

The University of Texas Graduate School of Biomedical Sciences at Houston

Graduation Celebration



THE UNIVERSITY OF TEXAS
HEALTH SCIENCE CENTER AT HOUSTON

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Benefactor News

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Steven T. Lott, Ph.D.
President 2004-2005
GSBS Alumni Association



Ms. Marcia Huggins Jahncke, far left, and Ms. Joann Sowell, far right, shown here with the 2004-2005 Sowell Huggins Scholars and GSBS Dean, George Stancel, Ph.D.

We'd like to honor two people, **Marcia Huggins Jahncke** and **Joann Sowell**, and their families, particularly in conjunction with this issue of the GSBSNews. You may notice the cover is dedicated to our recent graduates and their families who helped them enormously, most often behind the scenes, as the students worked toward their degrees. On May 6, 2005, the graduates' families celebrated, At Last, these 'new scientists' who are ready, finally, for prime time. It seemed fitting to tell the story of the two mothers, Joann and Marcia, whose vision was inspired by their families. Their quest has significantly aided 41 individual GSBS students and two professors over the last 14 years through scholarships. Their scholarship recipients are many of the same 'new scientists' that in turn are now developing, designing, testing, and discovering the solutions to the myriad cancers facing our society today.

Joann and Marcia were housewives and next door neighbors in Houston who had two of their children, Andy and Wade, diagnosed with testicular cancer. The boys were cured at M. D. Anderson Cancer Center. In gratitude for the health and saved-lives of their sons, through the accomplishments of research, they wanted to support the work of the future, and started the **Andrew Sowell-Wade Huggins Endowed Scholarship** at The University of Texas Graduate School of Biomedical Sciences.

Since that time in 1991 they have provided over half a million dollars to UT-GSBS much of it through the charitable organization, **Cancer Answers, Inc.**, founded in 1996. Cancer Answers has enabled fundraising events, letter drives, support of foundations (Vivian Smith Foundation, Sylvan Rodriguez Foundation, Martel Foundation) and businesses like Bridgeway Capital Management, along with many gifts from extended family, friends, and colleagues—often who have faced the challenge of cancer themselves. In 2005 Cancer Answers Inc. gave the Graduate School a gift of \$50,000—to continue to grow the Andrew Sowell-Wade Huggins Endowment. They had a gray granite and glass plaque designed that denotes the donors of these gifts, and it graces the reception area of the School. Today, the Andrew Sowell-Wade Huggins Endowment generates more than \$10,000 annually in scholarships, and \$10,000 toward the **Andrew Sowell-Wade Huggins Professorship/Fellowship Award**.

The sons, Andy and Wade, now have children of their own. With families and friends scattered across Texas and throughout the United States, like our spring graduates, they come together to celebrate achievements, holidays, and life milestones. Like our students, part of what Cancer Answers is doing, in a larger sense, and Joann, Marica, Andy, and Wade are doing more personally, is celebrating the continuance of family.

Cover photos: Families of new graduates celebrating the occasion are top left clockwise: Pamela Yang, Ph.D.; Aziz Poonawalla, Ph.D.; Gregory Aune, Ph.D.; and Sayeepriyadarshini Anakk, Ph.D., and Auinash Kalsotra, Ph.D.



Dean's Notes

Faculty Retreat

May 12-13, 2006

Last year I suggested the possibility of a GSBS Faculty retreat in the 2005-06 academic year, and the Executive Committee endorsed the idea. This in no way implies that "something's broken" at GSBS; quite the contrary, I believe our Faculty is doing an excellent job of providing quality education. Thus, the purpose would be to proactively consider how to best continue to provide outstanding training given the changes that have recently occurred and are continuing to occur, in graduate education, our parent institutions, the biomedical research community, Texas, and the nation.

The chosen date is May 12-13, noon to noon.

A successful retreat requires a great deal of discussion, debate, and advance planning, and I have thus asked senior members of the GSBS staff to coordinate our preparatory efforts for the retreat in their areas of responsibility. These are:

Ms. Linda Carter - Development, Public Affairs, and Alumni Affairs
Dr. Paul Darlington - Administrative Operations & Organization and Finance
Dr. Thomas Goka - Outreach, Diversity, and Student Affairs
Dr. Victoria Knutson - Admissions and Recruiting Activities
Dr. Jon Wiener - Academic Affairs

Each of them will convene a working group of GSBS faculty members plus students and alumni when appropriate. These groups will work with the relevant GSBS standing committee(s) to identify key issues and challenges, and develop possible approaches to address them. This information will provide the background for discussion at the retreat to which all faculty members will be invited. I will focus on our mission statement and strategic goals, faculty affairs, and interactions with our parent institutions, and work with the Executive Committee to identify cross-cutting issues. Dr. Goka will work with the GSA to encourage student input, and Ms. Carter will solicit information from our alumni and friends.

The goal of the retreat will be to identify the most significant issues and challenges facing GSBS in the future, and how our school should deal with them. I would like us to focus on major issues and school-wide goals important for strategic planning, allocation of resources, and major academic decisions, rather than procedural details that are best left to the GSBS standing committees, Programs, and staff members responsible for implementing policy decisions made by the Faculty.

All GSBS faculty members, students, alumni, and friends are encouraged to provide ideas and suggest topics for the retreat. Based upon the area of your comments, please contact the appropriate person(s) from the list above (see http://gsbs.uth.tmc.edu/current_staff.htm for their e-mail and phone contact information). We will have a link (*2006 Faculty Retreat Update*) on the Current Faculty and Student page of our website (http://gsbs.uth.tmc.edu/current_faculty.htm) to keep everyone informed in real time and to invite continuing input and commentary.

Thank you in advance for your efforts and I look forward to seeing many of you at the retreat.

Best regards,

Distinguished Visitors

June and Virgil Waggoner



Here with yellow roses and their namesake Wall and Hall are significant benefactors to The University of Texas M. D. Anderson Cancer Center, **June and Virgil Waggoner**, center, flanked by President John Mendelsohn and Dean George Stancel. The **June and Virgil Waggoner Academic Hall** houses the Graduate School within the **George and Cynthia Mitchell Basic Sciences Research Building** and is the actual site of the GSBS classrooms, conference rooms, library, reception area and administrative offices. Their generosity has provided over 15,000 square feet of interactive, inspiring, interior real estate for the GSBS.

