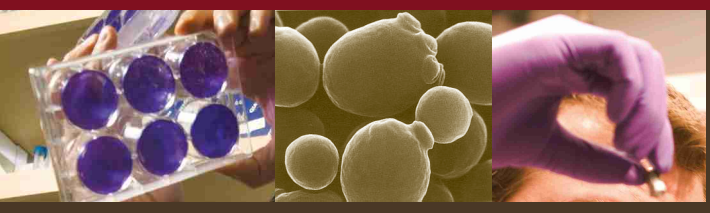




# WASHINGTON RESEARCH FOUNDATION

ONE GOOD **IDEA** LEADS TO ANOTHER



25<sup>th</sup>  
Anniversary

# WASHINGTON RESEARCH FOUNDATION

## 2006 Report

### TABLE OF CONTENTS

- 1 WRF Marks 25th Anniversary
- 2 Message from the CEO

#### WRF gifts

- 4 ENDOWMENTS AND GRANTS: Support at Many Levels
- 6 NEW BUILDINGS: Enhancing the Infrastructure
- 7 TECHNOLOGY DEVELOPMENT: Encouraging New Technology Development
  - Finding A Better Drug Through Computer Modeling
- 11 FELLOWSHIPS: Supporting Research Ideas Early
  - Nikolas Hrabe: Keeping Hip with Research on Porous Titanium
  - Angela Shum: Could Fruit Flies Become Flying Semi-Conductors?

#### WRF funded companies

- 17 FARECAST: Computer Science Meets Online Air Travel
- 19 CLARISONIC: Brushing Up on Skincare

#### WRF licensing

- 22 Actively Managing Intellectual Property Rights

- 23 **WRF VENTURE CENTER**
  - Helping Start-Ups

- 24 **WRF TEAM**
  - Working Collaboratively

- 25 **WRF FINANCIAL SUMMARY**

- 27 **A TRIBUTE TO W. HUNTER SIMPSON**



**Washington Research**  
FOUNDATION

25

# Washington Research Foundation enhances, encourages and empowers

**Its reach extends** to students, graduate students, researchers, faculty members, the administration of research-based institutions in Washington state and early-stage entrepreneurs. They likely know WRF as the organization that provided their grant, fellowship, endowment, building gift or company start-up funding. They may not realize that WRF is one of the most successful technology transfer organizations in the United States, in terms of gross licensing revenues and support of translational technology.

**Now marking its 25th anniversary,** WRF finds, captures and enhances the value of intellectual property arising from Washington state research institutions to support research and scholarship. The foundation's success in licensing intellectual property and managing its investments provides funds for a variety of programs that, in turn, encourage the creation of innovation and new technology. In this way, WRF powers its own "virtuous cycle."



**The foundation engages people** at different organizations and at many different levels to push forward research in science, medicine and engineering or to empower fledging enterprises to move toward commercialization. WRF's gifts support infrastructure, researchers (faculty, graduate students and undergraduates) and specific scientific projects. Although it has foundational ties to the University of Washington, it also supports activities at Washington State University, the Fred Hutchinson Cancer Research Center and other research-based institutions in Washington state.

**Since its creation in 1981,** WRF has given more than \$160 million to the University of Washington in the form of royalties, gifts and realized gains on equity holdings.



## MESSAGE FROM THE CEO



*Ronald S. Howell  
Chief Executive Officer  
Washington Research  
Foundation*

**L**eaders today understand the importance of transitioning ideas to technology, products and new industries. Competitive advantage comes in large measure from strong and independent research institutions, their scientists and engineers, entrepreneurs and financial networks.

**For 25 years the Washington Research Foundation** has worked with the University of Washington, and more recently with other research institutions in Washington state, to capture and enhance the value of innovations and inventions and then make grants to support the researchers and their institutions.

**In this report we asked others** – recipients of our grants and our partners – to tell their stories about their work and the possible impacts of their research and technology. We think the value of the Washington Research Foundation is best described by highlighting the many impressive people and projects which we support.

**Although we have had an amazingly successful run** for these last 25 years, we are in a period which demands more resourcefulness and shrewd investments to continue the trend. It is our vision to grow and increase our ability to make larger gifts and grants, support more researchers and student scientists and participate in expanding the problem-solving capabilities in this region.

**We also pay tribute** to a friend and founder, W. Hunter Simpson, who passed away this past January (see page 27 and 28). A tireless and creative force, Hunter was also like a rudder keeping us on course and demanding excellence in our programs. Truly, he will be missed by all of us.

Sincerely,

**Ronald S. Howell**

*Chief Executive Officer  
Washington Research Foundation*



**Washington Research**

F O U N D A T I O N

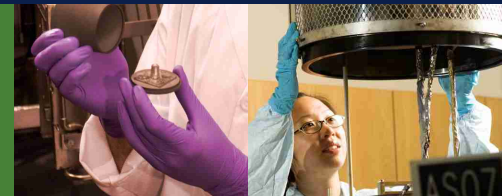
# WRF gifts

ENDOWMENTS AND  
GRANTS

NEW BUILDINGS

TECHNOLOGY

FELLOWSHIPS



WRF supports scientists and engineers through more than 100 endowments for chairs, professorships, research professorships and graduate stipends.



## ENDOWMENTS AND GRANTS

# Support at Many Levels

**WRF** is a **founding contributor** to a number of

programs, including the University of Washington (UW) Capital Campaign for Endowments, the Fred Hutchinson Cancer Research Center's New Technology Development Fund and the Washington State Technology Gap Fund. It was also a founding contributor to the UW Business School's Center for Technology Entrepreneurship and the Bioengineering Department's Program on Technology Commercialization.

**Gifts to the UW** include two endowed chairs, three professorships, 62 fellowships for graduate students, and a variety of research projects. Support often comes at early stages, when even a modest gift can trigger other donors and actions.

**Early support was a critical factor** more than 20 years ago when Yongmin Kim, now chairman of the UW Bioengineering Department, was considering joining the faculty. Although the young professor had received 13 offers to join other universities, he chose the UW because of a Physio-Control Corporation faculty development gift arranged by the late W. Hunter Simpson, a founding WRF board member and chief executive officer of Physio-Control.

**In 2001**, WRF provided funding for a \$500,000 professorship in bioengineering. And, in 2004, WRF gave \$500,000 in seed money to help create the Hunter and Dorothy Simpson Endowed Chair in Bioengineering. Funding for the chair has now grown to \$2.6 million.

