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REVIEW ON THE CONCEPT OF IMMUNOMODULATION IN AYURVEDA WITH SPECIAL EMPHASIS ON PRAKARA YOGA

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ABSTRACT: An immunomodulator can be defined as a substance, which can influence any constituent or function of the immune system in a specific or nonspecific manner including both innate or adaptive arms of the immune response. The Ayurvedic system of medicine details the concept of immunomodulation by the term Rasayana. The use of herbs for improving the overall resistance of body against common infections and pathogens has been a guiding principle of Ayurveda. Such herbs possessing immunomodulatory effects are referred to as Rasayana in Ayurvedic classics. Prakara Yoga is a chapter in one of the prime traditional Ayurvedic pediatric text book – Arogyakalpadruma. The whole content of Prakara Yoga chapter deals with different immunomodulatory recipes and procedures to be adopted right from the day after delivery. This paper is a review on the various concepts of immunomodulation detailed in the very same book along with the pharmacological studies conducted so far in this arena.

INTRODUCTION: A healthy immune system is vital for children as they are exposed to a plethora of germs. Immunity is the state of having sufficient biological defences to avoid infection, disease, or other unwanted biological invasion. It is the capability of the body to resist harmful microbes from entering it.

Immunity involves both specific and non-specific components. The non-specific components act either as barriers or as eliminators of wide range of pathogens irrespective of antigenic specificity.

Other components of the immune system adapt themselves to each new disease encountered and are able to generate pathogen-specific immunity. Innate immunity or nonspecific immunity is the natural resistances with which a person is born. It provides resistances through several physical, chemical and cellular approaches¹.

Immunomodulators: An immunomodulator can be defined as a substance, which can influence any constituent or function of the immune system in a specific or nonspecific manner including either innate or adaptive arms of the immune response.² They are a diverse array of recombinant, synthetic and natural preparations, often cytokines. Some of these substances, such as granulocyte colony-stimulating factor (G-CSF), interferons, imiquimod and cellular membrane fractions from bacteria are already licensed for use in patients. Others including IL-2, IL-7, IL-12, various chemokines,

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synthetic cytosine phosphate-guanosine (CpG), oligodeoxynucleotides and glucans are currently being investigated extensively in clinical and preclinical studies. Immunomodulatory regimens offer an attractive approach as they often have fewer side effects than existing drugs, including less potential for creating resistance in microbial diseases³.

Concept of immunomodulation in Ayurveda:

Ayurveda has propounded the concept of immunity as “Vyadhikshamatwa”⁴. Acharya Chakrapanidatta has interpreted the term Vyadhi-ksamatwa as Vyadhi bala Virodhitwa i.e., antagonistic to the strength and virulence of the disease and Vyadhyutpada Pratibandhakatwa i.e., the capacity to inhibit and bind the causes and factors of the disease⁵.

In fact, one of the therapeutic strategies in Ayurvedic medicines is to enhance the body's overall natural resistance to the disease causing agent rather than directly neutralizing the agent itself. The use of herbs for improving the overall resistance of body against common infections and pathogens has been a guiding principle of Ayurveda⁶.

Such herbs possessing immunomodulatory effects are referred to as Rasayana in Ayurvedic classics. They are supposed to have the ability of protecting the body against external factors that induce disease. This implied resistance against disease may represent the modern concept of immunity.⁷

Understanding Prakara Yoga: Prakara Yoga is the 35th chapter of the Ayurvedic pediatric classic text book named “Arogyakalpadruma” authored by Vaidya Kaikkulangara Rama Varrier.⁸ The author, at the end of the chapter points out that the content of Prakara Yoga is advised by Acharya Bhela. The core content of the chapter are the indigenous practices for enhancing body immunity and to prevent diseases in children. Due to vitiation of doshas, variety of diseases are occurring to children due to various reasons. Like the fort prevents the attack of enemies, Prakara Yogas help to prevent the occurrence of disease. In whole regimen of Prakara Yoga, good numbers of drugs are used at various developmental stages. Most of the combinations in Prakara Yoga are in the form of powder or ghee.

The one special feature regarding Prakara Yoga is that all the drug combinations/recipes detailed are as per the age of the child. Here, the drug schedule starts with birth and continues to the age of 12 years for the purpose of enhancing non-specific immunity of the body and thereby preventing diseases of childhood. The various formulations are quite excellent in preventing diseases, for boosting the immune system and to promote health and longevity.