Peking University Delegation



At an informal Texas BBQ supper at the Graduate School, GSBS Dean, George Stancel, Ph.D., third from left, presents a photo of Houston and the Texas Medical Center to special guest of honor, **Yang Ke, M.D., Ph.D.**, vice president of Peking University, second from left. The evening included greetings from **Harry Gee, Jr.**, UTHSC Development Board member, far left, and Houston City Council Member, **Gordon Quan**, far right.

Photo by Ester Fant



During a recent visit to The University of Texas Health Science Center with itinerary planned by UT M. D. Anderson Cancer Center's Extramural Program vice president, Thomas Brown, Ph.D. and scientist Alfred Yung, Ph.D., a delegation from Peking University stopped at the GSBS for a tour. Shown here left to right, **De-Bing Wang, M.D., Ph.D.**, president of Peking University, who is professor, chief physician, supervisor of Peking University Health Science Center, and chairman of the University Council, and Victoria Knutson, Ph.D., assistant dean for admissions, GSBS.

Photo by Kellie Cutsinger



Back-To-School Open House

GSBS students talk about their research with UTHSC Development Board members **Catherine Hevrdejs**, **Alan King**, **Harry Gee** and others at a fall Back-to-School gathering to introduce them to the HSC institutions.

Commencement 2005



Pierre D. McCrea, Ph.D.

GSBS Faculty President
2004-2005

Good Morning!

It is a pleasure for me to join you in this Commencement ceremony to represent the graduate

faculty of the UT GSBS. As some of you know, we are a diverse faculty that numbers over 500 members; a faculty that has, as one would both hope and expect, varied opinions, scientific interests and personal approaches to teaching and mentoring. Diverse too are the ways by which we learn from one of our most powerful assets, which has always been you, our students. In light of the variety of experiences that you have had in the Bayou City, I truly hope you will depart with the belief that a shared faculty goal is to provide rigorous graduate training and to work constantly to improve it. The most obvious engine of this process has been your graduate committee, consisting of five faculty members including your mentor. In the best of circumstances, committee contacts and evaluations over the course of each year have provided a two-way street, where we as faculty have grown in understanding and appreciation of your objectives and approaches, however mysterious they may have seemed at first! And a number of us have learned also about new forms of music escaping from your lab radios and drifting or blaring down the hallways into our offices.

Turning now from our shared past to your futures on this Commencement day, it is of course pertinent to ask where our graduate students and those from many other such institutions go from here? Well, you already know that some take on postdoctoral fellowships and ultimately academic positions, others move into productive careers in industry, biotech, scientific editing, publishing and patent law, and more than a few, we hope, into politics and public policy. Each of these areas has the potential to take full advantage of your graduate training as well as your innate talents, and to allow you to move towards societal as well as personal goals. We all realize, however, that even with such strong scientific backgrounds, making personal decisions around graduation time may be difficult to do with a sense of certainty. Should I stay in Texas, the promised land of big science and big hearts but also of pretty darn big bugs? Should I go the academic route, since I enjoy the excitement of gambling? If I go into patent law, will I get my own TV show? All kidding aside, with such important personal decisions to be made, setting larger societal goals for the years ahead is likely to seem even more iffy.

But if there is anything that biology has taught each of us, it is that everything is interconnected, on the grand as well as on the molecular levels. That is, we accept that life operates within a marvelously complex web. An event in one part of the web can pass messages simultaneously to many other locations, which often will add their own twists to the ultimate outcome. This is also true in the context of human relations and indeed in the manner in which humans interact with the many other life forms on Earth. What we do as individuals, and, very importantly, as organized groups of individuals, can have amazing consequences, positive as well as negative, for the health of the larger ecosystem.

As biologists, therefore, we have to accept the reality that our research, along with our ability to argue logically and to educate, have implications that extend beyond our bench or computer screen. Just as we aim to reveal the functions of really cool molecules in cell, developmental and disease pathways, we as individuals and as scientific groups have the potential to promote appreciation for bio-networks that help hold this amazing Earth together. What scientists have been learning in the last few decades, indeed centuries, is that we have much to work toward protecting. As boundless and awe-inspiring as Earth's networks of life appear, they are not each infinitely sustainable if societies rely upon habits that we as scientists know fly in the face of reason. While some of our news programs accurately remind us of our dependence upon non-renewable energy resources and its potential consequences for the health of our families, there are equally loud voices working hard to downplay such possible fallout. Even today, for example, there are those who describe global warming as a theory in need of further study, rather than accept strong scientific agreement that global warming is already well underway. Such individuals are not likely to err on the side of caution by mandating improved engine efficiency and limiting auto and industrial emissions. Perhaps such individuals also underestimate the power of human and scientific ingenuity in finding solutions, or at least improved approaches, if appropriate encouragement from both grass-roots and governmental offices is in place.

While I have been stating much that is obvious, I believe it is important for you, our graduates, to remember that your lifetimes will span a period of tremendous excitement and significance, where shifts in the thinking and actions of many societies will have to begin and to continue. Thankfully, no one is alone in this process, as many good minds and hearts are already at work. What role will you as new graduates

Commencement 2005

from GSBS, young and promising scientists, have in these efforts, I wonder? Will you recognize that the scientific revolution that you participate in provides you with equally impressive tools to address social and political problems?

As I look out over your number, it is clear that our School has been very fortunate to have top students from so many countries. Indeed, the mixing of many nationalities and cultures in reaching objectives has always been one of the true delights of doing science. It should also follow that such relationships strengthen the capacity of our graduates to have a shared influence across significant sectors of the globe. I hope that you will fully exercise this potential.

