WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
Coden USA: WJPRAP Impact Factor 8.63
Volume 15, Issue 13, 610-625. Review Article ISSN 2277–7105

AYURGENOMICS: EXPLORING THE GENOMIC BASIS OF PRAKRITI AND ITS IMPLICATIONS FOR PRECISION MEDICINE—A NARRATIVE REVIEW

***Dr. Tredha Vyas**

P P Savani Ayurveda College and Hospital, GETCO, NH 8, near Biltech, Dhamdod, Kosamba, Gujarat 394125.

Article Received on 04 June 2026,
Article Revised on 24 June 2026,
Article Published on 01 July 2026,

https://doi.org/10.5281/zenodo.21027371

***Corresponding Author**
Dr. Tredha Vyas
Assistant Professor and Consultant, P P Savani Ayurvedic College and Hospital, Dhamdod, Surat.

How to cite this Article: *Dr. Tredha Vyas. (2026). Ayurgenomics: Exploring The Genomic Basis Of Prakriti And Its Implications For Precision Medicine—A Narrative Review. World Journal of Pharmaceutical Research, 15(13), 610–625.

ABSTRACT

Ayurveda, the ancient Indian system of medicine dating back to 1500 BCE, offers a holistic framework for personalized health through the concept of *Prakriti*—an individual's innate constitutional type determined by the relative dominance of the three *Tridoshas* (Vata, Pitta, and Kapha). Ayurgenomics represents an emerging transdisciplinary field that integrates Ayurvedic Prakriti stratification with modern genomics to uncover the molecular basis of inter-individual variability in health and disease. This narrative review critically examines the genomic correlates of Prakriti, including associations with single nucleotide polymorphisms (SNPs), HLA alleles, and genes involved in metabolic pathways (CYP2C19, ACE, LEPR, EGLN1), and discusses their implications for predictive, preventive, and personalized medicine (PPPM). Evidence demonstrates that healthy individuals of contrasting Prakriti types exhibit significant differences in biochemical parameters, gene expression levels (particularly immunity, cell division, and blood coagulation genes), and molecular phenotypes. The integration of Ayurveda's *Trisutra* framework (Doṣa-Dhātu-Māla) with genomics through Ayurgenomics provides a novel molecular framework for identifying predisposed individuals and discovering actionable therapeutic points in an individualized manner. This review underscores the potential of Prakriti-based stratification to advance precision medicine while identifying gaps requiring large-scale genomic validation studies and standardized assessment tools.

KEYWORDS: Ayurgenomics, Prakriti, Tridosha, Precision Medicine, Genomics, Ayurveda, Personalized Medicine.

1. INTRODUCTION

Ayurveda, documented and practiced since 1500 BCE, is one of the world's oldest systematic medical traditions. The term "Ayurveda" derives from *Ayus* (life) and *Veda* (knowledge/science), literally meaning "the science of life". Ayurveda follows a systems approach that emphasizes individualized assessment and treatment, paralleling contemporary personalized genomic medicine.[3]

The foundational philosophy of Ayurveda is built upon the **Trisutra** concept—*Doṣa-Dhātu-Māla*—which encompasses:

- **Doṣa**: The three functional bioenergies (Vata, Pitta, Kapha) that regulate physiological and psychological processes
- **Dhātu**: The seven tissue layers (Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra)
- **Māla**: Trimal (Purisha, Mutra, Sweda)

Prakriti is a fundamental Ayurvedic concept defining an individual's unique physical, physiological, and psychological constitution, shaped by the relative dominance of the Tridoshas. It is determined at the time of conception and remains relatively stable throughout life, influencing:[2]

- Disease predisposition and susceptibility
- Response to environmental factors, diet, and therapies
- Metabolic activity and immunological profile[6][1][2]

1.1 The Three Prakriti Types

Prakriti Type	Dominant Doṣa	Key Characteristics
Vata	Vata	Thin body, dry skin, variable digestion, quick mental response, anxiety predisposition.[2,4]
Pitta	Pitta	Moderate body, warm skin, strong digestion, intense personality, inflammatory disease predisposition.[2,4]
Kapha	Kapha	Heavy body, oily skin, slow digestion, calm temperament, obesity/metabolic disease predisposition.[2,4]

Each person possesses all three Doshas in unique proportions, resulting in seven Prakriti types: three single-Dosha (Vata, Pitta, Kapha), three dual-Dosha (Vata-Pitta, Pitta-Kapha, Vata-Kapha), and one triple-Dosha (Vata-Pitta-Kapha).[2]

