U of A chemists unsung heroes in race to map human genome

Private company cracks genetic code with university-based technology

By Geoff McMaster

Drs. Norm Dovichi and Jianzhong Zhang have managed to avoid the international spotlight on their research for the most part. But truth be told, what will probably go down in history as the major scientific breakthrough of our age would not be possible without their innovation, at least not this early.

Last week an American company called Celera Genomics announced it had cracked the genetic code of a human volunteer and will need only three to six weeks to assemble the pieces into a complete blueprint. If successful, Celera will have beaten the publicly funded Human Genome Project in the race to decipher the human genetic code, consisting of roughly three billion chemical letters.

Missing from most of the widely circulated press accounts, however, is an explanation of the technology enabling Celera to leap ahead so quickly—a high-speed “model 3700” DNA sequencer capable of analyzing DNA 10 times faster than previous instruments. Running seven days a week, 24 hours a day, the sequence can now accomplish in less than three hours what used to take days, says Dovichi, and has accelerated by years the mapping of the human genome.

“[Celera] did something extraordinarily clever putting together a company with our instruments and with their own technology in sample preparation and computer data processing—it’s very impressive,” says Dovichi.

“With a relatively modest investment, they beat out the billion-dollar-a-year investment by the United States and British governments. I think that’s very cool.”

Although the sequencer was engineered and commercialized in 1998 by a company called P.E. Biosystems, and the first machines were shipped out early last year, the prototype was made nine years ago by Dovichi and Zhang, then a doctoral student. Dovichi knew their discovery was huge, but its development didn’t go as planned and has ended up costing Dovichi, Zhang and the U of A millions of dollars and immeasurable frustration. (See Dovichi’s, page 2.)

“We realized this had the potential to be extremely valuable. Unfortunately the university was unwilling to patent things at that stage and as a result wouldn’t patent [the sequencer].”

The two analytical chemists were also turned down for funding to develop their sequencer prototype by both provincial and federal governments. While disappointed in what they call a “Canadian inability to think big,” Dovichi and Zhang say they harbour no resentment.

“You can’t do anything about it, so you have to go on and do something else,” says Zhang.

“There are people in Canada who have similar stories who are extremely bitter,” adds Dovichi, “and I see how that has poisoned their careers. I’m not going to let that happen.”

Dovichi is therefore quietly pursuing his next research project on cancer prognosis through protein analysis. Ironically he has once again been turned down by the Canadian government for funding and has once again had to look south of the border. But he says he’s learned his lesson: “This time we protected ourselves on the intellectual side.”
While he’s excited about the role his DNA sequencer has played in mapping the human genetic code, Dr. Peter Robertson, director of the Industrial Liaison Office (ILO), but all it says Dr. Peter Robertson, director of the University of Alberta, knowing they can benefit from relatively recent ILO is not to make “huge sums of money” for the university. How-ever it does entice researchers to work at the U of A, knowing they can benefit from the fruits of their inventions. “In our best year two years ago—and we were the number one university that year—we made $4.3 million... It’s small peanuts as far as the university’s overall budget is concerned, but it helps attract and retain leading researchers and more research dollars to the university.”

U of A 10th in world computing contest

By Lucianna Ciccioppo

University of Alberta computing science students placed a respectable 10th ahead of the University of Toronto (15th) and Harvard University (22nd)—in the world finals of the ACM International Collegiate Programming Contest. The No. 1 team was St. Petersburg State University from Russia, with fellow Canadians from the University of Waterloo placing second. This Top 10 position for the U of A is up one over last year’s standing. It’s not the first time U of A students have landed in the top 10: in 1998 the team placed eighth and was third in 1994.

Sixty student teams were selected among 2,400 from around the world to participate in the finals in Orlando, Fla., recently. Winners are determined by the number of correct problems solved in the allotted time, with the least amount of penalty points. Problems range from basic geometrical programming to solving real-life problems.

This year’s team included: Matthew McNaughton, Richard Krueger and Daniel Robbins, with Jonathan Backer and Paul Shelley on reserve. Dr. Scott Rudnicki was coach once again. View these Web sites for more information on the yearly brain-twitching contest:

• http://acm.baylor.edu/acmicpc/
• http://acm.baylor.ca/~sp/ProgContest/

Read about the ACM contest online in Canadian Business.

www.canadianbusiness.com/magazine_items/2000/april17_00_orlando.shtml

U of A 10th in world computing contest

By Lucianna Ciccioppo

Matthew Breen takes pride in his aca-demic accomplishments. Last term the first-year arts student received a string of sevens. He hopes to be a teacher some day.

There was a time, however, when a university education would have seemed almost out of reach for Breen. Legally blind, he isn’t able to read novels unless software programs read it to me. It isn’t much, much harder without it.” In his first-year arts student Matthew Breen with the Reading Edge: VisuNet:Canada will help expand the world of print for visually impaired students and staff. He hopes to be a teacher some day. • http://acm.baylor.edu/acmicpc/• http://acm.baylor.ca/~sp/ProgContest/

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Blood sport

Is hockey becoming too violent?

