# Building Strength, Leadership, and Innovation

#### ANNUAL REPORT 2006-07



#### OUR MISSION STATEMENT

The mission of the University at Buffalo School of Pharmacy and Pharmaceutical Sciences is to educate students in pharmacy practice and the pharmaceutical sciences, to create and disseminate knowledge in pharmacy practice and the pharmaceutical sciences, to provide patient care, and to provide services to the community-at-large based upon this knowledge. This mission is to be achieved consistent with the highest ethical standards and with respect for diversity and cultural sensitivity.

The mission recognizes pharmaceutical care as a mode of pharmacy practice within the health-care team in which the patient is empowered "to achieve the desired outcomes of drug and related therapy."

The mission also recognizes that research in the broad area of the clinical sciences, pharmaceutical sciences, and education is necessary to create and maintain a body of knowledge needed for professional education, health-care delivery, and the advancement of science. In this context, our goal is to enhance the local, national, and international leadership of the School of Pharmacy and Pharmaceutical Sciences and continue it as one of the strong components of the University at Buffalo and the State University of New York system. This will involve a focus on those areas of unique strength within the school and those areas that form unique, interdisciplinary bridges within the university.

Care and discovery, core objectives of the School of Pharmacy and Pharmaceutical Sciences, are being advanced through expanded, enhanced programs and innovative research. The result advances the school's vaulted position, in keeping with the University at Buffalo's leadership path toward the top ranks of public research universities.

This annual report traces the strength, leadership, and innovation that have characterized the past year for the SoPPS—a dramatic progression poised to continue.

# Message from the Dean

#### Enhancement and innovation were encompassing themes in 2006–07.

Expansion of our PharmD Experiential Programs to provide students in all years of our program with off-site clinical educational experiences has been a major focus. This focus has brought with it the need for additional faculty as well as preceptors. We have begun active recruiting efforts in both these areas.

The enhancement of our programs also precipitated the need to continually strengthen and infuse school leadership. Edward Bednarczyk, PharmD, associate professor, pharmacy practice, was appointed chair of pharmacy practice and the former chair, Gene Morse, PharmD, expanded the role of associate dean for clinical and translational research. Both these positions are key to the future success of the school in allowing our pharmacy-driven academic and research areas strong insightful leadership. Another new leadership appointment within the school was the appointment of Jennifer Hess, PhD, as our assistant dean for admissions. This strategic hire will enhance the balance and focus for all admissions activities here at the school.

Innovation was a major theme evidenced by our researchers. Joseph Balthasar, associate professor, pharmaceutical sciences, has begun to lay the foundation for the Center for Protein Therapeutics upon receiving strong funding from many partners during the 2006–07 academic year. This funding will allow the center to begin hiring graduate and postdoctoral students to enhance the education of future proteomic researchers, as well as have an immediate impact on current research and analysis.

UB 2020 and associated growth to all divisions on campus brings with it the opportunity for expansion, enhancement, and innovation through all aspects of our university life. Increased enrollment driving increases in faculty, staff, and facilities will create changes in our curriculum, research activities, scholarship, and outreach. The possibilities are limitless. We welcome your partnership and support as we begin this new phase at UB and the SoPPS.



Thank you,

Dayne S. anderson

Wayne K. Anderson Professor and Dean

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# Bench to Bedside, Bedside to Bench

Therapeutic Hope for New Patient Populations

In the world of twenty-first-century health care, many take up the challenge of optimizing the discovery and delivery of new pharmacotherapy. At the UB School of Pharmacy and Pharmaceutical Sciences, Joseph Balthasar and Patty Havard are among the leaders of that cadre.

Bench to bedside, bedside to bench, their research on protein therapeutics and antiretroviral pharmacology among HIV-positive pregnant women, respectively, is advancing pharmacokinetics (PK) and pharmacodynamics (PD) knowledge. Together, they are cultivating hope among patient populations where previously there was little.



"In my laboratory, we're interested in the treatment of cancers and autoimmune diseases," says Balthasar, a Buffalo native and UB SoPPS alumnus who earned his BS degree in pharmacy in 1991 and PhD in pharmaceutics in 1996. "My group is very interested in understanding the pharmacokinetics and pharmacodynamics of monoclonal antibody drugs."

e explains that Gerhard Levy, a pioneer of modern PK/PD research, was a member of the SoPPS Department of Pharmaceutical Sciences faculty and that SoPPS Distinguished Professor William Jusko is an international leader in the discovery and advancement of PK/PD knowledge. "It could be argued that most of the important pharmacokinetic and dynamic research since the '60s had its start at Buffalo, from this department, largely because of Gerhard Levy, Bill Jusko, and others in the department."

#### **Center for Protein Therapeutics**

Balthasar's research also has drawn both industry and scientific attention in the field. His visionary work with monoclonal antibodies led to the development of a new UB Center for Protein Therapeutics; the institution was his idea during meetings of SoPPS faculty to identify strengths in their school as part of the UB 2020 strategic planning process.

The Center for Protein Therapeutics is scheduled to formally open in June 2008 at UB's New York State Center of Excellence in Bioinformatics and Life Sciences in downtown Buffalo. The facility is envisioned to position UB as the first university worldwide with a multidisciplinary program focusing on the application of pharmaceutical sciences to the development of protein drugs.

UB's protein therapeutics effort, which was spearheaded by a \$1 million grant from Novartis, is funded by a consortium of pharmaceutical industry leaders that were impressed by UB's protein therapeutics research and the capacity of the SoPPS for grooming PK/PD professionals to meet future industry demand. Over the next ten years, protein therapeutics is expected to comprise as much as 50 percent of the new drugs approved by the FDA.

#### **Antibodies in action**

"An antibody is a protein that is made by the immune system to target foreign objects within the body," continues Balthasar, who is associate professor of pharmaceutical sciences and director of the pharmaceutical sciences graduate studies program. "Pharmaceutical companies and scientists have found that the structural flexibility provided by antibodies, as evolved by the human body, allows for highly specific and selective binding and provides a great way to target therapeutics to a desired site of action, to label cells for destruction, and to bind to toxic substances and remove those toxic substances from the body."

Part of his current bench work is focused on developing better drug therapies for idiopathic thrombocytopenic purpura (ITP), an autoimmune disease in which antibodies E'RE NOT REINVENTING THE WHEEL," Balthasar says of his own research. "We're just using the wheels to drive a new car. We've adapted these methodologies, and then applied them to our purposes. And the ideas that we get all come from pharmacokinetics and pharmacodynamics."

attack cells on the surfaces of platelets, prevent clotting, and promote microbleeding within major organs. "We became interested in this disease because of a therapy known as IVIG which was found to be useful," Balthasar says. Intravenous immunoglobulin treatment is an effective therapy for the symptoms of many autoimmune illnesses, including multiple sclerosis, lupus, and rheumatoid arthritis. "It's actually a human product, and the antibody from the IVIG preparation is polyspecific."

In the lab, Balthasar and his research team use "fairly basic instrumentation" to engineer antibodies that are monospecific—proteins that will clone only to select targets. As he talks of spinning together cancer cells with genetically altered B-lymphocyte cells to create monoclonal proteins with selective affinity, he draws a diagram to better illustrate the far-reaching possibilities of protein therapeutics.

"Pharmacokinetic and dynamic analyses allow us to under-



stand systems in a very quantitative and mathematical way. If you understand things well enough to be able to develop models to describe them, you can begin to unravel complex mechanisms of drug effect, and you develop a clear picture of how a therapy is working," he explains.

"What we've done is investigate a therapy, IVIG, that is useful in the treatment of many autoimmune dis-

eases. We found a mechanism that was previously unknown that was responsible for its action. And then we developed more specific, more selective ways to be able to use that mechanism to get rid of the pathogenic antibodies."

