unlike other wine tasting events, PNRI's *An Evening of Wine* is organized around a key goal: the best of Washington red and white wines join with an ever-widening number of the PNRI family and friends for a great program balancing fun and fundraising to advance ways to help arrest diabetes. Upon arrival and registration, guests will have about one hour to try out wines provided by nine wineries. At 7:00 pm, the "Name That Wine" game will be hosted in a tented-enclosure on the Newcastle terrace, followed by a three-course dinner and wine-themed live auction, which includes gift certificates for local restaurants, wine-country excursions, and an afternoon affair on a private yacht. During the auction, a PNRI family will be featured to share the story of their fight with diabetes in support of the Fund-a-Need. Last year, more than \$45,000 was raised to support the Fund-a-Need focus—innovative diabetes research of a post-doctoral fellow. All of the evening's proceeds advance PNRI's scientific research.

Should you really want to attend yet have a conflict, you can make a donation in absentia. Auction items are valued from \$225 to \$2,500. In 2004, more than \$100,000 was raised at *An Evening of Wine*.

Sign up today for PNRI's 2nd annual summer special event—*An Evening of Wine*—at The Golf Club at Newcastle on Thursday, August 4, 2005 from 6:00 to 10:00 pm. Tickets are \$150 per guest. Space is limited. For reservations or to make a donation, contact Brandi Clark at 206-726-1200 or [bclark@pnri.org](mailto:bclark@pnri.org).



### Event Program:

6pm Registration and Reception  
7pm Name that Wine Game  
7:45pm Dinner  
8:30pm Live Auction

RSVP by July 22nd to Brandi Clark  
206-726-1200, [bclark@pnri.org](mailto:bclark@pnri.org)

*Business Casual Attire*

### Winery Partners:

Andrew Will, Saviah Cellars,  
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Dunham Cellars, and Seven Hills Winery

**Proceeds Benefit Diabetes Research at PNRI**

# New Partners in Discovery Establish Gifts with Principle and Purpose

by Sheryl Stiefel, Director of Development

The Pacific Northwest Research Institute (PNRI) depends on private contributions from friends in the wider community. Every year, more of our friends include PNRI in their will and estate plans. Those who leave bequests or consider PNRI in their estate planning assist us in the advancement of new detection, prevention, and treatment methodologies. With a little help from everyone, we will conquer diabetes.

## \$2.125 Million Establishes New Board Designated Endowment

In May, PNRI was notified of two large bequests. William "Bill" and Barbara Klaische bequeathed the first half of a \$2,000,000 gift to PNRI. "This is one of the largest bequests in our community so far this year," said Gene Williams, PNRI Trustee, who chairs the Development Committee and serves as Secretary of the Estate Planning Council of Seattle. PNRI received an additional \$125,000 as a first

payment from the estate of Hugh McCall, who has been an annual donor to PNRI for more than 10 years. Estate attorneys for the families presented these gifts to PNRI. Each gift underscores the families' wishes to eliminate diabetes as a life-threatening and economically destabilizing disease in the region and around the world.

"PNRI is building one of the most comprehensive diabetes research centers in the world," said Dr. Paul Robertson. "These estate gifts recognize that fighting diabetes is an uphill effort. But with every gift to PNRI, our research scientists are a few steps closer to victory."

## How can I become a Partner in Discovery?

*Partners in Discovery* is a special donor circle honoring benefactors who invest in PNRI's future. You can become a *Partner in Discovery* by letting the Development Office know that you have made a bequest in your will to benefit PNRI. *Partners* are

recognized in our annual report, receive invitations to special events, and are listed on a special donor wall in our lobby. If someone does not wish to be publicly recognized, we will honor his or her wish.

Like the Klaische and McCall families, most estate donors name PNRI as a residuary beneficiary of their wills or trusts. In these cases, PNRI receives a percentage of assets of the estate after taxes, expenses, and individual transfers have been fulfilled. When making a bequest, you may also designate a specific amount or a percentage of the estate.

To learn how you can become a *Partner in Discovery*, call Sheryl Stiefel, Director of Development, or fill out and return the coupon below. You may also send an email to [ststiefel@pnri.org](mailto:ststiefel@pnri.org). All inquiries are confidential.