In finishing, let me return to some points raised at the beginning of my address, which may have seemed closer-to-home. At this proud moment for you and those gath-

ered, I am sure I reflect the feelings of the larger faculty in extending our thanks to you for joining with us to pursue our shared scientific projects over these past few years. In some cases, these shared projects may have extended for longer than a few years, in which case you may be really ready for my remarks to end. So, allow me and the faculty to wish you continued discovery throughout your lives, and to advise also that you enjoy the ride! Stay in touch with the roots you have here in Houston as well as with your far-flung classmates, as we will be curious to hear how you are doing. Best wishes to the UT GSBS graduates of 2005!



Joseph L. Alcorn, Ph.D.

**John P. McGovern
Teaching Award 2005**

I would like to express my gratitude to the students for bestowing upon me such an honor. The announcement of this award was a complete surprise to me, and I am still shocked about how deeply your acknowledgment has affected me personally. Most people go through life with no idea of the immense personal satisfaction that comes when others recognize your efforts at a job that you love doing, and I thank all of the students of the GSBS for giving me that opportunity.

I began my academic career because I love what I do, namely research. I knew I enjoyed classroom or didactic teaching, and I try to let the students know it. However, I did not anticipate the rewards of mentoring students in their scientific endeavors. It is a thrill when students describe their interpretation of the results of experiments that I suggested. This feeling evolves into pride when students begin to forge their own solutions to research problems and formulate new approaches to research questions that I had not even considered. I take pleasure in seeing students excitingly impart these solutions and present their data to their peers, for this means that they are maturing

into scientists. Finally, the hardest achievement for students to attain is the ability to disagree with their mentor and to argue their point of view with well-conceived arguments. When this phase is reached by the student, it evokes simultaneous feelings of sorrow and accomplishment because you realize that the student no longer needs you, but you also realize that you had a part in their scientific development. I have come to appreciate that in my career, teaching students provides as much joy as performing scientific investigations.

It does not take an oracle to see that basic science is going through tough times, but we must remember that we are still academic institutions; and students that attend our institutions need and deserve our time, despite the fact that administrators feel that teaching does not generate revenue and our time could be better spent elsewhere. But the future of science resides in our students, and we must continue to train the scientists of the future. Despite these difficult times, you must all make a decision concerning the path you will take: research in academia versus research in industry or other endeavors altogether. While it is easy to be seduced by the perks of the path of industry, the advantages of a career in academia should not be discounted. Paramount is the opportunity to mentor students, both in the classroom and in guiding their development as scientists. Make no mistake; teaching is hard, and it is a conscious choice; but a choice one should take without hesitation for it provides enormous personal rewards far beyond those enumerated by contracts.

Darrell Boswell said when teaching the unlearned, he who teaches receives the greatest education. While I don't consider the students of the GSBS as unlearned, I do feel that interacting with the students has greatly educated me in many unanticipated ways, and I thank all of you for that gift and I really am humbled by this award. I thank all of you very much.

Commencement Address



Dr. Rita R. Colwell

Chairman, Canon US Life Sciences, Inc.
Distinguished Professor, University of Maryland College Park and
Johns Hopkins University Bloomberg School of Public Health

“How You Change the World”

Dean Wiener, members of the faculty, the staff, students, families, distinguished guests — it is an honor to present the commencement address here at The University of Texas Graduate School of Biomedical Sciences at Houston, affectionately known as GSBS, according to Dean Weiner on the UT web page! It is a true privilege to address the graduates of one of our nation’s most respected institutions of higher education, notably one with the mission to educate research scientists and scientists-educators, generate new knowledge in the biomedical sciences, and to increase public understanding of science. I feel completely at home here amongst you all! Forty-two years ago (in 1963), the Texas legislature authorized the Regents of the University of Texas to establish a Graduate School of Biomedical Sciences at Houston. In my experience, legislators aren’t always the wisest of people. But, in this case, they acted wisely and sensibly...a very rare act, indeed. Today, GSBS is at the top of health sciences graduate schools in the United States, with more than 1,300 scientists trained here in nationally-ranked programs, with a faculty that includes a Nobel Laureate, Lasker Award winner, and recipients of many other honors...ranking also in the top 1-2% of NIH funding in the world. This is a remarkable achievement!

Let me first extend my congratulations to the graduates and their families. This is a proud moment in all of your lives. I can relate to all of the triumphal, proud, and sentimental feelings that you are experiencing today. I can also relate to the great sense of relief that all of us — students, families, and celebrants — share. A long-sought goal has been reached. Congratulations again. This is a day for celebration.

Let me also assure you that I will not violate the commandment that commencement addresses should be very brief. You may have heard the old adage: “be sincere, be brief, and be seated.” Those are my marching orders today.

I have titled my remarks, “How You Change the

World.” I know that sounds like a lofty and unrealistically ambitious goal. Likely few of us would think of announcing such power or prescience. But we all have our passion. Some of us want to write novels, some want to heal others, and some of us want to uncover new knowledge. Our passions are uniquely ours, because we bring our own vision, our own values, and our own versatility to them. Our passions are what start us on quests to change the world. No matter your chosen field, you can always be an explorer and a pioneer. Never be daunted by the knowledge of others. Learn what others know, but be curious and courageous about what is not known.

It is acceptable, and even necessary, to challenge an established body of knowledge, if you think you have valid reason. If this had not been the case, we would still think the Earth was flat, and that all the celestial bodies in the universe revolved around the Earth. Now we know that we are a very tiny part of a galaxy among billions of galaxies. New scientific theories, new forms of music and literature, new technologies, cures for disease, new psychologies, and new visions come from those who dare to take risks and challenge conventional wisdom. Each of you has a unique contribution to make. In fact, it was the distinguished educator and writer John Gardner who said, “Democracy is measured not by its leaders doing extraordinary things, but by its citizens doing ordinary things extraordinarily well.”

Over the last two centuries, America has been the nation that has most fundamentally shaped the world, primarily by citizens doing ordinary things with passion, commitment, and ingenuity. The pioneers built sturdy wagons and trekked hundreds of miles with their families to settle a vast unknown territory. Similarly, America has been shaped by its scientists, engineers, inventors, and entrepreneurs. They have ingrained in our culture the importance of asking questions, finding answers, and challenging the status quo. The revolution in infor-

(Continued next page)

Commencement Address

mation technologies is a force that has transformed societies. It began in America and has reached across the globe and has helped sow seeds of democracy in many nations.