#### Improving ovarian cancer treatment

Balthasar also is using that mechanism to find ways to improve survival rates for ovarian cancer. Ovarian cancer is among the most difficult to treat because it spreads in microscopic tumor colonies from the ovaries to sites throughout the peritoneal cavity.

"Systemic toxicity limits the amount of chemotherapeutic drug that can be given to dose levels that aren't high enough to cure the disease," he explains. "We've been developing antibodies against the chemotherapeutic drugs. We give the chemotherapeutic drug directly into the peritoneum where the cancer resides, so it's active where it's needed. When the drug is absorbed into the bloodstream, the antibody, which is a protein therapeutic, binds to it and prevents it from causing toxicity."

#### **Reducing HIV threat to offspring**

At bedside, Patty Havard is pursuing new pharmacotherapeutic knowledge as it relates to the use of antiretroviral drugs in HIV-positive women to reduce transmission of the virus from mother to child.

"The current guidelines recommend a combination therapy of three antiretroviral drugs to reduce perinatal transmission of the HIV virus from the mother to the infant," she explains. "My clinical research is to better characterize the pharmacokinetics of these drugs during pregnancy, and some of the factors influencing their distribution across the placenta."

Havard earned her doctoral degree in pharmacy from the University of the Pacific and was a fellow at Columbus Children's Hospital in Ohio. Her clinical interest in therapeutics for HIV and AIDS-associated opportunistic infections was sparked while she was a member of the Rutgers University faculty. Her current clinical work with HIV-positive pregnant women began at Ohio State University, where she was part of the faculty in the Department of Obstetrics and Gynecology before coming to UB in 2006. At the SoPPS, she is research division head of pharmacotherapy research programs and associate professor of pharmacy practice.

uring her tenure at Ohio State University (OSU),
Havard collaborated with the Division of Infectious
Diseases and the Department of Obstetrics and
Gynecology (of which she is still a faculty member) in the
College of Medicine, and with Columbus Children's Hospital,
to implement an HIV high-risk pregnancy program. The multidisciplinary clinic was the first of its kind in the state. "HIV

pharmacotherapeutics really is a specialty that requires a close working relationship with infectious disease specialists, nurses, microbiologists, and other health-care providers," Havard said in a 2007 interview.

#### **Dramatic decline in HIV births**

Over the last six years, Havard's powerful clinical work has translated to the birth of more than 100 HIV-free infants to HIV-positive mothers and helped to reduce HIV births from 25 percent to less than 2 percent.

"As a pharmacist, I help to identify barriers as to why the moms are not taking their medications. Adherence to antiretroviral therapy is critical for optimal outcomes. Non-adherence can lead to drug resistance and increase the risk of HIV transmissions from the mother to the baby. Drugdrug interactions, drug-food interactions, laboratory tests, and maternal-adverse events are assessed at each clinic visit to ensure successful treatment with antiretroviral therapy," Havard says.

The participants in her clinical research are referred through women's clinics at the Erie County Medical Center (ECMC), and delivered at Women and Children's Hospital of Buffalo: Havard has a clinical practice at both locations. The women are predominantly African-American or from African nations, uninsured or publicly insured, and unaware that they are HIV-positive until the pregnancy is confirmed. Although usually in the early stages of HIV infection, they are treated with a regimen of protease inhibitors to improve the chance of their baby being born HIV-free.

#### Monitoring perinatal drug distribution

Potent antiretroviral drugs such as atanzanavir, zidovidine, and lamivudine, among others, are used routinely to reduce HIV morbidity and mortality in nonpregnant adult women. Despite limited safety data, these drugs also are recommended for HIV-infected pregnant women to reduce perinatal transmission of the virus. To give hope to new generations, Havard is developing a comprehensive outcomes database to monitor drug safety and optimize pharmacotherapy.

"Protease inhibitors don't cross the placenta very well. Yet we know that these drugs are effective in reducing perinatal transmission of HIV," she explains. To prevent the transmission of HIV from mother to infant, there must be adequate drug levels in the fetal compartment. Too high a drug level, however, may cause drug toxicity in the fetus.

"We really don't know much about the factors influencing drug distribution in the fetal compartment," Havard says, adding that many antiretroviral drugs work at the intracellular level. "We now know that there is a transporter protein that pumps out HIV protease inhibitors from intracellular cytoplasm. This effect could be a potential mechanism for drug failure. The protein is known as the p-glycoprotein, and the question is, Is p-glycoprotein even expressed in a fetal cell?"

o answer this key question, Havard and her collaborators are studying p-glycoprotein gene expression and HIV-protease inhibitor intracellular levels in blood samples taken from the mother and the umbilical cord at delivery.

#### **Visionary therapeutic outcomes**

Because antiretroviral therapy has transformed HIV infection into a chronic disease, the next stage of Havard's research will examine potential drug-drug interaction between protease inhibitors and conjugated estrogens (hormone replacement therapy) among HIV-positive menopausal women.

Looking forward, she hopes to establish at UB a regional HIV-in-Women Research Network between ECMC, OSU, and the University of Rochester Medical Center, which is a member of the National Institutes of Health–funded AIDS Clinical Trials Group. "I came to UB because of the expertise in pharmacokinetics, pharmacodynamics, and pharmacogenetics," Havard says. "I hope my clinical and research efforts, at least in small part, will improve the use of HIV medications and outcomes in HIV-infected women."

Joe Balthasar hopes his bench work with monoclonal antibodies will continue to build on the knowledge provided by his mentors in the pharmaceutical sciences department of UB, in his hometown. When asked what started him in pursuit of better protein biotech therapy, he remembers a pharmaceutics class he took with instructor Robert Straubinger, an international research scholar in bioanalysis and proteomics who is now his academic colleague.

"We're not reinventing the wheel," Balthasar says of his own research. "We're just using the wheels to drive a new car. We've adapted these methodologies, and then applied them to our purposes. And the ideas that we get all come from pharmacokinetics and pharmacodynamics."

-Jessica Thorpe,
Outside the Box Communications

# Education

The UB SoPPS educates students in pharmacy and the pharmaceutical sciences, providing them with the critical thinking skills to allow them to achieve the desired outcomes of drug-related therapy and disease management through research and clinical intervention.

#### **Admissions**

A central mission of the Office of Admissions is to advance the diversity and academic quality of the student body. This mission is supported by our continued review and enhancement of admissions policies and our ability to attract a robust applicant pool.

#### **ENROLLMENT (FALL HEADCOUNT)**

	PharmD	BS	BS/MS	MS	PhD	Total
2002-03	413	33	2	13	30	491
2003-04	433	31	0	13	30	507
2004–05	448	29	1	8	35	521
2005-06	467	34	4	6	35	546
2006-07	470	37	3	7	39	556

The most talented and selective undergraduate freshman class in the university's history arrived in 2007 with the School of Pharmacy and Pharmaceutical Sciences contributing significantly to this trend with 400 students indicating pre-pharmacy as their intended major, representing over 12 percent of the incoming UB freshman class. In addition, UB's Early Assurance Program offers outstanding pre-pharmacy undergraduates the opportunity to enter our PharmD professional program after completing two years of prerequisite coursework with a minimum GPA of 3.5. In 2007, the median GPA for early assurance students accepted to the SoPPS was 3.76.

#### **ADMISSIONS TABLE INFORMATION**

Year of admission (expected year of graduation)	Number of completed applications	Number admitted	Average GPA	Average PCAT score	Percent (numbers) holding a baccalaureate or higher degree
2002 (2006)	244	115	3.35	281*	36% (41)
2003 (2007)	384	117	3.24	376*	49% (57)
2004 (2008)	822	117	3.48	396	39% (46)
2005 (2009)	1,051	120	3.55	395	34% (41)
2006 (2010)	1,375	124	3.54	395	28% (35)
2007 (2011)	1,196	122	3.50	398	51% (62)

<sup>\*</sup>SoPPS began to accept other scores (e.g., MCAT) and waive PCAT requirements for UB's early assurance students. The GPA and PCAT scores reflect the entering class, not the entire school.



