**ABSTRACT**

**Aim**

The current work was intended to the pharmacological screening and development of polyherbal formulations using some conventional Indian therapeutic plants for inflammation suppressing and analgesic activity. The study includes preliminary investigations of plant extracts and screening for analgesic, anti-pyretic and anti-inflammatory activity, further formulations were prepared using extracts, then assessed for swelling suppression action.

**Method**

Three plants were selected; *Lagenaria siceraria, Ocimum gratissimum* and *Moringa oleifera* for analgesic, anti-pyretic and anti-inflammatory activity. After authentication, plant parts were subjected to preliminary phytochemical investigations followed by pharmacological screening of selected extracts to assess their effectiveness for the control of pain, fever and inflammation. Paracetamol, pentazocain and diclofenac sodium were used as standard drug for the anti-pyretic, analgesic and anti-inflammatory activity.

Two different types of dosage forms, i.e. the conventional semisolid dosage form and transdermal patches were prepared using a mixture of different extracts. Different evaluation parameters are performed on prepared dosage forms to assess physical stability followed by pharmacological screening. The prepared semisolid formulation and transdermal patches were finally subjected to stability test to assess its shelf-life.

**Results and Discussion**

Results obtained from the screening of analgesic, anti-pyretic and anti-inflammatory activity screening indicated that *Lagenaria siceraria, Moringa oleifera* aqueous concentrate and *Ocimum gratissimum* methanolic extract, have significant analgesic and anti-inflammatory activity while all the extract does not show any significant anti-pyretic activity except methanolic extract *Ocimum gratissimum* which showed moderate anti-pyretic activity.
Both polyherbal formulations (conventional semisolid dosage form and transdermal patch formulation TP-4) showed significant inflammation suppressing and were significantly equivalent with that of diclofenac sodium effect.

**Conclusion**

From the outcomes of painkilling, anti-pyretic and inflammation reducing activity screening studies, it can be determined that *Lagenaria siceraria, Moringa oleifera* aqueous extract and *Ocimum gratissimum* methanolic extract, have significant analgesic and anti-inflammatory activity while all the extract does not show any highly significant anti-pyretic activity.

From the research it can be determined that polyherbal semisolid preparation TSF-3 and polyherbal transdermal patch formulation TP-4 can be effectively formulated into a suitable dosage form with the added benefit of no side effects to control and cure of chronic ailments like inflammation and pain.