I. INTRODUCTION

Cow has been considered sacred and is the center to the ethos of Indian culture since time immemorial. Cow urine was commonly used to prevent and cure some of the ailments especially by the rural folk from ages, but it was pushed backstage as the western medicine developed. In some areas of the world, it is still being practiced as a folk treatment. Presently, in many areas of the world, cow urine therapy is opening new vistas in the treatment and prevention of many disease conditions. However, much is not known about the urine therapy, the components present in the urine and their functions.

Cow urine is recognized as water of life (“Amrita”, which means beverages of immortality) in the sacred Hindu writing (oldest books in Asia) called as Vedas. Cow urine has many beneficial properties particularly in the areas of agriculture and therapeutics. During the scientific investigation, it was observed that the urine of Indian cows has got medicinal properties, while these are absent in the urine of crossbred or exotic cows or buffaloes. Recent findings showed that the cow urine enhances the immune status of an individual by activating the macrophages and augmenting their phagocytic activity as well as bactericidal property (Dhama et al., 2005b).

In India, drinking of cow urine has been practiced for thousands of years. According to Sushruta Samhita and Ayurveda Samgraha for medicinal and other purposes, the cow urine is preferred compared to the urine of other animals. The use of Gomutra (cow urine) in India can be traced back to the Vedic times and probably it was used among the pre-Vedic period also. Several medicinal properties of cow’s urine have been mentioned and are known to cause weight reduction, cure leprosy, reverse certain cardiac and kidney problems, treat indigestion, stomachache and edema etc. (Kaviratna and Sharma, 1996).

Cow urine is traditionally used in Nepal for various purposes, including religious rituals, medical applications and to control insects (Subedi and Vaidya, 2003). Cow urine therapy is still widely practiced by the traditional medicine practitioners of Buddhist culture in Myanmar (Awale et al., 2006).

The urine of cow contains some beneficial elements, which fulfill the deficiency of elements and reduce the increased elements in the body. This quality of the urine is considered to help in curing of most
incurable diseases. Cow urine contents are water 95%, urea 2.5%, minerals, salts, hormones and enzymes 2.5% (Bhadauria, 2002).

The analysis of cow urine has shown that it contains some of the essential elements like, nitrogen, sulphur, phosphate, sodium, manganese, carbolic acid, iron, silicon, chlorine, magnesium, calcium salts, vitamins A, B, C, D and E, minerals, lactose, enzymes, creatinine, hormones, citric, titric, succinic and gold acids. Thus the consumption of cow urine maintains the balance of these substances and cures incurable diseases (Bhadauria, 2002; Jain, 2006).

Most of the urine related medicines are prepared by distilling urine and/or collecting vapors. The distillate of urine known as ‘ark’ used in treating many diseases including cancer, AIDS, diabetes mellitus and skin problems. Pharmacologically cow urine is known to have antibacterial, antifungal, antiviral, antineoplastic, anticonvulsive and antispasmodic properties. When cow urine therapy has given to those suffering from flu, sinusitis, allergies, colds, rheumatoid arthritis, aging, enteritis, constipation, edema, hepatitis, leprosy, obesity, gastric ulcer, depression, heart disease, hypertension, burns, asthma, tetanus, Parkinson’s disease, morning sickness, fever, eczema, fatigue, etc., some improvement in the condition has been reported. The urine of cow is bitter, pungent, piquant, spicy, warm and full of all the five types of elixirs. There is evidence that the urine of the cow works as best appetizer and it has been experimentally proved that the Indian cow urine is most effective when compared to the urine of exotic cows. Thus it is considered as a universal medicine for mankind and cures various sorts of disorders (Saxena et al., 2004).

In recent years, lot of interest has been generated among scientific community to develop or scientifically validate the Indigenous Technical Knowledge (ITK) as an alternate therapeutic or preventive approach using cow urine or its products. Several scientists from different laboratories of the Indian subcontinent like CSIR, AIIMS, GB Pant University, IVRI and certain NGOs are also working on different medicinal properties of cow urine. In fact there are several medicinal preparations available with NGOs, who are also marketing ‘cowpathy’ drugs under FDA license. Several students of Masters and Doctoral degree programmes are working on the medicinal properties of cow urine and other products of cows’ urine (Chauhan and Singhal, 2006).
Since there is ample experimental and clinical evidence available supporting the use of cow urine in treatments, the study was undertaken with the following objectives:

a. To analyse the physical and chemical properties of Deoni cows’ urine.

b. To study the pharmacological activities of pregnant and non-pregnant Deoni cows’ urine in vivo and in vitro and

c. Safety evaluation of pregnant and non-pregnant Deoni cows’ urine using laboratory animals viz. rats and mice.