By Phoebe Dey

No matter what National Hockey League enforcer Marty McSorley does from now on, he will never be the same. He was always remembered as the guy who knocked Vancouver Canucks tough-guy Donald Brashear unconscious after swinging his stick at Brashear’s head.

Brashear lay twitching on the ice and spent several weeks recovering from a severe concussion. The NHL suspended McSorley for the rest of the season and he has since been charged with assault with a weapon. That event, along with other high-sticking incidents, has caused many observers of the game to question whether hockey is becoming more violent than ever and whether the league is doing enough to police the sport.

University of Alberta head coach Rob Daum thinks players today don’t have the same respect for the game and each other as they did years ago.

“Hockey there were some unwritten rules and those included never hitting someone from behind or using the stick on someone,” said Daum. “Now I don’t think there is as much honour in athletes as in the past. Everything is changing and I hate to be a person who says ‘When we played, it wasn’t like this,’ but it wasn’t.”

When someone goes over the line, particularly in the NHL, there isn’t enough retribution on or off the ice to stop the culprit from striking again, said Daum.

“Before if someone went over the line, he’d have to fight and now in general there doesn’t seem to be that accountability,” he said. “I don’t believe in fighting as a tactic but it’s a much more honourable way to solve something than hitting somebody over the head. In the NHL, fighting has dropped and the dirty incidents have increased. I don’t think that’s a coincidence.”

So when did fighting become honourable? When ratings and dollar signs started skating on the same team, so to speak.

Dr. David Mills, a U of A history professor, said these violent occurrences go right back to the beginning of the NHL, but the difference today is millions of people watch the games and violent scenes are replayed repeatedly. The difficulty also lies with the NHL’s desire to reach a bigger audience and bring in more dollars, said Mills.

“The league is trying to expose its audience and wants to encourage people to watch, which is why they encourage fights,” said Mills. “The NHL is a big business and the only way this kind of stuff can be dealt with is by much bigger fines.”

Other leagues crack down immediately on athletes who step out of line, said Mills. If two football players fight, they are immediately ejected from the football game.

“And the biggest difference is, they don’t have sticks in their hands. Today’s hockey players also have such increased skills and now the game is played above the ice and not along the ice because shots are harder and higher.”

Mills suggested one solution might be to set the initial fine at $100,000 so it hits players where it hurts, said Mills. But, he adds, player relations have also changed so much that the union might not agree to any stiffer penalties.

“If the frequency of these violent attacks is to decrease, changes must come from the players themselves, said Golden Bear forward and CIAU Player of the Year, Russ Hewson.

“Longer suspensions will tend to curb the violence but the [NHL] players’ association has to look upon themselves or these things will continue,” he said.

Although there is no justification for what McSorley did, Hewson thinks the whole event is unfortunate.

“Marty has skated with us and is a really nice guy which made this all the harder to see, because you know in his heart he’s not the type to hurt people,” said Hewson. “But there was absolutely no reason for him to do what he did. You can slash at pants, a stick or even hands to knock a guy off a puck, but to slash someone the way he did and in the spot he did serves absolutely no purpose.”

In university hockey, a few players play dirty but overall there is a level of respect, perhaps because amateur athletes aren’t propelled by the almighty dollar, said Hewson.

“The respect is there because we are students and we play because we love the game. There’s no money on the line for us, but at the NHL level, money guides the game. Guys are scared. If they don’t finish a check or show they’re ‘mean’ they might not be in the line-up or collect a psychochrome.”

That job as the team’s enforcer is likely what pushed McSorley to do what he did, said Dr. John Dunn, a sports psychologist with the Bears hockey team.

“In no way do I condone his actions, but you have to recognize the role he plays within the team,” he said.

Precipitating factors contributed to McSorley chasing down Brashear and bashing him over the head, added Dunn. Earlier in the game when the duo fought, McSorley lost and Brashear taunted him after the bout.

“His pride and ego were hurt and in many regards he wanted to prove a point that he could earn his psychochrome,” said Dunn. “His frustration kept building up during the game and I’m sure he was looking for other opportunities to fight and when he didn’t get one and when there were only 30 seconds left in the game, he had to make his own opportunity.”

It is more likely McSorley was trying to force Brashear to turn around and fight rather than knock him out, but he lost control for that split second and using the stick was the only way to get a reaction, said Dunn.

Whatever was going on in his head, McSorley will have a chance to defend his assault with a weapon charge when he appears for trial in Vancouver on Oct. 2. Although millions of people watched the incident on television, McSorley does have a defence, said Lewis Klar, dean of the Faculty of Law.

By engaging in a physical contact sport, every player consents to what might happen on the ice, said Klar.

“If any of that physical contact happened on the street, it would be wrong, both civilly and criminally,” he added, saying intent will also likely play a key role in the trial. “There comes a certain point where contact exceeds what is permitted. And when does it become so excessive that players didn’t consent? The question is whether what McSorley did is outside the bounds, so we’ll have to wait and see what happens.”

