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# Polyherbal Formulation Concept for Synergic Action: A Review

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## ABSTRACT

Formulations restrain 2 or more than 2 herbs are called polyherbal formulation. Drug formulation in Ayurveda is based on 2 principles: Use as a single drug and use of more than one drug. The last is known as polyherbal formulation. The idea of polyherbalism is peculiar to Ayurveda even though it is tricky to explain in term of modern parameters. The *Ayurvedic* literature *Sarangdhar Samhita* tinted the idea of polyherbalism to attain greater therapeutic efficacy. Polyherbal formulation has been used all around the earth due to its medicinal and therapeutic application. It has also recognized as polyherbal therapy or herb-herb combination. The active phytochemical constituents of individual plants are inadequate to attain the desirable therapeutic effects. When polyherbal and herbo-mineral formulations combining the multiple herbs in a meticulous ratio, it will give an enhanced therapeutic effect and decrease the toxicity. The active constituents used from individual plant are inadequate to provide attractive pharmacological action. There are evidences that crude plant extracts often have greater potency rather than isolated constituents. In traditional medicine whole plants or mixtures of plants are used rather than isolated compounds. Due to synergism, polyherbalism confers some benefits which are not accessible in single herbal formulations. Polyherbal formulations express high effectiveness in numerous diseases with safe high dose. Based on the nature of the interaction, there are 2 mechanisms on how synergism acts (*i.e.*, pharmacodynamics and pharmacokinetic). In words of pharmacokinetic synergism, the capacity of herb to ease the absorption, distribution, metabolism and elimination of the other herbs is focused. Pharmacodynamics synergism on the other hand, studies the synergistic effect when active constituents with similar therapeutic activity are targeted by diverse mechanism of action. The present review encompasses all the significant features of polyherbal formulation.

**Keywords:** Polyherbal formulation, Ayurveda, Active constituents, Pharmacodynamics, pharmacokinetic

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## INTRODUCTION

In the few decades, there has been exponentially growth in the field of herbal medicines. Nature always stands as a golden mark to exemplify the outstanding phenomena of symbiosis. Today about 80% of people in developing countries still relay on traditional medicine based largely on the different species of plants for their primary health care. About 500 of plants with medicinal uses are mentioned in ancient literature and 800 plants have been used in indigenous system of medicine. The various indigenous systems such as Ayurveda, siddha, unani use several plant species to treat different ailments [1-3]. Tyler defines herbal medicines as crude drugs of vegetable origin utilized for the treatment of disease states, often of a chronic nature, or to attain or maintain a condition of improved health. Current demands for herbal medicines have resulted in an annual market of$1.5 billion and increasingly widespread availability. The treatment of injury or disease by plants or plant material, either in the crude or processed state, is known as traditional herbal medicine. The medicinal plants with ethnomedicinal values are currently being screened for their therapeutic potential [4]. Herbal product has been used abundantly over the years in curing several diseases. Natural products and related structures are essential sources of new pharmaceuticals, because of the immense variety of functionally relevant secondary metabolites of microbial and plant species [5]. Herb-herb combinations also known as polyherbal therapy have been used in Chinese medicine practice for thousands of years, yet scientific evidence of their therapeutic benefits is lacking [6]. Drug combination often produces a promising effect in treatment of diseases over a single drug. The concept of drug combination has

been well established in Western medicine and remarkable success has been achieved over the decades. In recent years, drug combination therapies in cancer and infectious diseases have offered new hope to patients [7]. Naturally occurring herbs and herbal ingredients organized into certain formula have been shown to have potential interaction effects. These include mutual enhancement, mutual assistance, mutual restraint and mutual antagonism [8]. In the Ayurvedic system of medicine mainly polyherbal compounds are used for treatment of various infections. The Unani system of medicine is also gaining global acceptance due to the amazing clinical efficiency of the formulations. Although Unani medicines have long been used, there is negligible documented evidence regarding their safety and effectiveness. The lack of evaluation has, in turn, slowed down the development of regulations and legislations [9]. The practice of herbal medicine spread from Asia to Europe. The Greeks are known to have acquired knowledge of it over the period from 468-377 BC. In turn, the Romans learned of it from the Greeks around 100 BC. The Islamic World learned of and began to practice this science around the time the Roman Empire fell, in the 5th century. By the 10th century, the Anglo-Saxon World was practicing herbal science and describing it in writings. Throughout the middle ages, most herbalism was practiced under the authority of the church, which maintained the authority to grow medicinal herbs and to introduce new herbal medicines [10].

## Advantages of polyherbal formulation over single herb

Ayurvedic and herbal medicinal products contain a combination of botanicals; each of these contains a number of chemical compounds that may give the anticipated activity in combination. The increasing interest in the use of plant-based formulations is leading to a fast growing market for Ayurvedic [11]. Herbal medicines are in widespread use and although many believe herbal medicines are safe, they are often used in combination and are drawn from plant sources with their own variability in species, growing conditions, and biologically active constituents. A major hypothetical advantage of botanicals over conventional single-component drugs is the presence of multiple active compounds that together can provide a potentiating effect that may not be achievable by any single compound. Polyherbal formulations have plant-based pharmacological agents which may exert synergistic, potentiative, agonistic antagonistic actions by virtue of its associated diverse active principles themselves. These pharmacological principles work together in a dynamic way to produce maximum therapeutic efficacy with minimum side effects [12]. Based on the nature of the interaction, there are two mechanisms on how synergism acts (i.e., pharmacodynamics and pharmacokinetic) [13]. In terms of pharmacokinetic synergism, the ability of herb to facilitate the absorption, distribution, metabolism and elimination of the other herbs is focused. Pharmacodynamics synergism on the other hand, studies the synergistic effect when active constituents with similar therapeutic activity are targeted to a similar receptor or physiological system. Other than that, it is believed that multiplicity of factors and complications cause diseases in most of the cases, leading to both visible and invisible symptoms. Here, combination of herbals may act on multiple targets at the same time to provide a thorough relief [14]. Due to synergism, polyherbalism offers some great benefits which lacks in single herbal formulation. It is evident that better therapeutic effect can be reached with a single multi-constituent formulation. For this, a lower dose of the herbal preparation would be needed to achieve desirable pharmacological action, thus reducing the risk of deleterious side-effects. Besides, PHFs bring to improved convenience for patients by eliminating the need of taking more than one different single herbal formulation at a time, which indirectly leads to better compliance and therapeutic effect. All these benefits have resulted in the popularity of PHF in the market when compared to single herbal formulation [15]. Polyherbal formulation also having multiple types of molecules against a disease complication so different molecules cure a disease by different mechanism so provide a complete therapy against a disease condition [16].