All of these accomplishments have occurred in tandem with the development of a unique system of universities and colleges. We've combined education with research so that students have the benefit of being taught by those doing the most advanced work in a field. And, the reverse is also true. Researchers have the advantage of always being challenged by the questions their students ask. As graduates, you are the beneficiaries of one of the greatest universities in the finest university system in the world. Now, you are launching your careers — in a world that few could have imagined 100 years ago, at the dawn of the twentieth century. Social and career choices were more limited then. Few women worked. Those who did were usually limited to teaching or nursing. Marconi had just invented the radio. The Wright Brothers were designing their “flyer,” as they called it. It had not yet flown. There were few research institutions. Much of what we did in agriculture, industry, and science was dependent on what we could do with the information that was then available. Our knowledge base constrained our capabilities. But, today, the vast accumulated knowledge of science and engineering has created a momentum of discovery. It is unparalleled in human history. Our choices are almost unlimited, which makes our responsibility far greater. As individuals and as a nation, we must decide what we value and how to achieve it.

Over the last 50 years, we have moved steadily toward a society defined by science and engineering. That transforming force of science has brought miraculous change with things that seem ordinary to all of us. But I remember a time before penicillin was widely available, before Sputnik, and before the ubiquitous “post it note.” I'm not trying to impress you with my age but rather with the age in which you are living. It means you have access to unimaginable knowledge and resources. You have sophisticated tools and technologies, and lightening fast communication to help you change the world. Let me share one story of how this works.

In my career, I have had the privilege and satisfaction to help understand where in the aquatic environment the bacterium causing the infectious disease, cholera, makes its home. I have studied the bacterium, *Vibrio cholerae*, for more than 20 years. I'll just share a few highlights. The research has taken me from my

graduate days in Seattle on a circuitous route to Bangladesh. It has brought me into contact with countless others who combat this scourge. In our years of research, we posed scientific questions and performed experiments that defied the conventional wisdom of the time. Many scoffed at our ideas and continued to pursue the old path. That only spurred us on with greater commitment. Eventually, we were able to prove that cholera was caused by a bacterium that occurs naturally in rivers, estuaries, and coastal waters. And, the bacterium has a dormant stage that fooled researchers. It literally hides between epidemics. We found that the cholera bacterium is associated with plankton found in virtually all rivers and streams. But purifying the water is an elusive goal. In poverty-stricken countries like Bangladesh boiling water to obtain safe drinking water is not an option. There simply isn't enough firewood to burn. A less expensive option is filtering out the plankton to lessen, and possibly curb the disease. We found that sari cloth of finely woven nylon would make an excellent and affordable filter. The sari is the native dress for women in this region. A team of researchers is now teaching women in remote villages how to filter their water.

Our work is a small step toward reducing the number of people who die each year from cholera. We were ordinary people committed to our passion and able to make a difference. There are few things more gratifying in life than helping others help themselves.

There is still much work to be done. The toll that infectious diseases inflict on the world is enormous. Worldwide, over 17 million people die from malaria, hepatitis, cholera, AIDS, and other virulent scourges each year. You are inheriting a future where instant communication has made the world the size of an apple. In that “world neighborhood,” 13 of every 14 people speak a language other than English. India, not China, will soon be the most populous nation on the planet. Global business is a fact of life. And, we have the modern phenomenon of a global and highly mobile workforce comprised of the world's most talented and highly skilled workers. They can routinely relocate to take advantage of the best job opportunities. Information technologies also allow them to stay at home, while they are working abroad from their homes. To have a clear vision of the larger future before us, we must have both mirrors and windows. Mirrors to see ourselves, and windows to see each other.

In stark contrast to that optimism, there are still persistent and monumental disparities in public health, edu

cation, and economic opportunity, as we scan the globe, and even our own nation. Twenty percent of the world's population holds 86% of the wealth. Half of the global village lives in poverty. Some of that one-half struggle along in America's hometowns, on small farms, and in our urban corridors. With mirrors, we reflect on and understand the complexity of our own nation. Windows help us to see the similarities and differences of other nations and cultures. There is an African proverb that says, "the lack of knowledge is darker than night." There is still a lot of darkness remaining in the world. There are still many things to change for the better. And, simple solutions can be powerful. You will not want for challenges.

Scientific knowledge has brought light to the darkness of not knowing. In the last 50 years science has catapulted us to places far beyond our imaginations. We are on the cusp of a nanoscale revolution that will redesign our society and our civilization. One nanometer is one billionth of a meter. A nanometer is to an inch what an inch is to 400 miles. The applications of nanotechnology will be diverse and almost magical. Soon, we'll be using nanomachines that will be able to connect to a human cell and deliver medicine. Here's one example that might interest many of you. The information on a thousand CDs could be packed into a space the size of a wristwatch. In my day, Bob Dylan wrote "The Times They Are A-Changing." Today, we are moving into the times they are amazing.

Two major scientific milestones have already been reached — the mapping of the human genome and the mapping of a complete plant genome. The human genome project got most of the publicity, but the plant genome sequencing can have equal influence and impact. We now know that humans have far fewer genes than we imagined, only 30,000. That's only 10,000 more genes than a worm. I did hear someone respond to that revelation with, "but our genes are better."...I doubt it!

If you view plant science narrowly, it's about more and better food, which in itself is critical. But that's just a fraction of the story. The plant sciences are also about finding new medicines, fighting pollution, and unlocking new streams of research. Two major concerns for the world's future are how to protect the planet that sustains us while sustaining the growing global population. These are not mutually exclusive goals. You have challenges that stretch from your own local community to the community of nations.

Each challenge presents its own opportunity for you to reach beyond your personal future to humanity's fu-

ture. It can be as close as the neighborhood youth group or as distant as a flood ravaged village in Mozambique. We are a "world neighborhood" of six billion people, most of whom are poor and yet filled with hope of a better future. Each human being on the planet ultimately influences all our lives, and lives in the conscience of us all. Perhaps your greatest opportunities are the challenges that lie ahead.