Recent violent incidents on the ice have caused observers of the game to question how to stop the attacks.
Canadian universities need $3.6B in repairs: report

A report indicating campuses across Canada face at least $3.6 billion in deferred repairs and maintenance. The report famously raises the issue of infrastructure reinvestment to a national level, says U of A’s vice-president (finance and administration).

“It’s an important issue for all institutions,” says Glenn Harris. “There’s a tendency to see the problem localized to each university.”

The report, produced by the Canadian Association of University Business Officers (CAUBO) and the Association of Universities and Colleges of Canada (AUCC), surveyed 51 universities. Out of the $3.6-billion in deferred repairs, the report concludes that more money is urgently needed to reduce further deterioration and costs.

The report cites aging buildings, decreasing funding levels, growing demands for new space and a lack of profile on facility management as some of the factors contributing to the urgency.

The University of Alberta currently needs about $60 million in repairs and maintenance. The problem, says Harris, is finding the right balance between funding the academic side and the infrastructure side of universities, during a time of fewer resources.

“We have to be creative and we have to be bold. But we also have an enormous amount of competing resources,” says Harris.

Harris points to the dentistry pharmacy building as a good example of the type of challenge facing facility upgrades on campus. Built in 1924, the building is about 250,000 square feet but only houses 5,100 rooms. Because students were predominately male back then, there is a shortage of women’s washrooms, as there are in other old buildings, as well as shortage of women’s locker room space and accessible entrances. This is in addition to the other problems attributed to old buildings, such as plumbing and roofing.

While the building is safe, it needs about $1 million to make it accessible. “But if we were to revamp the complete functionality of the building, it would require $30-40 million, if not more,” says Harris.

Harris says Alberta universities are in better shape than those in other provinces.

“The Alberta government has stepped up to the plate in this issue with $13 million in infrastructure renewal last year, plus some extra money was given out this year. It helps us enormously, but it’s not enough. The renewal challenges are huge,” says Harris.

The report calls for “an infusion of short-term catch-up funds to bring the situation into equilibrium” and suggests federal and provincial governments include universities as eligible funding partners in the recently announced national infrastructure program. In addition, the report urged for long-term increases in base-operational funding to confront the deferred maintenance issue.
Finances not the only issue in the farm crisis

A solid business plan and adapting to change are key, says rural economist

By Dr. Mel Leroth, Department of Rural Economy

Farm problems are hard to escape these days, even for the urbanized. As one issue goes away, another replaces it. About a year ago, pork prices bottomed and the issue was survival of the hog industry. As hog prices have climbed, the focus has shifted to grain prices. Protesting grain farmers have staged sit-ins in the Saskatchewan legislature. Other farmers threatened hunger strikes, one farmer drove his combine harvester to Parliament Hill, and yet another has asked the United Nations to cen-
sure the Canadian government for its treatment of farmers. Farm problems show up elsewhere, too. The New York Times recently gave front-page coverage to the income woes of some US ranchers.

The farm financial crisis may be front and centre, but it isn’t the only farm issue. Food production has grown using the tools of modern agriculture, new seeds, fertilizers, and centre, but it isn’t the only farm issue. Food production has grown using the tools of modern agriculture, new seeds, fertilizers, and pesticides. The biotechnical revolu-
tion in agriculture now underway is also expanding the ability to produce farm products. Farmers find the changes rapid, sometimes too rapid to deal with, and urbanites worry the safety and quality of the food supply is being compromised.

DID ‘OLD MAC’ HAVE IT THIS TOUGH?

Let’s begin with the consumer issue. The word to mind here is mattress. Mattresses are increasingly able to choose an ‘organic’ product. But for farmers, the question becomes: are we ripe for re-appearance? Is the crisis on the land? Would farmers be better off if soci-
ety could stop the process of change? The short answer is farms need to adjust to change but the changes in agriculture are part of a long-standing pattern. Indeed, there are exciting things happening in the food business, both on and off the farm.

First, how may the farm crisis be? Agriculture prices are cyclical, and grain farmers are now being reminded of the bot-
tom of a price cycle is less fun than the top. But there are risk-management tools avail-
able, and many farmers use them. Price fluctuations, however, are not driving peo-
pie from the farm. The Farm Credit Corpo-
ration, a major agricultural lender, says farmland values and farm incomes increased in every semi-annual period since mid-1993. While we don’t yet have data beyond mid-
1999, the most recent values show in-
creases in all provinces except British Co-
lumbia and Saskatchewan. The decline in Saskatchewan was small (0.5 per cent), and followed 11 successive semi-annual in-
creases. Many farmers also have diverse skills and abilities applicable to non-farm-
ing jobs. About half of a typical farmer’s income is from off-farm sources.