"We must keep **striving for excellence** because standing still is falling behind. WRF provided part of the **foundation for us to be even greater.**" *Yongmin Kim*



*Yongmin Kim, Ph.D.  
Professor and Chair, Bioengineering*

**Three years ago** the Bioengineering Department started a technology commercialization program to educate students on how to bring technology from the bench to the clinic or market place. Starting with 25 students, the program has grown to include 50 students and one start-up company that is in the process of being created. “Without WRF’s initial investment of \$40,000 we wouldn’t have started the program,” Kim says.

**“Our goal is** to produce the best educated students in science and engineering, as well as in commercializing technologies. In the global marketplace, our students will need solid engineering and science education, which they could also get in India, China or Europe. But what they also need is knowledge of entrepreneurship and how to move innovation into the marketplace – the American system still has an edge in that area.”

**UW’s Bioengineering Department** is one of the best in the country, Kim says, in part because of WRF’s support over the past seven to eight years. “We must keep striving for excellence because standing still is falling behind. WRF provided part of the foundation for us to be even greater.”

**At the faculty level,** WRF partners with the UW on a program to recruit and retain outstanding faculty members who might otherwise not stay at the university or be recruited by the institution. Started three years ago, the WRF Research Advancement Program (WRAP) provides up to \$200,000 each to as many as three current or prospective faculty members a year.

**“Often we find ourselves** in a position where people are being offered high level packages at other universities and we lack a key element that makes the difference,” says Mary Lidstrom, vice provost for research. “That’s when we go to WRF for help and present the case.”

**The awards carry a prestige value** because they are given to so few and because the money comes from outside the university. “The impact goes beyond the dollars,” Lidstrom notes.

“WRF’s support **has enabled us** to have a **a high success rate** in retaining and attracting some **top faculty members.**” *Mary Lidstrom*



*Mary Lidstrom, Ph.D.  
Vice Provost for Research*

NEW BUILDINGS

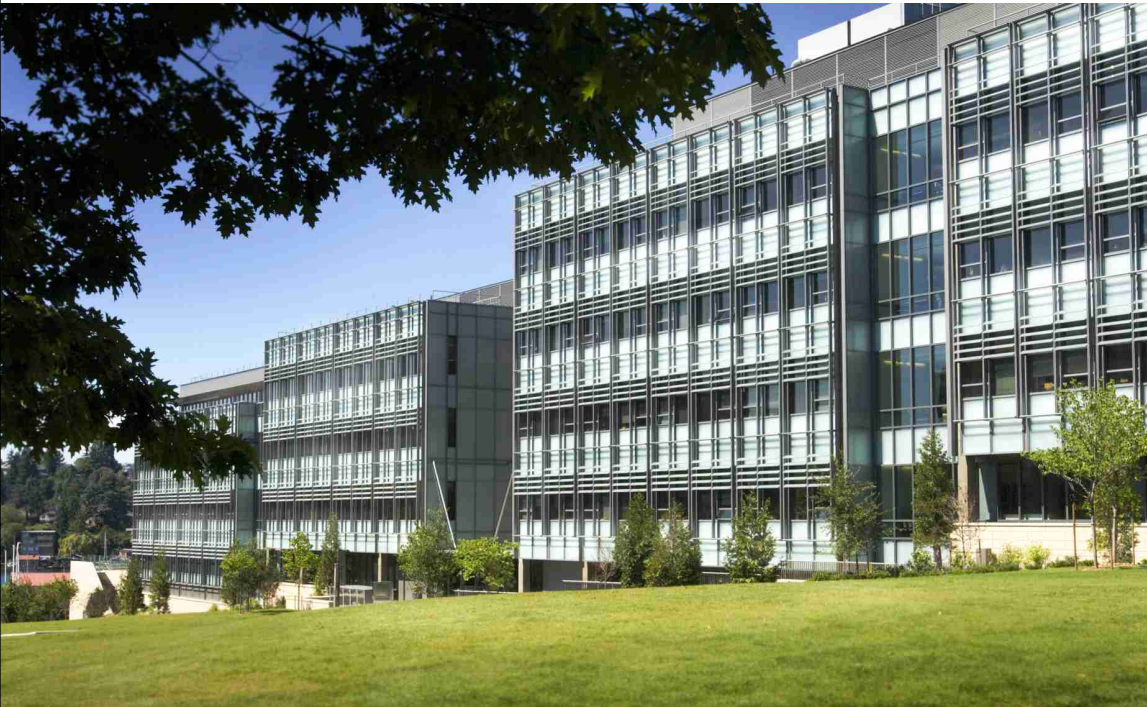
# Enhancing the Infrastructure



**WRF** donates money to assist in the construction

of buildings at the University of Washington and UW-owned facilities in the San Juan Islands. The foundation was an early pivotal donor to a new computer science and engineering building with a gift of \$1 million.

**The foundation also donated** \$1 million to the new bioengineering building and \$100,000 to the Helen Riaboff Whiteley Center, a retreat for scholarly and creative activities at the UW's Friday Harbor Laboratories on San Juan Island in north Puget Sound. The donation helped complete a campus of seven cottages where scholars can pursue their creative work.



**“WRF made one of the earliest gifts to the bioengineering building, which together with the genome sciences building, cost \$150 million,” says Bioengineering’s Kim. “Think about the leveraging effect of that early gift.”**

*Dedicated in March 2006, the William H. Foege building houses the Departments of Bioengineering and Genome Sciences.*



TECHNOLOGY

# Encouraging New Technology Development

**R**ecognizing the need for financial assistance to UW researchers seeking to commercialize leading edge technologies, WRF was receptive to a novel funding proposal from James Severson, vice provost and head of technology transfer. His proposal was for WRF to provide a gift to UW TechTransfer to help launch the Technology Gap Innovation Fund (TGIF).

**The TGIF is a royalty research fund that sponsors UW researchers in developing leading-edge technologies with strong commercial potential. In the fund's first year, the university committed \$500,000 from royalties and licensing fees generated by UW TechTransfer and the WRF provided a gift of \$250,000. The WRF has made a conditional pledge to support TGIF for five years.**

**In the first two years** of the five-year program, TGIF funded 24 projects that resulted in the formation of one company (AES, Inc., which hopes to develop a better and cheaper replacement for fluorescent bulbs), one license agreement and two potential start-up companies. "We've seen very positive results, some direct and others more behavioral," Severson says. "Faculty are interacting with us in a different way and thinking more about how to present their commercialization proposals."

**The idea for TGIF**, sanctioned by the university for a five-year experimental period, began informally in conversations between Severson and Ron Howell, CEO of WRF.