#### **DEGREES GRANTED (2006-07)**

PharmD	106
BS in Pharmaceutical Sciences	9
BS/MS in Pharmaceutical Sciences	2
MS in Pharmaceutical Sciences	2
PhD in Pharmaceutical Sciences	9
Total	128

#### **DEGREE PROGRAM ENROLLMENT (2006–07)**

P1 Year	124
P2 Year	118
P3 Year	119
P4 Year	109
PharmD Subtotal	470
BS in Pharmaceutical Sciences	37
BS/MS in Pharmaceutical Sciences	2
MS in Pharmaceutical Sciences	7
PhD in Pharmaceutical Sciences	40
Pharmaceutical Sciences Subtotal	86
Total Enrollment	556

#### **Continuing Education**

#### Office of Postgraduate Professional Continuing Education

FISCAL YEAR 2006–07	
UB Programs	15
UB Certificate Programs	1
Home Study Programs	1
Cosponsored	16
Teleconferences (five-topic series)	5
(offered at fifty-eight sites throughout the nation)	
Total	38

The Office of Postgraduate Professional Continuing Education accredited and conducted thirty-eight pharmaceutical continuing education programs over the past twelve months. Programming includes both live and home study offerings. Five series of teleconferences were offered at fifty-eight sites throughout the nation. The postgraduate office cosponsors educational activity by accrediting pharmacy programs for nonaccredited providers, including interprofessional CE.

Certificate programs are designed to expand and enhance predetermined practice competencies through the systematic acquisition of specified knowledge, skills, attitudes, and performance behaviors. The postgraduate professional education office is currently running a certificate program focused on HIV; future plans include certificate programs in medication therapy management.

"Giving back to the school allows me to share with others what my education and professional training has provided for me."



Dean Trzewieczynski, BS '98

# **UB Continuing Education Programs and Symposia**

8/14/06	Experiential Preceptor CE
10/27/06	Patient-focused Ambulatory Pharmaceutical Care
10/29/06	HIV Pharmacotherapy 2006
11/7/06	Patient-focused Ambulatory Pharmaceutical Care
11/9/06	Patient-focused Ambulatory Pharmaceutical Care
3/11/07	Pharmacy Law Update, Rochester
3/13/07	Pharmacy Law Update, Syracuse
3/15/07	Pharmacy Law Update, Jamestown
3/18/07	Pharmacy Law Update, Buffalo
5/9/07	Patient-focused Ambulatory Pharmaceutical Care
	Rochester
5/23/07	Pharmacy Law Review Series Part I
5/24/07	Pharmacy Law Review Series Part II
6/11/07	To Inject or Inhale: That Is the Diabetes Question
6/13/07	Introducing Medication Management into Your
	Clinical Practice

# Office of Postgraduate Education Receives Reaccreditation

The UB School of Pharmacy and Pharmaceutical Sciences Office of Continuing Pharmacy Education, under the auspice of the Office of Postgraduate Professional Continuing Education, underwent reaccreditation by the Accreditation Council for Pharmacy Education (ACPE). In January 2007, the continuing pharmacy education office received continuation as an ACPE-accredited provider for both continuing pharmacy education programming and certificate programming for a full six-year term.

#### Pharmaceutical Sciences Postdoctoral Fellows

Vamsi Addanki

Mechanisms of Nitrate Tolerance

Sebastien Bihorel

Pharmacokinetics and Pharmacodynamics in Diabetes

Jurgen Bulitta

Pharmacokinetics and Pharmacodynamics of Antibiotics

Ying Hong

Population PK/PD Modeling and Simulation of Therapeutic
Drugs

Cornelia Landersdorfer

Pharmacokinetics and Pharmacodynamics of Antidiabetic Drugs

Xia Lin

Characterization of Androgen-regulated Myosin Heavy Chain Expression

Qiang Lu

Antibody PK/PD and New Treatments for Autoimmune Diseases

Anshu Verma

Systems Modeling of Bone Homeostasis and IFN-beta PKIPD

Jun Yang

PK/PD Modeling of Anticancer Drugs

Jianping Zhang

Pharmacogenetics of Human Reductases

Weiyan Zhang

Construction and Expression of Chimeric Antibody

#### **Residency and Fellowship Training Programs**

The Department of Pharmacy Practice residency and fellowship programs experienced growth in all programs of both general pharmacy practice and specialty areas.

The residents participated in monthly journal clubs and teaching-certificate program classes as a group, and attended department-run seminars.



#### **Pharmacy Practice Residents/Fellows**

Victoria Aladejana, PharmD Resident Nuclear Medicine

Amed Amer, MD, PhD Fellow Drug Development/Novartis

Rebecca Bitter, PharmD Resident Psychiatry

Yseult Brun, PharmD Fellow Drug Development/Novartis

Holly Coe, PharmD Resident Primary Care/Buffalo Medical Group

Katherine Doyle, PharmD Resident Hospice/Homecare

Cara Felton, PharmD Resident Pharmacoinformatics

Noel Forrett, PharmD Resident Family Medicine

Yoriko Harigaya, PharmD Fellow Drug Development/GSK

Sarah McCabe, PharmD Fellow Drug Development/Novartis

Scott Monte, PharmD
Resident
Ambulatory Care/Lifetime Health
Medical Group

Neha Sheth, PharmD Resident PGY2-HIVIID

Patcharaporn Sudchada, PharmD Fellow Nephrology/Renal Transplantation Pharmacotherapy Craig Whitman, PharmD Resident Critical Care Medicine

Jenny Yang, PharmD Fellow Drug Development/Novartis

#### **Student Supporters**

The following supporters have provided generous funding for educational training of pharmacy postgraduate residents and fellows, as well as trainees in all levels of pharmaceutical sciences programming.

#### **Pharmaceutical Sciences**

#### **PhD Students**

Pfizer Global Research and Development Corporation Melanie Tait Surajkumar Bhansali Abraham Anson

Amgen, Inc. Justin Earp

Kapoor Foundation
Kavitha Bhasi

Merck & Company, Inc. Mirelle Vanessa Gonzales Sofia Gameiro

Sankyo Pharma, Inc. *Urvi Telang* 

Schering-Plough Corporation *Pei-suen Tsou* 

Eli Lilly & Company Chao Xu

#### **Postdoctoral Fellows**

Pfizer Global Research and Development Corporation Jun Yang Ying Hong Cornelia Landersdorfer

Johnson & Johnson Inc. Jurgen Bulitta



"The generosity of our alumni has had a profound impact on the quality of training

offered to students at the school. It is extremely gratifying to see alumni finding success in their professional careers and taking the opportunity to give back to the institution that has given them so much."

