Research Update • Le point sur la recherche

In the news . . .

Radiation: saviour and culprit

Radiation therapy for breast cancer greatly increases the risk of esophageal cancer in the next 10 years, according to a large cohort study involving more than 200 000 US women with previous breast cancer (*Ann Intern Med* 1998;128:114-7). Radiation therapy increased the risk of esophageal squamous-cell carcinoma by more than 5 times and of esophageal adenocarcinoma by more than 4 times. However, the overall number of cases of esophageal cancer was small, and the relation between risk and the dose of radiation received was unknown.

Hepatitis C and lymphoma

Researchers are looking into the possible role of hepatitis C virus (HCV) infection in B-cell non-Hodgkin's lymphoma (*Ann Intern Med* 1997;127:423-8). A recent case–control study compared 3 groups of patients in a US hospital. The first group had this type of lymphoma, a second had other types of hematologic cancer and the third had conditions other than cancer. Twenty-two per cent of the patients with lymphoma had HCV infection, versus 4.5% and 5% of those in the other groups.

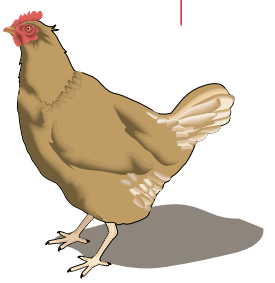
PMS in women's hormones, not their heads

Premenstrual syndrome (PMS) is now definitively proven to result from a physical process: high levels of estrogen and progesterone present during the luteal phase of the menstrual cycle that cause severe physical and emotional symptoms in an estimated 3% of women (*N Engl J Med* 1998;338:209-16). Researchers have been puzzled by PMS because the women affected do not appear to have unusual hormone levels or ovarian dysfunction. In a double-blind, placebo-controlled crossover study, researchers with the US National Institutes of Health found that women with PMS controlled with leuprolide experienced a recurrence of PMS when given estradiol *or* progesterone. Before this experiment, estrogen had not been implicated in PMS. The researchers believe that PMS is an abnormal physical response in some women to normal hormonal changes. In an accompanying editorial (*N Engl J Med* 1998;338:256-7), Dr. Joseph Mortola questions the American Psychiatric Association's psychiatric diagnosis of PMS, which implies that it is an affective rather than physical disorder.

Alarm bells over plummeting MRC funds

The decline in Medical Research Council of Canada (MRC) funding of basic medical research is causing an outcry in universities. Dr. Michel Bergeron, president of the Canadian Society for Clinical Investigation and chair of the Division of Microbiology at Laval University, says Canada's failure to support biomedical and clinical research adequately "is a mystery to me." Writing in the February 1998 issue of *Clinical and Investigative Medicine*, Bergeron states that the budget of the MRC has dropped 10% over the last 7 years, and 24% after adjustment for inflation. All other G7 countries except Italy spend from 2.2% to 2.8% of GDP on research and development. Canada spends just 1.5%, according to an article in the Aug. 1 issue of *Nature*. In a recent news release, the University of British Columbia complained that funding for research from the MRC this year has dropped to less than one-third of the amount received last year.

Composite of a killer



The Hong Kong "bird flu" that infected 13 people and caused 4 deaths last year has now been characterized (*Science* 1998;279:393-6). Dubbed A/Hong Kong/156/97, the virus was isolated from its first victim, a 3-year-old boy who died of its effects. This flu is one of many that affect poultry and waterfowl, but most do not jump directly to humans; instead, they mix with human flu viruses in an intermediate host, such as pigs. However, this virus has genetic "inserts" that code for extra amino acids located next to a crucial spot where cellular enzymes break apart the protein coat of the virus, allowing it to infect cells. This may allow the virus to go beyond the respiratory and digestive systems, attacking tissues in the heart, brain and blood vessels.