

**Victor
Gomel**



When Life Begins in the



Twenty years ago, Canada recognized the birth of a medical technology, when the first child was born through UBC's in vitro fertilization program

Facing page: Quinn Cartwright and Dr. Victor Gomel. "They thought we were chasing butterflies."

December 25, 1983. Blinding snow was sweeping British Columbia in one of the province's worst storms in years. In Kelowna, Margaret Reid knew this was the day. In Comox, two brothers, pilots of an air ambulance, were clearing the runway. Something extraordinary was about to happen.

The story had begun more than a decade earlier, when Dr. Victor Gomel, a Turkish-born professor in the University of British Columbia's Obstetrics and Gynaecology Department, attended a conference on reproductive technology in Athens. "I saw," he remembers, "lab-grown human eggs at sixteen- to eighteen-cell stages."

When he returned to UBC, and approached the department's chairman, "I'm sure he thought I was crazy." But in 1978, the year Louise Brown, dubbed the world's first "test-tube baby" was born in England, Gomel was chairman, and he was ready to develop the university's Division of Reproductive Endocrinology and Infertility.

Then Gomel met Dr. Betty Poland, one of the first geneticists to work in

obstetrics. "She was," says Gomel, "a wonderful woman, an absolutely beautiful human being. I was embarrassed that she had not been made a professor long before that time.

"I appointed her at once, and asked her to head the division." Out of that division, in 1982, emerged the UBC Fertility Endocrine Clinic.

"For the first two years," says Gomel, "it was a very heavy chess game. The division was very small; others felt there were issues far more important. They thought we were chasing butterflies."

Gomel and Poland were joined by the Korean-born biologist Young S. Moon, who became director of the clinic's Gamete Laboratory (gam'et: a mature reproductive cell). Moon was excited about the opportunity to set up a laboratory in Vancouver; he had attempted to start one in Ottawa, without success.

At UBC, says Moon, "We didn't have research money in the beginning. But I had my own research money." He established a small laboratory in the university hospital basement. "I remember very carefully carrying eggs upstairs in a petri dish."

While she successfully avoided news media in 1983, Emma says, "I never had a problem telling friends, and Robbie has always known. I told him 'You are Canada's special baby'."



Above: First mother, first child. Margaret "Emma" Reid and Robbie Reid, born Christmas Day, 1983.
Below: Dr. Betty Poland, the division's first head, with baby Robbie.

Today, Moon oversees a team of biologists working next to the egg retrieval and embryo implantation rooms. The laboratory holds incubators, freezers with more than 1,000 frozen embryos, and tanks of sperm. "We have a few football teams here," jokes one lab worker.

Gomel, Poland and Moon made sixteen attempts to bring women to pregnancy through laboratory techniques. All failed. Then, in 1983, Margaret Reid came to them.

"I had had two children by natural childbirth," says Margaret Reid (known to her friends as Emma), "and I was quite happy with my girls." In 1973, she chose to have tubal ligation, effectively preventing another pregnancy. Then ten years later, the man she was engaged to,

while loving Emma's daughters, wanted a child of his own.

"Because I loved him, I said all right, I'll try to get it reversed. There were four years of tests and painful exploration. The tubes were too damaged. Then my doctor told me she had just been to a conference where they talked about in vitro fertilization. The speaker was a Dr. Poland. I called Dr. Poland. She said 'Come and see me.'"

"She had no fallopian tubes at all," says Gomel. But within three months, she was pregnant. "I feel sick," she said. "Isn't it wonderful!"

(The Okanagan hospital where she worked didn't think it was wonderful. It didn't want to be associated, even indirectly, with what was considered a radical experiment. Emma was let go.)

On Christmas Eve, 1983, Emma, living then in Vernon and not quite six months pregnant, was rushed to a Kelowna hospital. Her baby's heart beat was weak and irregular. It was accepted that the baby would not live. But not by Emma.

