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1996 in Review

by Ed Hsiao

During the past 12 months, we've seen many advances in the sciences and in our world. Some of them truly represent the "Best of 1996." Others, like the Macarena invasion, just deserve to fizzle away. To recap some of the exploits of your tax dollars...

The year began in **January** with the introduction of Olestra, the fat substitute. Although widely touted as safe, Olestra has a "minor" side effect, namely GI distress. Few products using Olestra have appeared on the market since FDA approval.

February saw the introduction of tetraflop computers, at least in theory. Scientists at Intel and Sandia National Laboratories designed a computer using 9072 Intel P6 microprocessors running in p arallel. The computer, estimated at $45.5 million, is supposed to simulate nuclear warhead explosions and assist in testing new designs. In other areas of big, fat, science, researchers finally identified the leptin receptor as the product of the db gene.

In **March**, we saw yet another fuzzy cotton ball fly by the earth, namely Comet Hyakutake. Many ancient cultures associated comets with disasters, and so it was. It started with a gunman in Scotland killing 16 school children and their teacher. The outbreak of mad cow disease in Britain soon followed. The world suddenly learned about prions for a month as meat prices plummeted. Consumers eventually decided that cheap beef outweighed the risks of getting BSE, allowing the British meat market to recover.

In **April**, the Pentagon budget was put to shame as portions of Jacqueline Kennedy Onassis' estate were auctioned off. Theodore Kaczynski, the Unabomer suspect, was arrested. Sequencing of the yeast genome

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cur•ric•u•lum vit•ae

n. [Lat., course of life]

by Lesley R. Brown

As a new graduate student, your major concerns were those pertaining to passing the core courses and deciding upon rotation projects. The next year's concerns were getting through the qualifying exams and picking a lab and thesis advisor. With all of that behind you, you finally reach the point at which you can completely focus on your dissertation research. Several years later, you will hear the voice of your "committee" commanding you to go forth from this scientific "Garden of Eden." Like most graduate students, you have spent a great deal of time polishing your research skills, and a lot less time on learning how to present a summary of your scientific career. It would be nice to send a potential employer reprints, gels and beautiful autoradiograms, but alas, they all request a curriculum vitae.

In order to shed light on this thing called a CV, I attended a short seminar given by Don H. Harris, Ph.D., a human resources consultant for Bristol-Myers Squibb and a participant in the "Dialogue on Diversity" sponsored by Science. Dr. Harris was quick to point out that there are no set rules for preparing a CV, but neither would it be accurate to say that anything goes. There are a few key things he did recommend.

Your CV should be neat, concise and easy to read; he likes to think of it as a "brochure of your strengths". He also recommends that you write your own CV because that gives you more control over how you present yourself. And of course, it is always nice to be familiar with what is on your CV when you are in the interview. A curriculum vitae can range from two to fifteen pages and besides your name and address, it should include your career objective, educational history (usually in reverse chronological order), honors/awards, professional experience, professional affiliations,

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Upcoming GSA Meetings

Feb. 11
Teacher of The Year
email nominations to
gsa-g@welchlink.welch.jhu.edu
March 11

GSA Meetings are held on the 2nd Tuesday of each month at 2pm in Hunterian Room G-5.

UPCOMING EVENTS

Jan. 27 **Alicia Showalter Reynolds Memorial Lecture**

Feb. **Community Service**
The GSA is organizing another round of community service events, an informational meeting will be held soon. Contact Ann Marie Egloff,at gsa-g@welchlink.welch.jhu.edu.

Mar/Apr. **Student Poster Session**
Ever wonder what your classmates are up to in the lab? Wish you had a use for that poster you gave at last year's Gordon Conference? Like to get some informal input on your project from faculty and students outside your department? The organization for a student poster session is underway, for more infomation watch your email, or contact us at
gsa-g@welchlink.welch.jhu.edu.

