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University of British Columbia
Faculty of Science

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An Interdisciplinary Approach to Science

According to Science One Director Julyet Benbasat (above, centre), the program broadens its participants' focus.

While scientific pursuits have traditionally been divided into neat categories such as physics, chemistry, math and biology, in reality the divisions are not so clear. Science One *is a unique first-year program at UBC that is designed to take into account the interdisciplinary nature of science, where the boundaries between disciplines are becoming increasingly blurred.*

Science One is now in its third year at UBC, and its positive impact is beginning to be felt. One example is that *Science One* students represented only 4 percent of the entering class in 1993/94, but they make up a full 25 percent of the top 20 science students entering third year.

Several *Science One* students have opted for second-year course work that is interdisciplinary, even unconventional. For example, one former *Science One* student went on to study both astronomy and fine arts, while another is pursuing environmental science and law. Erin Hall, who went through *Science One* last year said, "I now realize how much each science discipline depends on the others. I can also look at the world around me and see it from so many different perspectives."

The *Science One* program is built around an academically-rigorous 21-credit course which covers the equivalent of first-year biology, chemistry, math and physics. Four faculty members, one from each discipline, are seconded to teach the class, and several are present for each class. Discussion between faculty and students is encouraged. Students are challenged to learn concepts, think critically and work constructively in teams.

Professors teaching second-year courses notice that *Science One* students tend to stand out. John Sams of the Department of Chemistry said, "Both this year and last year, the *Science One* graduates have been the first to start asking questions and get discussions going in Chemistry 205. We have had discussions go on for up to 30 minutes because one of the ex-*Science*

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Zoology Professors Win Awards

ZOOLOGY PROFESSOR PETER HOCHACHKA WAS RECENTLY awarded the Fry Medal from the Canadian Zoological Society for his outstanding research. Hochachka, a pioneer in the fields of comparative biochemistry and physiological adaptations, has furthered our understanding of evolutionary processes. His research focuses on the effect on mammals of hypoxia (lack of oxygen). In addition to the Fry Medal, Hochachka also won the NSERC Gold Medal for Science and Engineering and the inaugural Academic of the Year Award from the Confederation of University Faculty Associations (CUFA) in 1995.

Another member of the Department of Zoology, associate professor Dolph Schluter, recently won the Charles A. McDowell Award for Excellence in Research. Schluter's research mixes evolutionary theory, quantitative genetics and ecology. He was recently able to give convincing evidence that competition for food and habitat is what propels the evolution of differences between species. In evidence, he and his colleagues raised thousands of stickle-back fish in ponds at UBC to show that the process of natural selection on body form and behaviour changes when a competing species is introduced into its habitat. The McDowell award is given each year to a faculty member who has demonstrated excellence in pure or applied sciences.

Barry McBride Re-Appointed as Dean of Science

In addition to his administrative duties, McBride pursues his research in microbial pathogenesis.

BARRY MCBRIDE HAS been officially re-appointed as Dean of the Faculty of Science for another six-year term. His term has been extended to June 30, 2002.

McBride said the focus of the next few years will be the continued development of the strategic plan (see story on page 3, and the process of implementation. "We will be reviewing the curriculum with a view to a greater integration of disciplines, and to providing students with a more broadly-based education emphasizing communication, problem-solving, and working in groups. We will see a greater emphasis on integrated science degrees," said McBride. In research, McBride said it is critical that the Faculty develop effective mechanisms for accessing research funding from new sources, and develop ways of building the infrastructure to support research. "In a time of diminishing resources, we have to focus on what we do best," said McBride.

Some other key areas he will be focusing on include bringing the latest educational technologies into the teaching of science at UBC, re-organizing the administrative structure of the faculty for maximum efficiency and effectiveness, and building a large endowment for student support and new teaching and research initiatives.

Earth Sciences to Reorganize

IN THE NAME OF INCREASED CLARITY AND CLOSER LINKS BETWEEN researchers in related fields, the structure and title of four departments within the Faculty of Science was recently changed. Effective April 1, 1996, the Department of Earth and Ocean Sciences was created from the former Departments of Geological Sciences and Oceanography and the geophysicists from the former Department of Geophysics and Astronomy. Similarly, the Department of Physics and Astronomy was created from the former Department of Physics and the astronomers from the former Department of Geophysics and Astronomy.