At a national level, the agriculture scorecard is impressive. Farmers make up less than four per cent of the labour force, yet produce food for Canadians and for a growing export sector. Grain exports made it possible to open the west, but the live-
stock sector has also developed export markets for cattle, hogs and meat. The agrifood sector, essentially everything about farm products that isn’t on the farm, now contributes as much to Canada’s out-
put as does the part of agriculture taking place on the farm. In 1995, new rules were set for international agricultural trade. These rules hold promise of better world-
market access for Canadian farmers, who are by and large low-cost suppliers of farm and food products.

FEWER FARMERS, FEWER FARMS

Efficiency gains on the farm have been impressive. Most of the children of farm-
 ers have shifted to urban jobs, yet farm output has increased. Those increases have come from larger, fewer, and more specialized farms. Decades ago, one econo-
mist with whom I spoke during a farm fore-
cast there would be one very large farm in Canada before the end of the 21st cen-
tury. In fact, there were 277,000 farms in Canada in 1996, but that was down 42 per cent in just 35 years. Currently, the aver-
age farm in Canada covers a square mile, and in Saskatchewan an average farm is almost twice that size. Not all of these changes have come easily or painlessly. Farms have had to grow and adapt, and the farm that has not changed for even a decade or so is not likely providing a good income to its owners.

Is the family farm disappearing? Most farms are family operations, although many are organized as corporations for tax, management or succession reasons. Larger farms, corporate or not, permit farmers to employ their skills as managers or marketers, and to do so on a scale that permits capturing the benefits of the spe-
cialization. Few university graduates return to or try to establish a farm op-
eration that provides little prospect of a competitive income. Yet, skilled and edu-
cated people are ar-
gruably more impor-
tant to the future of farming than to sec-
tors of the economy.

Expanding farms are capital-intensive and skill-intensive. Skills and farm businesses are re-engineer agriculture in what could be the most fundamental shift since the end of peasant farming.

RESHAPING THE FUTURE

With a future so challenging, why is there so much media focus on problems in agriculture? For starters, food security and farm incomes are public issues, and many worry low farm incomes will jolt-
ize the food supply. Farm cash re-
cuits are up, however, rising 2.2 per cent in 1999 despite lower grain prices. Nor are farm incomes lower. The most recent income data from Statistics Canada are for 1997, but they show farm family in-
comes up four per cent, with increases from both off-farm and farm sources. Agriculture Canada forecasts beyond 1997 are for stable farm-family incomes, with off-farm income growing slightly.

Another reason may be what has been called ‘subsidy envy.’ The 1995 world trade rules made it necessary for many countries to change the way they channel public money to farmers. Much of that support now comes in visible ways, usu-
ally directly from government. Canadian farmers see the largesse heaped upon Eu-ópean and some US farmers, and lobby for similar support, even though these subsidies are costly for taxpayers and for ef-
fective exporters and damaging to the prospect of further trade liberalization. But lobby efforts for agricultural subsidies may have an even greater cost: creating an image that turns off those who would in-
vest in the new agriculture, and turns away the talented people who would remold agriculture.

Why give away movie ending?

I enjoyed reading John Charles’s re-
sponse in the last issue to Anna Fodchuk’s Oscar article—until the end. Knowing of Mr. Charles’s journalism experience and film background, I was a little surprised (read: stunned) that he gave away the twist ending to a movie that can owe much of its phenomenal success to the simple fact that no one gave it away in reviews or even by word of mouth.

What surprised me even more was that Folio decided to print it. Surely there must have been a way to compromise without impinging on the one undeniable accomplish-
ment of both American Beauty and The
Sixth Sense—great marketing.

Respectfully,
Nicola Simpson
Administrative Director, Cultural
Industries Research Centre
Department of Marketing, Business
Economics and Law

Kudos to guest writer

I am writing in response to Patrick Nugent’s guest column (“Wrong use of notwithstanding clause”) in the March 31 edition of Folio. In his fine article, Dr. Nugent raises his grave concern (which I share) about the inclusion of automatically

invoking the notwithstanding clause as well as raising the question why Bill 202, the Marriage Amendment Act, was neces-
sary and implies that it may be meaning-
less. It is clear to me that the bill is a mean-
spirited attempt to target people like my-
self—a gay and lesbian in Alberta. In this context the ‘meaning’ of the bill is quite clear—and spiteful.

Michael Phair
Councillor, Ward 4
City of Edmonton
Call to adventure leads psych grad to Ukraine

By Geoff McMaster

Ike many who have lived in one place for most of their lives, Jeffrey Stepanisky was torn between the land of his family and the land of his dreams. He knew his Ukrainian background was a plus, but he also knew he had to make a decision.

By chance he crossed an ad on a psychology website for an internship program in Ukraine. The Canadian Bureau for International Education was looking for recent graduates to travel to that country, work in public administration, policy development, public relations and education. The program seemed to have little to do with Stepanisky’s area of expertise, but his Ukrainian background was clearly a plus. His grandparents on both sides of the family are from the East European country, and he speaks a smattering of Ukrainian. So he figured he’d give it a shot.

I had very broad interests when I was doing my master’s degree and I thought I could transfer some of those skills,” says Stepanisky. “I knew I really thought I could do it as well.”