"We could have **started the fund** without WRF's help, but it would have been harder — **WRF understands how to commercialize an idea.**" *James Severson*



*James A. Severson, Ph.D.  
Vice Provost, Intellectual Property  
and Technology Transfer*

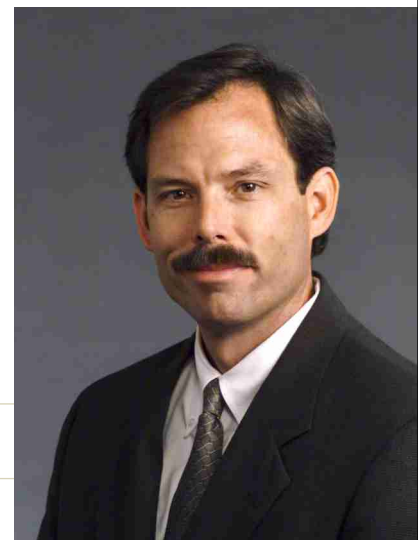
**WRF was the largest single donor** to the New Technology Development Fund at the Fred Hutchinson Cancer Research Center, which is responsible for commercializing intellectual property arising from research done at the Hutch. “Without WRF’s initial gift of \$150,000 two years ago the fund would not have gotten started,” says Spencer Lemons, vice president for industry relations and technology transfer. Managing four or five projects at a time, the fund provides \$10,000 to \$200,000 awards to enhance the prospects for commercializing the research.

**The foundation separately gives** the Hutch researchers grants for specific research projects, among them a matching effort to find more effective cancer therapeutic molecules. It also participated in a Series A round investment in Ikaria, Inc., a start-up based on the work of researcher Mark Roth. The Ikaria team has been able to put laboratory mice into suspended animation, which might lead to the ability to suspend humans to reduce their need for oxygen and give doctors more time to perform surgery.

**“WRF bridges the gap** – what we call the ‘valley of death’ – between the end of basic research funding by large national organizations and the time that venture capitalists become interested,” Lemons notes. “It is stunning how the lack of relatively small amounts of money – even \$50,000 to \$100,000 – can stop a technology from moving ahead.

“Being able to go to the **WRF for gap funding** makes all the **difference in the world.**” *Spencer Lemons*

**Through regular meetings** with faculty members at the UW and the Hutch, the foundation provides grants to support research that has commercial potential. Luciani Simoncini, Ph.D., director of WRF research commercialization and a trained scientist, has identified 12 recipients since 2005 for gifts ranging from \$10,000 to \$50,000.



*Spencer Lemons  
Vice President,  
Industry Relations and  
Technology Transfer,  
Fred Hutchinson Cancer  
Research Center*

One such project is profiled  
on the following page.



## Finding a Better Drug Through Computer Modeling

**Ram Samudrala, an innovator in computational modeling of biological systems,** uses a bank of computers to study how an existing drug kills the herpes virus. That knowledge will, he believes, lead to the development of new, improved drugs for herpes and other viruses.

**Working in University of Washington offices** near Lake Union, Samudrala relies on billions of computer calculations that simulate the binding of a drug to a protein. His focus is on a protease found in all human herpes viruses, including herpes simplex virus. His goal is to identify the most effective way for a drug to bind and inhibit the virus protease, stopping the virus from replicating.

**Samudrala believes** a key factor in the success of his approach is its recognition that the virus proteases and the potential inhibitor drugs are in constant motion, which make it difficult to ensure a secure binding between the two. “People weren’t using the flexibility of the molecular motion to understand how the protease inhibitor could attach itself to the virus protein,” notes Samudrala, who has been studying protein structures for 14 years. “We need to know why and how a drug kills, which computer modeling shows.”

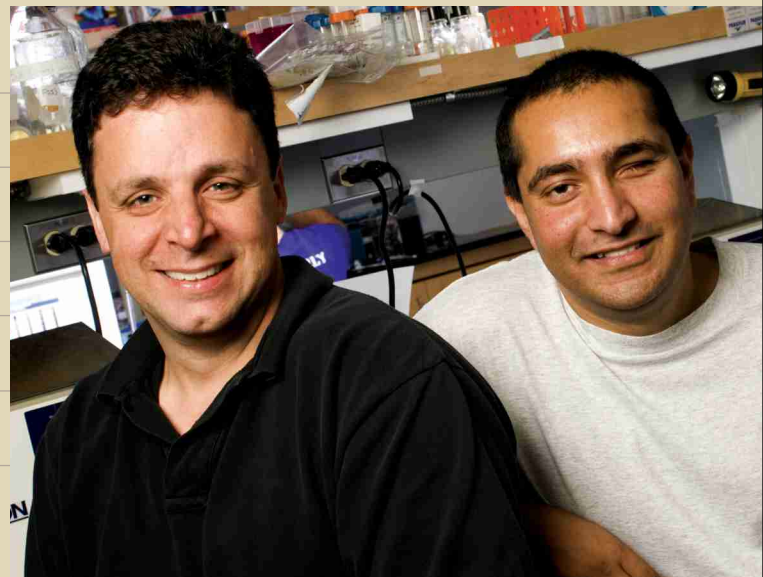
**Samudrala’s collaborator is Michael Lagunoff**, an expert on herpes viruses whose role is to demonstrate in the lab whether Samudrala’s computer-based predictions are correct. Samudrala is an associate professor and Lagunoff an assistant professor in the UW’s Department of Microbiology. Together, they have identified a promising broad-spectrum herpes virus protease inhibitor that they think can be used in conjunction with existing anti-herpes drugs to inhibit the viruses more effectively.

**A gift from Washington Research Foundation** has enabled them to buy samples of the drug and test the computer-model hypotheses of how the drug works. “The money fills the gap between research and early venture capital investing,” Lagunoff says.

**Lagunoff chose herpes viruses to study** because they are complex, different from other viruses and cause major human diseases. Indian-born Samudrala thinks their work could be applied to finding a cure for Third World diseases such as malaria. “I saw a lot of poverty near me when I was growing up in India and it would give me great satisfaction if our work could be directed toward treating rampant diseases in places like Africa.”

“The value of the **WRF gift** and funding from the university’s TechTransfer office is that **it comes quickly** and **speed is very important** when one is working on a potential drug discovery.”

