

Birth defect research focuses on cell migration



Development biologist Robert Burke at work in his UVic lab. His research into the migration of cells during embryonic development has won a \$330,000 federal grant.

BY RICHARD WATTS
Times Colonist staff

Understanding developmental causes of birth defects — like hole in the heart — is the aim of researchers now working at the University of Victoria.

Development biologist Robert Burke is working to understand how, during early embryonic development, cells migrate and move, amoeba-like, from a section at the back of the brain out to other specific areas, where they develop into things like heart valves.

Burke described the process as the cellular version of salmon swimming upriver to the right spawning stream or caribou herds finding their way across the tundra during migration. "To me, it's just a little biological miracle."

What makes the process so medically interesting is when this cell migration goes wrong, and the cells lose their way, the result is often a congenital birth defect, like a hole in a wall of the heart, or a cleft palate.

Burke's research is being supported by a \$330,000 grant from the Canadian

Institutes of Health Research, the federal government's premier agency for funding health research.

It is one of 92 research projects to be supported by \$32.9 million in investment announced Friday by Vancouver MP Herb Dhaliwal, minister of natural resources and regional minister for B.C.

The other UVic research awards are \$278,000 to educational psychologist Joan Martin for a study of the psychological and social effects of surgery to correct a chest deformity and \$202,000 for health policy expert Irving Rootman to study the level of health knowledge among various age groups.

Burke's cellular research is based on the observation of chicken embryos while they are still in the shell. They open a small window in the shell and then cover it with tape and observe the development process over several days.

To understand the migration of the cells, Burke's research works by switching off little receptors on the cells' surfaces that normally pick up specific protein chemicals to guide them to their correct location.

The scientists use a tiny glass tube filled with a solution containing the protein substances that turn off these receptors. This tube is moved until it touches an area of 100-odd cells and then an electric current is passed through to the cell.

In response to the electric current the cells open up momentarily and take in the protein substance that switches off their chemical receptors. Meanwhile, a protein marker that allows scientists to recognize these cells is also inserted.

After that, the scientists watch these cells find their way from the brain without the function of their chemical receptors to lead them and the corresponding development of the embryo.

Burke said right now science can't explain the migration of these cells during development of the embryo. And "bad luck" is the best explanation anyone has come up with to explain the development of birth defects.

"And for a scientist that is just not satisfactory," said Burke. "There has to be a reason."

"But we don't really know how these cells migrate at all."

SALTS: Trainees will be stretched to limits

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"That's the beauty of it," he said. "The captain says anything I want to learn, it's all open. There are no closed doors."

Captain Tony Anderson (or skipper, as he prefers to be called) said Malchow will be one of 18 trainees, mostly aged 18 to 25, aboard the Pacific Grace for the first leg of the voyage. There is room for 24 trainees, but that makes for cramped quarters below decks.

The itinerary calls for the Grace to sail from Victoria to Puerto Vallarta, then on to Costa Rica, across the Pacific to Hawaii and then back to Victoria nine months from now.

The program offers young people a place where they can be themselves, said Anderson.

"You ask trainees what they remember about being aboard and they say it's not the places they've visited, it's the community they've had out here," he said.

Trainees like Chris can expect to be stretched to his limits, said Anderson. "We're all going to be stretched. We work very closely together. There is really very little separation between crew and trainees. It's really a larger family out there."

The 170-ton ship will depart from Victoria Sunday at 2 p.m.

THAT'S SOME HEARSE



Mitch Chamberlain churns up the mud to the delight of the fans as he drives his 540 cu. in. Chevy-powered mud dragster at the Luxton Fall Fair Saturday. Chamberlain and his car, which he dubs The Undertaker, are from Puyallup, Wash. The fair continues today.