This brings me to my conclusion. Living in a society rooted in science and engineering brings many benefits, and it also brings important responsibilities. It is not just up to scientists and engineers to decide how we apply these new capabilities. All of us must be engaged in the discussion. And, it is no longer enough for scientists and engineers alone to generate the new knowledge. All of us must be active in the debate about the use of that knowledge. Science is a strong and valuable force for finding solutions to problems and for changing the world in positive ways. But our task as a society is to understand the issues that science raises, so we can be informed partners in the debate about how knowledge is used.

Your degree carries with it the prestigious reputation this institution has earned over more than a century of excellence. This commencement is just the beginning of a life-long journey in learning and in changing the world to become an ever better place. The torch of leadership must always be passed to the next generation. You stand on that threshold today. Be curious, be compassionate, and be committed. There is much to do here and elsewhere. You will not lack for challenges, for excitement, or for gratification, and I know that you will change the world.

Congratulations and great good luck!



Graduating Class 2004-2005

Doctor of Philosophy

Sayeepriyadarshini Anakk (Henry Strobel, Ph.D.)

Female-specific regulation of cytochrome P450 3A5 and response to xenobiotic stress

Lida Anestidou (Norman Weisbrodt, Ph.D.)

The role of nitric oxide in small intestinal motility in a model of acute inflammation

Gregory Aune (Zahid Siddik, Ph.D.)

RNA polymerase II large subunit degradation induced by ecteinascidin 743: molecular characterization and subsequent rational investigation of antitumor mechanisms in cancers with clinical response

Donna Badgwell (Stephanie Watowich, Ph.D.)

The conserved N-terminal domain of STAT3 is essential for STAT3 dephosphorylation and nuclear retention

Yanis Boubber (Jean Pierre Issa, Ph.D.)

An Sp1/Sp3 site polymorphism associated with hypermethylation of the candidate tumor suppressor gene RIL in cancer

Ivone Bruno (Gilbert Cote, Ph.D.)

Modulation of alternative RNA splicing through targeting intronic regulatory elements

Jennifer Carew (Peng Huang, M.D., Ph.D.)

Mitochondrial defects in primary leukemia cells: biological consequences and therapeutic implications

Xinpu Chen (John Spudich, Ph.D.)

Signal relay between two integral membrane proteins: the sensory rhodopsin I/HtrI transducer molecular complex

Nathan Childress (Isaac Rosen, Ph.D.)

The design and evaluation of a 2D dose verification system for intensity modulated radiotherapy

Laurel Fohn (Richard Behringer, Ph.D.)

Esx1 dosage impacts reproductive fitness: duplication and klinefelter's infertility. Deletion and decreased viability

Hui Gao (James Reuben, Ph.D.)

Immune restoration of patients with chronic myelogenous leukemia in complete cytogenetic remission

Aditi Hazra (Xifeng Wu, M.D., Ph.D.)

Genetic predictors of tobacco-related cancers with emphasis on methylation-related genes

April Hebert (Prمود Dash, Ph.D.)

Role of entorhinal cortical plasticity in spatial and contextual memory

Simon Jakubowski (Peter Christie, Ph.D.)

Analysis of agrobacterium tumefaciens VIRB6 and VIRB9 of the VIRB/D4 type IV secretion system (T4SS)

Auinash Kalsotra (Henry Strobel, Ph.D.)

Characterization of cytochrome P450 4F subfamily: functional role and response in inflammation

Hyun-Jung Kim (Reuben Lotan, Ph.D.)

Mechanism of N-(4-hydroxyphenyl) retinamide (4HPR)-induced apoptosis in head and neck squamous cell carcinoma cells

Sally Kim (M. Neal Waxham, Ph.D.)

The dynamics of calmodulin signaling revealed using optical methods

Kristine Klos (Dihua Yu, M.D., Ph.D.)

Upregulation of VEGF through p70S6K is involved in ErbB2-mediated angiogenesis, which can be inhibited by combined Herceptin plus Taxol treatment

Keng-Hsueh Lan (Dihua Yu, M.D., Ph.D.)

Tackling ERBB2: ERBB2-targeting peptide therapy and combination therapy with trastuzumab plus P13K inhibitors

Mei Li (Rodney Kellems, Ph.D.)

Expression regulation of AP-2gamma gene

Dawn Marsh (Donald Dougherty, Ph.D.)

Relationship of impulsivity and physical fighting history to alcohol-induced aggression in women

Suzanna Martin (William Klein, Ph.D.)

POU Domain transcription factor Brn3b is critical for the normal development and survival of retinal ganglion cells

Jon McDonald (Wei Zhang, Ph.D.)

Putative 1p36 tumor suppressor genes involved in oligodendroglioma development

Steffan Nawrocki (David McConkey, Ph.D.)

Induction of endoplasmic reticular stress by bortezomib: a novel therapeutic strategy for pancreatic cancer

Lan Pham (Richard Ford, M.D., Ph.D.)

Dysregulated CD40-NF-kappaB signaling in the pathophysiology of aggressive non-Hodgkin's lymphoma B cells

Aziz Poonawalla (X. Joe Zhou, Ph.D.)

Multiple gradient echo propeller (MGREP): technical development and potential applications

Doctor of Philosophy

Zhiyong Ren (Xiaomin Chen, Ph.D.)

STAT3 activation by ErbB-2 receptor and the development of peptide-based STAT3 inhibitor

Mahyar Sabripour (Christopher Amos, Ph.D.)

Application of stellar photometry to the analysis of microarray images

Shankar Sellappan (Dihua Yu, M.D., Ph.D.)

Heregulin-beta1 directly associates with RhoA via the IgG-like domain modulating breast cancer cell motility

Theodore Steger (Edward Jackson, Ph.D.)

Investigation of arterial spin labeling MRI for quantitative cerebral blood flow measurement

Susan Stephenson (Francis Ali-Osman, D.Sc.)