The new Department of Physics and Astronomy takes advantage of the many strong connections already existing between astronomers and physicists on campus, and may well facilitate more linkages. Faculty members from the two disciplines will be located in the same building, where they will be able to share a wider array of technical resources.

Similarly, an Earth Sciences Complex is proposed to house the new Department of Earth and Ocean Sciences. Planning for the building, which will bring together oceanographers, geophysicists and geologists, started in 1993. The change will help simplify administration, as well as foster collaboration among researchers with similar missions.

Killam Prize Winners

William Unruh of the UBC Department of Physics and Astronomy has been awarded one of Canada's most distinguished academic prizes: the Killam Prize for Natural Sciences. Three $50,000 Killam prizes are awarded annually by the Canada Council in recognition of world-class achievements by Canadian scientists. Unruh, 50, is recognized for his research on gravity and theoretical cosmology – the study of the origin and evolution of the universe.

Killam research prizes and fellowships were also recently announced, and several Faculty of Science members won the awards. One of 1995 recipients is Michael Ward of Mathematics, who studies modern physical applications, such as nonlinear diffusion problems, semiconductor device modeling and chemical reactors. Paul Harrison of Oceanography, a leading algal physiologist, won a Killam award for his research into marine plant physiology.

Killam awards are also presented in another category, Memorial Faculty Research Fellowships. Faculty of Science winners include Martin Barlow, Mathematics, and Dolph Schluter, Zoology.

Faculty of Science Strategic Plan

The UBC Faculty of Science is developing a new strategic plan to guide the faculty into the year 2000 and beyond. The Faculty's strategic planning committee is in the final stages of formulating a new mission statement and recommendations to continue its tradition of excellence in teaching and research. The three-part mission statement covers the teaching and learning environment, the research environment, and the organizational structure of the faculty. The plan is geared toward change, and a re-defining of collective educational and research goals.

According to a report presented by the steering committee to the Faculty of Science strategic planning committee, "It is no longer useful to ask the question: 'How can we do more with less?' We must do things differently. We may well need to discard biases from the past about ways in which we should teach and conduct research, and adopt new paradigms to serve us as we move into the 21st century."

Interdisciplinary Approach; cont'd. from pg. 1

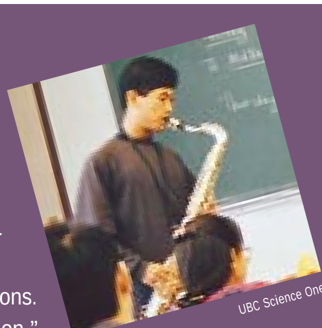
One students began with a very penetrating question. I don't seem to be able to get away with any sort of facile explanation, and I love it!"

The *Science One* home base, a comfortable room with couches, study areas, photo albums and bulletin boards provides an environment conducive to both work and fun. As a result, the small classes, limited to 72, quickly develop into a community. According to Benbasat, the students not only work together, they play together too, forming groups of current and former students to play sports or attend the opera. "*Science One* is a lifestyle," she said.

The program has been so successful, there will be a pilot project next year to take the *Science One* concept into the mainstream at UBC as a "coordinated science option." One section of first-year science students will go through their core science classes together," said Benbasat. "The professors teaching this section will work together as a team and the interplay between different disciplines will be emphasized."

This pilot project is happening much earlier than anticipated, mainly because of the success of *Science One*. The program is leading the way for science education of the future, as lines between the disciplines continue to blur. According to current *Science One* student Karen Chan, the program is "really cool, really tough, really fun, and really exhilarating. I am excited each time I step into the building for classes." This is not the response one would expect from a typical first-year science student. Times are definitely changing.

Science One Sequel


UBC Science One

Hamish Hwang

Science One graduate Hamish Hwang is a third-year biology student who is planning to go on to medical school. He said that through the *Science One* program, he discovered a different, more effective way to learn. "When I'm in class now, I can make connections. I realize we're not just learning facts in isolation." For example, when he's learning about hormones in his physiology class, he finds himself thinking about the biochemistry involved. Hwang says *Science One* gave him an appreciation for learning. "It really colours the way you go through your undergrad degree, in a positive way."