No doubt it probably helped that the program, funded by the Canadian Interna-
tional Development Agency, was new. The intention was to provide Canadian gra-
duates with the experience they need these days to land attractive jobs, while helping out with development in Ukraine and strengthening ties between the two coun-
tries.

Because the administrators of the pro-
gram themselves weren’t sure what to ex-
pect, they cast a broad net. They liked people who had worked in Ukraine, knew the language and were willing to work in teaching modules on Canadian health care and social welfare.
AWA’S WOMAN OF THE YEAR

Adding yet another accolade to a long list, Dr. Juliet McMaster, Department of English, has been selected the Woman of the Year by the university’s Academic Women’s Association.

A University Professor (one of the highest titles the university bestows on faculty) and the first University Cup winner, McMaster is an internationally known scholar on the works of Jane Austen and 18th and 19th century writing. The historical and fictional position of women is a steady focus in her scholarship.

She has received numerous awards for her dedication to teaching and research, including the Killam Senior Research Fellowship, the Guggenheim Fellowship and the McCalla Professorship. She is the U of A’s only Molson Prize winner, an award made jointly by the Canada Council and the Social Sciences and Humanities Research Council to one scholar per year.

She is a close mentor to her many graduate students, some 56 of whom have been women, and remains supportive of the careers of those who have graduated.

McMaster was the U of A’s first PhD graduate in English. The AWA’s Woman of the Year award recognizes contributions to the betterment of women in the university community.

CANADIAN WOMEN’S MENTOR AWARD

Dr. Mary Beth Bowen-Yacyshyn was honoured in Halifax recently as one of six winners in the second annual Canadian Women’s Mentor Awards, standing out from among 800 other nominees.

A research associate on campus, Bowen-Yacyshyn won in the science and technology category. She specializes in inflammatory bowel diseases and works with her husband Dr. Bruce Yacyshyn, an associate professor of gastroenterology, developing and testing drugs for treating Crohn’s disease and ulcerative colitis.

Bowen-Yacyshyn has gained a national reputation for mentoring young women and providing a role model for them. She was nominated by Dalhousie medical student Robyn Harrison of St. Albert, who spent two summers working with Bowen-Yacyshyn in her laboratory.

DISTINGUISHED AGROLOGISTS NAMED

Dr. Anne Naeth and two professors emeriti, Dr. Len Bauer and Dr. Alf Petersen, were given Distinguished Agrologist Awards.

These Faculty of Agriculture, Forestry and Home Economics professors were recognized by the Alberta Institute of Agrologists (AlA) for their contributions to the agriculture industry throughout their careers.

Naeth’s research focuses on connecting and addressing environmental, agricultural and industrial issues. She is known for her innovative teaching practices, and encourages students to acquire a broad range of theoretical and applied knowledge.

Bauer was at the forefront in farm management for decades and was instrumental in linking sound accounting practices with useful farm management information in the 1970s.

Petersen spent his professional life improving agricultural and rural life and contributed to the farm management and agricultural economics profession in Canada.

ENGINEERING INSTITUTE NAMES FELLOW

Dr. Witold Krzymien, Department of Electrical and Computing Engineering, was elected a Fellow of the Engineering Institute of Canada (EIC). A TRLabs scientist, Krzymien’s current research interests are in signal processing, multiple access and radio resource management problems in digital cellular wireless communication systems.

EIC Fellows are selected by their peers; 18 were chosen this year from a 30,000-member base of societies under the EIC umbrella.

UNITED WAY RECOGNIZES U OF A

The University of Alberta landed three awards from the United Way in recognition of its community giving: the Spirit Award for Leadership (with 183 leadership donors); the Bronze Award of Distinction for employee by division (for achieving the highest percentage of potential donors in the education sector); and a Bronze Chairman’s Award for the largest employee contribution (donations in excess of $305,000).
Submit talks and events to Brenda Briggs by 9 a.m. one week prior to publication. Fax 492-2897 or e-mail at public.affairs@ualberta.ca.

DEPARTMENT OF BIOCHEMISTRY
April 27, 1:00 pm
Dr. Steven Pecht, UBC, “Kinase analysis - Mapping protein kinase networks.” Room 2-07 HMRC. Hosted by Dr. Larry Fliegel (492-1848).

DEPARTMENT OF BIOLOGICAL SCIENCES
Molecular Biology and Genetics Research Group (part of 605 seminar series)
April 14, 11:00 am
Even Blecher, “Paralogous nature of the human genome: cause and consequence.” Room N-149 Biological Sciences Building.
April 20, 4:00 pm
Alan Underhill, “Defining functional specificity for the transcription factor PAX3.” Room G-146 Biological Sciences Building.

DEPARTMENT OF BIOENGINEERING
April 19, 10:30 am
Video conference seminar to U of Calgary: Christian Beaulieu, “Water diffusion in brain: how microscopic motions lead to an improved understanding of stroke.” Room 231 CIB.