Role of the glutathione S-Transferase P1 (GSTP1) electrophile binding site (H-site) in protection from doxorubicin mediated cytotoxicity

Jubilee Stewart (Catherine O'Brian, Ph.D.)

The characterization of PKC isozyme-specific EGFR-dependent Erk1/2 activation in androgen-independent prostate cancer cell lines

Xuefeng Su (William Dowhan, Ph.D.)

*Function and regulation of anionic phospholipids in mitochondria of *saccharomyces cerevisiae**

Leisa Talbert (Rodney Nairn, Ph.D.)

The role of XPF in recombinational repair

Travis Vaught (Pierre McCrea, Ph.D.)

*Identification and characterization of *xenopus kazrin*, a nucleocytoplasmic shuttling protein that interacts with ARVCF catenin*

Eric Vela (Jagannadha Sastry, Ph.D.)

Identification of glycosphingolipids as co-factors for HIV-1 infection

Joshua Vincentz (Yasuhide Furuta, Ph.D.)

Molecular and genetic analyses of FGF signaling during cardiac outflow tract development

Marcy Wainwright (Leonard Cleary, Ph.D.)

*The role of sensory neuron outgrowth in long-term sensitization of the tail-elicited siphon withdrawal reflex of *Aplysia**

Jeffrey Walterscheid (Stephen Ullrich, Ph.D.)

Ultraviolet radiation modulates the immune system through the platelet-activating factor receptor

Jay Wathen (Peter Thall, Ph.D.)

Bayesian doubly optimal groups sequential designs for randomized clinical trials

Pamela Yang (Alan Swann, M.D.)

Are there age-, strain-, and sex-differences in the prolonged exposure to methylphenidate

Monica Zamisch (Ellen Richie, Ph.D.)

Ontogeny and regulation of interleukin-7-expressing thymic epithelial cells

Ke Zhang (Sharon Dent, Ph.D.)

*The *Set1* methyltransferase opposes *IPL1* Aurora kinase functions in chromosome segregation*

Mei Zhang (William Dowhan, Ph.D.)

*Function of cardiolipin in mitochondria of *saccharomyces cerevisiae**

Ren Zhang (Benoit de Crombrughe, M.D., Agrege)

*Roles of p38 mitogen-activated protein kinase pathway in the regulation of *Sox9* activity and chondrogenesis*



Graduating Class



ss of 2004 - 2005



Graduating Class 2004-2005

Master of Science

Kendra Allton (Michelle Barton, Ph.D.)

A tap-tag approach towards defining p53 interacting proteins

Jack Bevers (Stephanie Watowich, Ph.D.)

Role of the conserved STAT 3 N-domain in IL-6 signal transduction

Peter Cashio (Andreas Bergmann, Ph.D.)

TRAMTRACK69 is implicated in the transcriptional repression of reaper mRNA expression within the midline GLIA of DROSOPHILA MELANOGASTER, and is involved in the survival of ectopic MG

Pai-Chun Chi (Tinsu Pan, Ph.D.)

A three-dimensional pencil-beam redefinition algorithm for electron arc therapy

Jackeline Esteban (Geoffrey Ibbott, Ph.D.)

Energy dependence of a TLD-100 system for characterizing low-energy brachytherapy sources

Gary Fisher (David Followill, Ph.D.)

The accuracy of 3-D inhomogeneity photon algorithms in commercial treatment planning systems using a heterogeneous lung phantom

Malcolm Heard (Geoffrey Ibbott, Ph.D.)

Characterizing dose distributions of brachytherapy sources using normoxic gel

Jay Herman (Kapil Mehta, Ph.D.)

Implications of tissue transglutaminase (TG2) expression in drug-resistant breast cancer cells

Yuhong Jiang (Paul Wong, Ph.D.)

ts1-induced neuroimmunopathology is prevented by an anti-oxidant, monosodium alpha-luminol

Jason Jones (Jagannadha Sastry, Ph.D.)

Inhibition of HIV-1 infection by peptides corresponding to the high affinity binding domain CD4

Karen LaFollette-Shumway (Michelle Barton, Ph.D.)

Replication Kinetics: Implications of histone H1 phosphorylation and interactions between RPA and p53

John Lahad (Gordon Mills, M.D., Ph.D.)

Complex systems of gene interaction: models for cancer progression

Jennifer Lemoine (Jaou-Chen Huang, M.D.)

Preimplantation genetic diagnosis and anxiety

Richard Mendez (David Yang, Ph.D.)

Targeting tumor hypoxia with Eylenedicysteine-Metronidazole

Christa Payne (Jocelyne Bachevalier, Ph.D.)

Cytoarchitectural organization of the perirhinal cortex and efferent projections to the orbital frontal cortex in Macaca mulatta

Tramanh Pham (Emanuel Murgola, Ph.D.)

Ribosomal protein L11 sites for functional interaction with polypeptide release factor 1 in translation termination

Lilliam Pinzon (John Powers, Ph.D.)

Effect of mucoprotein on the bond strength of resin composite to human dentin

Yuhua Qi (Dianna Milewicz, M.D., Ph.D.)

Characterization of versican splicing variants in thoracic aortic aneurysm and dissection (TAAD)

Graciela Rodriguez (Bang-Ning Lee, Ph.D.)

Effects of smoking on the cell-mediated immune response of women with HPV related cervical neoplasia

Cana Ross (Theresa Koehler, Ph.D.)

plcR/papR-independent expression of anthrolysin O by Bacillus anthracis

Tamara Solomon (W. Keith Hoots, M.D.)

Neonatal central nervous system thrombotic events (stroke) and genetic risk factors as the determining cause

Geraldine Srajer (Sharon Dent, Ph.D.)

The role of GCN5 in ES cell differentiation

Shanghua Yin (Fernando Cabral, Ph.D.)