Thus, the preventive measures mentioned in Prakara Yoga can be studied as an Ayurvedic approach or way of immunization as the modern tool of immunization/vaccination is also age specific.

The detailed description of the various immunomodulatory measures explained in Prakara Yoga is:

- **Jaatamatra/one day old child:** -Vacha is grinded in the juice of Tripadika and three drop of this mixture is instilled over the centre of the head. This procedure will maintain the digestive power correctly, the doshas will maintain correct balance, and the affliction with Balagraha will be prevented.
- **Pakshateeta/15 days to 1 month:** -the root, bark, leaf, flower and fruit of Bilva are taken together and powdered well. This powder is added with the juice of Dhatri and given internally.
- **Athipakshateeta/completed 1 month:** -the drugs such as Musta, Hingu and Vilanga are powdered and added with ghee medicated with juice of Trayanti/Brahmi is given internally.
- **Thraimasika/completed 3 months:** -the drugs such as Vyosha, and powder of Sariba is added with butter and given internally.
- **Shanmasika/completed 6 months:** -the powder of Musalikanda and Trikatu are mixed together and added with honey is given internally.
- **Ekabdha/1 year old child:** -The child of one year old should be administered with different preparations in each month as: -Powder of drugs such as Dhatri, Musta and Vyosha added

with honey is given internally at 1 year 1 month. Powder of drugs such as Dhatri, Musta and Vyosha added with butter is given internally at 1 year 2 month. Powder of drugs such as Dhatri, Musta and Vyosha added with hot water is given internally at 1 year 3 month. Powder of drugs such as Dhatri, Musta and Vyosha added with honey is given internally at 1 year 4 month. The drugs of Panchakola (Pippali, Pippali mula, Chavya, Chitraka and Nagara) is powdered and added with ghee is given internally at 1 year 5 month. Powder of Jeeraka and Krishna is added with honey and given internally at 1 year 6 month. The drugs such as Dadima and Vyosha added with Dadhi masthu is administered internally at 1 year 7 month. The ghee medicated with the drugs such as Grandhika mula and Kalinga/Kutaja is administered internally at 1 year 8 month. The drugs such as Vella/Vidanga and Krishna added with honey is administered internally at 1 year 9 month. The drugs such as Jeeraka and Vyosha added with sugar are administered internally at 1 year 10 month. The drugs such as Jeeraka and Vyosha added with cow's milk are administered internally at 1 year 11 month. The sugar and Jeeraka added with cow's milk is given internally at 1 year 12 month.

- **Thryabdha/3 year old child:** -The child of three year old should be administered with different preparations in each month as:-The drugs such as Guduchi, Pippali and Vacha are powdered and added with ghee and sugar is given internally at 3 year 1 month. The drugs such as Vyosha, Yasti, Vacha, Saindhava and Abhaya are powdered together and added with sugar and ghee is administered internally at 3 year 2 month. The drugs such as Vella, Musta, Ela, Vacha, Nagara and Pippali are powdered and given with sugar and ghee is administered internally at 3 year 3 month. The drugs such as Sariba, Vyosha, Vacha, Jeeraka and Kaisiki are powdered and added with sugar and ghee is administered internally at 3 year 4 month. The drugs such as Dadima, Ambhoda, Vacha, Dhanyaka and Magadhi/Pippali are powdered together and given with sugar and ghee at 3 year 5 month. The drugs such as Vrusciva, Bhunimba, Vacha and Ksheera taru twak are powdered well and mixed with sugar and ghee is administered internally at 3 year 6 month. The

drugs such as Supyaparni, Abda, Vira, Rudhi, Chapala and Vacha are powdered well and mixed with sugar and ghee is given at 3 year 7 month. The drugs such as Drona pushpa, Abda, Vacha and Dwija taru twak are powdered well and mixed with sugar and ghee is administered internally at 3 year 8 month. The drugs such as Trayamana/Brahmi, Abda, Vacha, Kutaja and Magadhi are powdered well and mixed with sugar and ghee is administered internally at 3 year 9 month. The drugs such as Malati pushpa, Vacha, Jeeraka and Kaisiki are powdered and added with sugar and ghee and given at 3 year 10 month. The drugs such as Samipatra, Jeeraka, Agni, Vacha and Kana are powdered and added with sugar and ghee and given at 3 year 11 month. The drugs such as Vella, Talisapatra, Agni, Pashugandha, Abhaya and Vacha are powdered and added with sugar and ghee and given at 3 year 12 month.