UBC Science One

Trity Pourbahrami

Science One graduate Trity Pourbahrami has nothing but positive things to say about her experience in the program. She said her choice to tackle a double major in physics and biology was a direct result of the interdisciplinary program, and the fact that *Science One* led to an NSERC position in a biophysics laboratory over the past summer.

"The program gave us a lot of support, and the students were comfortable asking questions. The professors seemed to really care," said Pourbahrami. "That encouraged us to learn better."

Chemistry at Work in the World

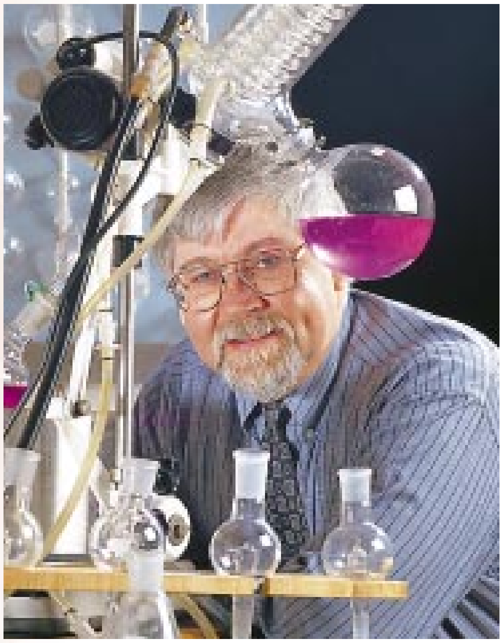
David Dolphin of the UBC Department of Chemistry is in a privileged position experienced by very few scientists. He has been able to follow the development of his research, in a hands-on way, from conception through development to commercial-ization. He's been able to see his ideas put to work in the world, providing the medical community with a new tool for fighting cancer.

DAVID DOLPHIN HAS BEEN INSTRUMENTAL IN FURTHERING THE development of Photofrin, the world's first light-activated drug to be approved for use in the treatment of cancer. He has collaborated in this work with another UBC faculty member, Julia Levy of the Department of Microbiology. Dolphin's focus is on maintaining the scientific lead he and his team have established in photodynamic therapy (PDT). To this end, Dolphin and Levy have developed the next-generation drug that will succeed Photofrin, called BPD.

QLT Phototherapeutics Inc., a Vancouver-based biotechnology company, was formed to commercialize Photofrin, and to further develop PDT technology. Under the aegis of the NSERC-QLT Industrial Research Chair, Dolphin works both at UBC pursuing his research and teaching, and at QLT as Vice President of Technology Development.

QLT's Photofrin has been approved for use in the treatment of oesophageal cancer in Canada, the Netherlands, Japan, and most recently, the U.S. The drug, when injected into a patient, concentrates in tumor sites, and becomes lethal when exposed to light. The major advantage of Photofrin is that it can be used to attack cancerous cells while leaving healthy tissue undamaged. In addition, the procedure is simple, and can usually be performed without anaesthetic.

QLT Phototherapeutics Inc.



However, Photofrin is a first-generation drug, and there is room for improvement. Dolphin's research over the past decade has focused on the next-generation compound, BPD. The new compound absorbs light at a longer wavelength, allowing for deeper penetration. It also distributes more quickly into diseased tissue, and leaves more quickly. The side effect of photosensitivity caused by Photofrin is not an issue with BPD.

Dolphin adds that BPD has a much wider range of potential applications. While Photofrin is being used exclusively in the treatment of cancer, BPD is showing promise in several areas, including psoriasis, rheumatoid arthritis, and age-related macular degeneration, the cause of 80 percent of the blindness in North America.

"My focus is on making new drugs, improving what we have, and addressing questions of manufacturing," said Dolphin. "I am now working on new third-generation drugs to stay ahead of the competition.