Tubulin alterations associated with drug resistance

Alumni News



Introducing the 2005-2006 Alumni Association Steering Committee

Members are L-R:

Joya Chandra, Ph.D. (1998) vice president

Ben Thomas, Ph.D., (1973)

Dorrie Lamb, Ph.D., (1980)

Mustafa Ozen, Ph.D., (1999)

seated, Steven Lott, Ph.D., (1997), president

Other members not present:

Molly Bray, Ph.D., (1998)

Vicki Estrera, Ph.D., (2001)

Brenda Whaley, Ph.D., (1995)

Kendra Woods, Ph.D., (1995)

Joya Chandra, Ph.D. (1998) In-Reach Mentor

I am an Assistant Professor at M. D. Anderson Cancer Center in the Division of Pediatrics, which will be renamed the Children's Cancer Hospital at M. D. Anderson next year. As a PI of a research lab, we have one GSBS student (Claudia Miller), one post-doc (Kechen Ban) and one Rice undergrad (Jason Long), and a technician, Susan Stephenson (another GSBS alum) who spent six months as a postdoc in my lab before she re-located to Atlanta with her husband and baby in June. My lab studies apoptosis induction in leukemia cells, specifically how oxidative stress can promote this process. We are working with several new biologically targeted therapies and hope to bring them into the clinic for both pediatric and adult leukemia patients.

A little knowledge that acts is worth infinitely more than much knowledge that is idle.

n Khalil Gibran

Congratulations . . .

Lisa Armitige, M.D., Ph.D. (2002/Advisor, Audrey Wanger, Ph.D.) assistant professor in the division of infectious diseases at UT Medical School, is the 2005 recipient of the \$70,000 United Negro College Fund/Merck Postdoctoral Science Research Fellowship Award, and \$40,000 Infectious Diseases Society of America Bayer/Harold Neu Postdoctoral Fellowship Award.

Richard Bartlett, Ph.D. (1979/Advisor, James East, Ph.D.) Scientific Review Administrator for NIH will be re-locating to the Houston area would be happy to advise students on how the NIH review system works, and strategies for grant writing. Generepair2@yahoo.com

David Brown, Ph.D. (1982/Advisor, Potu Rao, Ph.D.) was appointed Research Investigator at Repromedix, a national laboratory specializing in reproductive testing. Dr. Brown holds three US patents in the field of male infertility research.

Cherie Butts, Ph.D. (2003/Advisor, Ralph Freedman, Ph.D.) was recently appointed to the NIH Fellows Committee at the National Institute of Mental Health; chairperson for the NIH-wide Research Festival Job Fair, and NIH Speakers Bureau.

E. Burnell Hranitzky, M.S. (1969/Advisor, Peter Almond, Ph.D.) was named Fellow of the American College of Radiology (ACR) during the ACR 82nd annual meeting.

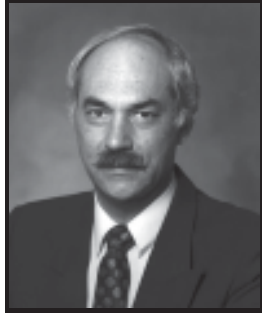
Jeannelle Martinez, Ph.D. (1999/Advisor, Lovell Jones, Ph.D.) is following her postdoc position at the National Institute of Environmental Health Sciences as the new Field Toxicologist for the national Decontamination Team, Office of Solid Waste and Emergency Response, Office of Emergency Management at the US Environmental Protection Agency in Cincinnati, OH.

Angabin Matin, Ph.D. (1993/Advisor, Mien-Chie Hung, Ph.D.) assistant professor of cancer genetics at UT M. D. Anderson Cancer Center, was recently featured in *The Houston Chronicle* (and published in *Nature*) for her research about the genetic mutation causing testicular tumors in mice and how this could help men.

Joye Purser, Ph.D. (2002/Advisor, Steven Norris, Ph.D.) is currently handling the Science Committee, health care, Social Security and other issues for Representative E. B. Johnson of Dallas, TX as Senior Legislative Assistant.

David Voehringer, Ph.D. (1995/Advisor, Raymond Meyn, Ph.D.) was noted in *Science* (Vol 303 January 16, 2004) in their article on scientific "temping" and its benefits, and who in the meantime has gone on to a permanent position at Cell Biosciences, a biotech company in Palo Alto.

Sets NIH Record



William Dowhan, Ph.D., professor of biochemistry and molecular biology at UT HSC-H sets a record for time with NIH grant-funding for “Structure and Function of Membrane Proteins” now in its 32nd year.

Distinguished Mentor Award



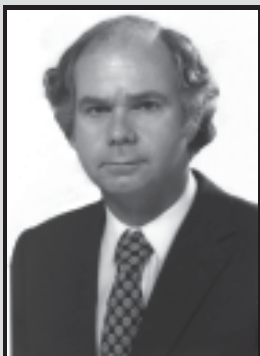
Robert Chamberlain, Ph.D., professor of epidemiology at UT M. D. Anderson Cancer Center and GSBS faculty, received the first **M. D. Anderson Postdoctoral Association Distinguished Mentor Award**. As the first recipient, Dr. Chamberlain is recognized by the Postdoctoral Association as the exemplar of successful postdoctoral mentoring at the M. D. Anderson Cancer Center.

Top Tips...On being a faculty mentor

...words of Innes Cuthill, Ph.D., professor of behavioral ecology at Bristol University who designs innovative experiments to test questions about the selective forces that shape animal form and behavior; recipient of recent *Nature*/NESTA awards for creative mentoring in science. Re-printed from *Nature* March 24, 2005, Volume 434 Issue no 7032.

- Never let a student think they have asked a silly question. Otherwise you risk stifling enthusiasm and killing self-confidence.
- Get involved in the research. Be their research assistant. It shows your enthusiasm for their work more effectively than (just) checking stats and draft manuscripts. And you can spot technical errors and improvements that otherwise might be missed.
- Give students time to reach their own conclusions: do not immediately jump in with the solution.
- Remember to emphasize the positive. Young researchers don't know that draft manuscripts often need heavy reworking and that even good papers get rejected.
- Emphasize that science isn't personal. When someone criticizes your work, they are not criticizing you.
- A supervisor must earn co-authorship by doing more than the normal role of a supervisor.