- **Panchayana/5 year old child:** - The child of five year old is given with medicaments said for Thryabdha/3 year old child with Pushkaramula instead of Vacha.
- **Ashtabdha/8 year old child:** - The child of eight year old is given with medicaments said for Thryabdha/3 year old child, added with root of Sankhapushpa instead of Vacha and the medium for mixing the compound is ghee and honey instead of sugar and ghee.
- **Dasabdha/10 year old child:**-After the tenth year, the child is given with proper medicated ghee monthly for seven days such as;
 - **Abhayadi Ghrita:** Ghee medicated with the juice of Brahmi added with the kalka prepared with the drugs such as Abhaya, Vyosha, Saindhava, Vacha and Talisapatra, is given at 10 year 1 month.
 - **Vidangadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Vilanga, Amalaka, Vyosha, Patha, Dadima and Dipyaka added with the juice extracted from Krishnamunda, is administered at 10 year 2 month.
 - **Jeerakadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as

Jeeraka, Vyosha, Saindhava, Vacha, Jalada and Pushkara along with the juice of Vetasamla, is administered at 10 year 3 month.

- **Jeevaniyadi Ghrita:** Ghee medicated with the drugs in the group called Jeevaniya gana, Ambhoda, Jayanthi mula, Chitraka and Granthi added with goat's milk is administered at 10 year 4 month.
- **Drakshadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Draksha, Vruschiva, Patha, Abda, Habusha mula, Katphala and Dadima along with goat's milk is administered at 10 year 5 month.
- **Saribadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Sariba, Jalada, Ushira, Trikatu, Surahwaya and Jeeraka added with goat's milk is administered at 10 year 6 month.
- **Nagaradi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Nagara, Amalaka, Anantha, Vilanga, Indrayava, Ambuda, and the root, bark, leaves, flower and fruit of Bilva added with water is administered at 10 year 7 month.
- **Pippalyadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Pippali, Indrayava, Draksha, Bruhati, Amshumathi dwaya, Tikta, Vaikundapushpa, Ambu, Nalada/Ushira, Alarka/Arka, Dipyaka, Dadima, Ambhoda, Patha, Ugra/Vacha, Sigru, Hingu, Punarnava, Bilva mula, Shami valka, Malati mukula, Utpala, Vilanga and Amalaka added with the medicinal fluid called Masthu is added with sugar and Jeeraka is administered at 10 year 8 month.
- **Bilvadi Ghrita:** Ghee medicated with the decoction prepared with the drugs such as Bilva, Ajamoda, Nirgundi, Chapala mula, Toyada and Dadima added with the kalka prepared with the drugs such as Vyosha, Ela, Agni and Vilanga along with cow's milk is beneficial to prevent diseases.

The drugs such as Patha, Vaikunda and Musta along with the medicinal fluid called Masthu can be used to prepare the medicated ghee. The same medicaments along with the decoction mentioned above can be used to medicate the ghee is also beneficial at 10 year 9 month.

- **Trayamanadi Ghrita:** Ghee medicated with the decoction prepared with the drugs such as Trayamana, Kalinga, Abda and Chapala mula added with the kalka prepared with the drugs such as Ativisha, Musta, Bhunimba and Kutaja is beneficial to prevent diseases. Ghee medicated with the kalka of the drugs such as Vyosha, Agni, Dadima and Jeeraka added with goat's milk is also beneficial to use at 10 year 10 month.
- **Dadimadi Ghrita:** Ghee medicated with the kalka prepared with the drugs such as Dadima, Triphala, Vella, Magadhi mula and Chitraka along with the juice of Jeevanthi and Masthu is advised to administer at 10 year 11 month.
- **Pathakutajadi Ghrita:** Ghee medicated with the decoction prepared with the drugs such as Patha, Kutaja, Bhunimba, Varshabhu/Vruschiva and Dhanyaka along with the kalka prepared with the drugs such as Vella, Palasa twak, Nisha dwaya, Punarnava, Vyosha, Dipyaka, Ananta and Madhuka/Yastimadhu is advised to administer added with honey at 10 year 12 month.
- **Dwasasabdha/12 year old child:** At 12 year 1 month, the drugs such as Ananta and Vacha along with sugar and honey is administered internally while from 12 year 2 month onwards, Instead of Ananta, the drugs such as Brahmi, Munda, Shami valka, Bhrunga, Amalaka, Magadhi, Vishala, Vajra valli, Indurekha, Bhunimba and Gopica are administered.

