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We use ACH² funding to develop a reliable vaccination regimen of dairy cows with HIV-1 Env oligomers that produces high titers of anti-HIV neutralising antibodies (NAb) in bovine colostrum. We have performed an early proof-of-principle study that shows that the colostrum NAb from these vaccinated cows is able to prevent infection by diverse strains of HIV-1 in vitro. Bovine colostrum Ab product is considered safe when taken orally, and has favourable properties for use when formulated into a topical microbicide for vaginal or rectal use. Hyperimmune colostrum represents an inexpensive source of very large quantities of HIV-NAbs, and uses established dairy manufacturing protocols that are potentially transferrable to developing countries. Vaccinating cows with HIV Env gp140 avoids the problem of HIV mimicry of human self-antigens and therefore viral avoidance of Ab responses due to self-tolerance mechanisms. This process is a commercially viable production process yielding a polyclonal NAb product that can inactivate HIV. Partners, Immuron Ltd, and The University of Melbourne patented the intellectual property for this technology. The intellectual property was vested in a new start up company, Reef Pharmaceuticals, that has taken the patent protection to the national phase. Reef Pharma has strong links to the technology, production and processing partnerships required to move this product to a human market.