"I'm in a very unique position. I've played a part in developing something with the potential to be a new drug, have seen it through clinical trials, and it's now doing people good. QLT is still a small enough company that I am involved in a lot of day-to-day hands-on activity," said Dolphin. "I get to see potential, watch it develop and see how patients respond. Normally, one individual doesn't have that opportunity."

David Dolphin finds his two roles, at UBC and QLT, exciting and challenging.

He has learned first-hand the basic difference between university and industry based research. "At QLT, we ask what we need to know, whereas with curiosity-driven research, we can also focus on what we'd like to know." He said in industry, the research must be focused because companies simply can't afford to follow up leads that don't contribute to their product development, no matter how exciting.

Dolphin isn't frustrated by this, however, because within the realm of QLT-relevant research, there are still plenty of exciting problems to pursue.

QLT Phototherapeutics Inc.

QLT was founded in 1981 to commercialize UBC research into photo-dynamic therapy. David Dolphin, who has been involved in photodynamic research from its early stages, says the research funding history of QLT could be a model for bringing university research to industry. NSERC provided funding for the research back when it was entirely driven by the curiosity of Dolphin and Julia Levy. NSERC also provided a strategic grant to investigate commercial potential, provided a collaborative grant that helped QLT in its early days, and now supports Dolphin's industrial research chair.

QLT has since moved on. It is now listed on the Toronto Stock Exchange, and has raised over $100 million to fund research and clinical trials. QLT has become adept in shepherding new second-generation drugs through the intensive process of clinical trials, and recently achieved a major milestone: FDA approval for Photofrin.

The company has come a long way since its inception in a UBC lab. It now has product sales worldwide, a slate of new ideas in various stages of clinical trials, a large staff and a presence in the public marketplace. But it has not lost touch with its roots. The original researchers, David Dolphin and Julia Levy, are still in charge of technology development, and Levy was recently named QLT's president and CEO.

Evolution: Not Just Survival of the Fittest

When Sally Otto began her research career, she thought she would have to choose between her favorite subjects: biology and mathematics. This new faculty member of the Department of Zoology has since found a way to incorporate both disciplines in her research. In fact, her study of evolution would not be possible without strong expertise in both areas.

Sally Otto is not afraid to ask big questions. In her research, she is trying to understand the evolution of recombination, life cycles and mating systems across all species. Her goal is to develop population-genetic models using analytical and numerical techniques to infer what evolutionary changes are possible, and under what conditions. Otto is interested in the study of evolution at a theoretical level.

There are a few basic rules of evolution that apply in all cases from bacteria to mammals. They are that mutations happen which change genes, and selection acts upon those changes promoting the spread of some mutations and the elimination of others. Determining which characteristics evolution favors is not as simple as claiming that the fittest survive. Such a claim begs the question, what is the fittest, and under what circumstances? Otto's work is aimed at gaining a basic and deeper understanding of why some characteristics win out over others in the process of evolution, and in developing mathematical models of these ideas which can be tested by further research.

One of the questions she is investigating is how the balance between the haploid phase (in which an organism has one set of chromosomes) and the diploid phase (two complete sets of chromosomes per cell) of a life cycle evolves. The haploid and diploid phases of sexual life cycles are extremely variable in length, ranging from little development in one or the other phase to equal development in both. Otto is exploring evolutionary models to better understand the factors that favor different life cycles. So far, she has found that the traditional idea that more (or diploid) is better does not necessarily apply in all cases. "It is not the case that all organisms are evolving to be diploid."

The same kind of ambiguity can be found in the evolution of recombination. Theoretical analyses have found that evolution can favor increased recombination, but that in fact, it often selects for decreased recombination. Otto describes recombination as a double-edge sword, which both creates and destroys advantageous gene combinations. She is exploring a variety of possible advantages of recombination to determine which favors recombination most strongly.