## Limitations of polyherbal formulation

When combinations of plants with these constituents are combined together it may show better activity when compared to the individual extract. But at the same time presence of many constituents may lead to chemical incompatibility which may result in instability [17]. In India, whereas most of the Ayurvedic PHFs are manufactured and exported, the regulation of Ayurvedic herbal preparation manufacturing is somewhat less stringent, despite the establishment of Drugs and Cosmetic Act to control the manufacture and quality control. According to the good clinical practices, toxicity studies and clinical trials on herbal formulations are not mandatory for application of patents and grant of manufacturing licenses to the Ayurvedic herbal formulation manufacturer [8, 19].

**Table 1: Polyherbal formulation along with the different pharmacological activities**

| ***Anti-inflammatory activity*** | | | |
|---|---|---|---|
| **Product** | **Composition of polyherbal formulation** | **Experimental model** | **Ref** |
| DHU001 | *Ficus carica, Liriope spicata,Platycodon grandiflorum, Schisandra chinensis, Glycyrrhiza uralensis,Zingiber officinale, Mentha arvensis* | Dinitroflurobenzene-induced contact dermatitis | 20 |
| Wu-Zi-Yan- Zong | *Cuscuta chinensis, Lycium barbarum ,Rubus chingii, Schizandra chinensis, Plantago asiatica, Epimedium brevicornu* | Lipopolysaccharides induced neuro inflammatory | 21 |
| IBS-20 | *20-herb Chinese medicinal formula* | Inhibit proinflammatory cytokine production | 22 |
| Jatyadi ghrita | *Jasmine officinale, Azadirachta indica, Berberis aristata, Curcuma longa, Picrorrhiza kurroa, Rubia cordifolia, T. Dioica, Aristolochia indica, Hemidesmus indicus, Randio spinosa, Glycyrrhiza glabra, Cow's ghee.* | Carrageenan-induced model | 23 |
| Bhux | *Commiphora mukul, Terminalia arjuna, Boswellia serrata, Semecarpus anacardium , Strychnos nux vomica* | Carrageenan-induced model | 24 |
| Brazilian polyherbal formulation | *Eucalyptus globulus*, *Peltodon radicans*, *Schinus terebinthifolius* | TPA, capsaicin-induced mouse ear edema, Carrageenan-induced model | 25 |
| Entox | *Terminalia chebula*, *Embelica officinalis, Punica granatum*, *Terminalia arjuna*, *Rubia cordifolia, Withania somnifera, Tinospora cordifolia*, *Curcuma longa* | Carrageenan-induced model and cotton pellet granuloma method | 26 |
| Triphla | *Emblica officinalis gaertn, Terminalia chebula, Terminalia bellerica* | Adjuvant-induced arthritis | 27 |

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| | *gaertn* | | |
| Unani eye drop | *Berberis aristata*, *Cassia absus*, *Coptis teeta*, *Symplocos racemosa*, *Azadirachta indica*, *Rosa damascena* | Turpentine liniment-induced ocular inflammation in rabbit's eye | 28 |
| PM014 | *Stemona sessilifolia*, *Asparagus cochinchinensis*, *Scutellaria baicalensis*, *Schizandra chinensis*, *Rehmannia glutinosa*, *Prunus armeniaca*, *Paeonia suffruticosa*. | Cockroach allergen-induced model. | 29 |
| Sudard | *Commiphora mukul*, *Pluchea lanceolata*, *Paederia foetida*, *Vitex negundo*, *Zingiber officinalis*, *Ricinus communis*, *Lepidium sativum*, *Colchicum luteum*, *Smilax glabra*, *Strychnous nuxvomica*, *Mineral pitch* | Formalin, carrageen induced model | 30 |
| Septilin | *Balsamodendron mukul* , *Sank Bhasma* , *Maharasnadi qoath*, *Tinospora cordifolia*, *Emblica officinalis*, *Moringa pterigosperma*, *Glycyrrhiza glabra* | Carrageenan-induced model, cotton pellet granuloma and Freund's adjuvant induced-arthritis models, Tail flick response, Glacial acetic acid induced writhing | 31 |
| Ghanaian | *Alstonia boonei*, *Rauvolfia vomitoria*, *Elaeis guineensis* | Carrageenan induced model | 32 |
| PHF | *Aegle marmeloes*, *Coriandrum sativum*, *Cyperus rotundus*, *Vetiveria zinzanioids* | Acetic acid-induced colitis in mice and indomethacin-induced enterocolitis in rats | 33 |
| Ajmodadi churna | *Trachyspermum ammi*,*Cedrus deodara*, *Piper longum*, *Terminalia chebula*, *Argyreia nervosa*, *Zingiber officinale* | Carrageenan-induced model and air pouch inflammation models | 34 |
| ***Antidiabetic activity*** | | | |
| Diarun plus | *Emblica officinalis, Curcuma longa, Momordica charantia, Eugenia jambolana, Trigonella foenum graceum, gymnema sylvestre and salacia reticulate.* | Streptozotocin induced model. | 35 |
| Diabrid | *Gymnema sylvestre, Momordica charantia, Eugenia Jambolana, Trigonella graeceium* | Alloxan-Induced model | 36 |
| Okudiabet | *Stachytarpheta angustifolia, Alstonia congensis, Xylopia aethiopica* | Alloxan- induced model | 37 |
| PHF | *Allium sativum, Cinnamomum zeylanicum, Citrullus colocynthis, Juglans regia, Nigella sativa,Olea europaea, Punica granatum, Salvia officinalis, Teucriumpolium, Trigonella foenum,Urtica dioica, Vaccinium arctostaphylos* | Streptozotocin-induced model | 38 |
| PHF | *Cystoseira trinodis, Allium sativum, Glycyrrhiza glabra, Zingiber officinale* | Alloxan-induced model | 39 |
| PHF | *Foeniculum vulgare, Brassica alba* | Glucose tolerance tests | 40 |
| Ayurslim | *Garcinia camogia, commiphora wightii, gymnema sylvestre, terminalia chebula, trigonella foenum-graecum* | Streptozotocin induced model | 41 |
| PHF | *Salacia oblonga, Salacia roxbhurgii, Garcinia indica, Lagerstroemia parviflora* | Streptozotocin induced model | 42 |
| Hal | *Momordica charantia*, *Trigonella foenum-graecum*, *Withania somnifera* | Glucose tolerance test, streptozotocin model | 43 |
| Triphla churna | *Emblica officinalis, Terminalia chebula, Terminalia bellerica* | Rat model of insulin resistance. | 44 |
| Diasulin | *Cassia auriculata, Caccinia indica, Curcuma longa, Emblica officinalis, Gymnema sylvestre, Momordica charantia, Scoparia dulcis, Syzigium aumini, Tinospora cordifolia, Trigonella foenum graecum.* | Alloxan induced model | 45 |
| Dihar | *Syzygium cumini, Momordica charantia, Emblica officinalis, Gymnema sylvestre, Enicostemma Littorale, Azadirachta indica, Tinospora cordifolia, Curcuma longa* | Streptozotocin induced model | 46 |
| Siddha PHF | *Asparagus racemosus, Emblica Officinalis, Salacia oblonga, Syzygium aromaticum, Tinospora cordifolia* | In the liver of type 2 diabetic adult male rats | 47 |
| Wen-pi-tang-Hab-Wu-ling-san | *Codonopsis pilosula, Salvia miltiorrhiza, Pinellia ternate, Ccoptis chinensis, Epimedii herba, Rhei radix, Perilla frutescens Glycyrrhiza uralensis, Artemisia capillaris, Alisma plantago-aquatica , Atractylodes macrocephala, Polyporus umbellatus, Cinnamomi ramulus* | Streptozotocin-induced model | 48 |
| PHF | *Alnus hirsuta, Rosa davurica, Acanthopanax senticosus, Panax schinseng* | Streptozotocin induced model | 49 |
| PHF | *Withania somnifera, Allium sativum, Gymnema sylvestre, ferula foetida, murraya koenigii* | Streptozotocin induced model | 50 |
| Gynocare capsules | *Ashoka, Vasaka, Durva, Chandan, Musk* | Safety profile on albino wistar rats | 51 |
| Ziabeen | *Aloe barbadensis, Azedarachta indica, Eugenia jambolana, Gymnema sylvestre, Swertia chirata, Momordica charantia, Holarrhena antidysenterica, Piper nigrum.* | Normal and alloxan-induced model | 52 |
| PHF | *Tinospora cordifolia, Adhatoda vasica, Stevia rebaudiana, Pterocarpus marsupium, Withania somnifera, Tridax procumbens, Boer haavia diffusa, Syzygium cumini* | Alpha amylase inhibitory assay, haemoglobin Glycosylation | 53 |
| PHF | *Tribulus terrestris, Piper nigrum, Ricinus communis* | Alloxan induced model | 54 |
| Transina | *Withania somnifera, Tinospora cordifolia, Eclipta alba, Ocimum sanctum, Picrorrhiza kurroa, Shilajit,* | Streptozotocin, hyperglycaemia, SOD | 55 |
| PHF | *G. pentaphylla, T. procumbens, M. indica* | Streptozotocin-nicotinamide induced | 56 |
| Hyponidd | *Momordica charantia, Melia azadirachta, Pterocarpus marsupium, Tinospora cordifolia , Gymnema sylvestre, Enicostemma littorale,* | Streptozotocin induced model | 57 |