The integration of Ayurvedic Prakriti phenotyping with genomics, termed **Ayurgenomics**, was pioneered for the first time by the Council of Scientific & Industrial Research (CSIR) in India. This groundbreaking approach has led to:[4]

- Identification of the molecular and genomic basis of Doṣa Prakriti
- Discovery of biochemical and hematological differences between Prakriti types
- Correlation of Prakriti with genetic markers, transcriptomic, proteomic, and metabolomic profiles[4,2]

Ayurgenomics aims to refine predictive, preventive, and personalized therapeutic approaches by bridging ancient wisdom with modern genomics.[2]

2. OBJECTIVES

Modern genomics has begun uncovering parallels with Ayurvedic concepts, suggesting a scientific basis for Prakriti-based personalized medicine. Despite growing evidence, comprehensive narrative reviews integrating detailed Ayurvedic textual references with contemporary genomic findings remain limited. This review aims to:[1]

1. Critically explore the Prakriti concept as elaborated in Ayurvedic Samhitas (classical texts)
2. Evaluate genetic underpinnings through current biomedical research
3. Discuss implications for precision medicine
4. Identify research gaps and future directions

3. METHODS

Review Design

This study employed a **narrative review** approach to comprehensively synthesize existing literature on Ayurgenomics, Prakriti genetics, and precision medicine implications. Narrative reviews are particularly suitable for emerging interdisciplinary fields where systematic meta-analysis may be limited due to heterogeneous methodologies.[1,2]

Data Sources and Search Strategy

A comprehensive literature search was conducted using the following databases and sources:

- PubMed/MEDLINE
- Google Scholar
- CSIR (Council of Scientific & Industrial Research) publications
- Ayurvedic classical texts (Samhitas)
- Peer-reviewed journals on genomics and integrative medicine

Search terms included

- "Ayurgenomics"
- "Prakriti genetics"
- "Tridosha genomics"
- "Prakriti SNPs"
- "Ayurveda precision medicine"
- "EGLN1 Prakriti"
- "Personalized medicine Ayurveda"

Selection Criteria

Included studies

- English-language peer-reviewed articles
- Studies examining genomic correlates of Prakriti
- Research on Ayurgenomics frameworks
- Ayurvedic textual references on Prakriti
- Articles published up to June 2026

Excluded studies

- Non-peer-reviewed sources without scientific validation
- Studies without clear Prakriti assessment methodology
- Articles focusing solely on Ayurveda without genomic integration

Data Extraction and Synthesis

Data were extracted systematically focusing on:

1. **Ayurvedic foundations**: Prakriti definitions from classical Samhitas
2. **Genomic markers**: SNPs, HLA alleles, gene expression patterns
3. **Molecular correlates**: Biochemical, hematological, transcriptomic differences
4. **Clinical applications**: Disease predisposition, pharmacogenomics

5. **Future directions**: Research gaps and translational opportunities

Information was synthesized thematically, integrating Ayurvedic philosophical concepts with molecular biology findings to construct a coherent narrative on Ayurgenomics.

Quality Assessment

Given the narrative review nature, formal quality assessment tools (e.g., PRISMA) were not applied. However, source credibility was evaluated based on:

- Journal peer-review status
- Author institutional affiliations
- Citation counts
- Methodological rigor in primary studies

4. RESULTS

Ayurvedic Foundations of Prakriti in Classical Samhitas

Prakriti in Charaka Samhita

The **Charaka Samhita**, one of the foundational Ayurvedic texts, describes Prakriti extensively:

"*Prakriti refers to the inherent nature of an individual determined by the dominance of Doshas present at the time of conception.*"[1]

Charaka Samhita (Chikitsa Sthana, Chapter 8) outlines that Prakriti is influenced by:

- **Matruja** (maternal factors)
- **Pitruja** (paternal factors)
- **Atmaja** (soul's inherent nature)
- **Rasaja** (The nutritional state and dietary habits of the mother during pregnancy.
- **Satvaja** (The psychological disposition (mind-body connection)
- **Satmyaja** (Wholesomeness and adaptability to environmental factors.)

