

# Genetic detective hunts down killer

By Sharon Dargay  
staff writer

Daniel Van Dyke has seen more blood stains than Sherlock Holmes. He searches for evidence under microscopes, on slides and in specimen jars. It may take him six years and \$1

million to crack a case, but in the end he fingers the culprit and lives to write about it in prestigious medical journals.

Van Dyke and his colleagues tracked down a potential killer earlier this year in a landmark cancer study that may generate more investigation of "chromosome 20."



## retirement memos

**Margaret Miller**

## Morning beach offers best start for a day

One thing you learn when living in Florida is that activity on summer days should come early in the morning. You get it later on.

But when you're living in Florida as a retiree, you also realize there's no reason why living patterns can't be rearranged. And since Joe and I are neither mad dogs nor Englemans, we skip the noonday sun and do most of our beachwalking and swimming in the relative cool of the morning.

My husband likes to start the morning with coffee and newspaper whatever the time of year, but in these months I usually head for the beach as the day's first order of business.

OUR PART OF the beach early on a summer morning is a beautiful, empty stretch. Well, maybe not quite empty, I discover as I begin my walk along the water's edge.

Down on the sand that fronts a small trailer court sits a fisherman who has thrown a line into the gulf to see if they're biting early.

The fisherman isn't alone either, but I don't see his companion until I'm nearly upon them.

Grey-blue feathers of the Great Blue Heron bleed into the early morning sand color as the big bird waits, patient and still, for any small fish that might be thrown his way.

After I pass the fishermen, a couple of women emerge from the trailer court. Is that a pet bird, they ask me. No one's pet, I'm glad to fill them in, but he's absolutely unswayed by people on the beach and friend to everyone with a fishing pole and line.

WINDING MY WAY down the beach, I have the company of gulls, terns and an occasional egret. I also find I've ac-

quired a handful of pretty shells. I meet another shell-gatherer where a hill of sand stands as a monument to unsuccessful efforts to dig a new pass.

This beachcomber has a bag full of treasures. "Is that all you've found?" she asks, looking at my scant collection. I explain I have to be fairly selective or there wouldn't be room for us in the apartment.

I complete the walk down by some pillbox, where pelicans often are gathered. The sun is higher, so I get sunglasses and beach hat out of my bag for the return trip.

On the mile-and-a-half walk back, the birds and I have more company. People are coming down from the county park for their day at the beach. More fisher-persons are out. Aromas of breakfast cooking wait from the trailer court.

THEN IT'S BACK to home base, for maybe a quick dip in the gulf and for sure, a swim in the condominium pool. The water there is coolest in the morning and feels marvelous after a couple of hours on the beach.

If it's a day I'm lucky, I find waiting for me a big osprey that this summer has sort of adopted our pool to watch over.

After a number of laps, it's time for breakfast and whatever pressing business the day offers. The summer beach is a neat retirement dividend in Florida. I once more marvel at the good fortune that brought us here to enjoy it.

Margaret Miller was Suburban Life editor for Observer Newspapers for 16 years. She and her husband, Joe, have retired to Florida, where she writes Retirement Memos.

TECHNICALLY, THE Troy resident's title is director of the cytogenetics laboratory at Henry Ford Hospital, Detroit. But his day-to-day work as a researcher makes him something of a genetic detective.

"Research can be very frustrating. There are a few times in a person's career that he has a few good ideas and a few bad ideas. In research you make a few decent discoveries and the rest of the time is hacking away," he said.

Although Van Dyke's study of medullary thyroid cancer was in some ways a "shot in the dark," it was worth the six-year effort, he said. The project may lead toward new diagnostic tests which will identify patients who are at risk of developing a hereditary form of the disorder.

The disease is one of about 2,000 ailments considered "dominantly inherited," or capable of being passed from parent to child through genetic patterns.

VAN DYKE, Dr. Charles E. Jackson, chief of the Clinical Genetics Division, and V.R. Babu, associate cytogenetics director, studied 15 families using a technique that enabled them to see fine detail in chromosomes under a microscope.

Everyone has 23 pairs of chromosomes, which are made up of genes that supply hereditary information. The team discovered that some genetic material was missing in chromosome 20 in many patients with the disease.

Van Dyke said the procedure used to identify chromosomes in the study is impractical as a diagnostic tool. He hopes the information will give other scientists a clue to developing less expensive, reliable tests.

"OUR NEXT task, should we decide to accept it, is to look at more of the 2,000 inherited disorders and see if we can find other genetic causes of cancer that have pieces of chromosomes missing in sufficient quantity," he said.

"With this study, we had no inkling of what we saw in it five years ago. We did a pilot that looked good. Then we did a pilot study that didn't look good and we nearly gave up."

With technical problems ironed out, the third try "turned out nice."

THE TEAM sent an "abstract" or summary of its work to a research seminar. By the time they were ready to publish the full results last year, physicians and geneticists working in

the field of thyroid cancer were familiar with the project.

They sent the four-page report, entitled "Chromosome 20 Deletion in Human Multiple Endocrine Neoplasia Types 2A and 2B: A Double-Blind Study," to the New England Journal of Medicine, a widely circulated publication.

"We wanted everyone to see it because we thought it would have broad implications to physicians and geneticists."

THEY ENDED up with a rejection letter and list of criticisms from the publishers.

Van Dyke guessed that the previously published abstract dissuaded publishers from accepting the study.

"It was a controversial project and the people who received the article had sufficient doubts about it and decided not to mess with it."

THE APRIL proceedings of the National Academy of Sciences, another widely circulated journal, published the report.

"It's a great feeling being able to share it with colleagues," he said, adding, "The skeptics tend to bring you back down to earth."

"It could all have gone down the drain. If it does, you go on to the next project."

The key to successful scientific research is designing a project so "no matter what happens you learn something from it," he explained.

VAN DYKE, who is married and the father of two preschool sons, studied genetic variations in fruit flies as an undergraduate student. He earned a doctorate from Indiana University and joined the Henry Ford staff in 1976.

"When I was looking for a graduate school, I looked at programs where I'd be studying barley, pine trees, more fruit flies or humans. I thought humans would be more interesting than pine trees," he chuckled.

WORKING WITH specimens rather than actual cancer patients makes the job less exhausting emotionally, although Van Dyke is constantly aware in his "heart" that every specimen is from a cancer patient.

"I do see a lot of specimens," he admitted. "But I spend a great deal of time working with (coupons) in the area of birth defects and prenatal diagnosis."

"Henry Ford Hospital is no ivory tower."

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(F54)



Daniel Van Dyke and a colleague go over some data in their research into thyroid cancer.

## Nutrition career program set

Persons considering a career in dietetics or nutrition are invited to learn more about Mercy College's program by attending a Dietetics Career and Program Information Session at 7 p.m. Thursday, Aug. 23, in the college's conference center.

Faculty members and admission counselors will be available to explain Mercy College's two-and-four year dietetics programs, clinical experience opportunities, admission procedures and requirements, and financial aid. A slide presentation about careers in dietetics will be shown during the session. A counselor from the college's Career Planning and Placement Office will

also be available to answer questions.

Mercy College offers both a two-year associate of science degree for dietetic technicians and a four-year bachelor of science degree for dietitians. Both programs guarantee students the opportunity to work with patients.

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For further information, call the College Admissions Office at 599-6030.

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