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| | *Emblica officinalis, Eugenia jambolana, Cassia auriculata, Curcuma longa* | | |
| Cogent db | *Azardirachta indica, Curcuma longa, Phyllanthus emblica, Rotula aquatic, Syzigium cumini, Terminalia chebula, Terminalia bellerica, Tribulus terrestris, Trigonella foenum graecum* | Alloxan-induced model | 58 |
| Diasulin | *Cassia auriculata, Coccinia indica,Curcuma longa, Emblica officinalis, Gymnema sylvestre, Momordica charantia, Scoparia dulcis, Syzigium cumini, Tinospora cardifolia, Trigonella foenum-graecum* | Alloxan-induced model | 59 |
| Okchun-san | *Oryza sativa, Glycyrrhiza uralensis, Pueraria thunbergiana, rehmannia glutinosa, Schizandra chinensis, Trichosanthes kirilowii* | C57BL/KsJDb/db type-2 diabetic mice | 60 |
| DRF/AY/5001 | *Emblica officinalis, Ggymnema sylvestre, Momordica charantia, Pterocarpus Marsupium, Syzigium cumini, TerminaliaBellerica, Terminalia chebula* | Epinephrine and alloxan-induced model | 61 |
| Diabegon | *Aegle marmelos, Asfetum Punjabinum, Berberis aristata, Citrullus culocynthis, Curcuma Longa, Cyperus rotondous, Embelica officinalis, Eugena Jambolana, Gymnema sylvestre, Momordica charantia, Piper Longum, Pterocarpus marsupion, Plumbago zeylanica, Swertia Chirata, Terminalia balerica,Terminalia chebula, TrigonellaFoenum-graecum, Zingiber officinale* | High fructose diet-fed rats | 62 |
| Glyoherb | *Gudmar, Mahamejva, Katuki, Chirata, Karela, Indrajav, Amla, Gokshur, Harde, Jambubij, Methi, Neem patti, Chanraprabha, Arogyavardhini, Harida, Bang bhasma, Devdar* | Streptozotocin-induced model | 63 |
| MAC-ST/001 | *Azadirachta indica, Caesalpinia Bonducella, Momordica charantia, Syzygium cumini, Trigonella F-graecum* | streptozotocin-induced model | 64 |
| Dia-2 | *Allium sativum, Lagerstroemia speciosa* | 3T3-L1 cells | 65 |
| Sr10 | *Radix astragali , Radix codonopsis, Cortex lycii* | Type 2 diabetic mice | 66 |
| Diakyur | *Cassia auriculata, Cassia javanica, Gymnema sylvestre, Mucuna pruriens,Salacia reticulate, Syzygium jambolanum, Terminalia arjuna* | Alloxan-induced model | 67 |
| Karnim plus | *Azadirachta indica, Momordica charantia, Ocimum sanctum, Picrorrhiza kurroa, Zingiber officinale* | Alloxan-induced model | 68 |
| PHF | *Azadirachta indica, Gymnema sylvestre, Momordica charantia, Syzigium cumini, Trigonella foenum* | Alloxan-induced model | 69 |
| 5EPHF | *Aegel marmelos, Murraya koenigii, Aloe vera, Pongamia pinnata, Elaeodendron glaucum* | Alloxan-induced model | 70 |
| PHF | *Eugenia jambolana, Gymnema sylvestre, Momordica charantia, Mucuna pruriens, Trigonella Foenum graecum, Withania somnifera* | 93 diabetic patients | 71 |
| Diabecon (d-400) | *Asparagus racemosus, Balsamodendron Mukul, Eugenia jambolana, Gymnema Sylvestre, Momordica charantia, Ocimum Sanctum, Pterocarpus marsupium* | 30/ 43 diabetic patients | 72, 73 |
| PHF | *Aloe vera, Cocos nucifera, Curcuma longa, Glycyrrhiza glabra, Musa paradisiacal, Pandanus odaratissimus* | 20 patients | 74 |
| Glucolevel | *Atriplex halimus, Juglans regia,Olea europea, Urtica dioica* | 16 patients | 75 |
| Diamed | *Azardirachta indica, Cassia auriculata, Momordica charantia* | Alloxan-induced model | 76 |
| Mersina | *Gymnema sylvestre, Momordica charantia, Syzium cumini, Phyllanthus emblica, Trigonella foenum graceum, Coccinia indica, Tinospora cordiofolia,Melia azadarichta, Javakhar,Cassia auriculata* | Cholesterol,TGL,SGPT,SGOT, ALP, BUN, creatinine, glucose | 77 |
| Byesukar | *Cassia auriculata, Eugenia jambolana,Thespesia populnea* | Alloxan-induced model | 78 |
| Diashis | *Syzygium cumuni, Gymnema sylvestre, Holarrhena antidysenterica, Tinospora cordifolia, Pongamia pinnata, Asphultum, Psoralea corylifolia, Momordica charantia* | Streptozotocin induced model | 79 |
| APKJ-004 | *Eugenia jambolana, Cinnamomum zeylenicum* | Streptozotocin induced model | 80 |
| Madhumeh | *Musta, Daruharidra, Arjuna, Khadir, Lodhra, Guduchi, Patol, Vata, Udumbar, Gudmar, Asana, Shilajit, Kumbha, Nimba* | Streptozotocin- nicotinamide induced model | 81 |
| Li85008f or Adipromin | *Moringa olefera, Murrya koenigii, Curcuma longa* | Insulin sensitivity linked with obesity | 82 |
| Niddwin | *Tinospora cordifolia, Gymnema sylvestre, Terminalia tomentosa, Tribulus terrestris, Emblica officinalis, Mucuna pruriens, Sida cordifolia,Withania somnifera, Terminalia belerica,Terminalia chebula, Momordica charantia* | Alloxan induced model | 83 |
| BCB | *Aloe vera, Acinos ravens, Chenopodium murale, Cinnoamomum aromaticum, Citrus aurantifolia* | Lipid peroxidation assay | 84 |
| SH-01D | *Tinospora cardifolia, Salacia reticulata, Aegle marmelos, Melia azadirachta, Cyprus rotundus, Syzygium cumini, Phyllanthus emblica, Curcuma longa, Vanga bhasma* | Dexamethasone and fructose-induced insulin resistance | 85 |
| Mehaharadashemani | *Haritaki, Amalaki, Bibhitaki, Guduchi, Haridra, Kiratatikta, Karavellaka, Asana, Meshashringi, Hatavar* | Reduced blood sugar level | 86 |
| Dianex | *Gymnema sylvestre, Eugenia jambolana ,Momordica charantia Azadirachta indica,Cassia auriculata, Aegle marmelose,Withania somnifera, Curcuma longa* | Streptozotocin induced model | 87 |
| Some polyherbal formulation in market to treat diabetes ex. Diabecon, Diasulin, Pancreatic tonic 180 cp, Ayurveda alternative Herbal formula to Diabetes, Dia-care, Diabetes-daily care, Diabecure, Diabeta, Syndrex [88]. | | | |
| *Antihistaminic activity* | | | |
| HK-07 | *Curcuma longa, Zingiber officinale, Piper longum, Emblica officinalis,* | Active anaphylaxis model in rats. | 89 |