*Michael Lagunoff*



*Michael Lagunoff, Ph.D. (left) proposed the joint research herpes project to Ram Samudrala, Ph.D.*



# Supporting Research Ideas Early

**WRF** is the largest supporter of the Seattle Chapter

of the Achievement Rewards for College Scientists (ARCS) Foundation, which provides scholarships to academically superior graduate students – all United States citizens – to complete their degrees in science, medicine and engineering. All Seattle ARCS members are women committed to raising funds for graduate fellowships at the University of Washington and Washington State University.

“There’s no other mechanism that allows for private support at the graduate level in science and engineering,” says Maggie Walker, president of the ARCS Seattle chapter. “We are not producing enough Ph.D.s in science and engineering, and we need to be paying attention to this deficit.”

**WRF funds six three-year ARCS fellowships a year**, part of the \$800,000 that the Seattle chapter raises every year. “WRF has been a stalwart in our basic funding, which has given us the confidence to ramp up our efforts,” Walker says. “The quality of our fellows is extraordinary and has improved tremendously over the past ten years, especially in their communications skills. In addition to their top percentile intellect, the ARCS Fellows are becoming more effective at generating support for future ARCS Fellows.”

Two ARCS Fellows are profiled in the following pages.

“WRF has been a **stalwart in our basic funding**, which has given us the **confidence** to ramp up our efforts.” *Maggie Walker*

*Maggie Walker*  
President, Seattle Chapter, ARCS Foundation







## Keeping Hip

## with Research on Porous Titanium

**Graduate student Nikolas Hrabe** sees the day when people will benefit from artificial hips made with porous titanium, providing them with a gentler, more durable and potentially less painful bond with real bone.

**Now in his third year** of a five-year research study to develop porous titanium, Hrabe is working on his doctorate in materials science and engineering at the University of Washington. His work is financed in part by money from the Seattle chapter of the ARCS Foundation, which Washington Research Foundation has supported since 1996.



*Nikolas Hrabe prepares a sample of porous titanium for heat treatment in a high vacuum furnace.*

ARCS FELLOW: Nikolas Hrabe

“The money from ARCS made my package here better, but more importantly, it made me feel emotionally supported,” Hrabe says. “Knowing that WRF has faith in me is a big boost to my morale and keeps me going when I encounter difficulties in the lab.”



**Hrabe is trying to determine** whether an artificial hip could be made with porous titanium – more akin to the porosity of bone – and incorporate a gradient of porosity. The higher porosity exterior would match the stiffness of the bone while a lower porosity interior would conserve strength. He believes this new material would provide a stronger interface with bone than solid titanium, which is the current orthopedic technology.

**A native of Minnesota’s Twin Cities**, Hrabe grew up in the small town of Medford, Wisconsin. That’s where he was introduced to ice hockey, a passion he brought with him to Seattle, where he plays hockey once a week in the Greater Seattle Hockey League. He also likes skiing and hiking, with his favorite hiking destination thus far the Hoh rain forest on the Olympic Peninsula.

**Hrabe received his bachelor’s degree** in materials science engineering from Northwestern University. While at Northwestern he did undergraduate research with an orthopedics company, which introduced him to the need for better artificial hip material.



*Taking a break from the lab, Hrabe sprays some snow at a Seattle area ice rink.*

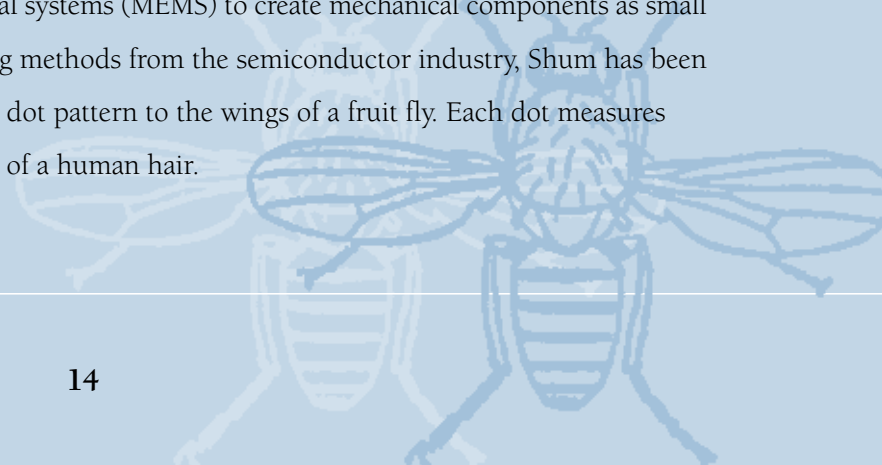


## Could Fruit Flies

# Become Flying Semiconductors?

**University of Washington doctoral student Angela Shum** thinks small. And she needs to, because her daily research challenge is how best to microfabricate on the wings of tiny fruit flies.

**Shum, who has a bachelor of science and master's** in electrical engineering, is intrigued by the challenge of marrying biology and microelectromechanical systems (MEMS) to create mechanical components as small as a micron – a millionth of a meter. Borrowing methods from the semiconductor industry, Shum has been able to apply a thin metallic film in a repeated dot pattern to the wings of a fruit fly. Each dot measures about 50 microns across, about half the width of a human hair.





ARCS FELLOW: Angela Shum

**The pattern**, formed by metal being evaporated through a stencil-like screen, represents what could be the first step in creating a microcircuit on a living organism. Shum uses photolithography – the same process for patterning on a wafer – to create the screen, or mask that covers a cylindrical container holding up to 100 fruit flies.

**The covered container** is then placed at the top of a four-foot tall evaporation chamber, where the flies are put to sleep under vacuum pressure that would explode most animate objects. (The flies probably survive because of their exoskeletons and open circulatory systems.) From the bottom of the chamber, the low evaporation temperature metal rises, coating both the mask and the flies. The result is a dot pattern that is a negative transfer of the mask pattern on the bodies and wings of the flies. This is the first time such a process has been demonstrated on a living organism. Other researchers may one day find a way to attach tiny sensors, control circuits, telecommunication microchips and other devices to this base.

**Shum earned her bachelor of science** in electrical engineering at the California Institute of Technology (Caltech) and her master of science in electrical engineering at the University of California at Los Angeles (UCLA). She was working as a systems engineer at Raytheon Company when she began thinking about pursuing her doctorate in electrical engineering.

**Although she had been offered** a three-year fellowship, she was debating whether to return to school or continue working. “The day before I was to send in my acceptance forms, I was still hesitant about making the decision. Luckily, I received the news that I was awarded the ARCS scholarship. The award gave me a welcome feeling and really made all the difference in my decision to come here.”

**When she’s not working in the lab**, Shum works out with lab colleagues, runs in her Eastlake neighborhood and practices yoga.

