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Labouring toward mis-conception

by Suzette Chan

In the near future, pregnancies may be prevented in the same way measles are prevented: by vaccination.

Theories and studies in the field of reproductive immunology are presented in the book *Immunology of Reproduction* (Oxford University Press, 1983), edited by Dr. Thomas J. Gill of the University of Pittsburgh and Dr. Thomas Wegmann of U of A's Department of Immunology.

Dr. Wegmann explains that there are three major areas of concern in the field. First, biologists must understand maternal-fetal relationships, such as why the fetus is usually not rejected by the mother's body. The second consideration is with the immunology of sex cells or gametes: is infertility a consequence of an extraordinarily immune egg or sperm? After these questions are carefully considered, biologists can ask, "Can we immunize against fertility?"

Wegmann says there are two viable approaches to reproductive immunology.

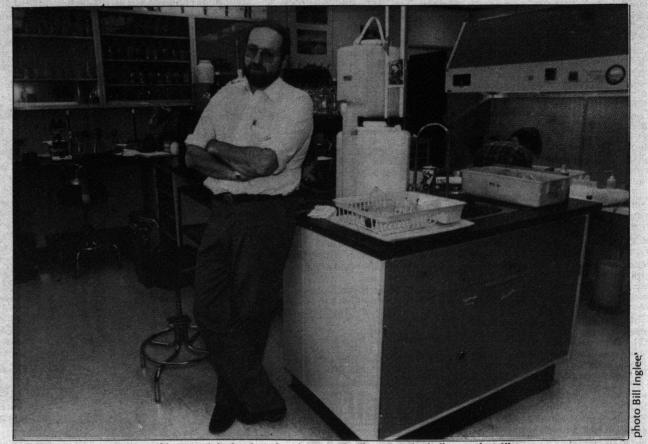
The first is to vaccinate against the actual gamete. Wegmann says that a vaccine which would supress sperm production would "probably be undesirable," and a vaccine against the egg "could damage the ovaries."

Subsequently, the most widely accepted possibility would be to inject the woman with an anti-sperm vaccine. In this case, biologists must specify which component of the sperm should be affected and which routes the woman should be immunized through (the mucousal immune system is a likely candidate). The second approach would be to vaccinate

The second approach would be to vaccinate against the production of certain hormones in early pregnancy.

These hormones signal to the ovary that an egg has been impregnated and requires other hormones to sustain the pregnancy. Dr. Wegmann points out that the major draw-back of this approach is that the anti-bodies needed must function highly specifically, but the higher the degree of specificality, the lower the degree of the vaccine's strength.

He says "overpopulation is the root problem" of pollution, world poverty and hunger. The effectiveness, specificality, and relative medical and moral tidiness of reproductive immunology recommends it as an appropriate control over population.



Dr. Thomas Wegmann is working towards the day when he can ask, "have you had all your shots?"

The possibility of reproductive immunology has already become a political tool.

Several years ago, Indian Prime Minister Indira Gandhi tried to control overpopulation by bribing men with transistor radios and the like to undergo vasectomies, but the unpopular move eventually lost her the election.

Now, back in power, Ghandi's government is "solely devoted to vaccination" as a cure for overpopulation, and has asked for American medical expertise. On the other side of the coin, Wegmann suggest that spontaneous abortions could possibly be prevented by adapting immunosuppressives to counter bodily substances working against pregnancies.

The field of reproductive immunology is so new that there has been no public reaction to it, but Dr. Wegmann is optimistic, speculating that the vaccination would probably be "acceptable to most people."

Experimental vaccinations of animals have proven to be successful. Highly limited anti-hormone vaccinations are being tested in Thailand.