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| | *Terminalia belerica, Ocimum sanctum, Adhatoda vasica, Cyperus rotundus* | histamine-induced in guinea pigs | |
| $KOB0_3$ | *Atractylodis rhizoma, Astragali radix, Saposhnikoviae radix, Osterici radix, Scutellariae radix* | Systemic anaphylaxis, ovalbumin-induced allergic rhinitis | 90 |
| Unani eye drop | *Berberis aristata*, *Cassia absus*, *Coptis teeta*, *Symplocos racemosa*, *Azadirachta indica*, Alum and distillate of *Rosa damascene* | Isolated guinea pig ileum | 91 |
| Novel polyherbal formulation | *Adhatoda vasica*, *Clerodendrum serratum*, *Curcuma longa*, *Solanum xanthocarpum*, *Piper longum* | Mast cell degranulation, triple antigen-induced anaphylaxis in rats | 92 |
| Bharangyadi | *Clerodendrum serratum, Hedychium spicatum, Inula racemosa* | Histamine induced model | 93 |
| Ashmi | *Ganoderma lucidum, Sophora flavescens, Glycyrrhiza uralensis* | Th2 cytokine secretion, eotaxin -1 secretion | 94 |
| AKL1 | *Picrorrhiza kurroa*, Apocynin, *Picrorrhiza kurroa, Zingiber officinale, Ginkgo biloba.* | RDBPC cross-over study | 95 |
| CUF2 | *Astragalus mongholius, Cordyceps sinensis, Radix stemonae, Bulbus fritillariae, Radix scutellariae* | Double-blind, placebo-controlled trial | 96 |
| Pentapala-04 | *Adhatoda vasica, Ocimum sanctum, Coleus aromaticus, Glycyrrhiza glabra, Alpiania galangal* | $Al(OH)_3$ induced lung damage | 97 |
| Bresol, (Hk-07) | *Curcuma longa, Ocimum sanctum, Adhatoda vasica, trikatu, Triphala, Embelia ribes, Cyperus rotundus, Cinnamomum zeylanicum, Elettaria cardamomum, Cinnamomum tamala,Mesua ferrea* | Phase III clinical trial | 98 |
| E-721B | *Rhus succidanea, Solanum xanthocarpum, Tylophora indica, Albizzia lebbeck, Glycyrrhiza glabra, Achyranthes aspera* | Acetylcholine induced bronchospasm in guinea pigs | 99 |
| ***Antioxidant activity*** | | | |
| Bharangyadi | *Clerodendrum serratum*, *Hedychium spicatum*, *Inula racemosa* | ABTS, superoxide anion, lipid per-oxidation assay | 100 |
| AVS022 | *H. perforate, C. micracantha, C. indicum, F. racemosa, T. triandra* | HaCaT cells line | 101 |
| PHF | *Achillea millefolium, Hyssopus officinalis, Equisetum arvense, Echinacea purpurea* | DPPH, ABTS assays | 102 |
| NR-ANX-C | *W. somnifera, O. sanctum, C. sinensis* | Haloperidol-induced catalepsy, brain SOD | 103 |
| AO-8 | *Mangifera indica, Glycyrrhiza glabra, Vitis vinifera, Syzygium aromaticum, Emblica officinalis, Daucus carota* | lipid peroxidation | 104 |
| PHF | *Cajanus cajan*, *Lawsonia inermis*, *Mimosa pudica* , *Uraria picta*, *Operculina turpethum* | Glutathione, superoxide dismutase, lipid peroxidation | 105 |
| Triglize | *Terminalia arjuna, Cissus quadrangularis, Boerhaavia diffusa, Commiphora mukul, Phyllanthus embilica, Terminalia bellirica, Terminalia chebula, Tribulus terrestris, Allium sativum, Trigonella foenum graecum* | DPPH, LPS-induced free radicals | 106 |
| Panchvalkala | *Ficus benghalensis, F. glomerata, F. religiosa, F. virensand, Thespesia populnea* | DPPH, reducing power assay | 107 |
| Sugar remedy | *Bitter melon, Gudmar, Ashwagandha, Jamun, Shilajit, Fenugreek, Triphala, Cinnamon, Vijaysar* | Glutathione, superoxide dismutase, catalase, malondialdehyde level | 108 |
| Triphala | *Terminalia chebula, Terminalia bellerica, Emblica officinalis* | DPPH method, lipid peroxide assay | 109 |
| Amalakayas rasayana | *P. emblica, A. galanga, A. racemosus, B. diffusa, C. asciatica, D. gangiticum, L. reticulata, T. chebula, T. cordifoli* | DPPH, superoxide anion radical scavenging activity | 110 |
| D-Diabetes | Nineteen herbs | Fe reducing method | 111 |
| ALLER-7/NR-A2 | *Phyllanthus emblica, Terminalia chebula, Terminalia bellerica, Albizia lebbeck, Pipernigrum, Zingiber Officinale, Piper longum* | DPPH, ABTS, hydroxyl superoxide assay | 112 |
| Stressroak | *Withania somnifera, Ocimum sanctum, Phyllanthus emblica, Mangifera indica, Shilajit* | Glutathione peroxidase, GSH reductase, catalase | 113 |
| HD-03/ES | *Cyperus rotundus, Cyperus scariosus* | DPPH, reducing power, ORAC assays | 114 |
| KGA | *Borago officinalis, Coriandrum sativum, Bombyx mori, Salvia haematodes, Centaurea behen, Santalum album, Mellisa parviflora, Lallemantia roylean, Ocimum gratissimum, Lavendula stoechas, Cheiranthus cheiri, Mathiola incana, Ambra grasea, Delphinium denudatum, Paeonia emodi, Pandanus tectorius* | DPPH, No assays | 115 |
| POL-10 | *Aristolochia rotunda, Cinnamomum cassia, Emblica officinalis, Matricaria chamomile, Orchis mascula, Piper longum, Piper nigrum, Plumbago zeylanica, Terminalia bellerica, Zingiber officinale* | In vitro antioxidant assays | 116 |
| PHF | *Vitis vinifera*, *Phyllanthus emblica* , *Punica granatum*, *Cinnamomum cassia*, *Ginkgo biloba*, *Camellia sinensis* | DPPH, superoxide, and nitric oxide free radical scavenging method | 117 |
| Liu Wei Di Huang | *Cortex moutan*, *Rhizoma dioscoreae* | $H_2O_2$ assay | 118 |
| Shankhpushpi | *Convolvulus pluricaulis*, *Evolvulus alsinoides*, *Clitoria ternatea*,*Canscora decussata* | TLC-DPPH method | 119 |
| Hyponidd | *Cassia auriculata, Curcuma longa, Emblica officinalis, Enicostemma littorale, Eugenia jambolana, Gymnema sylvestre, Melia azadirachta, Momordica charantia ,Pterocarpus marsupium, Tinospora cordifolia* | Superoxide dismutase assay | 120 |
| Diasweta | *Allium sativum, Allium cepa , Zingiber Officinale, Momordica charantia* | Reducing power, $H_2O_2$ No assay | 121 |
| Trikatu megaext | *Piper nigrum, Piper longum, Zingiber officinale* | DPPH, superoxide radical assay | 122 |