Joseph J. Raybon, PhD '07

#### Pharmacy Postgraduate Residents and Fellows

Lifetime Health Medical Group Scott Monte

Buffalo Medical Group Holly Coe

Novartis Pharmaceuticals Corporation Jenny Yang Sarah McCabe Amed Amer Yseult Brun

GlaxoSmithKline Yoriko Harigaya

Metcare Rx Pharmaceutical Service Group, LLC Cara Felton



#### **Commencement Awards**

Lilly Achievement Award

Lynn Monteleone

Phi Lambda Sigma of Achievement, Chapter Member of the Year Award Regina Ventura

GlaxoSmithKline Patient Care Award

Kerrie Peterson

Michael E. Crawford Award

Daniel Wachowicz

Eino Nelson Award

Jodi Grillo

UB Pharmacy Alumni Association Award

Tyler Smith-Strutz

David E. Guttman Award

Chia-Ching Wu

Renee A. Dederich Award

Jeffrey Scull

Francis P. Taylor Award

Jodi Grillo

APHA-ASP Mortar & Pestle Professionalism Award (McNeil) Kwaku Marfo

Robert H. Ritz Award

Kari Mergenhagen

National Community Pharmacists Association Outstanding Student Member Award Charles Greenberg Roger Mantsavinos Award *Lauren Maroni* 

Lori Esch Memorial Award Regina Will

Merck Award

Kari Mergenhagen

Lynn Monteleone

Lauren Maroni

ASP National Patient Counseling Award

Patrick Comerford

Roche Pharmacy Communications Award

Ronald Rambally

Robert M. Cooper Memorial Award *Lynn Monteleone* 

Mylan Pharmaceutical Excellence in Pharmacy Award Patrick Comerford

Facts and Comparisons Award of Excellence in Clinical Communication Nathaniel Page

Roy M. Barr Award

Kari Mergenhagen

Western New York Society of Healthsystem Pharmacists Award Andrea Hanson

Ekaterina Kossykh-Burrows

Samuel J. Bauda Award

Jared Reles

Pharmacists' Society of the State of New York Charis Gatas Natural Medicines Comprehensive

Database Recognition Award

Heather Pula

McKesson Leadership Award
Kerrie Peterson

NYS Chapter of the American College of Clinical Pharmacy Research Award William Loeffler

TEVA Pharmaceuticals USA
Outstanding Student Award
Rachel Weber

Margaret C. Swisher Memorial Award *Jodi Grillo* 

A. B. Lemon Memorial Award

Diana Rutkowski

ASP Certificate of Recognition

Amanda Boeckel

Applied Pharmacotherapy Professional Experience Program Award *Kari Mergenhagen* 

Ambulatory Care Professional Experience Program Award Megan Todd

Pharmacists' Association of Western
New York Student Leadership Award
Devon Benson

Perrigo Award of Excellence in Non-Prescription Medication Studies Matthew Woltz

Kelli Jordan Memorial Award Nathaniel Page

Excellence in Pharmacogenomics Award

Kari Mergenhagen

Excellence in Teaching Award

William Prescott, clinical assistant
professor

#### 2007 Who's Who Among Students in American Universities and Colleges

Patrick Comerford Charles Greenberg Richard Lin William Loeffler Kwaku Marfo Julia Markov Kari Mergenhagen Lynn Monteleone Priyanka Narula Nathaniel Page Kerrie Peterson Christina Pettapiece Jared Reles Diana Rutkowski Tyler Smith-Strutz Rabia Stevenson Patnawon Thung Julie Tracey Nathanile Turck Regina Ventura Rachel Weber Stephen Webster

Regina Will

Amanda Boeckel

#### **Student Achievements**

# 2007 Celebration of Academic Excellence Student Research Poster Presenters

Christine Lee Hoi Kei Lon Thu Dung (Ariane) Nguyen Nathan Page Jenna Voelinger Stephen Webster Chia-Ching Wu

# Excellence in Pharmaceutical Sciences 2006

Darowan Akajabor James Bartlett Caitlin Bower James Catanese Kaitlin Ganley Lisa Garrity Nichoas Jennings Jessica Jones Andrea Keck Matthew Kosloski Deborah Liana Laurie Loedeman Man Ly
Ka Leong Mak
Devon Marks
Stephen Matics
Stephanie McCutcheon
Joseph Steblein
Andrew Wohlrab
Chia-Ching Wu
Jade Yang
Lilianna Yohonn

Nathan Page – 2007 Rho-Chi Schering Plough-AFPE Scholarship

Patrick Comerford – J. Scott Fleming Award Finalist

Amanda Boeckel – United States Public Health Service Excellence in Public Health Pharmacy Practice Award

Qi Wang – Research Presentation at AAPS 2006 Annual Meeting

Erin Knight – UB SoPPS APhA Counseling Competition Nominee

Kari Mergenhagen – UB American Association of University Women, Olga Lindberg \$10,000 Scholarship Winner

Tricia Wilkins – 2007 AMCP/Pfizer Managed Care Internship



#### 2006-07 SoPPS **Degree Recipients**

#### **Bachelor of Science in Pharmaceutical Sciences**

#### February 2007

Jonathan Lamping Kingsley Ohikuare

#### June 2007

Michael Amato Thomas Barchet Amos Chery Matthew Kosloski Quyen Nguyen Oladipupo Omole Chia Ching Wu

#### Bachelor of Science/Master of Science in Pharmaceutical Sciences

#### June 2007

Jeffrey Brado Wing Ki Lam

#### Master of Science in **Pharmaceutical Sciences**

#### February 2007

Olanrewaju Okusanya

#### June 2007

Xiaomin Chen

#### **Doctor of Pharmacy**

#### September 2006

Kyungeun Oh Anita Robek Maria Sakach

#### February 2007

Anna D'Alessandro Shafiq Lavji Kimberly Popplewell

#### June 2007

Robert Adams Jennifer Alberico Robert Angelo Danielle Bader Rebecca Becker Devon Benson Amanda Boeckel Elizabeth Briggs Lucas Bryk Kimberly Cashion Lisa Chaloux Patrick Comerford Kathleen Connolly Eric Cudzil Sarah Darlak Nicole Dean Kevin DiGiacomo Colleen Domm Milad Elchibani Michelle Foster Charis Gatas Charles Greenberg Jodi Grillo

Brian Gucwa Jason Guffey Cheryl Haag Christine Han Kelly Hannigan Andrea Hanson Shanti Hinson Bradley Hoffman Alison Hynes Mavis Jasmine Melissa Jeanty Michael Johnson Susan Kang Stacy Kensy Kathleen Kittleson Jaycee Koo Janine Kosmoski

Ekaterina Kossykh-Burrows

Evan Kowal Natalie Kremer Christine Lee Kam Hin Lee Wen Qiao Li Richard Lin William Loeffler Michael MacEvoy Michelle Mangaser Kwaku Marfo Julia Markov Lauren Maroni Robert Maynard Tracv Mendan Kari Mergenhagen Amy Jo Michnik Lynn Monteleone Laura Murray Priyanka Narula **Brieanne Nichols** Navind Oodit Todd Ordan Richard Orlowski Nathaniel Page Bonnie Pellegrino Kerrie Peterson Lindsey Peterson Christine Pettapiece

Jonathan Philips

Kathryn Picone

Mark Prior Heather Pula Rohan Raikar Ronald Rambally Jared Reles Rebecca Rogers Wendy Rose Diana Rutkowski Jeffrey Scull Katie Shannon Tyler Smith-Strutz Kristin Spencer Michael Spino Rabia Stevenson Patnawon Thung Megan Todd Yuet Lam Tong Julie Tracey Nathaniel Turck Regina Ventura Nicole Wahl Rachel Weber Stephen Webster Nicole West Regina Will Matthew Woltz Amy Wong Ethan Wong Theodore Yantsides

#### **Doctor of Philosophy in Pharmaceutical Sciences**

#### February 2007

Anasuya Hazra-Raybon Joseph Raybon Qi Wang Zhenling Yao

#### June 2007

Kavitha Bhasi Youngjin Moon Wan-Jung Tsai Pei-Suen Tsou Sukyung Woo



# Research and Training

Create cutting-edge research that enhances the body of knowledge needed for professional education, health-care delivery, and advancement of sciences that will improve the health and wellness of the global community.

# **Department of Pharmacy Practice:** 2006–07 Annual Report

The 2006-07 year was marked by change within the Department of Pharmacy Practice. Edward Bednarczyk was named as chair in April, succeeding Gene Morse, who will remain as associate dean of translational research for the school.

