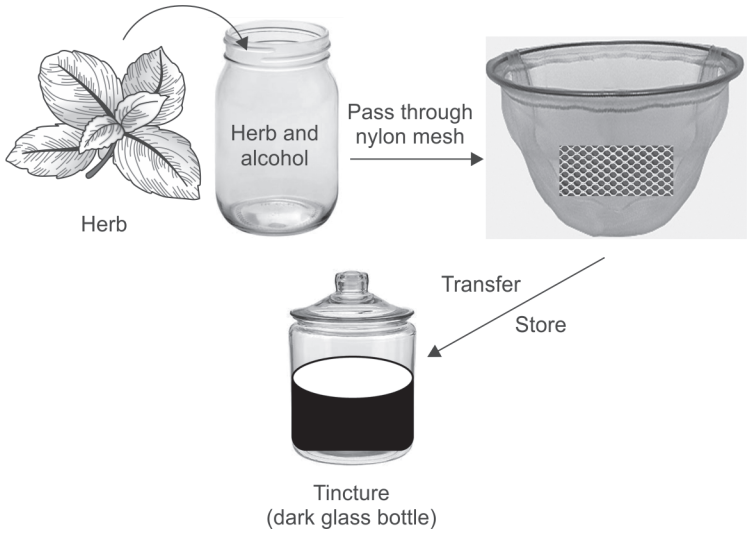

Fig. 1.3: Diagrammatic representation of preparation of tincture

Licorice root	4 parts
Oplopanax (fresh)	2 parts
Panax quinquefolium	1 part

Mix as tinctures. Dose: 60–90 drops up to four times a day. For morbid depression with congestion and dry mucosa.

Infusion (Fig. 1.4)

Infusion is the process of extracting chemical compounds or flavors from plant material in a solvent such as water, oil or alcohol, by allowing the material to remain suspended in the solvent over time. Fresh infusions are prepared by macerating the crude drug for a short period of time with cold or boiling water. These are dilute solutions of the readily soluble constituents of crude drugs.

GASTROINTESTINAL FORMULATION

Laxative Tea

Psyllium seed	3 parts
Liquorice	3 parts

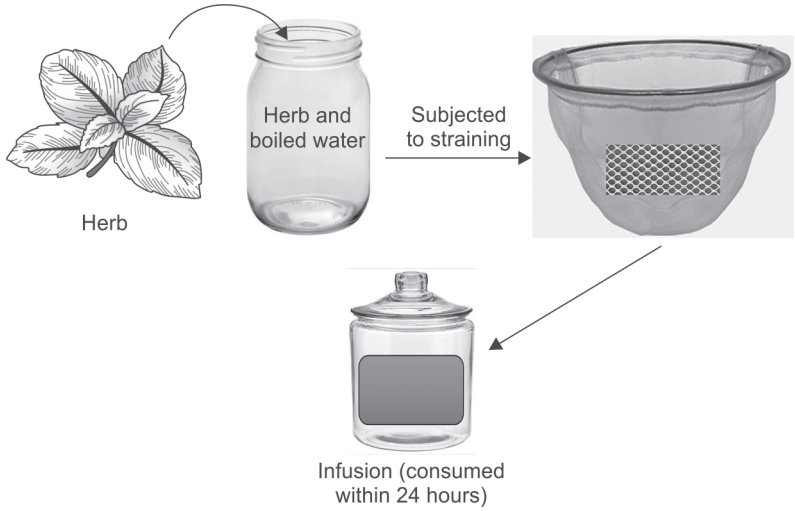

Fig. 1.4: Diagrammatic representation of preparation of infusion

This oil is well-suited for those who physically exert themselves and push their bodies. Absorbs quickly into the skin and fast-acting.

Rosemary Herbal Oil

Rosemary oil has traditionally been a key ingredient in massage oils, and hair care recipes. It contains rosemary oil, organic rosemary leaves, organic olive oil, and vitamin E oil.

HERBAL CREAMS

Creams are semi-solid emulsions of oil and water. They are divided into two types: Oil-in-water (O/W) creams which are composed of small droplets of oil dispersed in a continuous water phase, and water-in-oil (W/O) creams which are composed of small droplets of water dispersed in a continuous oily phase. Oil-in-water creams are more comfortable and cosmetically acceptable as they are less greasy and more easily washed off using water. Herbal creams normally contain the herbal material in either finely sifted form or incorporated as an extract. Creams normally contain antimicrobial preservatives due to the presence of water in the base and may have a relatively shorter shelf life compared to ointments. Herbal creams are those which have a hydrophilic base. If the base is purely hydrophobic, then the preparation must be qualified as an ointment.