The text classifies Prakriti into seven types based on Dosha dominance, establishing the foundation for individualized diagnosis and treatment.[1]

Prakriti in Sushruta Samhita

Sushruta Samhita (Sutra Sthana, Chapter 15) elaborates on Prakriti assessment through:

- **Varna** (color)

- **Akriti** (body shape)
- **Gati** (movement)
- **Bhasha** (speech)
- **Swara** (voice)[1]

Sushruta emphasizes that Prakriti determines disease susceptibility and treatment response, advocating for Prakriti-based therapeutic interventions.[1]

Prakriti in Ashtanga Hridaya

Ashtanga Hridaya (Sutra Sthana, Chapter 3) provides detailed criteria for Prakriti classification:

- Physical characteristics (body weight, skin texture)
- Physiological parameters (digestion, metabolism)
- Psychological traits (temperament, mental stability)[1]

Genomic Correlates of Prakriti

Single Nucleotide Polymorphisms (SNPs)

Multiple studies have identified significant associations between Prakriti types and specific SNPs:

Genetic Marker	Associated Prakriti	Functional Significance
CYP2C19	Vata	Metabolic enzyme, drug metabolism.[1]
ACE (Angiotensin-converting enzyme)	Pitta	Cardiovascular regulation, inflammatory response.[1]
LEPR (Leptin receptor)	Kapha	Metabolic regulation, obesity predisposition.[1]
HLA alleles	All types	Immune system variability, disease susceptibility.[1]

Genome-wide association studies (GWAS) have validated Prakriti as a biologically representative endophenotype, demonstrating concordance between genotypic variations and Prakriti phenotyping.[6][1]

EGLN1: Molecular Equivalent of Tridosha

A landmark discovery in Ayurgenomics is the identification of **EGLN1** (Egl-9 Family Hypoxia Inducible Factor 1) as a potential molecular equivalent of Tridosha:

Key Findings

- EGLN1 is a **key oxygen sensor** that differs significantly between Prakriti types[3]
- Linked to **high altitude adaptation** mechanisms[3]
- Shows **significant enrichment in highly connected hub genes** explaining Prakriti differences[3]
- Modulates different phenotypic outcomes where **hypoxia is a cause or consequence** during health and diseased states[3]

"EGLN1 could qualify as a molecular equivalent of tridosha that can modulate different phenotypic outcomes"[3]

This finding provides crucial mechanistic insight into how Tridosha may operate at the molecular level.

Gene Expression Differences

CSIR's Ayurgenomics study revealed that healthy individuals of contrasting Prakriti types exhibit **striking differences** in:

Biochemical and Hematological Parameters

- Vata: Lower hemoglobin, variable metabolic markers.[4]
- Pitta: Higher inflammatory markers, elevated liver enzymes.[4]
- Kapha: Higher cholesterol, increased body fat markers.[4]

Gene Expression Levels

Significant differences observed in genes responsible for:

- **Immunity** (HLA complex, cytokine genes)
- **Cell division** (cyclins, CDKs)
- **Blood coagulation** (coagulation factors)[4]

Transcriptomic, Proteomic, and Metabolomic Profiles

Ayurgenomics has extended beyond genomics to include:

- **Transcriptomics**: Gene expression patterns varying by Prakriti.[2]
- **Proteomics**: Protein abundance differences in metabolic pathways.[2]
- **Metabolomics**: Metabolic profile variations reflecting Dosha dominance.[2]

These multi-omics approaches provide comprehensive molecular characterization of Prakriti types.[2]

Prakriti-Based Disease Predisposition

4.1 Vata Prakriti and Disease Susceptibility

Disease Category	Specific Conditions	Genetic/Molecular Basis
Neurological	Anxiety, depression, Parkinson's	CYP2C19 polymorphisms affecting neurotransmitter metabolism.[1,2]
Cardiovascular	arrhythmias	HLA allele variations.[1]
Musculoskeletal	Osteoarthritis, muscle weakness	Bone metabolism gene variants.[2]

4.2 Pitta Prakriti and Disease Susceptibility

Disease Category	Specific Conditions	Genetic/Molecular Basis
Inflammatory	Rheumatoid arthritis, IBD	ACE polymorphisms, inflammatory cytokines.[1,2]
Metabolic	Hyperthyroidism, hepatitis	Liver enzyme gene variants.[2]
Dermatological	Acne, psoriasis, allergies	Immune regulation genes.[2]

4.3 Kapha Prakriti and Disease Susceptibility

Disease Category	Specific Conditions	Genetic/Molecular Basis
Metabolic	Obesity, diabetes type 2	LEPR polymorphisms, metabolic genes.[1,2]
Cardiovascular	Hypertension, coronary disease	Lipid metabolism variants [2]
Respiratory	Asthma, sinusitis	Airway inflammation genes [2]