Noted Educator and Scientist Dies



Grady Franklin Saunders was born in Bakersfield, California on July 11, 1938, and died in Houston, Texas, on August 26, 2005, from complications of a stroke. Grady's early education was in Oregon. His undergraduate work was at Oregon State, from which he received the B.S. and M.S. degrees. This was followed by a Ph.D. from the University of Illinois. After postdoctoral studies in France he came back to the US and started working at the University of Texas M. D. Anderson Cancer Center. His research was varied and he was one of the team that was first to localize various DNA's on human chromosomes. He supervised the research of 24 graduate students both at the Masters and Doctoral level. He also had many postdoctoral fellows in his laboratory. He was Chairman of the Graduate Faculty from 1977 to 1979, and served on many committees. He retired from MDACC about three years ago, but still worked part time. Grady will be greatly missed by the educational and scientific communities to which he dedicated so much of his life.

n Frances Arrighi, Ph.D.

News & Events

Student Awards 2005-2006

Medical School Dean's Research Awards to Graduate Students provide \$2,500 scholarships as a supplement to their stipends to recognize GSBS students who have achieved distinction in the biomedical sciences. Recipients will give a presentation of their research at the Dean's Research Scholarship Reception this fall.

Students

Brian Corbin
Diana Lazzell
Janci Chunn-Noble
Jun Xie
Teri Guidry
Eric Williams
Julio Morales

Supervisory Professor

Dr. William Margolin
Dr. Roger Janz
Dr. Michael Blackburn
Dr. William Dowhan
Dr. Jeffrey Actor
Dr. Henry Strobel
Dr. Phillip Carpenter



Graduate Student Association Officers

who organized the taco bar reception to welcome new students are L-R, Hilary Marks (endocrine neoplasia, MDACC) secretary; Jennifer Frey, (experimental therapeutics, MDACC) vice president; Rina Bhagat (experimental therapeutics, MDACC), president.



New and experienced graduate students wrap up orientation week with a reception and dinner

Helloooo. . . . New GSBS Office Staff



Brenda Gaughan returns to GSBS following a nine-year hiatus in Connecticut and Colorado. Formerly in Student Affairs here for 20 years, she joins us as Director of Faculty Affairs, and notes she is glad to be back in Texas.



Liz Stamey, part of the Academic Affairs team, lately of Tampa, Florida, is married with two children. Liz is known for her marathon running ability, most recently in the Black Mountain Trail Marathon in North Carolina.



Suzanne Pham, new to the Admissions team brings over six years of event planning and web maintenance and design experience, to the Graduate School. She has a BBA in Management from the University of Houston, and is currently pursuing a BA in Communications.



Karen Weinberg, also part of Admissions, is a Texas A&M University graduate. Born in Houston, raised in Magnolia, Texas, she likes to read and enjoys going to live music performances whenever possible.

Outreach News



In conjunction with the Alumni Outreach to Sylvan Rodriguez Elementary School, Thomas Goka, Ph.D. (1978) guides fourth and fifth grade students through a class about estimates and samples.



Graduate student Stacey Ruiz talks about being a scientist to students from Brookline Elementary School during the semester's **Scientist for a Day** program at GSBS.



The HSC Office of Community and Educational Outreach awarded graduate students who have provided significant volunteer service. Shown here, Dr. Goka, GSBS Assistant Dean; Liliana Rodriguez, Director of Special Programs; Charlie McClugg, School of Public Health student; Eric Williams, Joanna Koch, and Christopher Singh (GSBS students), and Dr. Carlos Moreno, Vice President.



Brookline Elementary Student Juan Carlos with his parents Juan and Maria Carlos on the occasion of his receipt of the **Benny Garcia Young Scientist Achievement Award**. The honor is presented to a student who has the most potential to become a scientist because of his curiosity, industry and dedication.



A **Project Grad** program, co-sponsored by The University of Houston and UT-GSBS, provided high school students an opportunity to learn about blood typing during an intense two-week series of classes, lab sessions and fieldtrips at GSBS.



Joanna Koch and Megan Minard receive certificates of gratitude from GSBS' Outreach and Minority Affairs office during a recent year end wrap up dinner to thank all the student volunteers.

Special Thanks & Gratitude

Special Thanks to Our Benefactors

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A tax-deductible gift may be sent to
UT-GSBS, P. O. Box 20334, Houston, Texas 77225-0334
For information call (713) 500-9865

Dear Alumni and other friends,

Heading into the next academic year and fall breezes I hope, the Graduate School is now completely vested in its new home, the George and Cynthia Mitchell Basic Sciences Research Building. So, while this is all still fresh, I want to invite you to a housewarming...or homecoming, whichever you prefer. Please mark your calendars for Friday, 6:30-9:30 p.m., November 11, 2005 for our now annual Alumni Reunion. It will take place in this sparkling new building midst fabulous art and cutting edge educational and scientific accoutrements.



Our Distinguished Alumnus for 2005-2006 is Bhudatt Paliwal, Ph.D. (1973/Almond), who has made, and is making, his world mark in radiation dosimetry, radiation imaging, and the use of hyperthermia in cancer care. Dr. Paliwal will be on hand at the Alumni Reunion (as well as a faculty/student seminar that afternoon, open to the public) to talk about his current endeavors and his beginnings at GSBS.

In the 2006 we want to bring a breath of the GSBS closer to you. Our thought is to host the makings of a few GSBS alumni chapters, and start to link GSBS friends and colleagues around the country. The initial sites being considered include Washington D.C., or the Maryland area, New York City, California around Palo Alto—midway, and Texas in San Antonio. Still in its formative stages I welcome your comments (stlott@mdanderson.org) about location preferences, interest, and of course any volunteers who would like to help us host an informal event, if one of these happens in your business/living area. As I read over this letter I am struck by the many mentions of home. One of the best memories I have about the GSBS, besides the educational experience, was how much I felt at home. We'd like to bring a bit of that to you.

I hope you will join us for the Reunion, elect one of your next Alumni Association leaders then, and relish an evening of camaraderie and new information.



Steven Lott, Ph.D. (1997)
President, 2004-2005
GSBS Alumni Association

Newsletter

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