## Please Give to PNRI

- YES!** Please send me information about making a bequest or charitable gift annuity to PNRI
- I have already included PNRI in my estate plans.

All replies are confidential.

Mail to: Sheryl Stiefel  
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Phone: 206-726-1203  
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## Your Participation Means...

Predict ■ Prevent ■ Conquer Diabetes

Name

Address

City

State

Zip

Daytime Phone Number

Mobile Phone Number

E-mail

join us in discovery...

*Partner in Discovery*

# 65th Annual ADA Scientific Sessions

Dr. Chris Rhodes, Associate Scientific Director of PNRI, chaired the 65th Annual Scientific Sessions meeting of the American Diabetes Association, held this year in San Diego in June. Rhodes led a team of scientific colleagues who planned the program, which included thousands of papers, oral presentations, symposia, plenary talks, poster presentations, and panel discussions. Attendance at the meetings was estimated at nearly 20,000.

A sizable delegation of PNRI scientists participated in the program. They included Dr. Vincent Poitout, who presented an oral abstract on effects of fatty-acids on insulin secretion. Dr. Derek Hagman, a post-doc-

toral fellow working in the Poitout group, presented a poster on beta cell transcription regulation.

Scientists from Rhodes' lab presented the results of research on insulin secretion and beta cell life and death. Dr. Isabel Briaud presented an oral abstract on beta cell survival. Dr. Lori Hays' oral abstract focused on insulin exocytosis. Hays was also the recipient of a competitive travel grant from the ADA to attend and participate in the conference.

The PNRI contingent included Dr. Peter Dempsey as well. Dempsey presented an oral abstract on metabolic effects of enzyme deficiency.

Dr. Paul Robertson was invited to speak

in two different symposia, one on oxidative stress in diabetes, the other on abnormal alpha cell function. Robertson also chaired a session on beta cell protection.

Dr. Bill Hagopian submitted two important abstracts for the ADA meetings. The first reported on the presence of a special subtype of type 1 diabetes among Chinese patients. The second reported on the presence of both type 1 and type 2 diabetes characteristics among African American and Latino children.



## Fascination of the Beta Cell

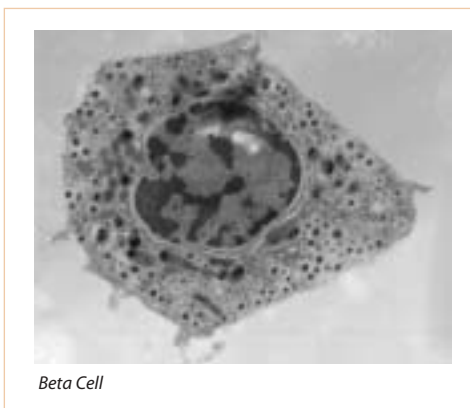
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In June of this year the ADA held its 65th Scientific Sessions Meeting. Rhodes served as its Chair. He is also Chair of the JDRF Research and Medical Research and Scientific Committees. As a speaker, he is in demand, accepting recent invitations to speak at leading diabetes research centers and symposia in the U.S. and abroad. He has, for example, been invited to speak this year at the Donald F. Steiner Symposium at the University of Chicago. He has also been named the 2005 Banting and Best Diabetes Lecturer at the University of Toronto. The lecture is named after Frederick Banting and Charles Best, the Toronto researchers credited with the discovery of insulin.

Rhodes received his Ph.D. from the University of London, studying virus-induced type-1 diabetes under the direction of Keith Taylor. He was appointed to post-doctoral research fellowships at the Joslin Diabetes Center at Harvard, with Philippe Halban, and later at the University of Cambridge, with John Hutton. From Cambridge he returned to Joslin to become an independent investigator and an assistant professor in the medical school at Harvard, where he established an investigative program studying the molecular biology

of the beta cell and its signaling system. ("Every second," Rhodes says, "beta cells are registering and sending signals essential to the control of glucose metabolism.")