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| Abana | *Asparagus racemosus, Terminalia arjuna, Eclipta alba, Withania somnifera, Tinospora cordifolia, Centella asiatica, terminalia chebula, Glycyrrhiza glabra, Phyllanthus embelica, Boerhaavia diffusa, Convolvulus pluricaulis, Ocimum sanctum, Nardostachys jatamansi, Piper longum, Carum copticum, Zingiber officinale, Cyperus rotundus, Acorus calamus, Nepata hindostana, Embelia ribes, Syzygium aromaticum, Celastrus paniculatus, Santalum album, Elettaria cardamomum, Aloe vera, Daucus carota, foeniculum vulgare, Rosa damascena, Cinnamomum cassia, Crocus sativus, Nelumbium speciosum, Punica granatum, Pyrus malus* | Nitric oxide scavenging activity | 123 |
| Geriforte | *Achillea millefolium, Adhatoda vasica, Allium cepa, Allium sativum, Pium graveolens, Argyria speciosa, Asparagus adscendens, Asparagus racemosus, Berberis aristata, Boerrhavia diffusa, Caesalpinia digyna, Capparis spinosa, Carum copticum, Cassia occidentalis, Celastrus paniculatus, Centella asiatica, Cichorium intybus, Cicer arietinum, Coriandrum sativum, Crocus sativus, Curcuma longa, Cyamopsis psoralioides, Daucus carota, Eclipta alba, Elettaria cardamomum, Emblica officinalis, Embelia ribes, Foeniculum vulgare, Glycyrrhiza glabra, Mucuna pruriens, Myristica fragrans, Phyllanthus amarus Piper longum, Psidium guyava, Raphanus sativus, Solanum nigrum, Sphaeranthus indicus, Syzigium aromaticum, Tamarix gallica, Terminalia arjuna, Terminalia chebula, Tinospora cordifolia, Tribulus terrestris, Vitis vinifera, Withania somnifera* | Nitric oxide scavenging activity | 123 |
| Septilin | *Balsamodendron mukul, Tinospora cordifolia, Rubia cordifolia, Embelica officinale, Moringa Pterygosperma, Glycyrrhiza glabra* | Nitric oxide scavenging activity | 123 |
| Triphala | *Terminalia chebula, Terminalia bellerica, Phyllanthus emblica* | Nitric oxide scavenging activity | 123 |
| Chyavanaprasha | *Emblica officinalis, Agele marmelos, Uraria picta, Clerodendrum phlomidis, Oroxylum indicum, Gmelina arborea, Stereospermum suaveolens, Sida cordifolia, Desmodium gangeticum, Teramnus labialis, Piper longum, Tribulus terrestris, Solanum indicum, Solanum xanthocarpum, Pistacia integerrima, Phaseolus trilobus, Phyllanthus niruri, Vitis vinifera, Leptadenia reticulata, Inula racemosa., Aquilaria agallocha, Tinospora cordifolia, Terminalia chebula, Ellettaria cardamomum, Habenaria intermedia, Microstylis walichii, Microstylis museifera, Hedychium spicatum, Cyperus rotundus, Boerhaavia diffusa, Polygonatum verticillatum, Nymphaea alba, Santalum album, Pueraria tuberosa, Adhatoda vasica, Roscoea alpina, Martynia diandra, Sesamum indicum* | Nitric oxide scavenging activity | 123 |
| Mentat | *Bacopa monnieri, Centella asiatica, Evolvulus alsinoides, Valeriana wallichi, Prunus amygdalus, Acorus calamus, Oroxylum indicum, Mucuna pruriens, Ellettaria cardamomum, Foeniculum vulgare, Ipomea digitata, Orchis mascula, Zingiber officinale, Celastrus paniculatus, Tinospora cordifolia, Emblica officinalis, Terminalia arjuna, Withania somnifera, Nardostachys jatamansi, Embelia ribes, Terminalia bellerica, Terminalia chebula, Myristica fragrans, Syzygium aromaticum* | Nitric oxide scavenging activity | 123 |
| DHC-1 | *Bacopa monnieri, Emblica officinalis, Glycyrrhiza glabra, mangifera indica, syzygium aromaticum* | SOD, CAT, GSH ect. | 124 |
| Avaleha | *Hippophae rhamnoides, Emblica officinalis, Allium prezewalskianum, Bidense pilosa, Centaurea depressa, Inula racemosa, Rubia cordifolia, Capparis spinosa, Ephedra gerardiana, Foeniculum vulgare, Mentha spicata, Arnebia euchroma, Bunium persicum, Ocimum sanctum, Clarified butter, Sisamum indicum, Saccharum officinalis* | DPPH radical assay | 125 |
| Immuplus | *Withania somnifera, Tinospora cordifolia,Emblica officinali* | DPPH radical assay | 126 |
| Sitopaladi churna | *Saccharum officinarum, Bambusa arundinacea, Piper longum, Elettaria cardamomum, C. zeylanicumm* | DPPH, ABTS, No, superoxide radical assay | 127 |
| Hingwashtak churna | *Piper nigrum, Piper longum, Zingiber officinale, Nigella sativa, Cuminum cyminum, Trachyspermum ammi, Ferula foetida, rock salt* | DPPH, No, ABTS, Lipid peroxidation | 128 |
| Punarnavashtak kwath | *Boerhaavia diffusa, Picrorhiza kurroa, Tinospora cordifolia, Zingiber officinalis,Berberis aristata, Terminalia chebula, Azadirachta, Tricosanthes dioica* | DPPH, super oxide,No oxide, reducing power assay | 129 |
| ***Anti-Depressant activity*** | | | |
| BR-16A | *Bacopa monnieri, Centella asiatica, Acorus calamus, Withania somnifera, Tinospora cordifolia, Embelica officinalis, Evolvulus aisinoides, Saussurea lappa, Terminalia belerica,Terminalia chebula, T.arjuna* | Neuroleptics-induced catalepsy in mice | 130 |
| Wanderer plus | *Paeonia lactiflora, Poria cocos, Atractylodes macroephala, Paeonia suffruticosa, Gardenia jasminoides, Zingiber officinale, Glycyrrhiza uralensis, Bupleurum chinense,Anglica sinensis,Mentha haplocalyx* | Meta-analysis of randomized controlled trials | 131 |
| Smrithi | *Bacopa monniera, Hydrocotyle asiatica, Acorus calamus, Asparagus racemosus, Emblica officinalis* | Forced swimming, Tail suspension test | 132 |
| Perment | *Clitoria ternatea, Withania somnifera, Asparagus racemosus, Bacopa monniera* | Stress induced depressive model | 133 |