*Angela Shum uses an evaporation chamber to place patterns on the wings of fruit flies.*



FARECAST

CLARISONIC

# WRF funded companies



WRF invests in early stage, technology-based companies through WRF Capital, which manages its evergreen seed venture fund. WRF Capital focuses on start-up companies with ties to the University of Washington and other non-profit research institutions in the state. Licensing and other investment income feed the venture fund. Two companies of the 19 “active investments” in operation are profiled.



# Computer Science Meets Online Air Travel



*Hugh Crean  
President and CEO, Farecast*

**W**ith rapidly changing airline ticket prices, consumers face a daunting task in knowing when and where to buy the cheapest tickets. Farecast, a start-up company funded in part by WRF Capital, addresses that challenge using information technology that began at the University of Washington.

**“We have been systemically studying price volatility** and applying data mining techniques to develop our predictive technology,” says Hugh Crean, president and chief executive officer. “We offer travelers a unique array of planning tools and an unbiased prediction of the price trend for their trip over the next week. We answer the question: ‘When and where should I buy my airline ticket.’”

**Travelers using the Farecast website** select their departure and arrival cities and travel dates, find out fares available at relevant airline web sites and learn the history of pricing for their search for up to 90 days. More important, they receive an unbiased prediction of the direction of the lowest fares over the next seven days.

# WRF funded companies

## COMPANY PROFILE: Farecast

**The predictions are backed** with a percentage of confidence about the likely change, giving consumers a strong direction about whether to buy now or wait. Farecast displays the information in easy-to-read graphs.

**The company updates its database daily**, using airfare pricing information from ITA Software. “We update our predictions and price histories every day,” Crean says. “The goal is to provide the customer an unbiased prediction and information based on the best data available to us.”

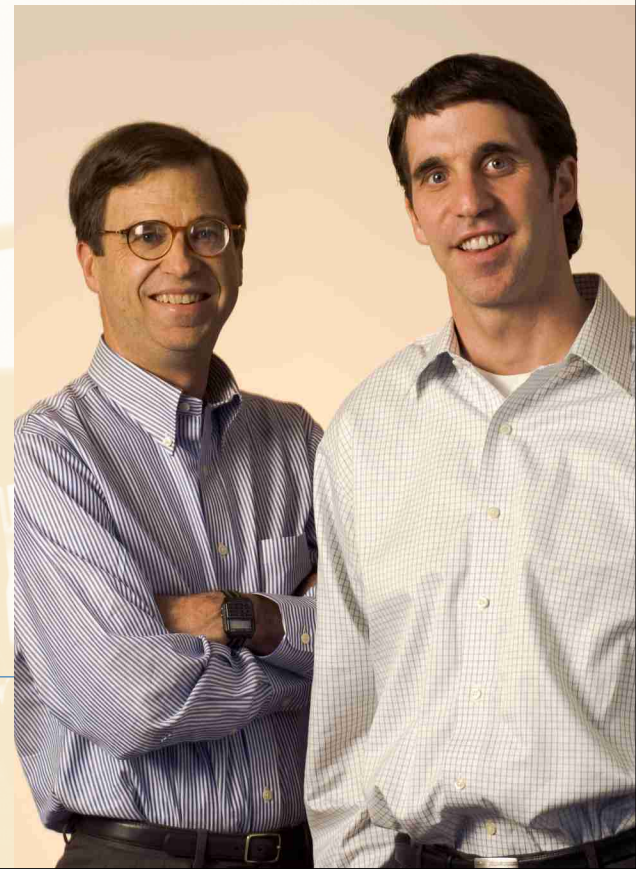
**The company launched its service in June, 2006**, initially covering domestic trips from Boston and Seattle to about 65 other cities. Farecast expanded to more than 55 cities in August. Crean believes airlines will be supportive of the new service because potential travelers will be routed to airline websites to buy tickets directly from the carriers.

**The initial technology was invented** by Oren Etzioni, associate professor in the University of Washington’s Department of Computer Science and Engineering.

**The idea arose during a flight** that Etzioni took years ago when he learned that passengers around him had lower-priced tickets. The initial proof-of-concept work at the UW was supported by a \$30,000 grant from the Washington Research Foundation. Later, the technology became the basis for the start-up company, Hamlet, Inc. (borrowing lightly on Shakespeare’s famous line to create the company slogan of “To buy or not to buy”).

**Hamlet, now known as Farecast**, received an initial financing of \$1.5 million from WRF Capital and Madrona Venture Group. Etzioni and his colleagues at the UW and the University of Southern California have filed a patent on the mathematical algorithm and predictive technology used by Farecast in its predictive services. A second round of financing led by Greylock Partners raised \$7 million.

*John Reagh, WRF, (left) with  
Hugh Crean, Farecast*



## COMPANY PROFILE: Clarisonic



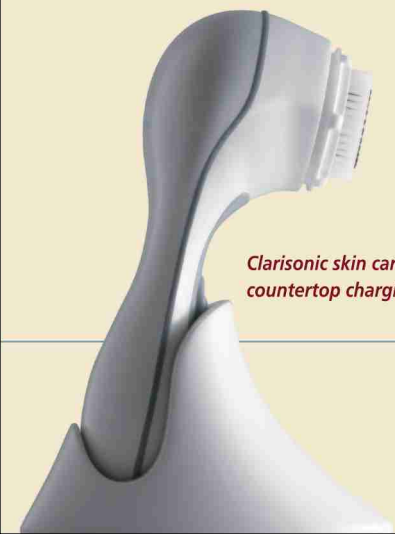
# Brushing Up On Skincare

*David Giuliani  
CEO, Clarisonic*

**E**ntrepreneur **David Giuliani** believes his new high tech skin care brush system could be even more successful than his last start-up enterprise – Optiva, maker of Sonicare toothbrushes and other personal products that had annual sales of \$175 million before it was sold to Philips Oral Healthcare in 2000.

**“We expect the Sonicare success** will be superseded by Clarisonic,” Giuliani says. “This is going to be big.” Giuliani, chief executive officer of Clarisonic, and a team of employees that included a few from Optiva days introduced the first Clarisonic product to the United States market in 2004.

*Clarisonic skin care brush in  
countertop charging cradle.*





# WRF funded companies

## COMPANY PROFILE: Clarisonic

**Resembling an electric razor**, the skin brush relies on two concentric rings of soft bristles. The outer ring remains still while the inner core of bristles vibrates at a very high sonic-frequency speed. The vibrations set up stress between the two sets of bristles that propagate into the skin, opening skin pores and cleansing deeply into the skin while also removing dead skin from the surface. “We offer a fabulous way to cleanse the skin so lotions and skin treatments can get in and do their work,” Giuliani says.