Ayurgenomics Frameworks for Precision Medicine

Six Translational Opportunities

The 2023 review by Camb Prism Precis Med identified six key frameworks where Ayurgenomics enables precision medicine:

1. **Molecular correlate discovery**: Building ontological links between Ayurveda and genomics[5]
2. **Biomarker discovery**: Early actionable interventions through Prakriti-based biomarkers[5]
3. **Drug action mechanisms**: Understanding molecular mechanisms for drug repurposing[5]
4. **Network medicine perspective**: P4 medicine (Predictive, Preventive, Personalized, Participatory) through common organizing principles[5]
5. **Non-invasive stratification**: Compendium of system-level phenotypes for healthy/diseased individual classification.[5]

6. **Evidence-based integrative medicine**: Developing solutions for clinical practice in integrative settings.[5]

Pharmacogenomics and Prakriti

Modern genomics has identified associations between Prakriti types and:

- **Metabolic activity**: CYP enzyme variants affecting drug metabolism.[6,1]
- **Immunological profile**: HLA alleles influencing drug hypersensitivity.[1]
- **Drug response variability**: Prakriti-based pharmacogenetic differences.[6]

This validates Prakriti as a predictive tool for personalized pharmacotherapy.[6]

Epigenetics and Prakriti

Recent findings on **epigenetics** demonstrate:

- Prakriti influences gene expression through epigenetic modifications
- Environmental factors (diet, lifestyle) interact with Prakriti to modulate epigenetic patterns
- Epigenetic plasticity may explain Prakriti-Dosha dynamics.[6]

This suggests that while Prakriti is constitutionally determined, its expression can be modulated through lifestyle interventions.[6]

Clinical Applications of Ayurgenomics

Preventive Medicine

Ayurgenomics enables:

- **Early risk stratification**: Identifying individuals predisposed to specific diseases based on Prakriti.[4,3]
- **Targeted lifestyle interventions**: Prakriti-specific diet and exercise recommendations.[2]
- **Preventive monitoring**: Regular screening for Prakriti-associated conditions.[4]

Diagnostic Precision

Integration benefits

- **Non-invasive stratification**: Using system-level phenotypes for Prakriti assessment.[5]
- **Molecular diagnostics**: Combining genomic markers with Prakriti phenotyping.[3]
- **Refined disease classification**: Subtyping diseases based on Prakriti constitution[2]

Therapeutic Personalization

Ayurgenomics supports

- **Prakriti-specific drug selection**: Choosing medications based on constitutional type.[6,2]
- **Dosage optimization**: Individualized dosing based on metabolic Prakriti.[6]
- **Combination therapy**: Integrating Ayurvedic and modern treatments strategically.[5]

CSIR Ayurgenomics Study: Key Findings

The landmark CSIR study represents the first integration of Ayurvedic Prakriti stratification with modern genomics:

Major Outcomes

- Identification of **molecular and genomic basis** of Doṣa Prakriti.[4]
- Documentation of **biochemical and hematological differences** between Prakriti types.[4]
- Discovery of **gene expression level differences** in immunity, cell division, blood coagulation genes.[4]
- Development of **novel molecular framework** for integrating genomics with Ayurveda.[4]

"The Ayurgenomics study thus provides a novel molecular framework for integrating genomics studies to Ayurvedic principles of inter-individual variability and accelerating the discovery of markers for predictive, preventive, and personalised medicine"[4]

5. DISCUSSION

Synthesis: Connecting Ayurvedic Philosophy with Molecular Biology

The Ayurgenomics paradigm represents a transformative convergence of ancient wisdom and contemporary science. The integration of Ayurveda's **Trisutra framework** (Doṣa-Dhātu-Mādhsvya) with genomics provides a unifying scaffold that allows both intellectual traditions to enhance one another.[3]

Key Conceptual Parallels

Ayurvedic Concept	Modern Genomic Equivalent
Tridosha (Vata-Pitta-Kapha)	**EGLN1** and hub gene networks regulating oxygen sensing and phenotypic outcomes.[3]
Prakriti (constitutional type)	**Genotypic variation** + SNP profiles + gene expression patterns.[1,6]
Dosha imbalance (Vikriti)	**Patho-phenotypes** + intermediate disease states [3]
Individualized treatment	**Personalized genomic medicine** + pharmacogenomics [3][6]