The drugs mentioned in Prakara Yoga chapter with their Sanskrit name, botanical name and family name are shown in **table 1**.

TABLE 1: LIST OF DRUGS MENTIONED IN PRAKARA YOGA CHAPTER WITH THEIR SANSKRIT NAME, BOTANICAL NAME AND FAMILY NAME

| Sanskrit name | Botanical name | Family name |
|------------------------------------|---|------------------|
| <i>Vacha</i> | <i>Acorus calamus</i> L. | Acoraceae |
| <i>Tripadika</i> | <i>Adiantum lunulatum</i> L. | Adiantaceae |
| <i>Bilva</i> | <i>Aegle marmelos</i> (Linn.) Correa ex Roxb. | Rutaceae |
| <i>Dhatri/Amalaki</i> | <i>Emblca officinalis</i> Gaertn. | Euphorbiaceae |
| <i>Musta/Ambhoda/Abda</i> | <i>Cyperus rotundus</i> L. | Cyperaceae |
| <i>Hingu</i> | <i>Ferula asafoetida</i> L. | Apiaceae |
| <i>Vidanga/Vella</i> | <i>Embelica ribes</i> Burn F. | myrsinaceae |
| <i>Trayanti/Trayamana</i> | <i>Scindapsus officinalis</i> Scott. | Araceae |
| <i>Sunthi/Nagara</i> | <i>Zingiber officinale</i> Roxb. | Zingiberaceae |
| <i>Maricha</i> | <i>Piper nigrum</i> Linn. | Piperaceae |
| <i>Pippali/Krishna/Chapala</i> | <i>Piper longum</i> L. | Piperaceae |
| <i>Chavya</i> | <i>Piper chaba</i> HUNTER | Piperaceae |
| <i>Chitraka/Agni</i> | <i>Plumbago zeylanica</i> L. | Plumbaginaceae |
| <i>Jeeraka</i> | <i>Carum carvi</i> L. | Apiaceae |
| <i>Dadima</i> | <i>Punica granatum</i> Linn. | Puniaceae |
| <i>Kalinga/Kutaja</i> | <i>Holarrhena anti dysentrica</i> Wall. | Apocyanaceae |
| <i>Guduchi</i> | <i>Tinospora cordifolia</i> (Wild) Meirs. | Menispermaceae |
| <i>Yastimadhu</i> | <i>Glycyrrhiza glabra</i> L. | Fabaceae |
| <i>Haritaki</i> | <i>Terminalia chebula</i> Retz. | Combretaceae |
| <i>Vibhitaki</i> | <i>Terminalia bellerica</i> (Gaertn.) Roxb. | Combretaceae |
| <i>Amalaki</i> | <i>Emblca officinalis</i> | Euphorbiaceae |
| <i>Ela</i> | <i>Elettaria cardomomum</i> (L) Maton | Zingiberaceae |
| <i>Kaisiki</i> | <i>Quercus infectoria</i> OLIV. | Fabaceae |
| <i>Dhanyaka</i> | <i>Coriandrum sativum</i> Linn. | Umbelliferae |
| <i>Vruschiva/Varshabhu</i> | <i>Boerhavia diffusa</i> Linn. | Nyctaginaceae |
| <i>Bhunimba</i> | <i>Swertia chirata</i> Buch. Ham | Gentianaceae |
| <i>Supyaparni</i> | <i>Teramnus labialis</i> var. mollis | Fabaceae |
| <i>Ruddhi</i> | <i>Dioscorea bulbifera</i> Linn. | Dioscoraceae |
| <i>Dronapushpi/Vaikundapushpa</i> | <i>Leucasa spera</i> (Willd.) Link | Lamiaceae |
| <i>Dwijataru/Palasha</i> | <i>Bute monosperma</i> | Fabaceae |
| <i>Samipatra</i> | <i>Mimosa pudica</i> L. | Mimosaceae |
| <i>Pashugandha</i> | <i>Nelumbo nucifera</i> Gaertn. | Nymphaeaceae |
| <i>Talisapatra</i> | <i>Abies webbiana</i> Lindl. | Pinaceae |
| <i>Sankhapushpi/Anantha/Gopica</i> | <i>Hemides musindicus</i> (L.) SCHULT. | Asclepidaceae |
| <i>Patha</i> | <i>Cyclea peltata</i> | Menispermaceae |
| <i>Dipyaka/Ajamoda</i> | <i>Ptychoti sajowan</i> DC. | Apiaceae |
| <i>Vetasamla</i> | <i>Rumex vesicarius</i> L. | Polygonaceae |
| <i>Draksha</i> | <i>Vitis vinifera</i> L. | Vitaceae |
| <i>Habusha</i> | <i>Juniperus communis</i> Linn. | Cupressaceae |
| <i>Jayanthi</i> | <i>Premna integrifolia</i> Linn. | Verbenaceae |
| <i>Katphala</i> | <i>Myricanagi</i> Thumb. | Myriaceae |
| <i>Ushira</i> | <i>Pseudoraphis spinescens</i> (R.Br.) Vikery | Poaceae |
| <i>Surahwaya/Devadaru</i> | <i>Cedrus deodara</i> (Roxb.) Loud. | Pinaceae |
| <i>Bruhati</i> | <i>Solanum nigrum</i> Linn. | Solanaceae |
| <i>Amshumati</i> | <i>Desmodium gangeticum</i> DC. | Fabaceae |
| <i>Tikta</i> | <i>Solanum anguivi</i> Lam. | Solanaceae |
| <i>Ambu</i> | <i>Vallisneria spiralis</i> Linn. | Hydrocharitaceae |
| <i>Nalada</i> | <i>Vetiveria zanioides</i> (Linn.) Nash. | Poaceae |
| <i>Arka</i> | <i>Calotropis gigantea</i> | Asclepiadaceae |
| <i>Shigru</i> | <i>Moringa oleifera</i> Lam. | Moringaceae |
| <i>Samivalka</i> | <i>Prosopis spicigera</i> | Fabaceae |