#### **Experiential Programs**

The experiential program is in the process of significant revision, beginning with a revision of the assignments required of students during their P4 experiential rotations. This year has also seen the creation of the new position of director of experiential programs. Peter M. Brody Jr. has been named to fill this position. The director is charged with implementing the new introductory pharmacy practice experiential rotations for students, beginning in their P1 year. This is expected to be fully implemented in the spring 2008 semester.

# Office of Postgraduate Professional Continuing Education

Our residency and fellowship programs continue to grow and mature. Over the past year we have had six fellows and nine residents in training. Seven of our current residencies have been accredited by the American Society of Health-System Pharmacists (ASHP).

A total of thirty-eight continuing education programs, representing sixty-seven contact hours, were administered through the office in the past year. An advisory board was added to gain input from practitioners regarding both the content and the format of future continuing education programs.

#### **Research and Publication**

The Department of Pharmacy Practice continues to exceed national averages for publication in the professional literature. In 2006, forty abstracts and thirty peer-reviewed journal articles were published or presented by department faculty.

The growth and scope of our programs have created a need for expansion and enhancement within our department. The department is meeting this challenge as we begin new searches for faculty in these key areas: cardiology, critical care, infectious diseases, oncology, and women's health. The department is committed to hiring the best and brightest emerging and established faculty, allowing us to maintain excellence in both research and practice in the coming years.

Plans for significant expansion of the university have been announced by President John B. Simpson. This includes a transition back to UB's South Campus for the school and department. As we prepare for these changes, we look forward to continued growth and the attendant challenges.

# **Department of Pharmaceutical Sciences:** 2006–07 Annual Report

The department has an established, international reputation of excellence in teaching and research and is well positioned to expand its prowess in pharmacokinetics, pharmacodynamics, and protein therapeutics. Moreover, the department is a leading academic institute for cutting-edge research and teaching in pharmacogenomics.

The department's strengths lie in biological applications of pharmaceutical sciences to traditional small molecules as well as biotechnology products, particularly areas of systems



pharmacology (pharmacokinetics, pharmacodynamics, pharmacogenomics), drug delivery, and development of new therapeutic approaches utilizing mechanistic studies with tools of genomics, proteomics, computation, and bioinformatics.

The implementation of the UB-Pfizer Strategic Alliance and establishment of a Center of Excellence in Pharmacokinetics and Pharmacodynamics allowed the hiring of two new assistant professors. Wojciech Krzyzanski, formerly a postdoc and research faculty member in the department, arrived in August 2006. His research emphasizes mathematical modeling of drugs that affect the hematopoietic system. Wenqing Gao, formerly a postdoc at Ohio State University, arrived in January 2007. She studies pharmacological effects of androgens and mechanisms of action of nuclear receptors.

The department boasts outstanding faculty members over a range of academic levels with highly productive, largely NIH-funded research programs and some corporate support. The school and department rank second in the U.S. in NIH research funding per PhD faculty member, according to the latest report on pharmacy faculty from the American Association of Colleges of Pharmacy (AACP). The departmental faculty brought in or shared over \$2.5 million in individual and multidisciplinary grants. Donations of \$200,000 for graduate student training were provided by Merck, Eli Lilly, Daiichi Sankyo, Schering-Plough, Amgen, and the Kapoor Foundation, and there was funding for six students and four postdocs by the UB-Pfizer Strategic Alliance. Joseph Balthasar received a \$1 million grant from Novartis to enhance research in protein therapeutics, an area planned for future growth in the department.

An active research seminar program had over fifty presentations by local and visiting scientists. Gordon Amidon, professor of pharmaceutics at the University of Michigan, was selected for the 2006 Gerhard Levy Distinguished Lectureship in Pharmaceutical Sciences. (His presentation banquet was disrupted by Buffalo's "October Surprise" snowstorm.) Other notable speakers during the academic year were Diane Mould of Predictions Research, Irving Wainer of the National Institute of Aging, Tristan Maurer of Pfizer Inc., and Robert Bies of the University of Pittsburgh. Juinn Lin from Merck & Co. was selected by the graduate students for the Annual Pharmaceutics Alumnus Lecture. David D'Argenio from the University of Southern California gave a two-day minicourse in the use of the Adapt program, and Robert Bauer from Xoma presented tutorials on the use of the S-Adapt software.

Faculty were active in dissemination of the department's scientific accomplishments and knowledge. This included 102 research articles and book chapters published and 149 seminars, lectures, and research presentations delivered at various scientific meetings and university and industrial venues. Five faculty members serve as editors of journals and many participate on numerous journal editorial boards and NIH study sections.

The department offers courses in pharmacokinetic-pharmacodynamic modeling, trial simulations, and population pharmacokinetic modeling for visiting scientists from the pharmaceutical industry, academia, and the FDA each year in May. Similarly, the department offers an annual summer workshop in molecular genetic methodologies for pharmaceutical sciences. Some of these courses are also provided on site at various pharmaceutical companies and other universities. Don Mager served as a visiting professor at the University of Paris, presenting pharmacokinetics lectures over a three-week period.

Faculty recipients of special awards included William J. Jusko, chair, who was named UB Distinguished Professor, and Marilyn Morris, who received the SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities and has become associate dean for graduate and postdoctoral education at UB.

The department is poised for further growth of its research and training programs with additional faculty and graduate students and expanded capabilities in the area of protein therapeutics. In addition to our use of the Cooke-Hochstetter building, we have begun some research operations at UB's New York State Center of Excellence in Bioinformatics and Life Sciences located in the university's burgeoning downtown campus.







#### **Special Honors for Faculty Members**

Wayne Anderson, professor and dean, recipient, 2007 TIAA-CREF Lifetime Achievement Award.

**Edward Bednarczyk,** clinical associate professor, appointed chair, pharmacy practice.

**Linda Catanzaro**, clinical assistant professor, pharmacy practice, recipient, New York State American College of Clinical Pharmacy, 2007 Educator of the Year Award.

**William Jusko**, chair, pharmaceutical sciences, named UB Distinguished Professor.

Marilyn Morris, professor, pharmaceutical sciences, recipient of the SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities.

**Gene Morse,** professor, pharmacy practice, appointed associate dean, clinical and translational research, and also appointed International AIDS Society-USA Core Faculty member.

**William Prescott**, clinical assistant professor, recipient, UB SoPPS Teacher of the Year Award.

**Robert Straubinger,** professor, pharmaceutical sciences, elected fellow to the American Association of Pharmaceutical Scientists.

**Brian Tsuji**, clinical assistant professor, pharmacy practice, recipient, New York State American College of Clinical Pharmacy, 2007 Researcher of the Year Award.

**Robert Wahler,** clinical assistant professor, pharmacy practice, recipient, New York State American College of Clinical Pharmacy, 2007 Clinical Practitioner of the Year Award.

#### Faculty Grants Awarded: 2006-07

July 1, 2006-June 30, 2007

#### **Pharmaceutical Sciences**

Joseph Balthasar

University of Michigan

Triggered Local Release of Active Thrombolytic Agents

University of Michigan

PTD-Mediated Protein or Drug Delivery for Cancer Therapy

National Institute of Allergy and Infectious Diseases FCRN Inhibitors for Antibody-Mediated Immune Conditions

Protherics Inc.

Benefits of Leucovorin Plus Voraxaze Versus Leucovorin Alone

Novartis Pharma AG

FCRN as a Determinant of IGG Bioavailability

Novartis Pharma AG

Laboratory for Protein Therapeutics

National Cancer Institute

Pharmacokinetic Strategies to Optimize IP Chemotherapy

Sathy Balu-Iyer

National Heart, Lung, and Blood Institute

Development and Pharmacology of Novel Lipidic RAHF

Javier Blanco

National Institute of General Medical Sciences

Pharmacogenetics of Human Carbonyl Reductases

City of Hope National Medical Center Key Adverse Event After Childhood Cancer

**Ho-Leung Fung** 

National Heart, Lung, and Blood Institute

Organic Nitrate Metabolism, Tolerance and Action

Wenqing Gao

American Association of Colleges of Pharmacy
Characterization of the Role of FHL-2 in Androgen Receptor
(AR) Regulated Gene Expression in Cardiac Mycocytes

William Jusko

National Institute of General Medical Sciences Mathematical Models in Pharmacodynamics

Health Research Inc.