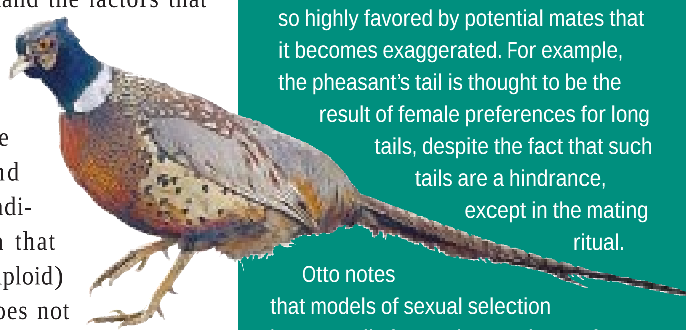
Last year, Otto won the American Society of Naturalists Young Investigators Prize for her work. At the time she was working at the Institute of Cell, Animal and Population Biology at the University of Edinburgh, where she was doing post-doctoral work. She now brings her quest to understand and model some of the basic and still very mysterious processes of evolution to her new position at the University of B.C.

Sally Otto says there are still so many questions to answer. "We don't even understand the very basic aspects of being alive, such as why an organism is sexual, or why recombination is present in some organisms and not in others." In her research, Otto is attempting to answer some of these fundamental questions.

How Do Mating Preferences Evolve?

One of the key factors in evolution is the way members of species make their choices of mates. Currently, there are several models that attempt to explain how mating preferences evolve.

A classic way to look at the problem is to observe the behaviour of the member of the species that does the choosing (often the female). The question that has traditionally been asked, says Otto, is what will favor picky females. One answer is that the mate she chooses is somehow more fit for survival. Then the characteristics of fitness and choosiness in mates will evolve together. Taken to the extreme, this model can lead to Fisher's runaway process, whereby a trait is so highly favored by potential mates that it becomes exaggerated. For example, the pheasant's tail is thought to be the result of female preferences for long tails, despite the fact that such tails are a hindrance, except in the mating ritual.



Otto notes that models of sexual selection have usually focused on mating preferences in only one sex of a species. However mating preferences sometimes evolve in both sexes. One of Otto's research goals is to understand what factors favor the evolution of mating preference in only one sex, and what factors favor its evolution in both sexes.

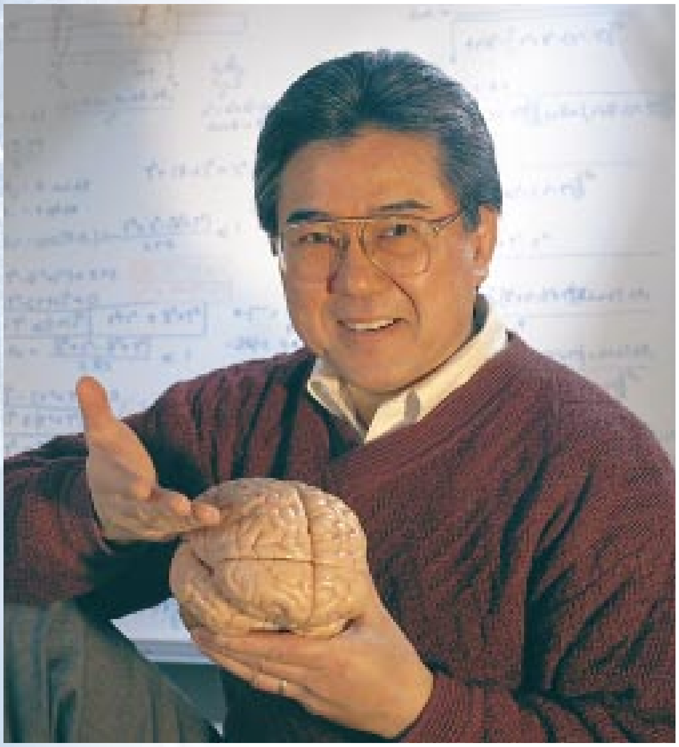
Mathematics for Understanding the Brain

Robert Miura of the Department of Mathematics is not a typical mathematician. Over the past 20 years, he has focused his research on the workings of excitable cells, such as neurons found in the brain and beta cells found in the pancreas. This area of research has as much do with biology as with math.

An engineer and applied mathematician by training, Robert Miura is a neurobiologist at heart. He considers research into brain functions "one of the last great frontiers" of scientific discovery, on a par with the study of the deep ocean and outer space.