**The product has been clinically tested** and shown to help relieve rosacea and acne, as well as reduce wrinkles. The company has an advisory board of dermatologists, and all trials are reviewed by an institutional review board. Most women who use Clarisonic reported tighter pores, healthier skin and less inflammation. Men say they get closer shaves after using the Clarisonic.

**To cut through the clutter of skin care products**, Giuliani has focused on endorsements from dermatologists, aestheticians and plastic surgeons; powerful high-end retailers such as Saks Fifth Avenue, Nordstrom and Sephora; and economically effective outreach to consumers via the internet, infomercials, public relations and high-visibility spokespersons. “Hawaii is our best U.S. market, in part because our spokesperson there is a former Miss Universe and Miss Hawaii,” Giuliani says.

**Giuliani sees great potential in Japan**, where Clarisonic was launched in early 2006. “Japanese consumers spend as much on skincare products as the United States, but the country is half the size,” he notes. “That means they spend twice as much on skincare per person as we do.” The product retails for \$195.

**WRF Capital invested initially in Clarisonic** in February 2005 and again in February 2006. “We were impressed by the Clarisonic team and the track record at Optiva,” says Loretta Little, managing director at WRF Capital.



*Japan is expected to be a significant market for Clarisonic.*

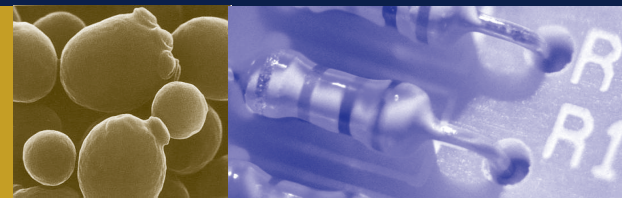
## A START-UP MINI BRIEF: Accium

### Testing New Drugs Fast

New higher quality drugs can be developed more efficiently and with fewer clinical trial failures if companies begin relying on technology services offered at Accium BioSciences, a WRF Capital-funded start-up company. Loretta Little, WRF, (left) worked with Ali Arjomand, Ph.D., president and chief operating officer, to help finance Accium's Series A round. Accium operates the first commercial accelerator mass spectrometry facility in North America.



# WRF licensing



WRF manages patents that cover a broad range of applications, from radio receiver architecture to therapies for treating bleeding disorders, diabetes and immune diseases.



## LICENSING

# Actively Managing Intellectual Property Rights

**A**pplying a knowledge of science and a detective's attention to details, Beth Etscheid tracks corporate America's usage of more than 30 technologies licensed by Washington Research Foundation.

**As WRF's director of licensing**, Etscheid has been able to retrieve millions of dollars that might not have been returned to the foundation and ultimately to the University of Washington and others in the form of royalties, grants, scholarships and gifts.

**The technologies** grew out of research carried out at the University of Washington and other institutions in the 1970s, 1980s and early 1990s. WRF continues to monitor and negotiate license agreements with companies that make use of the patents in its legacy patent portfolio.

**"We sign new licenses every year** and continue to receive money from older license agreements because it often takes time for a technology to be developed to its full potential," says Etscheid, who was a scientist at the Fred Hutchinson Cancer Research Center before joining WRF. "Vigilant monitoring is necessary because companies sometimes overlook the patent agreements as a result of changes in accounting, personnel and procedures."

"WRF has earned **more than \$126 million** for the University of Washington from **licensing activities.**" *Beth Etscheid*



**Beth Etscheid, Ph.D.**  
**WRF Director of Licensing**

# WRF Venture Center

## Helping Start-Ups

### WRF offices in the Eastlake area of Seattle

house the WRF Venture Center, where fledging companies have offices and access to business support. Teranode Corp., a WRF start-up company, had its first offices here, as did nLight Photonics Corp., which is now based in Vancouver, Washington. Other companies in which WRF Capital has invested are located in the WRF Venture Center, as are new companies in which the foundation has no capital investment.

## WRF Offices



*The WRF offices and Venture Center are on Eastlake Avenue in Seattle, Washington.*

#### WRF Capital Active Portfolio Companies

Accium BioSciences, Inc.  
Alder Biopharmaceuticals, Inc.  
Amnis Corp.  
Clarisonic  
Farecast, Inc.  
Halosource, Inc.  
Illumita, Inc.  
Ikaria, Inc.  
Microgreen Polymers, Inc.  
nLight Photonics Corp.  
Omeros Corp.  
Second Act Partners, Inc.  
Targeted Growth, Inc.  
TeachTown, Inc.  
Teranode Corp.  
Therus Corp.  
(AcousTX, Coaptus)  
Trailfire, Inc.  
Uptake Medical Corp.  
VLST Corp.

#### Acquired / IPO Companies

Corus Pharma, Inc.  
Intelligent Ion, Inc.  
Lumera Corp.  
Numinous Technologies, Inc.  
Performant, Inc.  
Reality Based Learning Co.

#### Companies with Passive Investments

Confirma, Inc.  
EKOS Corp.  
Koronis Pharmaceuticals, Inc.  
Micronics, Inc.  
Point of CareWare, Inc.  
Trace Detect Corp.

## Working Collaboratively

**T**he work of WRF is carried out by a team of committed, knowledgeable people guided by an accomplished board of directors with collective experience in venture investing, start-up operations, medicine, science and academia.

### WRF Management Team



*WRF team members include, from left: Beth Etscheid, PhD, Director of Licensing; Thong Le, Managing Director; John Reagh, J.D., Managing Director; Luciana Simoncini, PhD, MBA, Director of Research Commercialization; Jeff Eby, CFO; Kim Emmons, MLS, Manager, Research and Information Services; Loretta Little, MBA, Managing Director; Ron Howell, CEO.*

### WRF Board of Directors

**Mr. Thomas J. Cable**

Private Investor  
Chairman of the Board, Washington Research Foundation

**Mr. Ronald S. Howell**

CEO, Washington Research Foundation

**Mr. Paul Bialek**

General Partner, Frazier Technology Partners

**Mr. C. Kent Carlson**

Partner, Preston Gates & Ellis LLP

**Mr. Barry Forman**

President, American Paradigm Corporation

**Mr. C. Calvert Knudsen**

Private Investor

**Mrs. Sally Narodick**

Retired Chairman and CEO, Edmark Corporation  
and Apex Learning Inc.