Ray Smith/Times Colonist

CRD CAPITAL REGIONAL DISTRICT

Notice of Counter Petition Opportunity

Juan de Fuca Search and Rescue Service

Establishment Bylaw No. 3101

The Board of the Capital Regional District ("CRD") intends to adopt Bylaw No. 3101, "Juan de Fuca Search and Rescue Service Establishment Bylaw No. 1, 2003".

The purpose of Bylaw No. 3101 is to enable the CRD to establish the operation of a search and rescue service in the Juan de Fuca Electoral Area. The intent of the bylaw is to provide volunteers with training, gear and equipment to facilitate search and rescue activities. The annual cost of the service, per average residential assessment, is estimated to be \$15.09. Further technical information may be obtained by contacting Mr. Ken Cossey, Electoral Area Services Planning Dept., 2205 Otter Point Road, Sooke, BC V0S 1N0 (Telephone 642-1620) during regular office hours Monday to Friday (excluding statutory holidays).

The Board may adopt this bylaw unless at least 5% of the electors in the Juan de Fuca Electoral Area of the Capital Regional District, to which the bylaw applies, petition against the bylaw by signing counter petition forms and submitting them to the Capital Regional District by the established deadline of 4:30 p.m. on Tuesday, October 21, 2003. At least 223 electors must sign the counter petition in order to defeat the bylaw.

The counter petitions must be in the form established by the CRD. The required forms of counter petition and a copy of the bylaw are available between the hours of 8:30 a.m. and 4:30 p.m. Monday to Friday, excluding statutory holidays from the following CRD offices:

* CRD Corporate Secretary, 524 Yates Street, P.O. Box 1000, Victoria, BC V8W 2S6; (Telephone 360-3128 or toll free 1-800-663-4425, local 3128);

* CRD Electoral Area Services Planning Dept., 2205 Otter Point Road, Sooke, BC V0S 1N0; (Telephone 642-1620)

Bylaw 3101 may also be viewed on the CRD website: <http://www.crd.bc.ca/bylaws/bylawsubjectto/> by selecting Bylaw 3101 from the list.

The only persons entitled to sign the counter petition forms are the electors of the area to which the counter petition opportunity for Bylaw No. 3101 applies. The area to which this counter petition applies is the Juan de Fuca Electoral Area of the Capital Regional District, which includes Willis Point, Malahat, East Sooke, Kemp Lake, Otter Point, Shirley, Jordan River, Port Renfrew and Songhees/Esquimalt First Nations.

An elector is a person who is eligible to vote in a Capital Regional District election in this area according to Section 49 of the *Local Government Act*. Elector qualifications for Resident and Non-Resident Property Electors are as set out below:

Resident Elector: You are entitled to submit a counter petition as a **Resident Elector** if you are 18 years or older on the day of submission, are a Canadian Citizen, have resided in British Columbia for six months and in the electoral area of the CRD for 30 days;

Non-Resident Property Elector: If you are 18 years or older on the day of submission, are a Canadian Citizen, have resided in British Columbia for six months, have owned and held registered title to property in the electoral area of the CRD for 30 days, do not qualify as a Resident Elector, you may submit a counter petition as a **Non-Resident Property Elector**. Note: Only one Non-Resident Property Elector may submit a counter petition per property, regardless of how many owners there may be.

Signed original counter petition forms must be received by the Capital Regional District, no later than 4:30 p.m. on Tuesday, October 21, 2003, attention Corporate Secretary, at:

* Capital Regional District, 524 Yates Street, 3rd Floor, Victoria, B.C. V8W 2S6; or

* CRD Electoral Area Services Planning Dept., 2205 Otter Point Road, Sooke, BC V0S 1N0

Dated this 10th day of September, 2003.

Carmen I. Thiel,
Corporate Secretary

BY BILL CLEVERLEY
Times Colonist staff

Capital Regional District chairwoman Judy Brownoff is abusing her position by meddling in affairs outside her jurisdiction, says Langford Mayor Stewart Young.