"On Christmas morning, I walked to the nurses' station and demanded answers. They had been told I was about to abort a still-born infant." Emma called her Vancouver obstetrician, Burndt Wittmann. He arranged to have her taken to the airport, to be brought to Vancouver by air ambulance. In Comox, he reached two young pilots hoping to get home to Calgary for Christmas.


Instead, they ploughed the snow-covered runway, flew their Cessna 310 over the mountains, and carried Emma to Vancouver's Grace Hospital, where Robert John Saunders Reid, delivered by emergency Caesarean, entered history as the first child born through Canadian-based in vitro fertilization (IVF) technology.

The UBC Fertility Endocrine Clinic, based first at UBC, then at Shaughnessy Hospital, is located now on the fifth floor of the Willow Pavilion of the Vancouver Hospital and Health Sciences Centre. The clinic is reached by ninety-year-old elevators, through doors which must be opened manually. One of the two slow-moving lifts has an operator,

often found knitting. It is ironic that technology so advanced is practiced in an Edwardian structure.

“It’s a funky old building,” says Dr. Timothy Rowe, current division head, “but we have had our best years since moving here.” He notes that the premises previously contained a delivery room and special care nursery. “The success,” he says, “must be due to so much biological fluid flowing through the walls.”

Tim Rowe—tall, slim, witty—has headed the division for the past three years. Born in Australia “on a farm halfway between Melbourne and Adelaide, with nothing but sheep for company” he did his internship as a flying doctor at Broken Hill, a mining town on the edge of the desert. Coming to Canada in 1974, he completed his residency in Halifax.



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Then, twenty years ago, he was recruited for UBC by Victor Gomel.

“What irony,” he says, remembering Gallipoli, “a Turkish department head with three Aussies in the department. Every Anzac Day, we refused to work.” But it is clear, behind the joking, how greatly he admires Gomel.

Susan Wilson, the clinic’s petite, outgoing nurse coordinator since 1995, explains the basic process—the IVF cycle—would-be parents go through. “First, there are ten to twelve days of hormone injections for the mother. Then eggs—an average of five to twelve—are recovered from her ovaries and placed in an incubator. If the father’s sperm—also incubated—tests as normal, 50,000 are added to each egg, and the combination is left overnight in a petri dish. Fertilization occurs in about seventy-five percent of eggs, and cell division begins. When the embryo has reached the four-

to eight-cell stage, it is implanted in the mother’s womb.” Variations of this treatment centre around ovarian stimulation and such associated techniques as intra cytoplasmic sperm injection (ICSI), in which sperm is injected into an egg and hatching is assisted.

Treatments do not always lead to pregnancy. Three IVF cycles are recommended, at a cost of \$6,000 to \$7,000 each (compared to \$10,000 to \$15,000 in the United States).

Dr. Anthony Cheung, the clinic’s medical director, respects the spirit of holistic medicine. He says “We go back to core values, and we present alternatives. We look at the whole person, not just the reproductive tract.” One woman brought her acupuncturist to the clinic when her eggs were to be retrieved, and

the specialist in ancient Asian medicine was welcomed.

Cheung received his medical degree at the University of Sydney, was a research fellow at the Centre for Management of Menopause, earned a master’s degree in public health, did post-doctoral work in reproductive technology at the University of California, Davis, spent more than three years on the University of Alberta faculty, and joined UBC in 1996. He likes to quote lines from T.S. Eliot’s *Four Quartets*:

“We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.”

There are various causes of infertility: blocked or scarred fallopian tubes, blocked sperm ducts, ovulation problems, and other conditions. In thirty-five percent of cases, it is the woman who is

infertile; in exactly the same number of cases, it is the man. In twenty percent of cases, infertility is a combination of male and female factors. In ten percent, the cause is unknown.

Couples (and, in some cases, single women) come to the clinic from all over British Columbia, other provinces, Yukon, the United States, even off-shore countries. The average age of patients is 37.5 years, although there is a significant number in their forties, and a few as young as twenty-one. It is a multicultural clientele, and the clinic’s staff—physicians, nurses, office workers—communicates in English, French, Spanish, Cantonese, Mandarin, Korean, Hindi and Punjabi.