Miura has been able to marry his apparently disparate interests in the field of mathematical biology. He is working on a number of projects, all with some relevance to his interest in brain research and the modeling of excitable cells. For example, he is working with electrophysiologist Ernest Puil of the Department of Pharmacology and Therapeutics on how drugs, such as anesthetics, affect the behavior of nerve cells. Miura's role in the project includes modeling, analysis and interpretations of the experimental data. "I attempt to find mathematical models to describe what we observe in the lab," said Miura.

One of the most exciting aspects of this project involves hooking up a computer to a single nerve cell using the extremely fine tip of a glass microelectrode. The researchers are able to inject current into the cell and measure the electrical potential response of the cell membrane. They can also put a model of how ions enter the cell into a computer, and electronically alter the ionic currents which pass though the cell membrane. Miura notes that drugs can have a similar effect, but they are not nearly as specific. "This technique allows you to isolate the specific thing you want to control. I think it's a major breakthrough." The aim of the research is to gain a better understanding of how nerve cells work– how they grasp inputs from the brain, and what causes them to fire.



Miura is developing and analyzing mathematical models of cell behavior that will contribute to a better understanding of, among other things, diabetes, classic migraines and the intricate workings of the brain.

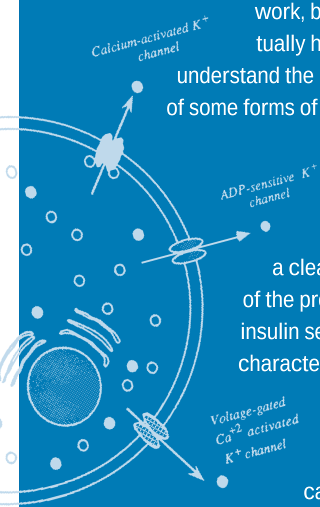
Another project Miura is working on with student Jennifer Enns looks at the mechanisms that cause triggered activity in the nerve cells of crabs. This could lead to new information about triggered activity in humans, such as fibrillation of the heart. In fact, Enns is studying proposed models for certain types of heart cells, but, says Miura, "The equations are so difficult, it's very hard to do mathematical analysis."

Miura is also working with student Longxiang Dai to learn more about the brain, specifically the paths ions travel to get from one location in the brain to another, and a related question about the amount of extracellular space in the brain. The work is highly computationally-intensive requiring the use of supercomputer facilities.

Miura is hoping that the development of a technique to follow the movements of ions in the brain will shed some light on the phenomenon of spreading cortical depression, which is believed to cause classic migraines. It's another piece in the complex puzzle of understanding the workings of the brain, a puzzle that presents no shortage of interesting research problems for Miura.

Towards an Understanding of Diabetes

In one of his many research projects, Miura is working on gaining a better understanding of beta cells which secrete insulin in the pancreas. "We are currently trying to understand how normal beta cells work, but we eventually hope to understand the mechanisms of some forms of diabetes." Miura is working with models to obtain a clearer picture of the process of insulin secretion. A characteristic of beta cells is their bursting electrical activity.



These cells go through a cycle as membrane potential increases, oscillates, decreases, then repeats.

There are a lot of proposed models to describe the behavior. Student Gerde de Vries (now doing post-doctoral work at the National Institute of Health) completed a study of the first generation of these models. Now Miura is looking further into how to extend the mathematical techniques to the second generation. He is also looking at what happens to the bursting electrical activity when parameters, such as glucose levels, change – one more step towards the understanding of diabetes.