A recent letter from Brownoff to six municipalities that suggests they buy a vote on the planning committee for the sprawling Juan de Fuca Electoral Area has Young livid.

Young says Brownoff is unhappy with the recent approval of the controversial Silver Spray resort/marina/housing development in East Sooke and is attempting to create a new committee whose members' thinking is more in tune with hers.

Brownoff maintains she was only trying to accommodate Colwood Mayor Jody Twa, who had asked to be taken off one of the Juan de Fuca planning committees because of time constraints. But Twa denies he ever asked to be removed.

Land-use issues including rezonings and planning in Juan de Fuca — which includes East Sooke, Willis Point, Jordan River and Sooke — has been an administrative nightmare for years. As the last electoral area (among 13 municipalities) in the CRD proper, its director is not allowed to decide planning issues on his or her own.

To free the entire board from the responsibility, the province struck two committees with representatives from adjacent municipalities to decide such issues as rezonings. But those committees, especially the one dealing with East Sooke matters, eat up vast amounts of time and are taxing on the elected officials who have their own municipalities to look after.

In her letter, Brownoff suggests a committee could be formed with a nominal buy-in from Highlands, Metchosin, Sooke, Saanich Central Saanich and Langford, which could replace the provincially formed committees.



Brownoff, Young: At odds over planning committee for Juan de Fuca Electoral Area.



Brownoff said she thought she would poll the municipalities involved first before taking it to the board because there would be no point in the board even discussing it if the affected parties had no interest.

In an interview, Young said Brownoff, a Saanich councillor, should resign as CRD chairwoman. He said she appears to be trying to structure a committee to suit her views.

"When a Saanich councillor starts meddling in what's happening out here and starts to dictate and change the process to put a Central Saanich member on there because she thinks Central Saanich will vote against it, the whole thing stinks," Young said.

"The CRD is just causing more trouble, sticking its nose in where it doesn't belong. It should get down to some basic services and stay out of everything else. It has a \$170 million a year budget. There's \$34 million the West Shore pays them. I say keep the money out here

on the West Shore and just get rid of the CRD altogether."

Twa agreed that there's no love for the CRD in the Western Communities.

"It's getting to the point where the temperature is pretty hot out here with the CRD," Twa said.

He maintains he never asked that he be removed from the committee, but rather whether his alternate could attend in his place.

"I have never, ever requested from Judy that the voting structure be changed — never," Twa said. "That is fundamentally different than asking that the voting structure be changed. So Judy has twisted that."

Brownoff's committee proposal was defeated by Saanich council on a tie vote Monday night.

Brownoff, meanwhile, says the Silver Spray debate is over and played no part in her sending out the letter. She said she's just attempting to find a legal alternative to a committee formed by the province that will accommodate everyone's schedule.

"I wouldn't say (Young) was misdirected. It would have been helpful if Stew would have phoned me so I could tell him that his neighbour, Mayor Twa, was the one who came to me," she said.

"This particular issue came as a result of a director (Twa) coming to the board chair (Brownoff) asking to be removed from a committee which I didn't have any control over," Brownoff said.

Meanwhile, she said, she would be meeting with provincial Community, Aboriginal and Women's Services Minister George Abbott today to tell him that Juan de Fuca electoral matters are consuming too much CRD time and the province should step in.

"I'm just going to say to the minister he needs to get on with this boundary review or solve this issue," Brownoff said.

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Driver's licence lifted

A man was given a 24-hour driving suspension Saturday after his car was spotted about 7:30 a.m. in a ditch on West Saanich Road, near Wallace Drive.

By the time police were called to the scene by a passerby, the 21-year-old driver had managed to make his way to Saanich Peninsula Hospital, where he was treated for minor injuries. Police located him there.

In addition to his roadside suspension, Saanich police Staff Sgt. Ed Illi said the driver was also given notice of a longer-term prohibition because of previous offences.

Anyone with information about the accident is asked to call Saanich police at 45-4321.