DEPARTMENT OF CHEMICAL AND MATERIALS ENGINEERING
May 4, 2:30 pm

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
April 26 to 28, 12:00 noon
Dr. Victor Basili, prominent software engineering scientist from University of Maryland, College Park will be visiting under the auspices of an iCORE ISPR (ICT Strategy Planning and Recruitment) grant, PI Dr. Petr Musilek, and Dr. Giancarlo Succi. Seminars will be broadcasted to the University of Calgary via video link. Info: 492-7228.

DEPARTMENT OF MEDICAL GENETICS
Medical Genetics Rounds
April 19, 12:00 – 1:00 pm
Dr. Paul Flaman, St. Joseph’s College, “Genetic testing, ethical issues and religious faith.” Room 2-07 HMRC.
April 26, 12:00 – 1:00 pm
Dr. Fiona Bamforth, Lab Medicine and Pathology/Medical Genetics, “Primary hyperparathyroidism.” Room 2-07 HMRC.

DEPARTMENT OF PHILOSOPHY
April 14, 3:30 pm
Colloquium: Joseph Almog, University of California, Los Angeles, “What Language Does It Take to Describe Our Mind?” Room 4-29 Humanities.

DEPARTMENT OF PHYSICS
April 14, 3:30 pm
Colloquium: Guenter Albrecht-Buehler, PhD, Northwestern University Medical School, Chicago, IL, “Detection of near-infrared light pulses by mammalian cells. Are cells able to ‘see’?” Room V-129.

JOHN DOSSETOR HEALTH ETHICS CENTRE
Health Ethics Seminar Series
April 14, 12:00 – 1:00 pm
Barbara van Tiperstrom, Health Law Institute, “International Human Rights Law Implications for Canadian Health Care and Research.” Room 2-07 HMRC.
May 19, 12:00 – 1:00 pm
Dr. Wendy Austin, Faculty of Nursing, “Human Rights Approach to Health Ethics: Common Sense or an Illusion.” Room 2-07 HMRC.

T he Office of the Vice-President (Academic) and Provost is pleased to invite nominations for the University Cup 2000 competition. The University Cup is among the highest honours that the University of Alberta confers on its faculty members. It is awarded in recognition of faculty members who have clearly excelled in both teaching and research. These two activities are the primary responsibilities of faculty as set out in the Staff Agreement, and together they represent the heart of the University ideal, which is the creation and transmission of knowledge.

Any full-time member of the academic teaching staff with 20 years of service as a faculty member in a university community and at least 10 years of service as a faculty member at the University of Alberta is eligible to receive the award.

Formal nominations, including supporting documents, may be submitted by current or past students, faculty members, Deans or Chairs to Doug Owram, Vice President (Academic) and Provost, Third Floor (P3), University Hall, by June 1, 2000.

Nominators play a crucial role in ensuring that the candidates considered are the most accomplished members of the University and that the letters of support give appropriate testimony to nominees’ achievements.

Detailed criteria for nominations may be obtained from the Office of Vice President (Academic) and Provost – 492-3290.

T he Office of the Vice-President (Academic) and Provost is pleased to invite nominations for the University Teaching Unit Award. The intent of this award is to celebrate excellence in teaching when a group of individuals consistently work together to promote outstanding teaching and learning.

This award is to be given to a “teaching unit.” The teaching unit must have been in existence for at least three years. The teaching unit may work at the graduate or undergraduate level and may include some or all members of a faculty, school, department or division, or it may be an interdisciplinary team. Students taught by such a teaching unit must be able to identify that they were taught by a group of instructors and not a series of individuals. The teachers in the teaching unit must be able to define how they are a unit, describe their roles and how they function.

Formal nominations, including supporting documents, may be submitted by Deans, Chairs, and any student member or student to Dr. Doug Ovram, Vice President (Academic) and Provost, Third Floor (P3), University Hall, by June 1, 2000.

Nominations are limited to 15 pages. Detailed criteria for nominations may be obtained from the Office of Vice President (Academic) and Provost – 492-3290.
WHERE IN THE WORLD IS FOLIO?

Fill out the form below and forward to 405 Administration Building by April 25 for your chance to win. And don’t hesitate to snap a photo of yourself reading Folio wherever you are—it could win you a Funky-but-functional Workplace Wellness golf shirt.

GUESS WHERE EDITOR LUCIANNA CICCOCIPPO TOOK HER FOLIO EDITION recently and you could win a copy of Threshold: An Anthology of Contemporary Writing from Alberta, courtesy of University of Alberta Press— that’s if you can guess the city and country correctly. Get the country right and you won a funky-but-functional Workplace Wellness golf shirt.