Dr. Paul Robertson, PNRI President and Scientific Director, recruited Rhodes



Beta Cell

in 1999 to become Associate Scientific Director of PNRI and to help build a first-rate diabetes center here. His voice grows animated in describing it: "My intention is to help put together one of the biggest and best diabetes research centers in the country. A center that's genuinely comprehensive, studying all aspects of diabetes, both type 1 and type 2, diabetes-related obesity, as well as diabetic complications. A center that has a strong clinical research component, too." Rhodes continues to work toward the development of such a center, but at the same time he is concen-

trating as much energy as he can on four key targets in islet biology.

### Four Promising Developments in Islet Biology

The question of exactly how insulin gets secreted—the process of exocytosis—is one the Rhodes lab is currently working to answer. The beta cell doesn't just produce insulin, package it in secretory granules, and then disperse it into the blood stream. Some of the granules—those with the freshest supply of insulin—appear to be sent to areas of the cell membrane with particularly beneficial lipid fluidity where insulin secretion can be most efficient. But no one yet knows how the secretory granules know where to go or which ones are selected for the task. Dr. Lori Hays, postdoctoral fellow, and Chad Soden, research assistant in the Rhodes lab, are working to find out.

The synthesis of insulin itself—as much as is already known about it—remains problematic as well. How is it regulated so that as insulin is being used (or discarded) the precise amount of new insulin necessary to replenish the store is produced? Researchers in Rhodes' group—Drs. Cristina Alarcon and Yuji Uchizono—have been working to delineate this process. Dr. Barton Wicksteed, now an independent investigator at PNRI, has also contributed

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## Fascination of the Beta Cell

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importantly to the research. They have already discovered that there is a specific regulatory region of mRNA that increases insulin synthesis. They have gone further to discover that a specific protein is responsible for switching the synthesis process on and off. What they are trying to determine now is just what that protein is.

A third target area of research for Rhodes and his lab group is the question of beta cell death. Drs. Isabelle Briaud, Chris Mitchell, and Kyohei Yamamoto are working on this project. The loss of beta cells plays an important role not just in type 1 diabetes but also in type 2. “You only get type 2,” Rhodes explains, “when you start losing beta cells.” So how and why do beta cells die? How can they be protected and preserved? These are pressing questions for researchers and patients alike, and the Rhodes group is pursuing one intriguing answer. Apparently a molecule named IRS-2 is linked to beta cell death. Without IRS-2, beta cells die. Since it is already known that IRS-2 is highly regulated naturally in healthy pancreases, the Rhodes group is trying to identify ways to increase the levels of IRS-2 for diabetes patients and thus to protect beta cells and increase their chance of survival.

Rhodes is particularly excited about a fourth initiative. He is developing protocols to set up a core service laboratory to establish an international standard for functional surrogate beta cells. Since beta cells are so important in the development of diabetes, and since the idea of replacing them with donor islets or with laboratory-cultivated beta cells (derived from various sources including stem cells) is being advocated with such promise, it's time to establish just exactly what the functional criteria of beta cells are. Do they make insulin and secrete it appropriately? Do they function consistently under correct regulation? Do they survive long enough? Do they grow? These are just some of the questions that must be asked and answered precisely.

It is intended that two “beta-cell functional differentiation laboratories” will be established to assess whether candidate surrogate beta-cells are suitable for transplantation. One will be in the United States directed by Rhodes, and the other in Europe under the direction of his former postdoc-

toral mentor, Philippe Halban, at the University of Geneva. Once they have completed their specifications, Rhodes and Halban will have described the essential functional characteristics required of a beta cell to control metabolism of blood sugar. They will have provided some of the key specifications for pioneering new diabetes cell replacement therapies.

### Ambition

When Rhodes says that the beta cell is “unbelievably fascinating,” he’s not speaking simply as a dispassionate scientist. Certainly the elegance of his subject appeals to him. The puzzle of its apparent simplicity and extraordinary subtlety intrigues and challenges him. But he has the cure of diabetes in his sights, and it’s an audacious ambition.

“It’s an achievable goal,” he says flatly of the possibility of protecting the beta cell and thus preventing or treating type-2 diabetes in ways only dimly imaginable now. He hesitates when asked to be more specific about what might be achievable and when. And then the excitement is irresistible.

