

# Researchers develop novel, woman controlled contraceptive product

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Despite the availability of numerous effective birth control methods, more than 40 percent of pregnancies worldwide are unintended. In addition to contributing significantly to population growth, unintended

pregnancies can have pronounced adverse effects on maternal physical, mental and economic wellbeing.

Researchers from Boston University School of Medicine (BUSM) and ZabBio (San Diego, CA) have developed an anti-sperm monoclonal antibody, the Human Contraception Antibody (HCA), which they found to be safe and possess potent sperm agglutination (clumping) and immobilization activity in [laboratory tests](#).

"HCA appears to be suitable for contraceptive use and could be administered vaginally in a dissolvable film for a woman-controlled, on-demand method birth control method," explains senior author Deborah Anderson, Ph.D., Professor of Medicine at BUSM.

To evaluate its suitability as a topical contraceptive, the researchers tested HCA over a wide range of concentrations and under different physiologically relevant conditions in vitro. Specifically, HCA was mixed with sperm from normal, healthy volunteers and then tested. Within 15 seconds, sperm became immobilized and firmly stuck together. The researchers also found that HCA did not cause vaginal inflammation in lab tissue culture tests.

Due to its effectiveness and safety profile, HCA may address current gaps in the contraception field. "HCA could be used by women who do not use currently available contraception methods and may have a significant impact on global health," said Anderson. To that end, HCA is currently being tested in a Phase I Clinical Trial.

The researchers also believe HCA could also be combined with other antibodies such as anti-HIV and anti-HSV [antibodies](#) for a multipurpose prevention technology, a product that would both serve as a contraceptive and prevent sexually transmitted infections.

**More information:** Gabriela Baldeon-Vaca et al, Production and characterization of a human antisperm monoclonal antibody against CD52g for topical contraception in women, *EBioMedicine* (2021). [DOI: 10.1016/j.ebiom.2021.103478](https://doi.org/10.1016/j.ebiom.2021.103478)

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