Sirolimus in Acute Myeloid Leukemia: Pharmacokinetic and Pharmacodynamic Studies

Pfizer Inc.

Center of Excellence in Pharmacokinetics and Pharmacodynamics

National Institute of General Medical Sciences

Corticosteroid Pharmacokinetics and Pharmacodynamics

Wojciech Krzyzanski

Amgen Inc.

Amgen Postdoctoral Fellowship in PK/PD Hematology

**Donald Mager** 

Amgen Inc.

Bone Homeostasis and IFN-Beta PK/PD

National Institute on Aging

IPA Agreement for Donald Mager

Marilyn Morris

National Cancer Institute

Dietary Isothiocyanates in Cancer Prevention: Effects on Estrogen

Murali Ramanathan

National Multiple Sclerosis Society

Brain-Derived Neurotrophic Factor in Multiple Sclerosis

**Robert Straubinger** 

National Cancer Institute

Drug Carrier Modulation of Blood/Tumor/Brain Permeability

National Center for Research Resources

High Sensitivity Liquid Chromatography/Tandem Mass Spectrometry System

PhRMA Foundation

Fellowship for Brian Trummer: Concentration and Exposure Dependent Mechanisms of Taxane Antitumor Action and the Tumor Resistance Response

#### **Pharmacy Practice**

**Edward Bednarczyk** 

Pfizer Global Research and Development

An Open Label Phase 1 Study to Assess Central D2/D3 Receptor Occupancy Using Positron Emission Tomography (PET) Following Multiple Oral Dose Administration of PF-00217830 in the Healthy Adult

Gene Morse

Campbell Foundation

Novel Assays for Antiretroviral Intre/Extracellular Measurement

University of Rochester

Adult Therapeutic Clinical Trials Program for AIDS

GlaxoSmithKline

GlaxoSmithKline Fellowship in Support of Yoriko Harigaya

Virginia Commonwealth University

Opiods and HIV Medications: Interactions in Drug Abusers

Social and Scientific Systems Inc.

ACTG: Pharmacology Laboratory

Patrick Smith

Hoffmann-La Roche Inc.

A Multiple-Center, Open Label, Multi-Dose, Three Period, Single Sequence Crossover Study to Investigate the Potential Pharmacodynamic and Potential Pharmacokinetic Interaction Between Glyburide and R04389620 in Type 2 Diabetic (T2D) Patients Not Adequately Controlled with Glyburide as a Standard Prescribed Therapy Novartis Pharmaceuticals Corporation In Vitro Pharmacokinetic/Pharmacodynamics of LBH589 in Chronic Myelogenous Leukemia

#### Kathleen Tornatore

Novartis Pharmaceuticals Corporation
The Relationship of Drug Exposure and Immunodynamic
Responses During Myfortic, Therapy in Stable AfricanAmerican and Caucasians' Renal Transplant Recipients

#### Brian Tsuji

Gustavus & Louise Pfeiffer Research Foundation Novel Approaches to Combat Antibiotic-Resistant Superbug Infections

#### **New Technology Disclosures/Patent Applications**

Title	Name
Anti-FcRn Antibodies for Treatment of Auto/Allo Immune Conditions	Joseph Balthasar, Pharmaceutical Sciences
Compositions and Methods of Preparation of Lipid Nano Particulates Containing Antigens as Cancer Vaccine	Sathy Balu-Iyer, Pharmaceutical Sciences
Compositions and Methods of Preparation of Liposomal Microparticulate IL-12 for Immunotherapy	Sathy Balu-Iyer, Pharmaceutical Sciences
Method for Treating Blood Coagulation Disorders	Sathy Balu-Iyer, Pharmaceutical Sciences
Compositions of Less-Immunogenic and Long Circulating Protein-Lipid Complexes	Sathy Balu-Iyer, Pharmaceutical Sciences
Bridging Centrality: A Concept and Formula to Identify Bridging Nodes in Scale-Free Networks	Murali Ramanathan, Pharmaceutical Sciences
Method and Composition of Less Immunogenic Long Acting Factor VII	Sathy Balu-Iyer, Pharmaceutical Sciences
Method and Composition of Less Immunogenic, Long Circulating EPO	Sathy Balu-Iyer, Pharmaceutical Sciences
Method for Assessing Interaction in Biological Networks and Hypergraphics	Murali Ramanathan, Pharmaceutical Sciences



# Research and Training Awards Fiscal Year 2006–07

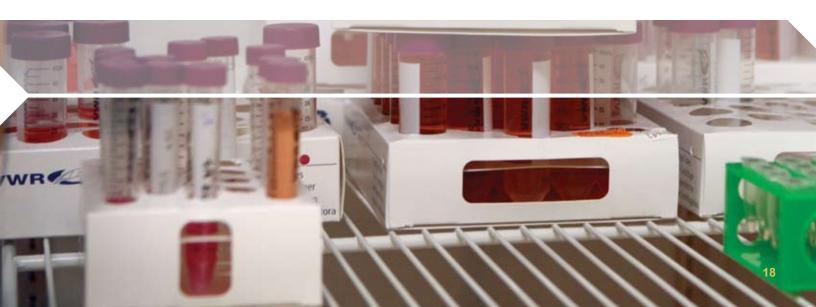
#### **Pharmaceutical Sciences**

Name	Sponsor	Program Type	Current Period	Project Period
J. Balthasar	National Institute of Allergy and Infectious Diseases	Continuation Research	\$327,007	\$1,353,537
J. Balthasar	University of Michigan	Continuation Research	\$50,000	\$100,000
J. Balthasar	University of Michigan	Continuation Research	\$50,000	\$100,000
J. Balthasar	National Cancer Institute	New Research	\$277,164	\$1,066,905
J. Balthasar	Novartis Pharma AG	New Research	\$100,000	\$100,000
J. Balthasar	Novartis Pharma AG	New Research	\$900,000	\$900,000
J. Balthasar	Protherics Inc.	New Research	\$8,871	\$8,871
S. Balu-lyer	National Heart, Lung, and Blood Institute	Continuation Research	\$271,422	\$1,085,688
J. Blanco	National Institute of General Medical Sciences	Continuation Research	\$270,516	\$1,374,843
J. Blanco	City of Hope National Medical Center	New Research	\$5,000	\$5,000
J. Canty (Qu)	National Heart, Lung, and Blood Institute	Continuation Research	\$9,268	\$48,041
H. Fung	National Heart, Lung, and Blood Institute	Continuation Research	\$384,759	\$1,935,286
W. Gao	American Association of Colleges of Pharmacy	New Research	\$10,000	\$10,000
W. Jusko	National Institute of General Medical Sciences	Continuation Research	\$343,819	\$1,814,443
W. Jusko	Health Research Inc.	New Research	\$44,879	\$44,879
W. Jusko	National Institute of General Medical Sciences	Renewal Research	\$253,399	\$1,021,164
W. Jusko	Pfizer Inc.	Continuation Research	\$1,500,000	\$4,500,000
W. Krzyzanski	Amgen Inc.	New Training	\$50,000	\$50,000
D. Mager	National Institute on Aging	Continuation Research	\$21,829	\$62,334
D. Mager	Amgen Inc.	New Training	\$50,000	\$50,000
M. Morris	National Cancer Institute	New Research	\$62,606	\$125,213
M. Ramanathan	National Multiple Sclerosis Society	Continuation Research	\$109,948	\$329,845
R. Straubinger	National Cancer Institute	Supplemental Research	\$290,879	\$1,855,009
R. Straubinger	National Center for Research Resources	New Research	\$500,000	\$500,000
R. Straubinger	PhRMA Foundation	New Training	\$18,000	\$18,000
A. Zhang (Co-Pl Ramanathan)	National Science Foundation	Continuation Research	\$131,539	\$569,806
	Pharmaceutical Sciences Totals		\$6,040,905	\$19,028,864