Spring **Opera Tickets**
Interested in group discount tickets to The Lyric Opera? email Terri Shieh at
gsa-g@welchlink.welch.jhu.edu

June 3 **Watch the Birds vs. NY Yankees** Tickets $9

Some Thoughts on Science and Politics

by Tara Riemer

At first, science and politics seem to be completely opposing disciplines. Scientists strive for the ultimate truth while politicians often seem to hide or manipulate the truth. In addition, most scientists have limited knowledge or interest in government and politics, except maybe in the time around a major election. So if science and politics are seemingly so disconnected, why should you, as a scientist, care about politics? Because chances are that your paycheck depends on it.

The vast majority of scientific research conducted in the United States is federally funded, either from the National Institutes of Health (NIH), the National Science Foundation (NSF), the Department of Defense (DoD), or the Department of Energy (DoE). Universities like Hopkins depend on this funding for survival, and most basic science faculty members must obtain a large portion of their salary from their research grants. In addition, the majority of support for graduate students, including fellowships, training grants, and research grants, is also federally funded. The stability of this funding depends on the federal budget, which is turn is determined by the politicians who compose the budget each year.

The federal budget is enormous, totaling more than $1.6 trillion in 1997 (see the companion internet site). However, only 17% is available as discretionary funds, as the rest is tied up in interest payments (15%), defense (16%), and entitlement payments, including social security (22%), Medicare (11%), Medicaid (6%), and other entitlement programs (12%). Research funds are just a sliver of the $263 billion discretionary funds, which is also divided among various programs including education, the arts, housing, transportation, and foreign aid. The budget is hotly debated each year, beginning in February and hopefully finishing by October 1, the start of the new fiscal year (remember from 1995 what happens when the debate does not conclude by October 1 - government shut-down!). As there is much pressure to reduce the federal deficit and attain a balanced budget, few programs are safe from potential budget cuts.

Fortunately for biomedical scientists, the 1997 NIH budget of $12.7 billion was increased by 7% over 1996. Other programs did not fare so well. The NSF budget only increased 1.5% from 1996 to 1997. And similar NIH budget increases are not predicted for the future, even as the number of submitted grant proposals continues to increase.

What do legislators think about science and research, since, after all, they determine the available funds? One way of determining this is

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WINTER? A REALITY CHECK

by Jutta Beneken

About a month ago I was sitting by the Inner Harbor amphitheater, people-watching. To my left was a couple with a toddler, trying to get him to put on a jacket. A group of college-aged youngsters wearing T-shirts and shorts were walking by the Water Taxi stop. The Light Street Pavilion was decked out in all its Holiday glory, and so was Santa's Palace, that prime example of architectural genius.

It was January 5th, or was it? I began to wonder. My calendar said it was, but my wardrobe didn't. The remaining Holiday decorations said it was, but would people really be wearing shorts on January 5th? Maybe they had escaped from Sheppard Pratt and were a little confused. Maybe they were graduate students and couldn't afford real pants and a sweater. Maybe — then it occured to me! I had boarded the wrong plane on my way back from Christmas break! Yeah, that's it. This wasn't really Baltimore, it was Florida! I thought back to that Friday, January 3rd...(note: if this were a movie, the picture would get all fuzzy and the music all weird).

The temperature is about 5° Fahrenheit, but here it is measured in Celsius, and that number is a little more frightening: -15° . That's the highest it's been for about a week. Although it's not snowing, the snow that fell ten days ago is still on the ground, covering a treacherous layer of ice that's everywhere except on the runways. Thank God. The airport: Munich, Germany. Destination: Luxemburg (city = country, don't you love Europe?). The plane, a Fokker-50, takes off on time without even skidding once. Bummer.

Touchdown in Luxemburg an hour and a half later. There is more snow on the ground here but it feels a little warmer, maybe -7° C (19° F). I am waiting for my connection, and it begins to snow. The announcement says the plane will be departing on time. Whoopee! Destination: Reykjavik, Iceland. I'm thinking: well, Europe has been in a deep freeze for the past two weeks, wonder if Iceland will be true to its name.

The plane takes off about 15 minutes late. They apologize and say they took the extra time to de-ice the wings. No problem! A meal and a movie later, touchdown in Reykjavik. I'm disappointed. The temperature is a sweltering 40° F, no snow. Through the window I see a few snow-capped mountains and a volcano. Whoopee! I have 20 minutes to browse the airport souvenir shop. They're out of vodka. Bummer.