When prospective parents arrive, they may talk with Diane Bockus, a counsellor trained in psychology at York University in Toronto. The people she meets “have to live at a certain level of anxiety. There’s a lack of control, chronic uncertainty. They’re engaged in a process that is costly and emotionally demanding, with no guarantee of success. They see their friends and family moving on, and feel left behind. It’s so hard for the fertile world to understand what they’re going through.”

The Cartwrights and the Hydes know what she’s talking about. Janice Cartwright and Melanie Hyde met as part of a group receiving hormone injections at the clinic—they called their group “the Pergonal pals.” (Pergonal, a natural hormone extracted primarily from the urine of menopausal nuns, is still available, says Susan Wilson, but no longer widely used. Today’s hormone of choice is recombinant FSH, a product of genetic engineering.)

The Hydes—Melanie, a technologist in the VGH cytogenetics lab, and Keith, a consultant in high-tech market research—weren’t successful until the fifth go-round. Keith says “Remember those ancient videos in high school—look at a girl the wrong way and she gets pregnant? Well, it doesn’t always work that way.” But once they did achieve pregnancy, everything that followed, says Melanie, was “absolutely routine.” Their doctor was Tim Rowe—“a super guy.”



Remembering the hit by Manfred Mann, and Quinn's development from frozen embryo, Bill has dubbed his beautiful nine-year-old daughter "Quinn the Eskimo."

Janice, Quinn and Bill Cartwright. "We love her to bits."

The Hydes' son Jordan is now almost ten years old.

The journey to pregnancy was more traumatic for the Cartwrights. Janice Cartwright, a legal secretary, had suffered an ectopic pregnancy, and no longer could transmit eggs.

When she and her husband Bill—a financial planner—consulted Dr. Rowe she was thirty-five years old; Bill was forty.

Janice became pregnant three times, and had three miscarriages. The couple's mood swings rocketed from joy to despair—"way up to way down all in one day," says Bill. Finally, Janice said, "We've had enough. I've made my peace

with that." She quit her job at Alexander Holburn Beaudin & Lang and enrolled in programs at Langara, hoping to work with children.

But another four frozen embryos had been implanted, and one resulted in pregnancy. "Before, I had always known when I was pregnant. This time, I didn't know." The clinic called her to give her the news. She telephoned Bill at his office. When he answered, she said, "Hi, Daddy."

She says, "It was a beautiful pregnancy, the most wonderful time of my life. I enjoyed every minute of it." The Cartwrights' daughter Quinn was delivered at Women's Hospital in "a room full of doctors." Quinn's Apgar score: nine.

She learned to read at three, and reads now in both French and English. She plays the piano (*Marche Slave to Scarborough Fair*) and loves to perform. Bill says, "She's never seen a stage she didn't like." This summer, she'll appear at the Richmond Gateway in the Applause Musical Theatre production of "The Lion King."

Janice has explained Quinn's beginnings to her daughter.

"You know, Quinn, how people have babies? Well, with us, they took an egg out of me, put it together with sperm from Daddy, and then put it back in me." "Okay."

Remembering the Bob Dylan song turned into a hit by Manfred Mann, and Quinn's development from cryopreservation, Bill has dubbed his beautiful nine-year-old daughter "Quinn the Eskimo."

*Everybody's in despair, every girl and boy,
But when Quinn the Eskimo gets here
Everybody's gonna jump for joy.*

Victor Gomel is now, a colleague says, "a true international superstar of microsurgery." A darkly handsome man who resembles an older version of Charles Denner, the star of Truffaut's "The Man Who Loved Women," he came to Vancouver after four years at McGill. That was the high-flying Wasserman era—The Cave, Isy's, Big Frank's Steak House. "I used to tell my staff if they



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needed to reach me late in the evening to call Casa d'Italia.”