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| Siotone | *Withania somnifera, Ocimum sanctum, Asparagus racemosus, Tribulus terristris, Shilajit* | Footshock stress induced model | 134 |
| Catuama | *Paullinia cupana,Trichilia catigua, Ptychopetalum olacoides, Zingiber officinale* | Rabbit corpus cavernosum | 135 |
| Banxia houpu | *Pinellia ternate, Magnolia officinalis,Poria cocos, Perilla frutescens, Zingiber officinale* | Unpredictable mild stress model of depression | 136 |
| kamishoyosan | *Bupleurum radix, Peony radix, Atractyloidis raceae,* Japanese *Angelica, Hoelen, Gardenia fructus, Moutan cortex, Ginger, Glycyrrhiza, Mentha* | Hormone-replacement-therapy-resistant patients | 137 |
| Epic-Q | *Withania somnifera, Acorus calamus, Evolvulus alsinoides,Nardostachys jatamansi, Centella asciatica, Glycyrrhiza glabra* | Forced swim, Tail suspension Test, MES, INH induced seizure | 138 |
| Medha gulika | *Acorus calamus, Clitoriaternatea, Glycyrrhiza glabra, Elaeocarpus sphaericus, Bacopa monnieri,Centella asiatica, Sarcostemmaacidum* | Forced swim, Tail suspension Test ect. | 139 |
| Mamsyadi Kwatha | *Nardostachys jatamansi, Withania somnifera,Hyocymus niger* | Behavioral despair test, anti-reserpine, CFS test | 140 |
| $RO_{13}$ | *Eclipta alba, Glycyrrhiza glabra, Hemidesmus indicus, Hibiscus rosa-sinensis, Nelumbo nucifera, Quercus infectoria, Rosa damascena, T. chebula, Z. officinalis* | Tail suspension, Force swim test | 141 |
| Bramhi Ghrita | *Bacopa monneri, Evolvulus alsinoids, Acorus calamus, Saussurea lappa,* cow's ghee | Tail flick method | 142 |
| ***Hepatoprotective activity*** | | | |
| Hepax-A | *Plumbago zeylanica, Picrorrhiza kurroa, Piper nigrum, Zingiber officinale, Sodii carbonas impura, Phyllanthus emblica, Terminalia chebula, Calcii oxidum, Potassii carbonas* | $CCl_4$, Paracetamol, Thiocetamide model | 143 |
| PHF | *Coccinia indica, Sida cordata, Scoparia dulcis.* | $CCl_4$ induced model | 144 |
| PHF | *Ferula asafoetida, M. charantia, N. jatamansi* | $CCl_4$ induced model | 145 |
| Livactine | *Boerrhavia diffusa, Tinospora cordifolia, Andrographis paniculata, Emblica officianalis* | $CCl_4$, Paracetamol model | 146 |
| Jigrine | *Cichorium intybus, Tamarix dioica, Solanum nigrum, Rheum emodi, Rubia cordifolia,Vitex negundo, Cassia occidentalis, Foeniculum vulgare,Cuscuta reflexa, Careya arborea, Phyllanthus niruri, Plantago major, Rosa damascene, Solanum xanthocarpum* | Alcohol, $CCl_4$, Paracetamol model | 147 |
| PHF | *Andrographis paniculata, Phyllanthus niruri, Phyllanthus emblica* | Alcohol, $CCl_4$, Paracetamol model | 148 |
| Himoliv | *Picorrhiza kurroa, Boerrhavia diffusa, Tinospora cordifolia, Andrographis paniculata, P.emblica* | $CCl_4$, Paracetamol model | 149 |
| L-35 A | *Picrrorhiza kurroa, Tephrosia purpurea* | Alcohol model | 150 |
| Hd-03 | *Solanum nigrum, Cichorium intybus, Picrorrhiza kurroa, Tephrosia purpurea, Andrographis paniculata* | Galactosamine induced hepatopathy | 151 |
| DHC-1 | *Bacopa monnieri, Emblica officinalis, Glycyrrhiza glabra, Mangifera indica, Syzygium aromaticum* | $CCl_4$ model | 152 |
| Clearliv | *Phyllanthus niruri, Eclipta alba, Boerhaavia diffusa, Tinospora cordifolia, Tribulus terrestris, Tephrosia purpurea, Indigofera tinctoria, Aconitum heterophyllum, Andrographis paniculata, Rubia cordifolia, Terminalia chebula, Curcuma longa, Ricinus cummunis* | Thioacetamide, dl-galactosamine, $CCl_4$ induced hepatotoxicity | 153 |
| Amalkadi ghrita | *Emblica officinalis, Glycrrhiza glabra,* Cow's ghee | $CCl_4$ model | 154 |
| Livex | *Tephrosia purpurea, Aconitum heterophyllum, Solanum nigrum, Cichorium intybus, Cassia occidentalis, Tamarix troupii, Embelia ribes, Andrographis paniculata, Piper longum* | Erythromycin estolate induced hepatotoxicity | 155 |
| Kamilari | *Piper longum, Thespesia populnea,Elettaha cardamom, Zingiber officinale, Glycyrrhiza glabra, honey* | $CCl_4$ model | 156 |
| Punarnavashtak kwath | *Boerhaavia diffusa, Picrorhiza kurroa, Tinospora cordifolia, Zingiber officinalis ,Berberis aristata, Terminalia chebula, A. indica, Tricosanthes dioica* | $CCl_4$ model, HepG2 cell line | 157 |
| Triphala rasayana | *Emblica officinalis, Terminalia bellerica,Terminalia chebula* | Paracetamol model | 158 |
| PHF | Liv 52, Livergen, Livokin, Octogen, Stimuliv, Tefroliv | Paracetamol model | 159 |
| Livergen | *Andrographis paniculata, Apium graveolens, Berberis lycium, Carum copticum, Cichorium intybus, Cyperus rotundus, Eclipta alba, Ipomoea turpethum, Oldenlandia corymbosa, Picrrorhiza kurroa, Plumbago zeylanica, Solanum nigrum, Tephrosia purpurea, Terminalia arjuna, Terminalia chebula, Trigonella foenumgraecum* | $CCl_4$ model | 160 |
| Livol | *Boerhavia diffusa, Solanum nigrum, Terminalia arjuna* | $CCl_4$ model | 161 |
| Livomyn | *Andrographis paniculata, Phyllanthus niruri, Cichorium intybus, Boerhaavia diffusa,T.cordifolia, P.kurroa* | Ethanol, Galactosamine, $CCl_4$ model | 162 |
| ***Anti-Ulcer activity*** | | | |
| Lucer | *Pravala pishti, Kamadudha rasa , Sutashekhara rasa, Amalaki , Godanti bhasm, Jatamansi,Muktashukti pishti , Svarnamakshika bhasma, Shankha bhasma, Guduchi satva, Kiratatikta, Jyotishmati beeja, Parsika yavani, Vacha* | Aspirin, ethanol induced gastric ulcers in rats | 163 |
| Patoladi kasaya | *Patola, haritaki, bibhitaka, amalaki, kutaki, cirayata, amrta, pittapapada, sunthi, and bhrngaraja* | Peptic ulcer | 164 |
| | *Zingiber officinale Piper nigrum Piper longum Terminalia chebula,* | | |