Six planes leave from Reykjavik at about the same time. Destinations: JFK, Fort Lauderdale, London, Boston, BWI, and Stockholm. I stand in line for one of them. The lady rips my boarding pass. She looks at it but doesn't say anything. I board the plane. Another meal, another movie, and lots of dead time later, touchdown in — let's call it airport X for now. It looks like BWI, the immigration officer's badge says BWI in huge letters, and my luggage is there. (Surprise!) The tag says LUX/BWI. I'm home....or am I? It's 7 pm local time. My math skills left me somewhere over Labrador, so I have no idea what time it is at home. The outside temperature is 65° F. Like I said, my math skills left me, so I have no idea what that is in Celsius, but it feels awfully warm... (note: fuzzy picture, weird music - you know the deal).

Back at the Inner Harbor it hits me like a bolt of lightening on a hot and humid summer's day. BWI! Boca Raton - West Palm Beach International Airport! Welcome home.

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Recipe and Wine Pairing

TOP 10 THINGS TO DO INSTEAD OF STUDYING FOR ORALS

10 Plan your Post-orals Celebration or Drown-Your-Sorrows party
9 Consider the advantages of a late afternoon exam (the committee will be in a hurry to get home)
8 Surf the net, dude
7 Consider the disadvantages of a late afternoon exam (the committee will be tired and hungry)
6 Clean that nasty spot behind the refrigerator
5 Make comprehensive list of subjects to study that would ensure smooth sailing during your orals, realize the impossibility of the task and go get drunk.
4 Learn to play the flugel horn
3 Re-organize your Bio-Organic lecture notes in even more brilliant Hi-liter colors
2 Watch the Brady Bunch marathon on Nick at Night
1 Cook a gourmet meal for all your classmates, have a "practice orals" session over dessert

Orals Procrastination Dinner:

Leg of Lamb
Beans w/ lemon and shallots
Wild rice
Pear Gallettes

To accompany this feast, try a Pinot Noir. They're a little pricey for the average student dinner, but you can't be serious about procrastination with out spending some dough. Two that come highly suggested are: the '94 Scotchman's Hill from Australia and the '94 Saintsbury from California. Both go for about $15. For a more detailed description of the wine, bug David Bellows, whose favorite method of wasting time is to talk wine...

Roast Leg of Lamb

4 lb. Lamb
1 large head of garlic

Remove ends and peel 8 - 10 garlic cloves. Wash and dry leg, insert whole garlic cloves under skin, pepper leg to taste.
Cook in preheated oven about 30 min per lb., or until juices run clear when pricked with a fork.

con't next column

Green Beans with Lemon and Shallots

1-1/2 or 2 lb. green beans
2 shallots - diced
2 Tablespoon lemon juice
2-3 Tablespoon butter

Snap and wash beans.
Bring the biggest pot you own (which you have filled with H_2O) to a RAPID boil. Add beans and cover. Cook 3-5 min. Drain beans and immurse in ice water to stop the cooking. Set aside (these blanched beans can be made hours in advance). Just before serving, melt butter in skillet, add shallots saute 90", add beans and heat through 2 min, finally add lemon juice and heat another 2 min.

Wild Rice

read the label!

Pear Gallette

Crust:

1/3 C cornmeal
1C flour
1/2 tsp. NaCl
1 tsp. sucrose

Mix above, add 7 Tbsp. butter, and sour cream (a few tsp.) and H_2O as needed for pliable consistency. Roll to desired size.
Slice 2 pears, place in center of rolled crust, leaving enough at the edge to fold over the fruit. Top fruit with a dusting of sucrose, and fold edge of pastry over fruit. Bake in 400°F oven 35 min.

Tony Street has worked as a security officer with BSI for over 4 years. He can be found greeting his fellow brothers and sisters at the Welch Library/PCTB Entrance security desk.

Showdown

by Anonymous

Only 40 minutes 'til showdown at the Ph.D. corral.

Empty dark room ‘cept me and my slides. The announcer steps up to the mike in the center of the darkened library. Crowd hushes as the spotlight glares off his shiny bald spot. He shouts, “You asked for it! You got it! THE BAD BOY OF SCIENCE!” Crowd goes crazy. Blaring electric guitars scream as the fireworks explode off the walls. I jump through a cloud of smoke into the center of the room - two lit Roman candles blasting balls of fire into the audience. Tiny professors scramble under their desks like insignificant ants beneath my boots.

