

maturity—genital microbiologist Sharon Hillier of the University of Pittsburgh and 13 colleagues examined more than 10,000 pregnant women for signs of bacterial vaginosis (BV), a condition in which the benign lactobacilli normally present in the vagina are replaced by more virulent species (see graph). The researchers found that subjects who were diagnosed with BV—16% of the total—were 40% more likely than their peers to give birth prematurely, even after other risk factors such as smoking were taken into account.

These results were given added weight by the other *NEJM* study, conducted by obstetrician and gynecologist John Hauth and four co-workers at the University of Alabama, Birmingham, who looked into the effect of treating these infections with the antibiotics metronidazole and erythromycin. In a group of mostly African-American women—who have a higher-than-average risk of giving birth prematurely—the treatment reduced the rate of preterm delivery among infected women to 31%, as opposed to 49% among infected women receiving a placebo. The results imply, says MacGregor,

that BV “should be treated if identified in any pregnant woman.”

Work by microbiologist Ruth Kunds in of the Brigham and Women’s Hospital (BWH) in Boston suggests, however, that pregnancy may be too late to start treatment. Kunds in and three colleagues examined placentas from 647 women who had given birth to preterm, low-birthweight babies. The most common micro-organism, found in 28% of the placentas, was the sexually transmitted bacterium *Ureaplasma urealyticum*. Women harboring *Ureaplasma* in the placenta were almost 14 times more likely to have undergone premature labor, the group found.

Kunds in concludes that overall, uterine infections with *Ureaplasma* far outweigh vaginosis as a cause of prematurity. “The vaginal flora,” she says, “are not as influential as what goes on in the uterus.” But because tetracyclines, the antibiotics most effective against *Ureaplasma*, cause defects in fetal vertebrae and teeth and therefore cannot be used during pregnancy, “both father and mother have to be screened and treated simultaneously prior to conception,” Kunds in says.

One longtime critic of the infection-prematurity connection, Paul MacDonald, a perinatal researcher and director of the Green Center for Reproductive Biology Sciences in Dallas, isn’t convinced by these studies. MacDonald argues that they show only an association between infection and prematurity, not a direct cause-and-effect relationship. “These women may be at increased risk of preterm delivery for reasons totally independent of infection,” such as abnormalities in the fetal brain that may generate biochemical signals initiating labor prematurely, says MacDonald.

But many researchers think these studies have illuminated part of the picture, although how infections interact with other risk factors, such as ethnic background and smoking, remains unclear. Says Shirley Driscoll, former director of women’s and perinatal pathology at BWH, “To identify risk factors and to sort out which are instrumental, singly and in synergy, is terribly complex.” But, she adds, “It’s nice to see progress being made.”

—Wade Roush

## FRANCE

# Cancer Charity Falls Afoul of Audit Court

PARIS—The future of France’s Cancer Research Association (ARC), one of the country’s best known charities and a major funder of research, has been cast into doubt by the leaking of an official report into its finances. According to press accounts, the report, which has been passed to France’s public prosecutor, accuses ARC of spending less than one third of its income on research, and it even suggests financial mismanagement. The huge scandal this has provoked in France has also prompted a war of words between ARC’s autocratic president, Jacques Crozemarie, and senior cancer researchers. Crozemarie has threatened to wind down the charity, while Laurent Schwartzberg, a former government minister and prominent cancer researcher at the Paul-Brousse Hospital in Villejuif, told the leftwing Paris daily *Libération* that Crozemarie “believes himself the master of everything.”

Crozemarie is closely associated in the public mind with ARC. He makes televised appeals for cash, and advertisements in the press are accompanied by a signed photograph. Together with the National Cancer League, ARC has traditionally provided a substantial proportion of France’s cancer research funding. But ARC, like many medical charities, has suffered a drop in income over the past decade as many donors have shifted their generosity to AIDS research.

The Cour des Comptes, the state auditing court that investigates how public money is spent, began looking into ARC’s affairs after

reports 2 years ago that too much money was spent on administration and advertising. At the time, Crozemarie dismissed the allegations. The issue again hit the press last week when *Libération* obtained a leaked copy of the report and published some of its findings, which were later confirmed by the court. According to the paper, the Cour des Comptes said that only 27.2% of ARC’s funds, or \$25 million, was spent funding research in 1993. ARC refuted this figure in a statement, insisting that the true figure was 45%. When approached by *Science*, ARC declined to make further comment.

The court also said last week that it had passed the report to the public prosecutor’s office for possible legal action, because the report alleges that contractors to ARC, such as the public relations company handling its promotion, had “overinvoiced,” or charged well over the real price for equipment and services. The court said a mill supplying paper for ARC publicity material took a profit of 43.8% on the deal, while an intermediary added another 25.5% in commission. According to *Libération*, the court also uncovered the fact that Crozemarie had worked as a private consultant for the intermediary.

At an ARC press conference last week,

Pierre Tambourin, director of life sciences at France’s research agency, the CNRS, said the report revealed “shocking self-distribution of funds” for uses other than research. Crozemarie responded in the press by saying that he had been unaware that the company concerned had dealings with ARC. “Frankly, I feel guilty about nothing,” Crozemarie told the newspaper *Journal du Dimanche* last Sunday. “Let the justice authorities look into these stories of over-invoicing. I was not aware of them.”

At an emergency ARC board meeting held last week, Crozemarie’s authority was significantly reduced, although he retains his title. The board established a new commission—consisting of five researchers, including Schwartzberg, and a lawyer but not including Crozemarie—which will temporarily manage ARC while it prepares a reply to the court’s charges. After the meeting, Crozemarie said that ARC would not campaign for funds this year, adding that he might hand over what remains of the 33-year-old charity to the Fondation de France, an independent body that oversees large donations to research charities.

—Julian Nundy

Julian Nundy is a writer in Paris.



Eye of the storm. ARC President Jacques Crozemarie.