My guess for the city and/or country is:

Name: 
Department/Affiliation: 
Phone: 

University of Alberta 2 FOLIO April 14, 2000
We offer a comprehensive salary and benefits package in an environment that recognizes and rewards excellence. The salary range for this position is $37,128 to $55,892 per annum. Candidates are asked to submit a resume no later than April 28, 2000 to Cynthia Caskey, Employment Unit, Employee Relations & Employment Services, 240 Assiniboia Hall, University of Alberta, Edmonton, T6G 2E7

CONTENT COORDINATOR, CANADIAN HEALTH NETWORK (CHN) “ACTIVE LIVING PROJECT”
ALBERTA CENTRE FOR WELL-BEING

The CHN aims to help Canadians make more informed and better decisions about their health through easy Internet access to reliable, relevant, credible health information. CHN is a nationally funded bilingual network of existing Internet-based health information. Reporting to the director of the Alberta Centre for Well-Being, the project coordinator will have the overall responsibility for the Canadian Health Network (CHN) Active Living Project. The position will be located at the University of Alberta in Edmonton.

Responsibilities include: developing and supporting a diverse network of associates in the active living area, supporting associates in reviewing and recommending appropriate active living content, and facilitating effective communication and partnership development with associates. Along with networking responsibilities, the project coordinator will oversee all evaluations of the Active Living Project Web site, and manage the project budget, prepare project reports, and make the work of both the content coordinator and information specialist understandable. The project coordinator will possess a master’s degree in health education, physical education, or a related discipline; physical activity qualifications or experience. Application deadline is May 1, 2000.

Phone: 780-492-3546; Fax: 780-492-9234.
Biological Sciences, University of Alberta, T6G 2E9.

PROJECT COORDINATOR, CANADIAN HEALTH NETWORK (CHN) “ACTIVE LIVING PROJECT”
ALBERTA CENTRE FOR WELL-BEING

The CHN invites applications for the position of Project Coordinator for the Active Living Project. The position will be located at the University of Alberta in Edmonton.

Responsibilities include: developing and supporting a diverse network of associates in the active living area, supporting associates in reviewing and recommending appropriate active living content, and facilitating effective communication and partnership development with associates. Along with networking responsibilities, the project coordinator will oversee all evaluations of the Active Living Project Web site, and manage the project budget, prepare project reports, and make the work of both the content coordinator and information specialist understandable. The project coordinator will possess a master’s degree in health education, physical education, or a related discipline; physical activity qualifications or experience. Application deadline is May 1, 2000.

Phone: 780-492-3546; Fax: 780-492-9234.
Biological Sciences, University of Alberta, T6G 2E9.

The Department of Anthropology at the University of Alberta invites applications for the position of Assistant Chair. Reporting to the department chair and to the chair of the Women’s Studies Program, the assistant chair (admin) is accountable for the provision of efficient and effective administrative support for teaching and research programs. Responsibilities include, but are not limited to: budget planning and analysis; overseeing student programs, timetabling and registration; coordinating, directing, and assessing the performance of support staff providing executive assistance to the chair and associate chair; analyzing and interpreting university, faculty, department, and program policies.

This position will be of interest to highly motivated, enthusiastic and energetic individuals who possess excellent leadership, organizational, analytical, and communication skills, and who are recognized for their ability to work positively and effectively with individuals and groups, both in the department and the University community and externally.

Qualified applicants will have a university degree and several years of related experience. Proficiency in a Windows computer environment (Microsoft Excel and Access) and in university PeopleSoft (E.I.S.C, SIS and QASIS), as well as familiarity with academic, financial and human resources policies and procedures is essential. Administrative experience related to teaching and research programs that involve lab facilities, collections, travel, and field work is highly desirable.

This position has a salary range from $37,649 to $56,477 (under review), commensurate with qualifications and experience. Application deadline is May 1, 2000.

Letters of application, including a résumé and the names of three referees, should be sent in confidence to: Dr. Nancy Lavelle, Chair, Department of Anthropology, University of Alberta, 13-15 Tory Building, University of Alberta, Edmonton, AB T6G 2E4.

RESEARCH ASSOCIATE - PART-TIME
DEPARTMENT OF BIOLOGICAL SCIENCES

A highly motivated individual is sought to conduct research on cell cycle regulation and embryonic development in Drosophila. Candidates must possess a graduate degree (preferably PhD) in biology or biochemistry and have demonstrated research productivity and technical skills relevant to the areas of protein biochemistry and invertebrate development. Experience in SDS-PAGE, immunoblotting, immunoprecipitation, microinjection and invertebrate embryology is desired. Computer proficiency is also preferred (Macintosh system). Ability to work independently is essential and salary will be commensurate with qualifications and experience. Starting date is June 1, 2000 (negotiable). Applications will be accepted until April 30, 2000. Send CV, reprints of representative publications, names and contact information for three referees to: Dr. Sheila D. Campbell, CIROS, Biological Sciences, University of Alberta, T6G 2E9.

Phone: 780-492-5046, Fax: 780-492-5024.

EMPLOYMENT ADVISER
HUMAN RESOURCE SERVICES

Human Resource Services offers a unique and challenging career opportunity for an individual who is interested in becoming part of the employment team within Employee Relations and Employment Services. With a focus on partnership, the adviser will consult with departments on recruitment and selection matters, including provisions of the Collective Agreement, obligations under University of Alberta policies and procedures, compliance with human rights and FIPPA legislation, as well as best practices to ensure selection and retention of exceptional employees.