Marketed Formulations

Himalaya Herbals Fairness Cream

Earthbound Organics Jojoba and vitamin E cream.

HERBAL SOAPS SHAMPOOS AND BATHS

A soap is a salt of a fatty acid usually made by saponification of a fatty acid with caustic soda or a suitable base. Herbal soaps have the herbal materials incorporated in the detergent base. These herbal materials normally have an antifungal and antibacterial effect on the skin and helps in cleansing of the skin. Herbal soaps are normally meant for microbial skin conditions such as dandruff, eczema, ringworm and boils. Soaps have a relatively longer shelf-life when preservatives or antioxidants are added. Herbal shampoos are cosmetic preparation meant for cleaning hair and scalp for removal of dirt, oils, drandruff and environmental pollutions. Herbal baths are normally prepared by the addition of fresh or dried herbs to bath water. An infusion or tincture of an herbal material may also be added to bath water. Herbs normally used are aromatic in nature and may contain essential oils that may help in relaxation or stress relieve.

Examples

Neem Shampoo

Gram flour	1 kg
Sandal wood powder	250 gm
Neem leaves powder	160 gm
Shikakai powder	1 kg

Orange Shampoo

Methi	250 gm
Shikakai	1 kg
Orange peel	q.s.

MODERN HERBAL FORMULATION

Tablets (Fig. 1.8)

Tablets are unit solid dosage forms containing one or more medicaments intended for oral administration. The mode of administration is swallowing, chewing or by dissolving and dispersing in water before administration. Tablets are usually solid, right circular cylinder, the end surfaces of which are flat or convex and may be available in other shapes—triangular, rectangular, etc.

Herbal tablets are a convenient dosage form and no problems with taste or alcohol are associated with their use. However, tablets contain fixed formulations which cannot be exactly adapted to the needs of the individual patient.

A major potential problem with tablets is the degree of processing required. The minimum processing is required for tablets comprising of powdered herb. Tablets are