**Mr. Brooks Simpson**

President, Pacific Rim Medical Systems

**Dr. George I. Thomas**

Clinical Professor of Surgery, University of Washington  
Cardiovascular Surgery

**Mr. James R. Uhlir**

Partner, Christensen O'Connor Johnson Kindness PLLC

**Ms. Lisa L. Johnsen**

Partner, Preston Gates & Ellis LLP  
Board Secretary, Washington Research Foundation

# WRF Financial Summary

**W**ashington Research Foundation reports on a fiscal year ending June 30.

## Statement of Financial Position

	6/30/02	6/30/03	6/30/04	6/30/05	6/30/06
<b>Assets</b>					
Current Assets	16,584,729	17,028,639	17,833,898	16,395,490	29,658,042
Long Term Assets	33,038,799	39,127,979	45,621,689	48,514,015	54,624,528
<b>Total Assets</b>	<b>49,623,528</b>	<b>56,156,618</b>	<b>63,455,587</b>	<b>64,909,505</b>	<b>84,282,570</b>
<b>Liabilities and Equity</b>					
Liabilities	12,796,123	13,325,466	15,609,832	15,638,601	25,684,055
Unrestricted Net Assets	36,827,405	42,831,152	47,845,756	49,270,904	58,598,515
<b>Total Liabilities/Net Assets</b>	<b>49,623,528</b>	<b>56,156,618</b>	<b>63,455,587</b>	<b>64,909,505</b>	<b>84,282,570</b>

## Statement of Activities

	6/30/02	6/30/03	6/30/04	6/30/05	6/30/06
<b>Operating</b>					
Total Royalties and Licensing Revenue	17,750,426	26,120,405	20,703,099	21,489,737	34,667,853
Total Royalty Costs	11,615,962	18,050,589	13,486,760	14,469,744	24,215,754
Net Licensing Income	6,134,464	8,069,816	7,216,339	7,019,993	10,452,099
Operating Expenses	2,272,634	2,221,089	2,552,929	2,706,406	3,089,206
Change in Unrestricted Net Assets from Operating Activities	3,861,830	5,848,728	4,663,410	4,313,588	7,362,894
<b>Non-Operating</b>					
Net Investment (Loss) Income	(2,789,999)	553,660	3,409,028	1,177,153	3,245,381
Grants and Distributions Expense	373,500	399,500	3,057,834	4,065,592	1,280,664
Change in Unrestricted Net Assets from Non-Operating Activities	(3,163,499)	154,160	351,194	(2,888,440)	1,964,718
Change in Unrestricted Net Assets	698,331	6,002,888	5,014,604	1,425,148	9,327,611
<b>Other Information</b>					
Licensing Fees Paid to UW	4,761,226	11,917,313	9,978,177	10,677,774	11,016,812
Grants Paid	965,500	945,500	2,003,770	5,016,142	1,102,163