Proposal rocks. I sport my 70’s Elvis jumpsuit with a laser pointer in one hand and ice cold Bud in the other. I blind everyone with my sequin-studded suit and flare for the big finish.

It ends, and now comes crunch time - the old Q and A. First question from the four-eyed geek in the second row. He whimpers out some feeble question and I throw down my Bud in disgust. Stomping across the room I get right in his face and demand, “You wanna step outside and repeat that question.” He’s shocked. Seconds pass before he begins to stammer incoherently. I poke him stiffly in the chest and bark, “I thought so.” Marching to the front, I toss my arms back and defiantly challenge, “anyone else got somethin’ to say.” Silence. I hear the wall clock ticking. One, two, three, four. I grab my overheads and toss them into the audience announcing, “I’m outta here.” Profs scramble madly for the sacred text of the talk - punching and kicking desperately. Stepping outside the science groupies are all juiced for the after-proposal party. They carry my down the hall cheering, “We love scientists, we love scientists, we love . . .”

20 minutes 'til showdown and I’m pumped.

Graduate Student Travel Awards

The GSA has budgeted a limited amount of travel award money to supplement student attendance at pertinent scientific meetings or for field work.

Guidelines for GSA travel awards:

1. The value of the award shall be approximately $200.00.
2. The student must be making a significant presentation (talk or poster) or be conducting relevant field work.
3. All other potential sources of funding should have been exhausted.
4. The application must include a signed letter from the student’s mentor justifying the student’s attendance at the meeting as well as certifying a valid financial need.
5. Applications for awards should be submitted at least one month in advance of the meeting date.

Application forms can be obtained at the Office of Graduate Student Affairs (Hunterian G-1, 4-3385), or may be requested by e-mail from ameeker@welchlink.welch.jhu.edu (Alan Meeker, GSA Treasurer, 4-4974).

Important Parking Announcements

The JHMI Parking Office has announced that effective December 2, 1996 all Hopkins students and employees will be required to use their JHMI ID Badge to access and exit all JHMI East Baltimore Campus parking facilities during Free-Base Access Time Periods.

Free - Base Access Time Periods are:
Monday thru Friday from 4:00 p.m. to 8:30 a.m.
All Day Saturday, Sunday, and designated Holidays.

To “access” and “exit” a parking facility during Base Access hours, students and employees must swipe their ID Badge through the card readers.

Effective February 3, 1997 students and employees who pull tickets and have a valid and working JHMI ID Badge will be charged for the hours parked.

Science and Politics, con't from p.2

to scrutinize the party platforms from the last Presidential election (see the internet site). Both the Republican and Democratic platforms mention science and technology issues, and of course, they support technological development, medical research, and science education (how could they not). Local Maryland legislators are generally firm supporters of research funding, as having NIH and Johns Hopkins in their backyard mean jobs and income to their constituents. Also, there have been several instances where members of Congress who have been touched personally by some aspect of medical research have become strong supporters of medical research funding.

As a scientist, there are many ways you can help assure continued scientific funding in the future. First, you can keep abreast of the current funding situation. Also, as a scientist, you must constantly inform the public about the importance of your work and the impact it may have on humanity. Currently, NIH has benefited from positive public opinion of its importance, as medically-related research touches the lives of many. Some budget decisions are based on public opinion, as the government officials who are forming the budget must answer to the public opinion that elected them. And, of course, you can express your concern over dwindling R&D funding to your own congressional representatives, and then vote with your paycheck in mind.

For references and interesting internet links, see the companion internet site (*http://www.bme.jhu.edu/~triemer/issues.html*).

CV, con't from p.1

publications and references. Other items which may be relevant include licenses and/or certifications, patents, military experience, and grants and research projects. If you have an extensive publications list, then it may be more appropriate to list only the most recent and/or relevant publications and have interested parties request a complete list later. A date of birth and marital status are no longer standard inclusions.