The adviser provides training to departments in recruiting practices, consults and advises current and potential employees regarding employment and career opportunities, and confers with the union as appropriate regarding employment activities. The adviser plays a role in special recruiting initiatives and collaborates with internal and external groups to develop and implement programs that support organizational goals in recruitment and employment equity.

Ideal candidates must have an appropriate degree in human resources management, and possess at least 3 years’ experience in this field. The adviser will be familiar with membership in relevant organizations and professional designation (such as CHRP). Proficiency with MS Word, Excel, email and familiarity with database systems is expected.

The records arising from this competition will be managed in accordance with provisions of the Alberta Freedom of Information and Protection of Privacy Act (FOIPP).

The University of Alberta hires on the basis of merit. We are committed to the principle of equity of employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons.
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WINDSOR, UNIVERSITY HEIGHTS – furnished cottage on 40×100 ft. lot. 3+ bedroom, 2+ bath. $2,600/month. July 1, 2000, 1 year lease. Please call 439-6240.


WINDSOR PARK – furnished house, $2,200/month. 10 month walk to U of A. Available May 1. 433-4525, 492-4170.


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BEAUTIFUL, NEW MEDITERRANEAN STYLE two-bedroom furnished suite, lower level of house, 1530 – 99 Avenue NW. Featuring large windows, all appliances, indoor heated garage. Call 444-4502.

FIVE BEDROOM HOME, two baths, four appli- ances. $1,280 plus utilities. (780) 465-9715. Email: aurora@planet.eon.net

TIMBER BROOKS – one bedroom apartment. Com- pletely furnished: five major appliances, microwave, dishes, etc. in-suite laundry, powered parking stall, balcony. Available for 12 month period from June 1, 2000. $575/month including utilities. $400 Damage Deposit. No-smokers, no pets, no references required. Call 438-3444.

FURNISHED BUNGALOW IN PARKALLAVEN available from July 1, $750/month plus utilities. Non-smoking, cat lover preferred. 437-5402.


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DAVID RICHARDS CARPENTRY – Certified journey- man. NAIT. Complete interior/exterior, residential, commercial renovations including plumbing/electric. No job too big/small. References available. 436-6363.

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The workspace looks innocuous enough. Tucked away between a greenhouse and the staff parking lot at the Devonian Botanic Garden south of Edmonton, it consists of a lab and small storage and workrooms, the largest of which is crammed with racks of brown and grey filing cabinets.

Then the host points out the darkroom and the canisters of liquid nitrogen. You now suspect the refrigerator isn’t being used to store lunches. Your suspicion this is no ordinary office is confirmed when you see what’s inside the filing cabinets: tiny packets of dried mould.

The University of Alberta Microfungus Collection and Herbarium (UAMH) is the eighth-largest collection of filamentous fungi in the world. It has 9,700 living strains of yeasts, moulds and mushrooms. Its collection focuses on fungi associated with human and animal diseases, as well as those that grow on plants or live in symbiosis with them.

Living strains, which are freeze-dried or frozen in liquid nitrogen for preservation, are the preferred source for researchers, since genetic material can easily be extracted. The collection also keeps photographs, slides and a “herbarium” of dried specimens for verification and teaching. It’s much easier to get a dried fungus across the border than a living one, says curator Lynne Sigler.

Sigler and her staff have made significant contributions to medical microbiology and diagnostic medicine. In 1989 Sigler discovered Onychocola canadensis, a new genus of fungi that causes nail infections in older patients. Subsequent to her work, scientists in other countries have been able to identify the same fungus. Sigler’s collection now has more than 30 samples of it.

UAMH has also collaborated in numerous medical diagnoses of sick and dying people. In one case, UAMH received a fungus sample from Saudi Arabia, taken from a teenage female cancer patient who had developed a brain abscess. Sigler was able to identify the fungus and show the same fungus had caused brain infections in two dogs in Oklahoma. The Saudi Arabian girl is still alive.

UAMH got its start in 1933 when Dr. E. Silver Dowding established a diagnostic service for human fungal diseases. Sigler joined UAMH as an undergraduate in 1969 under Dr. Bill Carmichael, a leader in the field.

"I fell into this collection at an early age and I’m still here. I was fortunate to find an exciting position in which I could grow and that matched my interests and abilities."

As well as her curatorial responsibilities, she teaches in the Department of Medical Microbiology and Immunology and is affiliated with the agricultural, food and nutritional sciences and biological sciences departments.

Sigler likens the UAMH to a library. Most activities revolve around classifying, cataloguing and storing the microfungi. Researchers can access the collection through its catalogue online and they can even “check out” material.

In 1999 UAMH provided nearly 600 samples of living organisms, most of which went to outside institutions. Scientists and researchers at the U of A and around the world in pharmacy, biology, medicine, chemistry, engineering, agriculture and forestry use its resources.

University of Alberta Microfungus Collection and Herbarium is home to medical breakthroughs

By Vivian Zenari