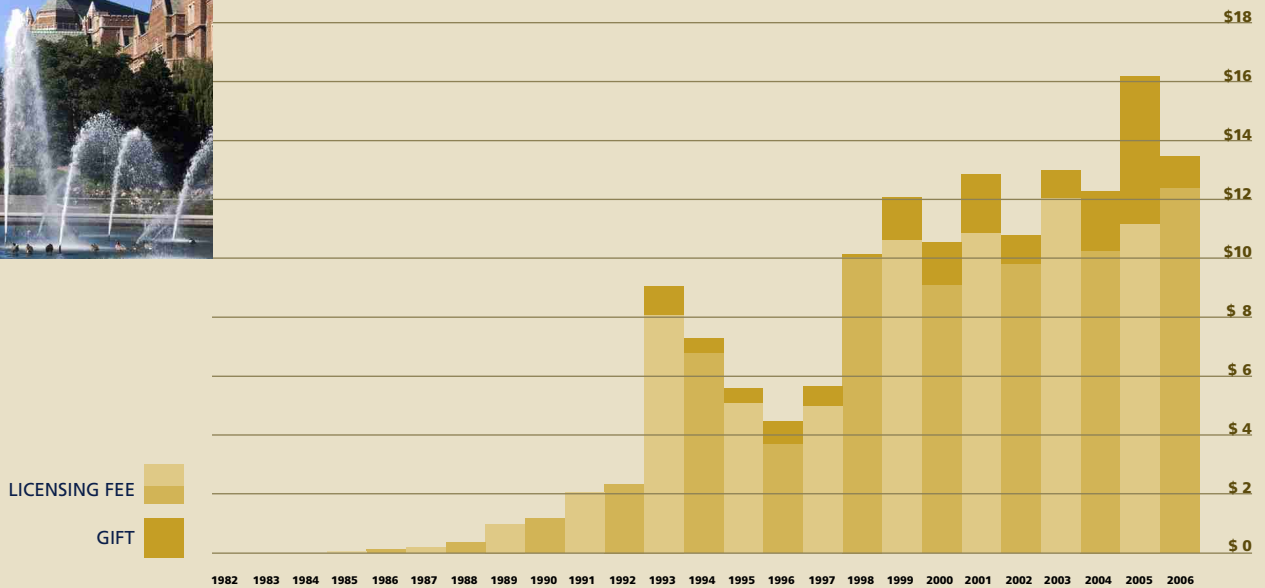


# WRF Financial Summary



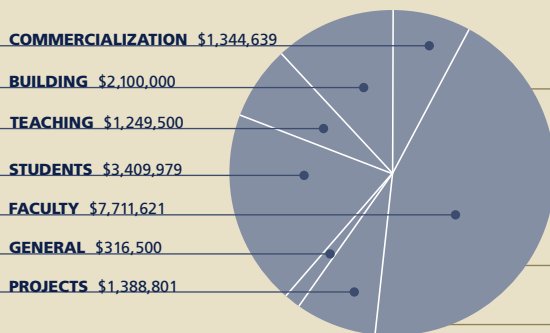
## WRF Support to UW

FISCAL YEARS: DOLLARS IN MILLIONS



## WRF Gifts

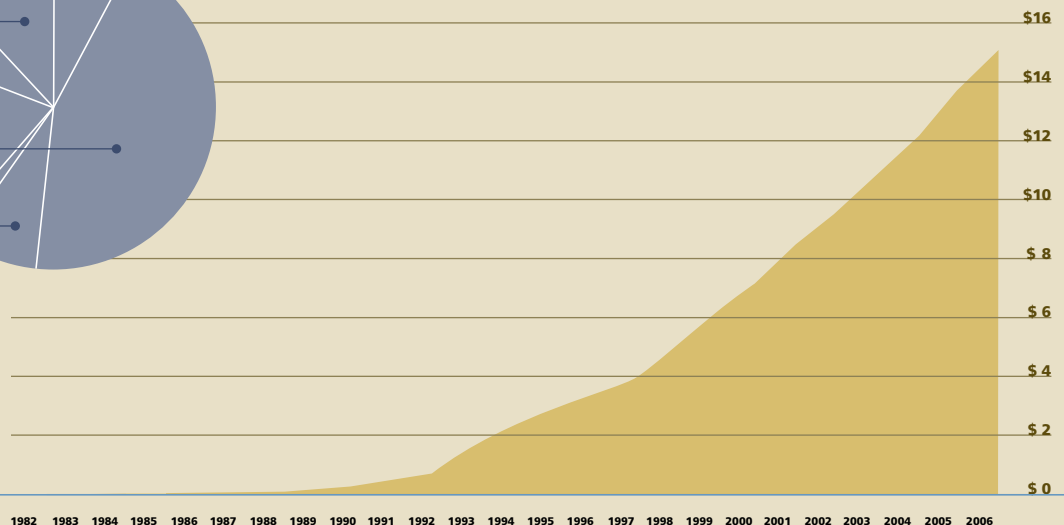
1994-2006 TOTALED \$17.2 MILLION

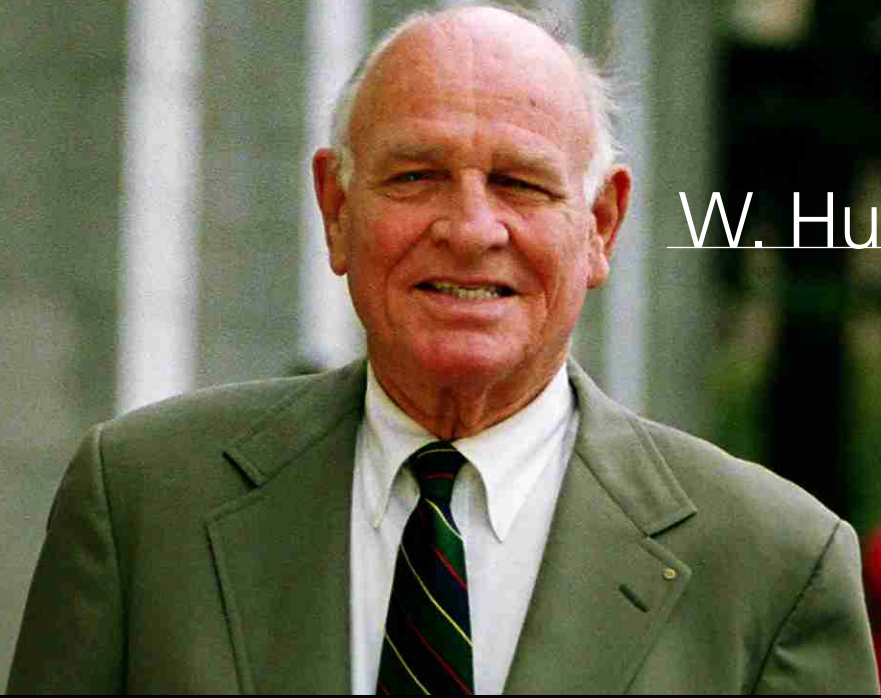


## Cumulative Support to UW

FISCAL YEARS: DOLLARS IN MILLIONS

(In addition, UW received stock in Numinous, Ostex and Immersion worth approximately \$10 million, as a result of WRF license agreements.)





W. Hunter Simpson  
1926-2006

DRIVING FORCE BEHIND THE CREATION OF THE WASHINGTON RESEARCH FOUNDATION

**A** dynamic and inspiring business leader,

W. Hunter Simpson was the driving force behind the creation of the Washington Research Foundation. Friends universally described him as “larger than life.”

**A lifelong supporter of the University of Washington,** he often described the UW as “the most precious asset” in the Pacific Northwest. A native of Tacoma, he received his business degree from the UW in 1949 and joined IBM, where he rose to become head of the company’s Seattle office with responsibility for 600 employees in 11 states.

**Hunter surprised friends and business associates** in 1966 when he left IBM after 17 years to become president of Physio-Control Corporation, a struggling medical device company that later became known internationally for its Lifepak™ defibrillator monitors, products that have saved the lives of

*Hunter Simpson had a knack for generating news.*



# In Tribute

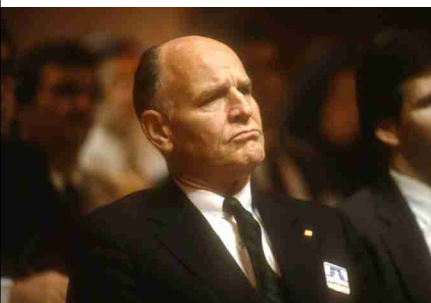
## W. HUNTER SIMPSON

hundreds of heart attack victims. He created a corporate culture where employees, known as team members, enjoyed a four-day work week, quarterly company-wide meetings that sometimes resembled pep rallies (including the UW Husky marching band) and public recognition for jobs well done.



**In the mid-1970s**, Physio-Control began manufacturing two products derived from research done at the UW. Although the university was known for the quality of its researchers, it had no mechanism in place to commercialize any technology arising from research. Hunter took the unusual step of paying voluntary royalties to the UW for the technologies that Physio-Control commercialized.

**Hunter also took one more step** toward securing revenue for the UW from its technology. Hunter and a group of friends that included Tom Cable, Bill Gates Sr. and others with close ties to the UW decided to form WRF as an independent foundation to facilitate the transfer of technology to the private sector. The WRF was incorporated in 1981, and its patenting and licensing program has since generated hundreds of millions of dollars in revenues.



**Hunter remained on the board for the rest of his life.** He also served as a UW Regent and a director of the UW Foundation Board. He and wife Dottie received the first-ever Gates Volunteer Service Award in 2002 in recognition of their support to the UW. Those whose lives Hunter touched personally and professionally will miss him, and his legacy will endure in the WRF and other organizations which benefited from the power of his persuasive leadership.

“Hunter could well be remembered as **one of the greatest regents** in the history of the institution.”

*William Gerberding, former UW President, at the memorial service to celebrate his life*



# WASHINGTON RESEARCH FOUNDATION



**Washington Research**  
FOUNDATION





## Washington Research

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Photography by Nick Gunderson

W. Hunter Simpson photos courtesy of Bob Peterson