

**SPERM SUPPRESSION AND CONTRACEPTIVE PROTECTION PROVIDED BY  
NORETHISTERONE ENATATE (NET-EN) COMBINED WITH TESTOSTERONE  
UNDECANOATE (TU) IN HEALTHY MEN**

**Principal Investigator:** Prof. Deoki Nandan, Director, NIHF

**Investigators (Study Team):** Dr. M.M.Misro, (Nodal) Prof. Deptt. of RBM  
Dr. T.G.Shrivastav, Prof., Deptt. of RBM  
Dr. Gyan Singh, CMO, Deptt. of RBM  
Dr. D.Sinha, SMO, Deptt. of RBM  
Dr. Chetna, MO, Deptt. of RBM  
Dr. Geetanjali, MO, Deptt. of RBM

**Date of Submission to PAC:** 1/2009

**Duration of the Project:** 3 years from the date of Initiation (Jan 2010)

**General Objective:**

To develop a safe, effective, reversible and acceptable hormonal contraceptive regimen for men.

**Specific Objectives:**

1. To study the levels of contraceptive protection provided by continued administration of NET-EN + TU every 8 weeks for a period of 6 weeks.
2. To study the level and rate of suppression of spermatogenesis induced by a regimen of NET-EN + TU administered every 8 weeks, as indicated by the proportions of participants who are rendered azoospermic or severely oligospermic (sperm concentration  $\leq$  1 million/ml) in the 24 weeks of suppression phase.

Other secondary end points-

- a. Maintenance of suppression of spermatogenesis by the combined regimen.
- b. Alterations in circulating concentrations of steroid and peptide hormones as a result of administration of this regimen.
- c. Safety and behavioural aspects.

**Methodology:**

After informed consent has been provided by each male volunteer and his female partner, he will enter a Screening/Enrollment Phase and will undergo two or, if needed, three semen analyses, one blood draw, complete physical and andrological examinations, one urinalysis, and a digital prostate examination; female partners will be evaluated for normal reproductive function and pregnancy.

When screening and baseline procedures are completed, eligible couples (n = approximately 400) will be enrolled and the male participant will enter the Suppression Phase and will receive:

NET-EN 200 mg + TU 1000 mg IM every 8 weeks for up to 26 weeks (up to 4 injection visits, 2 injections at each visit).

During this time, couples will use alternative contraception and the male partner will undergo regular semen analyses.

Participants will be entered into the Efficacy Phase (up to 56 weeks) provided that the male partner provide 2 consecutive semen samples demonstrating sperm concentrations <1 million/ml and continue to receive injections of

NET-EN 200 mg + TU 1000 mg IM every 8 weeks for at least 6, but no more than 7 injection visits, 2 injections at each visit.

During this phase, participants enrolled in the study will be asked to rely only on the injections for contraception.

When this phase of the trial is complete, male participants will no longer receive injections, but will be regularly followed until their semen concentrations return to at least 20 million/ml or to a level generally considered fertile as defined by current WHO recommendations. Alternative contraception will be resumed.

Participants will be asked to provide information on sexual activity and the acceptability of the hormonal regimen at scheduled times throughout the study.

### **Progress:**

- After the constitution of the new study team, initiative was taken to get the approval from regulatory bodies like office of Drug Controller General of India and ICMR.
- The project was initially received the approval from Institutional Review Board NIHFWS in February 2009.
- The budget was revised and approved on 20<sup>th</sup> April 2009.
- Following clearance from the MOHFW, the project was submitted for DCGI and HMSC clearance in April 2009 from ICMR.
- The project received the DCGI clearance on 7/09/2009 and subsequently HMSC approval on 30/09/2009 from ICMR.
- The study drugs has since been received on 15<sup>th</sup> December 2009. 60 % of the budget (approximately 27.96 lakhs) for the year 2009-2010 has also been received.
- The insurance amount Rs.386050/- has been transferred to United India Insurance Co which is tied up for providing the insurance cover for the subjects enrolled for the study.
- The subject inclusion will start soon following go-ahead by sponsors (WHO/CONRAD).

**Summary of the results so far:** Nil

### **Any other comments:**

Steps are being undertaken to initiate the work and the process of subject selection.

### **Budget**

Budget for the purpose is sponsored by WHO /CONRAD.