These parallels demonstrate that Ayurveda's systems approach has interesting parallels with contemporary personalized genomic medicine approaches.[3]

EGLN1 as the Molecular Tridosha: Implications

The identification of EGLN1 as a potential molecular equivalent of Tridosha is profoundly significant:

Scientific Implications

1. **Mechanistic explanation**: Provides molecular basis for how Tridosha regulates physiological processes.[3]
2. **Hypoxia connection**: Links Dosha dynamics to oxygen sensing, relevant in both health and disease.[3]
3. **Adaptation biology**: Explains high-altitude adaptation differences between Prakriti types.[3]
4. **Hub gene enrichment**: Highly connected genes explain phenotypic variability.[3]

Clinical Implications

- EGLN1 targeting could modulate Dosha balance therapeutically
- Hypoxia-related diseases may show Prakriti-specific patterns
- Oxygen sensing pathways represent new therapeutic targets.[3]

Prakriti as a Biologically Representative Endophenotype

Multiple lines of evidence validate Prakriti as an **endophenotype**—an internal, biologically measurable trait.

Genetic Validation

- GWAS findings confirm genotypic-Prakriti concordance.[6,1]
- SNP associations (CYP2C19, ACE, LEPR) demonstrate biological basis.[1]
- HLA allele variations support immune system correlation.[1]

Multi-omics Validation

- Transcriptomic differences in gene expression.[2]
- Proteomic variations in metabolic pathways.[2]
- Metabolomic profile differences.[2]

Clinical Validation

- Documented disease predisposition patterns.[1,2]
- Biochemical and hematological parameter differences.[4]
- Treatment response variability.[6,2]

This comprehensive validation positions Prakriti as a robust tool for precision medicine.[6,1]

Ayurgenomics in Predictive, Preventive, and Personalized Medicine (PPPM)

Ayurgenomics accelerates PPPM goals through:

Predictive Medicine

- Identifying predisposed groups based on Prakriti-genotype mapping.[3]
- Early risk stratification before disease manifestation.[4]
- Genetic biomarker discovery for actionable interventions.[5]

Preventive Medicine

- Prakriti-specific lifestyle and dietary recommendations.[2]
- Targeted monitoring for high-risk individuals.[4]
- Epigenetic modulation through environmental interventions.[6]

Personalized Medicine

- Individualized drug selection based on Prakriti.[2,6]
- Dosage optimization through metabolic profiling.[6]
- Combination therapy strategies integrating Ayurveda and modern medicine.[5]

"Our studies affirm that integration of the trisutra framework through Ayurgenomics can guide the identification of predisposed groups of individuals and enable discovery of actionable therapeutic points in an individualized manner."[3]

Pharmacogenomics: Prakriti-Based Drug Discovery

An Ayurgenomics approach enables Prakriti-based drug discovery:

Mechanistic Understanding

- Understanding molecular mechanisms of Ayurvedic drug action.[5]
- Identifying targets for drug repurposing.[5]
- Explaining variable drug responses across Prakriti types.[6]

Clinical Applications

- Prakriti-specific pharmacotherapy protocols.[2]
- Reduced adverse drug reactions through personalized selection.[6]
- Enhanced therapeutic efficacy through constitutional matching.[2]

The integration of Ayurveda and modern omics technologies represents a successful journey towards future precision medicine.[6]

Non-Invasive Stratification: System-Level Phenotypes

Ayurgenomics enables **non-invasive stratification** of healthy and diseased individuals using:

Compendium of Phenotypes

- Biochemical markers
- Hematological parameters
- Transcriptomic profiles
- Metabolomic signatures.[5]

Advantages

- Minimally invasive assessment
- Rapid Prakriti classification
- Objective molecular validation
- Scalable for clinical practice.[5]

This approach allows systematic exploration of Trisutra Ayurveda, harnessing genomics and molecular phenotyping power.[4]

Challenges and Limitations

Despite promising findings, several challenges remain:

Methodological Challenges

1. **Standardization**: Lack of standardized Prakriti assessment tools[1]
2. **Heterogeneity**: Variable methodologies across studies limit meta-analysis[1][2]
3. **Sample size**: Most studies have limited participant numbers[1]
4. **Population specificity**: Findings may not generalize across ethnic groups[1]

Scientific Challenges

1. **Mechanistic gaps**: Complete molecular pathways of Tridosha remain unclear[3]
2. **Epigenetic complexity**: Interaction between Prakriti and environmental factors needs elucidation[6]
3. **Multi-omics integration**: Comprehensive integration of genomics, transcriptomics, proteomics, metabolomics requires advancement[2]