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|----------------------------|---|----------------|
| <i>Malatimukula</i> | <i>Jasminum grandiflorum</i> Linn. | Oleaceae |
| <i>Utpala</i> | <i>Nymphaea stellate</i> Willd. | Nymphaeaceae |
| <i>Nirgundi</i> | <i>Vitex nirgundo</i> L. | Verbenaceae |
| <i>Ativisha</i> | <i>Aconitum heterophyllum</i> Wall. Ex Royle | Ranunculaceae |
| <i>Jivanti</i> | <i>Holostem maadakodien</i> Schultes. | Asclepiadaceae |
| <i>Nisha</i> | <i>Curcuma linga</i> Linn. | Zingiberaceae |
| <i>Munda</i> | <i>Centellaa siatica</i> Linn. | Apiaceae |
| <i>Bhrunga/Bhrungaraja</i> | <i>Eclipta alba</i> (Linn.) Linn | Compositae |
| <i>Vishala</i> | <i>Citrullus colocynthis</i> Schrad. | Cucurbitaceae |
| <i>Vajravalli</i> | <i>Cissus quadrangularis</i> Linn. | Vitaceae |
| <i>Brahmi</i> | <i>Bacopa monnieri</i> | Plantaginaceae |
| <i>Kakoli/Vira</i> | <i>Roscoea procera</i> Wall. | Zingiberaceae |
| <i>Kshirakakoli</i> | <i>Lilium polphyllum</i> D. Don | Liliaceae |
| <i>Jeevaka</i> | <i>Microstylis wallichi</i> Lindl syn. | Orchideaceae |
| <i>Rishabhaka</i> | <i>Microstylis muscifera</i> Ridley | Orchideaceae |
| <i>Medha</i> | <i>Polygonatum verticillatum</i> (L.) All. syn. | Liliaceae |
| <i>Mahameda</i> | <i>Polygonatum cirrhifolium</i> (Wall.) Royle | Liliaceae |
| <i>Mudgaparni</i> | <i>Phaseolus trilobus</i> Ait. | Fabaceae |
| <i>Mashaparni</i> | <i>Teramus labialis</i> Spreng. | Fabaceae |
| <i>Jivanthi</i> | <i>Leptadenia reticulate</i> W & A. | Asclepiadaceae |
| <i>Madhuka</i> | <i>Glycyrrhiza glabra</i> Linn. | Fabaceae |

Time of administration: Each formulation is advised to administer for seven consecutive days with the constituents and dose varying with the corresponding age and suitable adjuvant.

