

A Scientific Method of Drug Development Based on Ayurvedic Bhaishajya Knowledge

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Abstract : An attempt is made in this study to evolve a drug development modality based on classical Ayurvedic knowledge base as well as on modern scientific methodology. The present study involves (a) identification of a specific ailment condition, (b) the selection of a polyherbal formulation, (c) deciding suitable extraction procedure, (d) confirming the efficacy of the combination by in-vitro trials and (e) fixing up the recommended dose. The ailment segment selected is arthritic condition. The selected herbal combination is Kunturushka, Vibhitaki, Guggulu, Haridra, Maricha and Nirgundi. They were selected as per Classical Ayurvedic references, Authenticated as per API (Ayurvedic Pharmacopeia of India), Extraction of each drug was done by different ratios of Hydroalcoholic menstrums, Invitro assessment of each extract after removing residual solvent for anti-inflammatory, anti-arthritic activities (by UV-Vis. Spectrophotometer with positive control), Invitro assessment of each extract for COX enzyme inhibition (by UV-Vis. Spectrophotometer with positive control), Selection of the extracts was made having good in-vitro activity, Performed the QC testing of each selected extract including HPTLC, that is the in process QC specifications, h. Decision of the single dose with mixtures of selected extracts was made as per the level of in-vitro activity and available toxicology data, Quantification of major groups like Phenolics, Flavonoids, Alkaloids and Bitters was done with both standard Spectrophotometric and Gravimetric methods, Method for Marker assay was developed and validated by HPTLC and a good resolved HPTLC finger print was developed for the single dosage API (Active Pharmaceutical Ingredient mixture of extracts), Three batches was prepared to fix the in process and API (Active Pharmaceutical Ingredient) QC specifications.

Keywords : drug development, antiinflammatory, quality stardardisation, planar chromatography

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