Clinical Implementation Challenges

1. **Clinical validation**: Limited large-scale clinical trials[1]
2. **Integration barriers**: Healthcare system integration of Ayurveda-modern medicine remains challenging[5]
3. **Evidence gaps**: Need for more evidence-based solutions for clinical practice[5]

Ayurgenomics in the Global Precision Medicine Landscape Integration with Global Initiatives

- Alignment with P4 medicine (Predictive, Preventive, Personalized, Participatory) frameworks[5]
- Compatibility with genome medicine initiatives worldwide
- Contribution to diverse population genomic databases
- Unique contribution: Constitutional typing before disease manifestation

Cultural and Ethical Considerations

- Respect for traditional knowledge systems
- Informed consent for genetic testing
- Data privacy in genomic databases
- Equitable access to Prakriti-based interventions

5. CONCLUSION

Ayurgenomics represents a paradigm shift in understanding inter-individual variability through the integration of Ayurvedic wisdom with genomic science. The identification of molecular correlates (particularly EGLN1), validation of Prakriti as an endophenotype, and development of frameworks for precision medicine demonstrate the scientific validity and clinical utility of this approach.[3,4,5]

While challenges remain in standardization, mechanistic understanding, and clinical implementation, the translational opportunities are enormous. Future research focusing on large-scale validation, standardized tools, and clinical trials will accelerate the realization of Ayurgenomics' potential in advancing preventive and personalized medicine globally.[1][4][5]

The integration of the Trisutra framework through Ayurgenomics provides a novel molecular framework that can guide individualized healthcare, representing a successful convergence of ancient wisdom and modern science for the benefit of global health.[3,4]

6. REFERENCES

1. Prakriti In Ayurvedic Samhitas And Its Modern Genetic Correlation: A Critical Review. *Journal of Neonatal Surgery*, 2025 Aug 1.
2. Prakriti and Ayurgenomics: Bridging Ancient Wisdom and Modern Genomics for Personalized Healthcare. *African Journal of Biomedical Research*, 2025 Jul 10; 28(3S). DOI: 10.53555/AJBR.v28i3S.8093
3. Goel A, et al. Genomic insights into ayurvedic and western approaches to personalized medicine. *J Genet.*, 2016 Mar; 95(1): 209-28. DOI: 10.1007/s12041-015-0607-9
4. Review On Prakriti-based Personalized Medicine: Integrating Ayurveda and Genomics. *International Journal of Advanced Research*, 2020 Jun 4
5. CSIR. Ayurgenomics: Bringing age-old wisdom to the healthcare of the future. *CSIR Success Stories*, 2025 Dec 10.
6. Ayurgenomics-based frameworks in precision and integrative medicine: Translational opportunities. *Cambridge Prism: Precision Medicine*, 2023 Jun 15; 1: e29. DOI: 10.1017/pcm.2023.15
7. An Ayurgenomics Approach: Prakriti-Based Drug Discovery and Personalized Medicine. *PMC Articles*, 2022 Mar 31; (). DOI: PMC9011054
8. Prakriti-based medicine: A step towards personalized medicine. *PMC Articles*. DOI: PMC3296331
9. Charaka Samhita. Translated by Shrivatsa Gosvami. Delhi: Chaukhamba Sanskrit Pratishthan; 2008. Sutra Sthana, Ch. 7; Chikitsa Sthana, Ch. 8.
10. Sushruta Samhita. Translated by Kaviraj Kunjalal Bhishagratha. Delhi: Sanskrit Shakti Peeth; 2010. Sutra Sthana, Ch. 15.
11. Ashtanga Hridaya. Translated by Priyavrat Sharma. Chennai: Krishnadas Academy; 2009. Sutra Sthana, Ch. 3-4.

12. Madhava Nidana. Translated by P.V. Sharma. Delhi: Ayurved Endo Lab; 1990.
13. Sharngadhara Samhita. Translated by Ram Karan Sharma. Delhi: Ayurved Academy; 1985.
14. Bhava Prakasha. Translated by K.C. Kashyap. Varanasi: Chaukhamba Publications; 2001.
15. Personalized Medicine through Prakriti: Exploring Ayurgenomics as a Framework. *IJRTI*, 2025; (). PDF.
16. Review on Prakriti-based Personalized Medicine: Integrating Ayurveda and Genomics. *IJAR*., 2020; (). Article 57439.