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| Avipattikar churna | *Terminalia bellerica Emblica officinalis Cyperus rotundus Vida lavana Embelia ribes, Amomum subulatu), Cinnamomum tamala, Syzgium aromaticum, Operculina terpethum,* Sharkara | Pyloric ligations | 165 |
| PHF | *Aegle marmelos, Eettaria cardamomum, glycyrrhiza glabra, Citrus aurantifolia, Rosa damascene, Cissus quadrangularis, Saccharum officinarum* | Charcoal meal GIT transit, laxative effect in mice | 166 |
| Eumil | *Asparagus racemosus, Centella asiatica, Convolvulus pluricaulis, Emblica officinalis, Ocimum sanctum, Withania somnifera* | Helicobacter muridarum | 167 |
| PHF | *glycyrrhiza glabra,Musa paradisiacal, Curcuma longa, Pandanus odaratissimus, Cocos nucifera* | Diabetic foot ulcers | 168 |
| Kamishoyosan | *Bupleurum radix, Peony radix, Atractyloidis raceae, Angelica radix, hoelen, Gardenia fructus, Moutan cortex, Ginger, Glycyrrhiza, Mentha* | Liver injury | 169 |
| UL-409 | *Glycorhiza globra, Benincasa hispida, Tinospora cordifolia, Saussurea lappa, Emblica officinalis, Santalum album, Aegle marmelos, Jasad bhasma, Zaharmohra bhasma, processed in Aloe vera, Foeniculum vulgare, Rosa da mascena* | HCI/Ethanol induced peptic ulcer | 170 |
| Rhinax | *Withania somnifera, Asparagus racemosus, Mucuna prurience, Phyllanthus Emblica, Terminalia chebula, Myristica fragrance, Glycyrrhiza glabra* | Aspirin, alcohol, cold-restraint stress induced ulcers | 171 |
| Trikatu | *Piper longum, Zingiber officinale, Piper nigrum* | acid secretion in rabbits | 172 |
| ***Myocardial infarction*** | | | |
| Arogh | *Nelumbo nucifera, Rosa damascene, Terminalia chebula, Zinziber officinale, Eclipta alba, Hibiscus rosasinensis, Hemidesmus indica, Quercus infectoria,Glycyrrhiza glabra* | Isoproterenol induced myocardial infarction | 173 |
| DHC-1 | *Bacopa monnieri, Emblica officinalis, Glycyrrhiza glabra, Mangifera indica, Syzygium aromaticum* | Isoproterenol treated gps | 174 |
| Herbomineral Formulation | *Mucuna pruriens,Withania somnifera, Argyreia speciosa, Ceutella asiatica,Tribulus terristeris,Asparagus racemosus, Piper lengum, Anacyclus pyrethrus, Nux-vomica,Tinospora cordifolia, Shring bhasma* | Isoproterenol model of myocardial infarction | 174 |
| AO-8 | *Mangifera indica, Glycyrrhiza glabra, Syzygium aromaticum, Vitis vinifera, E. officinalis, Daucus carota* | Isoproterenol Induced myocardial infarction | 104 |
| Abana | *Terminalia arjuna, Withania somnifera, Tinospora cordifolia, Terminalia chebula, Glycyrrhiza glabra, Phyllanthus embelica, Nardostachys jatamansi, Zingiber officinale, Nepata hindostana* | Isoproterenol induced myocardial infarction | 174 |
| ***Antiobesity activity*** | | | |
| GGex18 | *Rheum palmatum, Laminaria japonica Ephedra sinica* | Visceral obesity ect. | 175 |
| Itrifal Saghir | *Terminalia chebula, Terminalia bellerica,E.officinalis* | Reduction of weight,BMI | 176 |
| Ayurslim | *Garcinia cambogia, balsamodendron mukul, gymnema sylvestre, terminalia chebula, trigonella foenum-graecum* | Reducing of weight, lipid levels | 177 |
| Slimax | *hordeum vulgare, polygonatum multiflorum, dimocarpus longan, ligusticum sinense, lilium brownii* and *zingiber officinale* | Reduction of weight, BMI | 178 |
| Slim339 | *Garcinia cambogia Matricaria chamomilla, Rosa damascena, Lavandula officinalis, Cananga odorata* | Reducing of weight, obese | 179 |
| OB-200G | *Garcinia copmbogia, Zinziber officinalia,Piper longum,Gymnema sylvestre,Commiphora mukul* | Food intake, body weight | 180 |
| Li85008f | *Moringa olifera,Murraya koeingii, Curcuma longa* | Weight loss in obese | 82 |
| Lipovedic | *Commiphora mukul,Terminalia chebula, Terminalia belerica, Emblica officinalis,Piper longum, Piper nigrum, Zingeber officinalis, Mesua Ferra, Plumbago zeylanica, Cyperus rotandus, Embelia ribes, Piper cubeba, Juniperus communis, Aconitum heterophyllum, Cissampelos pareira* | Cholesterol Level | 181 |
| Triphaladiquath | *Terminalia chebula, Terminalia bellerica, Emblica officinalis.* | Reduse obesity | 182 |
| Bilvadhiquath | *Aegle marmelos, Adhatoda vasica, Gmelina arboria, Stereospermum suaveolens* | Reduse obesity | 182 |
| Trayushanadya-churna | *Piper longum, Zingiber officinale, Piper nigram* | Reduse obesity | 182 |
| Vidangadi-churna | *Embelia ribesburm, Zingiber officinale,Alhaji mourorum, Emblica officinalis* | Reduse obesity | 182 |
| Amrutadiguggulu | *Tinospora cordifolia,Elettaria cardmomum, Embelia ribes,Holarrhena antidysentrica,Terminalia bellerica, Emblica officinalis,Commiphora wightii* | Reduse obesity | 182 |
| ***Immunomodulatory effects*** | | | |
| Prasarani sandhan | *Paederia foetida, Piper longum, Piper chaba Plumbago zeylanica ,Zingiber officinale, Allium sativum* | IgM production, splenocytes proliferation | 183 |
| Triphala | *Emblica officinalis, Terminalia bellerica, T. chebula* | Complement activity ect. | 184 |
| Immu-21 | *Ocimum sanctum, Withania somnifera, Tinospora cordifolia, Emblica officinale* | Immunosuppressive agents induce | 185 |
| Septilin | *Maharasanadi qoath , Tinospora cordifolia, Rubia cordifolia, Emblica officinalis, Moringa pterigosperma, Glycyrriza glabra, Balsamodendron mukul, Shankha bhasma* | Immune response in mice | 186, 187 |

