The present study was carried out to study the pharmacokinetics of hormones (progesterone and estrogen (estradiol and estrone)) in postmenopausal females of India.

For this purpose demographic data analysis of PMF was carried out which includes height, weight and BMI measurement and various laboratory parameters estimation like hematological parameters, biochemical parameters, lipid profile and renal parameters. Our study revealed that, the laboratory parameters and symptoms of post menopause are within the clinical consideration for treating most of the PMF in India that were reported from various countries in research journals. A validated method for estimation of hormone was developed individually for estrogen and progesterone using LC-MS-MS technique which was found to be rapid, simple and more sensitive for estimation of these hormones. During the comparison of estradiol, estrone and progesterone levels in pre menopausal female and PMF it was observed that the estradiol, estrone and progesterone levels were low in PMF as compared to the pre menopausal females. The pharmacokinetic study for estrogen and progesterone in PMFs showed increased levels of hormones after treatment with micronized progesterone capsule and estrogen tablet respectively. As well as the formulation treatment was well absorbed, tolerated with negligible adverse drug reactions.