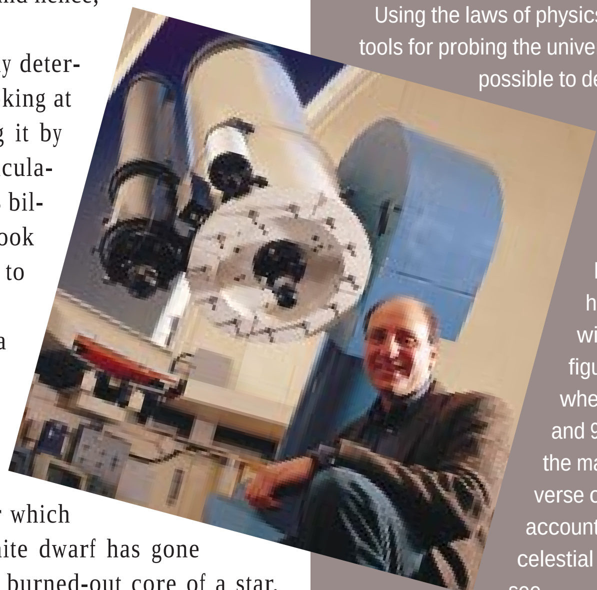
An Astronomical Question

How old is the universe? The two methods considered most accurate in determining this astronomical figure result in two quite different estimates: 8 billion and 16 billion years. That's quite a spread, even taking in to consideration the huge margins of error in astronomy. Harvey Richer of Physics and Astronomy is working on a project to more accurately pinpoint the age of the universe.

Last year Harvey Richer, together with colleagues at UBC, in Victoria and in the U.S., was granted one of the largest blocks of time on the Hubble Space Telescope. The goal was to gather data that will eventually determine the age of the universe in an entirely new way. He was given a full 30 orbits to expose pictures of faint white dwarf stars, the oldest of which have been around since the beginning of time as we know it. Richer believes that if he can determine the age of the white dwarf stars in ancient star clusters, he will be able to tell when the cluster formed and hence, when the universe began.

One way scientists have traditionally determined the age of the universe is by looking at the size of the universe, and dividing it by the rate of expansion. Using these calculations, the universe seems to be about 8 billion years old. The other method is to look at the oldest stars, which are estimated to be 16 billion years old.

Richer feels he can come up with a more accurate figure by looking at white dwarf stars because they cool over time at a very predictable rate. This makes it much easier to date a white dwarf than to date a 'living' star which is still burning its nuclear fuel. A white dwarf has gone through its life cycle, and is simply a burned-out core of a star, steadily cooling over time.



"The position of a star on a temperature chart can tell us how long it's been a white dwarf. If we can determine the age of the oldest white dwarf, we will know the age of the universe," said Richer.

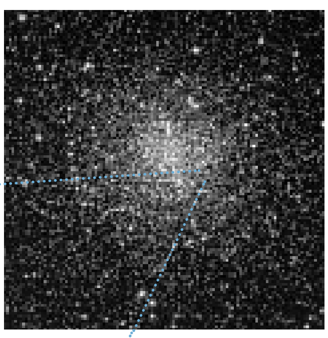
He pointed the Hubble Space Telescope at one of the oldest-known star clusters. In the 30 orbits he was granted, he was able to see white dwarfs as ancient as 7 billion years old. Unfortunately, the older the stars get, the fainter they become. Richer estimates it would take a full 150 orbits to obtain the data he needs to determine the age of the universe using the light from white dwarfs.

He is studying the data gathered from the Hubble Space Telescope which was pointed at a blank field, now called the Hubble Deep Field, for a full 150 orbits. "The data was released in January and we're processing it," said Richer. "It's an incredibly big job. We're asking, "What are the faintest things we can measure? Hopefully we'll prove we can measure stars 10 billion years old or more."

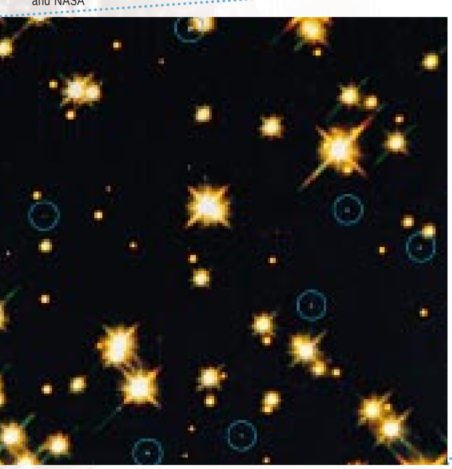
Richer is also using the Canada-France-Hawaii telescope to look at younger, closer clusters, where it is not as technically demanding to get an accurate age of cooling white dwarf stars. "This will provide more proof that our proposal will work," said Richer.