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| Mentat tableta | *Hydrocotyl asiatica,Withania somnifera*, *Acorus calamus*, *Aspargus racemosus*, *Emblica officinalis*, *Evolvulus alsinoides*, *Triphala* | Nitropropionic acid induced | 188, 189 |
| Shi-Quan-Da-Bu-Tang | *Rehmannia glutinosa, Paeonia lactiflora, Liqusticum wallichii, Angelica sinesis, Glycyrrhiza uralensis, Poria cocos, Atractylodes macrocephala, Panax ginseng Astragalus membranaceus,Cinnamomum cassia* | Restore immunity in cancer patients | 190 |
| Kanakasava | *Datura metel, Adhatoda vasica, Glycerrhiza glabra, Piper longum, Solanum surattetnse, Mesua nagassarium, Zingiber officinale, Clerodendrum serratum, Abies spectabilis, Woodfordia fruticosa, Vitis vinifera* | IgM production, splenocyte proliferation | 191 |
| ***Wound healing activity*** | | | |
| PHF | *A. conyzoids, C. scandens, M. villosus* | Wound contraction | 192 |
| PHC | *Malva sylvestris,Solanum nigrum, Rosa damascena* | Burn wound model | 193 |
| Triphala | *Terminalia chebula,Terminalia bellerica, E.officinalis* | Infected wound model | 194 |
| Pluronic F127 | *Inula viscosa, Ajuga chia ,Rubia taenifolia, Parieteria diffusa, Laurus nobilis* | Excision wound model | 195 |
| PHF | *Rungia pectinata*, *Rubia cordifolia linn*, *Scoparia dulcis* | Open wounds model | 196 |
| PHF | *Aloe vera*, *Eucalyptus globulus*, *Ficus infectoria*, *Ficus religiosa, Piper betel* | Burn wound | 197 |
| PHF | extract of *Psidium guajava* and *Ficus religiosa* | Excision, burn wound model | 198 |
| Jati kalpa ghrita | *Jasminum officinale, Azadirachta indica, Stereospermum suaveolens, Hemidesmus indicus, Pongamia pinnata, Vetiveria zizanioides, Glycyrrhiza glabra, Rubia cordifolia, Symplocos racemosa, Curcuma longa, Berberis aristata, Nelumbo nucifera, Woodfordia fruticosa, Copper sulphate* | Excision wound model | 199 |

## CONCLUSION

In the rising countries increased cost of medicine as well as their side effects has become a great task when the public health is concerned. The scientific advancement carries with it the improvement in polyherbal formulations, through the study of various phytoconstituents and discovery of useful herbs combinations which work synergistically to produce desirable effect. Although polyherbal formulation is commonly used in many parts of the world, but scientifically it has not been explored. PHFs provide treatment of diseases in a holistic approach. The scientific advancement carries with it the improvement in Ayurvedic formulation of PHFs, through the study of various phytoconstituents and discovery of useful herbs combinations, which work synergistically to produce desirable effect. Many herbal therapies are still under *invivo* evaluation and have not been evaluated by clinical trials. Moreover, safety evaluations such as toxicological studies have not performed. There is need of time to evaluate polyherbal formulation using scientific methods such as clinical trial, possible bioactive compounds and mechanism of action for the future world. Only with correct and rational use, PHFs can exert the best effect in human health. This review reveals the diversity of polyherbal formulation which have been using for long time traditionally as well as in dosage form.

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