“\$200 million and ten years,” Rhodes says. “That’s what it’d take. That and a big dedicated team of researchers.” He is immediately tempted to recant, then doesn’t. “Given enough money and enough resources, we could do it. We could find a drug to protect the beta cell, and we could have it available to doctors and patients within 10 years.”

This is a rainmaker talking. But it’s also a scientist who’s been working for twenty years at some of the best laboratories in the world on the core component of the system whose failure results in diabetes. The tiny beta cell in the pancreas, and the life-sustaining insulin that is its chief product.

## PERSPECTIVES

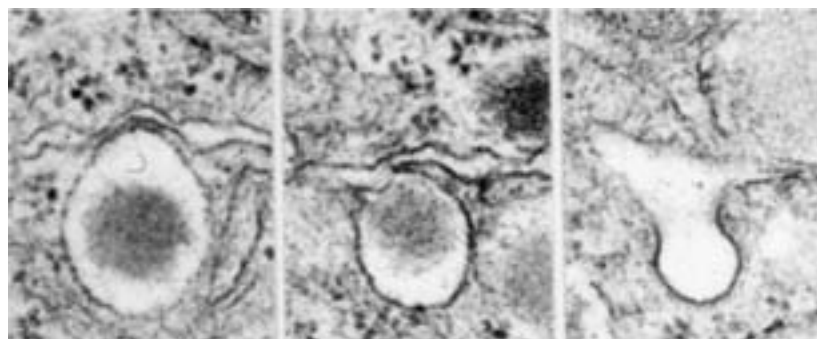
### Yoshito Tanaka

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Sota and Yuri. He and his wife, Takako, formed a very strong unit, caring for each other and their children. Takako, a nurse by training, was the perfect helpmate and care giver when Yoshito first fell ill in 1999.

It was around New Year’s that I first noticed he was looking ill and questioned him about it. He knew he was sick, but wanted to wait a few weeks before seeing a doctor because he had lab work to finish. I insisted he stop and he did. His diagnosis was a formidable form of cancer that had already metastasized. He underwent extensive surgery and intensive chemotherapy with the happy result that he could rejoin the lab about one year later to finish his work. He then returned to Japan.

Yoshito worked for several years more, continuing his research and taking care of patients. He died in April of this year, leaving behind a lovely young family and a caring professional community in Japan. He also left us at PNRI behind, who remember him so fondly it still hurts. His life with us so poignantly reminds us that the good really can die young.



*Secretory granules in various stages of exocytosis*

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# THE LASER

JULY 2005

## Wired or Wireless— Help us Keep in Touch!

Whether you are wired or wireless, check out PNRI's current news, stories, research, and event announcements on the internet. The Institute's website posts the latest press releases and media stories at [www.pnri.org/news](http://www.pnri.org/news). Links to on-line versions of the print *Laser* are sent to subscribers whose electronic addresses we have. So please send us your address today. Subscription is easy. Just visit [www.pnri.org/howtohelp/subscribe.html](http://www.pnri.org/howtohelp/subscribe.html). When you do, we will be able to keep you even more closely in touch with our work.

## Research World at ADA Diabetes Expo

PNRI worked with the American Diabetes Association (ADA) to create Research World at the 2005 Diabetes Expo here in Seattle on May 14. The Research World exhibit featured the four Puget Sound diabetes research institutions receiving ADA funding support. PNRI—whose investigators are currently receiving mentor grants and the Thomas R. Lee outstanding research award—helped plan and staff the Research World.

Dr. Lori Hays and technician Elizabeth Oseid arranged for a microscope display of pancreas and islet tissue that Expo visitors could examine. Dr. Salwa Al-Noori created a continuously looping slide show demonstrating the eye, heart, kidney, and nerve damage caused by diabetes. Dr. Al-Noori also volunteered to staff the exhibit area along with other scientists to answer visitor questions and to help them understand the



*Young ADA volunteer at Expo studies pancreas section under a microscope*

focus and scope of diabetes research. Partnerships with organizations like ADA help PNRI serve the community by bringing research knowledge and passion to the public and by broadening awareness of the importance and danger of diabetes.