"The Hubble Telescope is so oversubscribed, it would be quite a coup to get 150 orbits." Richer is doing what he can to accomplish that feat, bolstered by the fact that the Hubble Space Science Institute is committed to getting the best science possible out of the telescope.

M. Bolte (University of California, Santa Cruz)



Harvey Richer (University of British Columbia) and NASA



The M4 globular cluster (top, from a ground based telescope), with more than 100,000 stars, is our nearest neighbour at 7,000 light years away. The detail (bottom, from the Hubble Space Telescope), at 0.63 light years across, reveals seven white dwarfs.

The Mystery of the Dark Matter

Using the laws of physics and the latest tools for probing the universe, it is now possible to determine the mass of the entire universe. However, the scientists who have done so have some up with a puzzling figure: somewhere between 90 and 99 percent of the mass of the universe cannot be accounted for by celestial bodies we can see.

There are a number of theories, but so far no definitive answers to what this dark matter can be. "It dominates the universe," said Harvey Richer. The two most prevalent theories are that the dark matter is made of some type of elementary particle, such as a neutrino that has a bit of mass, or that it's made up of dark stars not massive enough to burn nuclear fuel and give off light. There is another theory out there, but it's heresy, said Richer. The controversial idea is that maybe the laws of Newtonian physics do not apply over such huge distances. However, said Richer, "Before we change the laws of physics, we should look at all other possibilities first."

UBC Student Produces Best Thesis in Canada

The thesis written by UBC graduate Hans Keirstead was named the best Zoology Ph.D. thesis in Canada last year. Currently a postdoctoral fellow at the University of Cambridge in the Brain Repair Centre, and a full fellow of Downing College in Cambridge, Keirstead studied Zoology, Anatomy and Surgery at UBC. His thesis supervisor was John Steeves, professor and director of CORD (Collaboration on Repair Discoveries). The winning thesis was entitled "Immunological suppression of central nervous system (CNS) myelin and the effect of myelin suppression on CNS repair after injury".

Centre for Neurological Research Gets Green Light

UBC senate has approved the creation of a Brain and Spinal Cord Research Centre based in the faculties of Medicine and Science, and operating in partnership with the Vancouver Hospital and Health Sciences Centre (VHHSC). The centre's aim is a unique collaboration that builds on the existing neuroscience efforts of more than 70 UBC and VHHSC neuroscience research groups. The Faculty of Science's existing spinal cord repair group, called CORD (Collaboration on Repair Discoveries) will be the focus of spinal cord research within the centre.

LeBlond Releases Book on Sea Serpents

Paul LeBlond, director of UBC's Earth and Ocean Sciences program, has recently co-authoured a book with Edward Bousfield, called *Cadborosauraus: Survivor from the Deep*. The book summarizes what is currently known about B.C.'s very own sea serpent, often seen in Victoria's Cadboro Bay. LeBlond, founding director of the International Society of Cryptozoology says he's not sure if "Caddy" exists, but he believes it's worth investigating further.

Faculty of Science Teaching Awards

Three of this year's best teachers in the Faculty of Science were recently honoured with teaching awards. The winners are David Austin of the Department of Mathematics, Michael Gerry of the Department of Chemistry, and George Spiegelman of the Department of Microbiology & Immunology.

Hancock, Snutch and Gold Win MRC Awards

Three UBC scientists were recently honoured with awards from the Medical Research Council of Canada. Robert Hancock of the Department of Microbiology & Immunology was a recipient of the MRC Distinguished Scientist Award for his work in the Canadian Bacterial Diseases Network. Terry Snutch of the UBC Biotechnology Lab was named MRC Scientist, and Michael Gold of Microbiology & Immunology was named MRC Scholar. The five-year awards are designed to support renowned scientists who are at the forefront in their field of health research. The Medical Research Council of Canada is the major federal agency responsible for funding health research in Canada.

Comet Viewing at UBC

The UBC observatory opened its doors to the public March 23 to give people a look at what might have been the brightest comet in 20 years. Named after the Japanese amateur astronomer, the Hyakutake comet passed Earth at a distance of 15 million kilometers, close enough to be seen by the naked eye. The comet was visible through March and is expected to develop a more prominent tail through April as it moves closer to the sun.

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