Dosage: Acharya Sarngdhara's opinion is considered while fixing the dose for the Yogas (recepies) of Prakara Yoga. According to him, the dose at first month is 1 ratti (125mg). this dose is increased by 1 ratti each in successive months, up to twelve months when it reaches 2 masha (1.5gm) (since, 12 ratti = 2 masha). Next, the dose is increased by 1 masha every year and hence the dose at 12 year is taken as 13 masha since the recepies are explained only upto 12th year.

DISCUSSION: The constituents of Prakara Yoga are predominantly pungent in taste, light in quality, pungent after digestion and hence alleviate the vitiation of kapha since the infancy period is dominant with Kapha dosha and hence produces the Kaphaja diseases. All these Kapahaja diseases are brought about due to the imbalance in the digestive fire. Prakara Yogas are Deepana (carminative), Pachana (digestive), Krimighna (anti-helminthic), Tridoshahara (alleviates the three body humours), Medhya (brain stimulants), Krimihara (Anti-helminthic), Shoolahara (anti-spasmodic), Kushtaghna (anti-microbial), Balya (improves strength), Ayushya (provides long life), Laghu (light), Srotoshodhana (clears the body

channels), Rasyana (rejuvenative), Anulomana (mild laxative) and Vyadhihara (disease curing). The Deepana, Pachana and laghu property helps in correcting the deranged digestive fire and thereby pacifies the vitiated Kapha dosha. Moreover, the ghee preparations mentioned from tenth to twelfth year substantiate the fact that the children of that age group are more to diseases due to vitiated pitta and vata and ghee is the ideal form of medication since it is going to pacify pitta and vata doshas. The same ghee preparations aids in brain stimulation, providing strength and disease curing.

Pharmacological studies showing the immunomodulatory effect of the various constituents of Prakara Yoga: Several pharmacological studies have been so far conducted on different ingredients of Prakara Yoga such as: *Embllica officinalis*,⁹⁻¹⁴ *Desmodium gangeticum* DC,¹⁵ *Calotropis gigantea*,¹⁶ *Eclipta alba* (Linn.),¹⁷ *Aegle marmelos* (Linn.) *Correa ex*,¹⁸⁻¹⁹ *Bacopa monnieri*,²⁰ *Solanum nigrum* Linn.,²¹ *Plumbago zeylanica* L.,²²⁻²⁴ *Coriandrum sativum* Linn.,²⁵ *Leucas aspera* (Willd.) Link,²⁶ *Tinospora cordifolia* (Wild) Meirs.,²⁷⁻⁴⁰ *Terminalia chebula* Retz.,⁴¹ *Premna integrifolia* Linn.,⁴² *Carum carvi* L.,⁴³ *Piper longum* L.,⁴⁴⁻⁴⁹ *Centella asiatica* Linn.,⁵⁰⁻⁵¹ *Cyperus rotundus* L.,⁵² *Vitex nirgundo* L.,⁵³ *Nelumbo nucifera* Gaertn.,⁵⁴⁻⁵⁵ *Moringa oleifera* Lam.,⁵⁶⁻⁵⁷ *Cedrus deodara* (Roxb.) Loud.,⁵⁸ *Acorus calamus* L.,² *Boerhavia diffusa* Linn.,⁵⁹

Embelia ribes Burn F.,² *Citrullus colocynthis* Schrad.,⁶⁰ *Terminalia bellerica* (Gaertn.) Roxb.,⁶¹ *Glycyrrhiza glabra* L.² But more studies is to be conducted on the remaining members on Prakara Yoga for creating a good scientific basis.

CONCLUSION: Thus, the Prakara Yogas can be practised as an effective preventive measure right from the birth of a child. Eventhough many formulations which boost the immunity and strength have been explained in various Ayurvedic classics, the Prakara Yoga remain the sole authentic traditional age wise immunization schedule for children. Hence, more detailed investigation of its pharmacological activity, toxicity and clinical trials is to be conducted for obtaining a scientific approach to this traditional recepie of Prakara Yoga. In future, the research scholars should be guided and entertained to investigate on various constituents of Prakara Yoga thereby exploring the effect from these drugs as immunomodulators.

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