He says, “We started the IVF program in the spring of 1982, although we could have started it in 1979. There are now twenty-two clinics in Canada; most ob/gyn departments have an IVF program.”

Now professor emeritus in the UBC Department of Obstetrics and Gynaecology, Gomel remains a strong, authoritative presence. “My role,” he says, “is more of a senior statesman. What I do most is try to help young people develop their potential. And I write, teach, see some patients, do some operations.”

Gomel, an editor of many medical journals, maintains an office in Paris, and in one month this spring, traveled to Ankara, Paris and Toronto as a consultant. He is at work on a French national

development: *La Cité de naissance dans France*. “Tim and I came up with the project,” he says. “It will be a museum, an educational centre, a research and resource facility on birthing.

“I am a very lucky man,” he says. “I have students who are professors all over the world—Holland, Japan, Saudi Arabia. They are my riches.”

Since 1982, when the UBC clinic opened, more than 1,500 children have been born through its reproductive technology. The first—and the first in Canada—will be in Vancouver for a celebration of the twentieth anniversary of the breakthrough. Robert John Saunders Reid is now nineteen. Emma remembers her baby as “cute as a button, a star performer, a tough little guy.”

Although hunted by reporters at the time, the identity of Canada’s first IVF baby has not been known until now. Emma and Robbie live in Stayner, Ontario, on the Bruce Peninsula. She works with her husband running an aircraft service company; Robbie is trying to decide where his career will lead. “He picks up languages so quickly,” says Emma. He’s also skilled in mathematics, played drums for a time, and is interested in architecture.

While she successfully avoided news media in 1983, Emma says, “I never had a problem telling friends, and Robbie has always known. I told him ‘You are Canada’s special baby.’”

Asked if he still feels special, Robbie says, “I feel more special around Mom.”

The UBC Fertility Endocrine Clinic celebration will take place the evening of May 31 at the Vancouver Aquarium—an appropriate setting, as we all, originally, emerged from the sea, and the womb itself is an enclosed ocean. On that evening, the clinic will announce its new name: The UBC Centre for Reproductive Health.

Some 3,000 invitations have been sent, to founding sponsors, physicians, nurses, researchers, clinicians and families. Emma and Robbie Reid will be there, but Burndt Wittmann, who delivered Robbie on Christmas Day, 1983, may not be able to attend—he is now in Saudi Arabia—nor, probably, will Christo Zouves, who initially treated the Cartwrights. (Once at the clinic, as Bill was videotaping an examination, Zouves grabbed the camera and started shooting. Then, as Janice lay with her feet in stirrups, Zouves called “Bill! Come over here! See that? Looks like a pig’s nose? She’s ovulating! Take her home at once!”) Dr. Zouves is now in San Diego.

The most regrettable absence will be Dr. Poland—“a wonderful, wonderful woman,” says Emma Reid. “A gentle person who led by example,” says Tim Rowe. Dr. Poland died of breast cancer in the early 1990s.

A private clinic providing similar assisted reproduction services has opened in Vancouver, and Tim Rowe says that’s good. “In the ‘80s, there were far more people than we could possibly handle. Now we can focus on what we do best: more time, more attention.” Because the UBC clinic is a hospital-based program, it takes challenging cases.

The clinic’s overall pregnancy rate is thirty-four percent. “The goal,” says Dr. Cheung, “is to increase pregnancy success without increasing the ratio of multiple births, which has become an epidemic in the United States.”

The cost of in vitro fertilization at the UBC clinic, given three or more cycles, can run to \$20,000. But couples from all strata of society come. Some mortgage homes, others get family assistance. And for those unable to afford the cost, Susan Wilson is about to launch the Hope Fertility Fund.

Hope is a good name. That’s what couples bring to the UBC Fertility Endocrine Clinic. That’s what Victor Gomel and Betty Poland were determined to reward. And for 1,500 families, that hope has been given life. ❖