#### **Pharmacy Practice**

Name	Sponsor	Program Type	Current Period	Project Period
E. Bednarczyk	Pfizer Global Research and Development	New Clinical Trial	\$504,297	\$504,297
G. Morse	Virginia Commonwealth University	Continuation Research	\$102,400	\$102,400
G. Morse	University of Rochester	Continuation Research	\$77,683	\$77,683
G. Morse	Social and Scientific Systems Inc.	Renewal Research	\$291,525	\$291,525
G. Morse	Campbell Foundation	New Research	\$80,000	\$80,000
G. Morse	GlaxoSmithKline	New Training	\$138,226	\$138,226
P. Smith	Novartis Pharmaceuticals Corporation	New Research	\$94,406	\$94,406
P. Smith	Hoffmann-La Roche Inc.	New Clinical Trial	\$129,986	\$129,986
K. Tornatore	Novartis Pharmaceuticals Corporation	New Clinical Trial	\$317,139	\$317,139
B. Tsuji	Gustavus & Louise Pfeiffer Research Foundation	New Clinical Trial	\$48,050	\$48,050
	Pharmacy Practice Totals		\$1,783,712	\$1,783,712
	School Totals		\$7,824,617	\$20,812,576



# **Scholarship**

Pursue innovation, identify solutions, and present results to enhance the local, national, and international leadership of SUNY, UB, and the SoPPS.

# Pharmaceutical Sciences Publications: 2006–07

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#### Balu-lyer, Sathy V.

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## **Community Service**

The care and discovery fostered by the SoPPS is extended to the community in a number of ways, provided by all members of the schools.

As New York State's only publicly funded pharmacy school, community service and support is of primary importance.

All members of the SoPPS give back to the community in many ways: support of local charities and advocacy groups, food and clothing drives, and other volunteerism. Following are some of the focused activities:

The eleventh annual student halfway dance and charity gala raised over \$8,400 for the Children's Heart Fund (www. childrenshearts.org), a local charity supporting research on Protein-Losing Enteropathy, a disease which affects children born with complex defects of the heart.

PharmD students provided direct community service to over ninety agencies through community wellness clinics held at community centers, churches, and other outreach venues. Under the supervision of licensed pharmacists, these clinics allowed P2 and P3 students to interact with community members and provide recommendations on health management issues, as well as medication management. Health topics ranged from bone density assessments to counseling to cardiac rehabilitation.

Students also participated in our Poison Prevention Outreach Program where PharmD students visit area schools to educate children on the dangers of poisons and how medicines can look like candy and other harmless items. This program has reached 3,200 children in thirty-three schools throughout Western New York.

The SoPPS faculty and staff generously support the UB State Employees Federated Appeal (SEFA) Campaign. In 2006-07, the SoPPS again surpassed the goal contribution amount with 111 percent of the goal, also placing second overall at UB for school-based attainment of contribution goals!

The SoPPS comes together during the holidays to aid needy families in Buffalo Niagara. In the sixth year of support for this program, faculty and staff purchased gifts and household items for four families.

Service to valued community partners will continue in recognition of their support, as well as to assist them in their healthcare management.

### **Alumni Relations**

The support of our alumni community has been invaluable in the various student events and outreach efforts that have contributed to the continued success of our school.

#### 2006-07 Alumni Association Activities

The School of Pharmacy and Pharmaceutical Sciences Alumni Association supported and recognized many people and activities over the past academic year. Alumni Association dues allowed the association to award a total of six \$500 need-based scholarships to P2 student Alyssa Murphy, P3 student Adam Field, and P4 students Michelle Foster, Kerrie Peterson, Patnowan Thung, and Andrea Hanson.

The school's annual awards ceremony, held in April 2007, gave the association the opportunity to recognize two outstanding alumni members: Dean Trzewieczynski, Class of 1998, was the Orville C. Baxter Memorial Professional Practice Award recipient, and Susan Ksiazek, Class of 1982, was the Willis G. Gregory Memorial Award recipient. Dean and Susan both exemplify the professional practice of pharmacy and are proud advocates of the school and the association.

Our annual Reunion and All-Alumni Dinner Dance held in September welcomed back 113 alumni, quests, and

SoPPS members. Special recognition was given to the 50th anniversary class of 1956, 25th anniversary class of 1981, and 10th anniversary class of 1996.

The Alumni Association held its annual outreach meeting at the Association of Health Systems Pharmacists Midyear Meeting which occurred in Anaheim, California, in December 2006. This meeting is the association's prime national outreach activity and is always well attended (annual averages of 100+ attendees), allowing the opportunity to network and reconnect with alumni colleagues and school faculty, students, residents, and fellows.

Local alumni attend the association's annual wine and cheese party to benefit alumni-supported student programs. The university's premier art gallery, the Anderson Gallery, was the host site for this function in February 2007 at which gift basket auctions raised funds for student programming.

The Alumni Association values its important role in the school and its support of bringing our alumni colleagues together through various activities and programs.





### **Development**

Being able to enhance the quality and innovation of our school depends on the generosity and commitment of our alumni, friends, faculty, and staff whose support is critical to our school's continued success.

#### HONOR ROLL OF DONORS

We gratefully acknowledge the alumni, friends, faculty, staff, corporations, and foundations who made gifts to the school between July 1, 2006, and June 30, 2007. Through their generosity, the school received more than \$1.9 million in gifts that allow us to continue training and nurturing the pharmacists, clinicians, pharmaceutical scientists, and community leaders of tomorrow.

#### WILLIS G. GREGORY SOCIETY

The Willis G. Gregory Society recognizes donors who have made an annual gift of \$1,000 or more to the School of Pharmacy and Pharmaceutical Sciences during the fiscal year. The society is named in honor of the school's admired dean, who served from 1890 until his retirement in 1936. Dr. Gregory was considered a visionary for his progressive views on pharmacy practice and is credited with transforming the pharmacy profession.

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"Being a Willis G. Gregory member identifies the fact that you believe that the School of Pharmacy gave you the opportunity for your success."

Bruce Moden, BS '57

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#### PROFILE IN GIVING

# **The Bauda Family**

If you want to talk about the Bauda family tree, better make it an oak. This clan of twelve children grew up, by and large, during the Depression. But they weathered it "amazingly well," says Dr. Charles Bauda ('42), taking motivation and strength from their mother's belief in education. Born in Italy, his mother was about six years old when she arrived in the United States. Enrolled in a public grammar school for eight years, she "had no opportunity for higher education," Dr. Bauda remembers. "But she inspired us to seek a college education."

Though the family was big, they were "extremely close," says Dr. Bauda. "We helped each other out and achieved our goals even during the years of the Depression."

Interestingly, several Baudas entered the health-care arena. Three of them—Samuel ('23), Jennie ('26), and Joseph ('39)—graduated from the School of Pharmacy. Each saw significant success in the field. Samuel began his career with a drugstore chain. His affinity for helping customers led him to start what became a large Jamestown, New York, drugstore, which he operated for some fifty years.

Joseph had an outstanding career as a community pharmacist. He was diligent in filling prescriptions, establishing a close rapport with customers to ensure they understood how to take their medications. He also applied his administrative and organizational skills in the pharmacy field at the city, county, and state levels. A founder of the Pharmacists' Association of Western New York, he received many awards and honors on behalf of numerous pharmacy organizations.