These days, many companies and organizations also maintain electronic databases of resumes and CVs. This requires that you have a CV which is in the correct format for electronic scanning. For a document to be scan ready, it should be on plain white bond paper and contain no staples. Fancy typesetting such as italics, bold type, underlining and bullets are also not recommended because they don't scan well.

Good luck in preparing your "course of life"!

1996, con't from p.1

was completed after $30 million and 7 years, which was ahead of schedule. Now, the European Union scientists that initiated the study want to explore the function of all the genes they sequenced. Their goal is to finish this task by 2000.

And in **May**, the magnitude of the discoveries made by the Galileo probe became astoundingly clear as data collected over the past two years was reported. For those of us not familiar with astrophysics, many of the spectacular pictures became available-over the web.

In **June**, the awesome power of bacteria reared its head again, as scientists discovered that phage could carry the cholera toxin gene. In addition to the toxin gene, the phage also carried a variety of other genes that increase virulence. Whether this accounts for the highly contagious and virulent nature of cholera remains to be seen, but it reminds us that these small bugs can still pack quite a punch.

July was the month of the Olympic Games, the divorce of Charles and Di, and the tragedy of TWA Flight 800. But on the brighter side, spinal cord regeneration in adults became a possibility. The results give hope that a treatment for spinal cord transections might be forthcoming in the distant future.

As **August** came around, all those new, bright-eyed bushy tailed 1st year graduate students were met with the big news was that ancient life on Mars was a remote, once-in-a-blue-moon, itsy-bitsy possibility, as indicated by remnants of what could almost be called bacteria dung. Needless to say, the press had a slightly different opinion, leading people to say "That won't happen till they find life on Mar... Oh well."

September saw Seymore R. Cray, founder of Cray Research, Inc., pass away after a car accident. Cray was one of the early pioneers of transistor-based computing and developed the first generation of supercomputers in 1976. Cray was also the inventor of RISC (Reduced Instruction Set Computing) technology, found in many high-end desktop computers today. In contrast, Baltimore locals were more interested in the "Roberto Alomar Incident."

October saw the birth of Madonna's baby. The popular dictum that parenthood changes the parents was evident with Madonna's role as the lead actress in Evita, which opened January 1st. Meanwhile, the Human Genome Project released the first rough map of the entire human genome, with approximate locations for over 16,000 genes.

In **November**, yet another scientific breakthrough occurred when Michael Jackson announced that he was having a baby.

And finally, 1996 ended in **December** as Carl Sagan passed on to join the "billions and billions" of stars in the sky. His program The Cosmos was perhaps one of the best-known television series to run on the PBS network, giving mere earthlings an appreciation for the majesty of the universe. Finally, Dr. David Ho, a HIV researcher at the Aaron Diamond AIDS Research Center in New York was named Time Magazine's Man of the Year.

And now it's January of 1997. What can we look forward to? Faster computers, more discoveries, and some setbacks, for sure. A global economy, international scientific cooperation. Grappling with technology, junk email, the web, and privacy. And also pizza over the internet. Although not a new idea, a new nationwide system called Cyberslice (http://www.cyberslice.com) using Next technology is offering pizza over the World Wide Web. This means you can browse the menu of your favorite Pizzeria and even order your favorite pie at 3 am. To the future...

Volunteer News

Keep your eyes open for future events! We plan to do Habitat for Humanity and the Maryland Science Center again.
Also, look out for the 1997 organizational meeting coming up in the next month.
Questions or suggestions, please send email to amegloff@welchlink

BCMB MOVIE ON VIDEO

The 2nd year BCMB movie is now on video (with narration). *BCMB- The Dark Side* can be purchased by contacting Jason Ravenel at jdr@welchlink.welch.jhu.edu.
Price is based on demand (so order soon)
and should be about $15. Please submit orders by February 1.

The Alicia Showalter Reynolds Memorial Lecture

"The Mechanism and Funcation of Genomic Imprinting in Mammals"

Shirley Tilghman, Ph.D.

Howard A. Prior Professor of Life Sciences,
Depart. of Molecular Biology, Princeton University, and
Investigator, Howard Hughes Medical Institute

Monday, January 27, 1997
3PM
WBSB East Lecture Hall

Reception to Follow