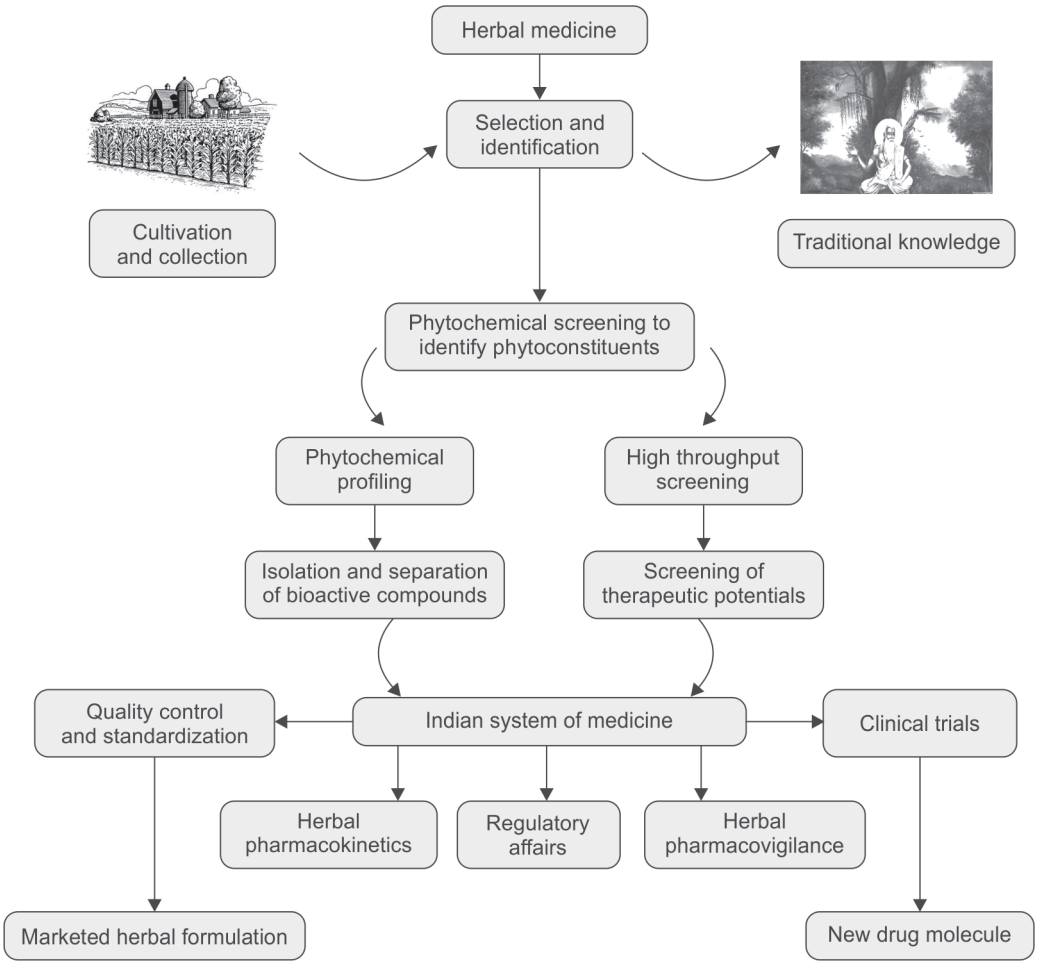

Fig. 1.14: Leveraging approaches for the development of herbal medicine

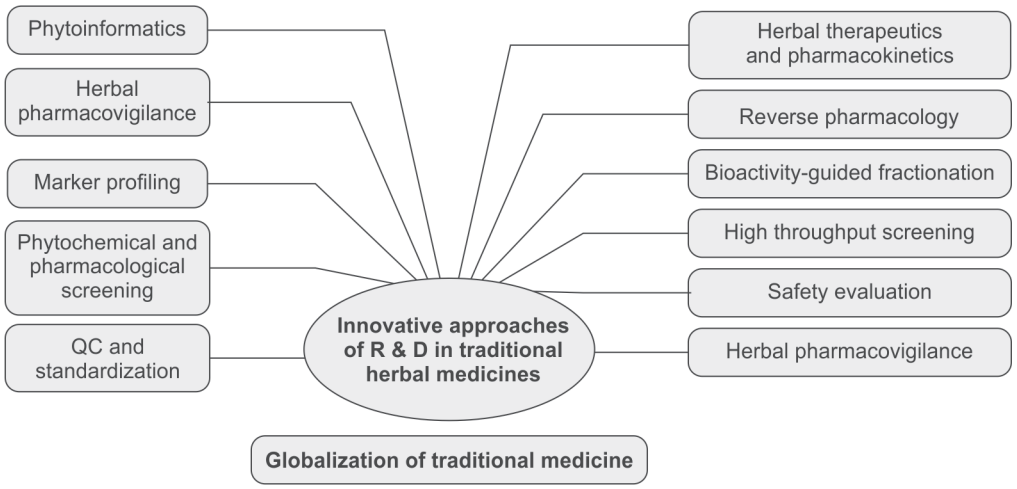

Fig. 1.15: Innovative approaches of R & D in traditional herbal medicines

Table 1.9: Assessment of the drug carrier

Characters	Liposomes	Transferosome	Ethosomes	Microsphere	Nanoparticles	Phytosomes	Nanoemulsions/ microemulsion
Size	0.05–5.0 Mm	0.05–10.0 Mm	0.05–10.0 Mm	1–300 µm	10 to 1000 nm	0.05–5.0 µm	0.01 to 50 µm
Composition	Phospholipids and cholesterol	Phospholipids surfactant	Phospholipids ethanol	Polymers	Polymers	Phospholipids and cholesterol surfactant	Oil phase and aqueous phase
Flexibility	Rigid in nature	High deformability due to surfactant	High deformability and elasticity due to ethanol	Rigid and hard in nature, bigger in size	Small and rigid with hard nature	Similar to liposomes	High deformability (globules)
Mechanism	Diffusion/ fusion/ lipolysis	Deformation of vesicle	Lipid perturbation	Diffusion/ erosion	Diffusion/ erosion	Diffusion/ fusion/ lipolysis	Diffusion/fusion/ deformation of globules
Route of administration	Oral, topical, transdermal and parenteral	Topical and transdermal	Topical and transdermal	Oral, topical, transdermal and parenteral	Oral, topical, transdermal and parenterals	Oral, topical and transdermal	Oral, topical, transdermal and parenteral
Marketed product	VincaXome Vincristine Solid tumors NeXstar, USA				Abraxane Paclitaxel Abraix Bioscience Cancer treatment AstraZeneca USA	Meriva-SR curcumin anti-inflammatory, detoxification, cardiovascular Thorne Research USA	