Jennie was a trailblazer. The first female manager of a local drugstore chain, she later ran her own store and then served as chief of pharmacy for a hospital. Recalls Dr. Bauda, "That was unheard of at that time. Jennie's unprecedented achievement established a legacy for women pharmacists to have job opportunities equal to men."

In addition to his pharmacist siblings, Dr. Bauda also had a brother who was an engineer, also a graduate of UB. He has honored his siblings with awards and scholarships in their names. "They made sacrifices," he says, "to help me continue in school. In gratitude for their benevolence, I'm privileged to pay tribute to them in this way."

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"The Cecil and Violet Newton Scholarship has allowed me to focus on my studies and has brought me one step closer to achieving my professional goals. I am so grateful alumni see the value in supporting future pharmacists."

Amy Hall, PharmD '09

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Just request and complete the matching gift form from your company's human resources office and send it, along with your gift payable to the University at Buffalo Foundation/ Pharmacy.

For more information, contact Leigh Yates, director of development, at (716) 645-3432 or ltyates@buffalo.edu.

#### STUDENT SCHOLARSHIP AND FELLOWSHIP SUPPORT

Thank you to the many donors who have established scholarship and fellowship endowments and given annual gifts that provide much needed support to fund our highest priority—helping bright, hard-working students fulfill their dreams of obtaining their pharmacy and pharmaceutical sciences degrees. During the 2006–07 academic year, 340 students received academic and need-based scholarships and fellowships totaling \$357,715.

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Alexandra Centeno Alina Eisen Jessica Massey Shannon Rotolo Elizabeth Yearwood Thank you to all our sponsors who participated in the Fourth Annual Student Scholarship Golf Tournament. We received \$30,000 in tournament sponsorships that allowed the school to award five scholarships to the following students: Brianna Belknap '08, Tricia Lee Wilkins '08, Amy Hall '09, Alina Eisen '09, and Lisa Nichols '09.



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Special thanks to Ethan Allen Medical Search for their contribution.

#### PROFILE IN GIVING

### The Brazeaus

Daniel and Gayle Brazeau have been a package deal for nearly thirty years now: They met in college and married soon after graduation. Received their PhDs from UB's School of Pharmacy and Pharmaceutical Sciences. Taught at the same colleges. Wound up today—side by side, as usual—as UB pharmacy and pharmaceutical sciences school faculty.

So it should come as no surprise that they share the same philosophies on life, education, and giving. Indeed, their notion that education is "fundamental" and "transformative" led to their decision to leave a majority of their estate to UB and the pharmacy school.

The Brazeaus started wondering what they would leave as a legacy after both sets of their parents prudently prompted them to think about making a will. Their shared beliefs brought them to a logical conclusion: "We're only going to save the planet through education," asserts Dan, "and we've both been in academics our entire lives. So the idea to make the bequest to UB didn't require a lot of thought."

Adds Gayle, "We're academicians at heart, so if we can

invest in an environment that helps people learn every day, that's what we're all about. We got a great education at UB and want to make sure we can help others do the same."

Gayle and Dan say that they love education, that giving to education is "investing in the future." Their bequest commitment demonstrates that this long-term partnership is willing to make the investment in what they love.



# **Financial Reports**

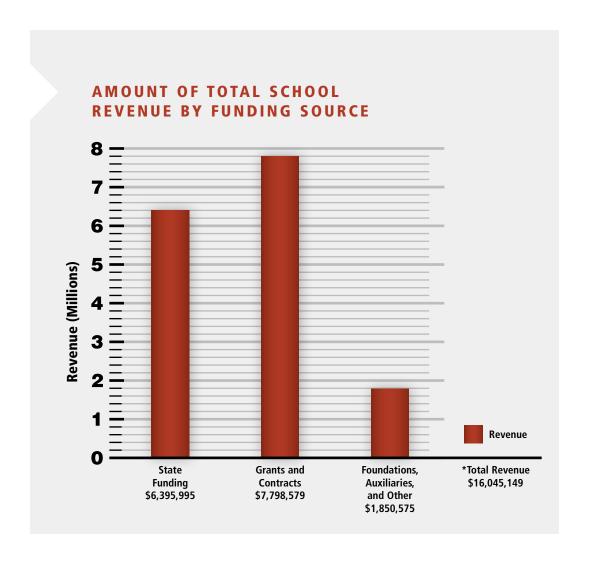
The support to achieve our goals, the security to reach for the future, and the impetus for creativity are allowed through our well-positioned financial portfolio.

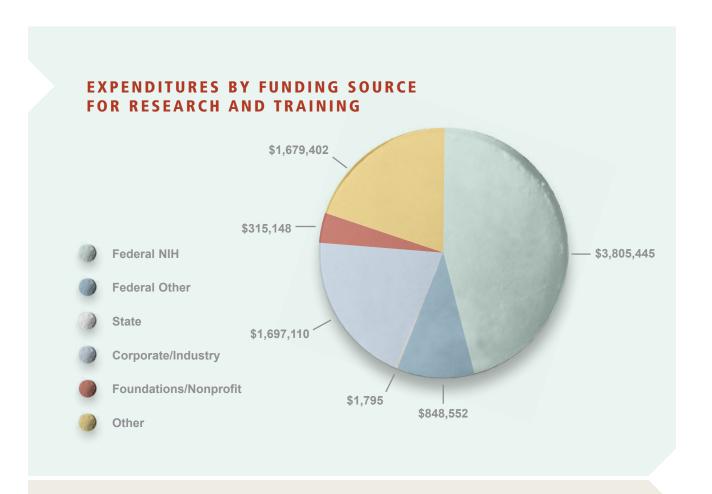
#### **A Supportive Financial Environment**

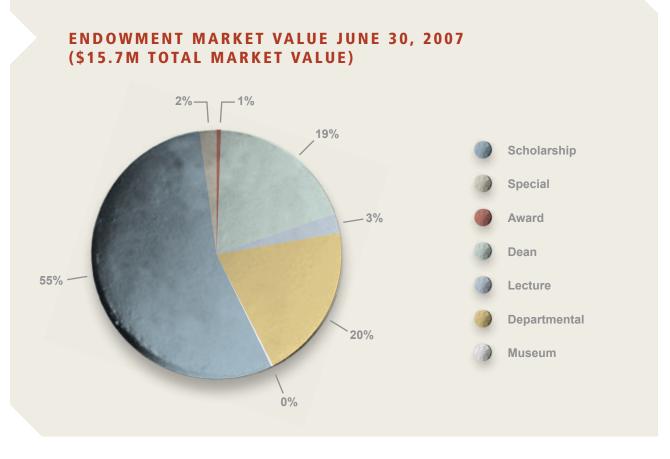
All members of the SoPPS are impacted by our positive and progressive financial planning. Financial support for the school is garnered through various avenues which include the State of New York, research activity, program and training, and philanthropic dollars.

The school is fortunate to have such a varied base of support to assist in achieving our goals: the education of our students, the quest for innovative research models, the growth of scholarly activity, and the advancement of health care.

The following graphs give an overview of the school's financial activity via revenue, expenditures, and endowments.







#### **School-wide Committees**

Our school-wide committees give governance and oversight to our school. The structure, composition, and charges of the school's standing committees are prescribed in the bylaws of the School of Pharmacy and Pharmaceutical Sciences.

#### **Executive Committee**

Wayne Anderson (chair), Kathleen Boje, Gayle Brazeau, Rebecca Brierley, Karl Fiebelkorn, Patty Havard, William Jusko, Cindy Konovitz, Candise Morris, Gene Morse, Robert Wahler, Leigh Yates

#### **Student Academic Affairs Committee**

Karl Fiebelkorn *(chair)*, Kathleen Boje, Gayle Brazeau, Nicole Paolini, William Prescott

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#### **Curriculum Committee**

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#### **Safety Committee**

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