## Cancer clues fetched from canines

Man shares more with his best friend the dog than mere companionship: they share a similar lifetime risk and incidence of many cancers. A comparison of tumor tissues now indicates that some cancers bear identical genetic abnormalities and molecular pathogenesis in humans and canines (*Chromosome Res.* **16**, 145–154; 2008).

"We have discovered that not only do some cancers appear the same in both species, [but also] the molecular pathology is genetically identical in [several] very well characterized blood cancers," says study author Jaime Modiano, a professor of comparative oncology at the University of Minnesota Cancer Center and College of Veterinary Medicine in Minneapolis.

For example, Modiano and his co-author Matthew Breen at North Carolina State University in Raleigh, North Coralina discovered that one well-known mutation called the Philadelphia translocation, found in human chronic myelogenous leukemia, is also seen in the canine form of this illness.

The work is part of an effort to determine whether pet canines may help provide insight into human diseases in ways that complement research in other animal models. Researchers say this approach takes advantage of a number of factors that are unique to pet dogs, such as their spontaneous development of cancers while living in the same environment as humans.

Modiano notes that purebred dogs are genetically homogenous, which means researchers can track certain breed-specific heritable factors that influence risk and outcome of the cancers. Moreover, over the course of evolution, the dog and human genomes seem to have conserved some of the same genetic changes that have similar effects on risk of cancer and other diseases in both species.

"I am excited about Modiano's observations," says David Ringer, scientific program director of the American Cancer Society in Atlanta. "Because dogs and humans share common evolutionary conservation of chromosomal breakpoints, or 'hotspots', dogs may represent a closer model to humans of certain diseases than other animals," he says. "It is not far-fetched to wonder whether other fragile genetic sites in dogs may lead us to some in humans that are currently unknown, but which may connect us to other human diseases," he adds.

*Vicki Brower, New York*

## Scaled-up self-experimentation proposed

Sometimes they are depicted as crackpots, sometimes as maverick geniuses, but scientists have always experimented on themselves. Now a British biotech entrepreneur named William Bains is proposing that self-experimenters should form collectives, pooling resources to make their findings more acceptable to the mainstream scientific community.

Bains, who also lectures on the business of biotechnology at the University of Cambridge, UK, believes that the high costs and red tape associated with clinical trials have forced pharmaceutical companies to become increasingly conservative in the treatments they will test—leaving radical but potentially effective therapies out in the cold. "From a European biotechnology standpoint, the interest from commercial enterprises in funding anything really new has just completely dried up," he says.

A radical alternative to conventional clinical trials, which he proposed in a paper published in April, is to have people who are willing to experiment on themselves band together and form what he calls 'biomedical mutual organizations' (BMOs) (*Med. Hypotheses* **70**, 719–723; 2008). These collectives would pool resources to provide their members with more test subjects (each other), greater analytic capacity and access to more novel therapies, Bains claims.

He believes that the bête noire of individual self-experimenters—the placebo effect—would be less of a problem in a group, which could in theory mount a properly controlled trial. However, John Saunders, who chairs the UK's Royal College of Physicians' committee on ethical issues in medicine, is doubtful. "I'm not convinced that [the BMO members] would be happy to randomize themselves between treatment and placebo conditions," he says. "They would be motivated toward taking the new agent; that's almost the reason for joining the BMO."

Reuters/Stringer Australia

**Self-experimenter:** Nobel Laureate Barry Marshall

There are other potential obstacles, too, though Bains doesn't consider them insurmountable.

For example, he says, "if you are using this approach for really radical therapy, what do you do if it goes wrong, and who picks up the tab for the consequent costs?" He hopes that the discussion stimulated by his paper will throw up some possible solutions.

*Laura Spinney, London*

## Harsh spotlight falls on Vytorin

It was hard to miss the headlines out of the recent American College of Cardiology meeting in Chicago: Vytorin, the blockbuster cholesterol drug combination from Merck and Schering-Plough, had failed to perform any better than a much cheaper generic medication (simvastatin alone) at fighting plaque buildup in arteries in a randomized, double-blind clinical trial.

Less widely reported was the release of angry emails sent by the study's principal investigator, John Kastelein, to a Schering-Plough executive last summer. In the emails, Kastelein warned the company against delaying the release of the trial's results into 2008: "You will be seen as a company that tries to hide something […] this starts smelling like extending the publication for no other [than] political reasons and I cannot live with that." Kastelein heads the department of vascular medicine at the Academic Medical Center of the University of Amsterdam in the Netherlands. The emails were made public on 31 March by US Senator Charles Grassley of Iowa, who is investigating the marketing of Vytorin.

Schering-Plough noted in a written statement that at the American College of Cardiology meeting Kastelein "publicly stated that he did not question the motivations or good faith of the company scientists dealing with those issues." It added that "[t]he study took longer to complete than originally anticipated due to unexpected challenges encountered in ensuring the quality of the reading and analysis of the blinded data."

*Meredith Wadman, Washington, DC*