

# The Legalome: Definition, Scope, and Canonical Record of Truth

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## Subtitle

A canonical public record for the definition, provenance, attribution, and conceptual lineage of the Legalome.

## Edition

Canonical Edition 1.0

## Published

2026-03-18

## Canonical URL

<https://legalome.info>

## Canonical short definition

**The Legalome is the biological ecology of justice.**

## Canonical formal definition

The Legalome is the application of microbiome sciences and objective omics-derived markers in forensic and legal psychology.

## Expanded definition

The Legalome concerns the explanatory and practical relevance of microbes, microbe-derived metabolites, and objective omics-derived markers in cognition, behavior, legal psychology, and justice involvement. It includes the ways in which the human microbiome acts as a biological transducer of environmental inputs that may intersect with brain architecture, function, and behavior.

The Legalome also includes intersections with other omics-derived markers, including genomics, metabolomics, epigenomics, transcriptomics, and related biological measures that may help bring objectivity to domains traditionally dominated by paper-and-pencil self-report, narrow behavioral interpretation, and subjective clinical impressions.

## What the Legalome is not

The Legalome is distinct from forms of forensic microbiology primarily concerned with: - human identification - placing a perpetrator at a crime scene - establishing postmortem intervals - determining cause of death

Instead, the Legalome focuses on the explanatory and practical relevance of microbiome science, microbe-derived metabolites, and objective omics-derived markers in the context of cognition,

behavior, legal psychology, and justice involvement.

## Scope of application

The Legalome includes applications within forensic psychology, but it is not limited to forensic psychology.

It is also situated within the broader field of legal psychology, including all actors within systems of criminal justice—encompassing the behavior, lifestyle, occupational conditions, and fitness-for-duty of law enforcement personnel, judges, lawyers, corrections professionals, and forensic practitioners.

This broader scope matters because legal and justice systems are high-stakes, high-stress environments in which biological ecology, environmental inputs, burnout, cognition, judgment, and performance may intersect in consequential ways.

## Why the Legalome matters

The Legalome introduces an ecological and biologically informed framework into legal and forensic psychology.

It expands inquiry beyond isolated behavioral interpretation by incorporating microbiome science and objective omics-derived markers into questions of context, vulnerability, behavior, legal responsibility, mitigation, justice involvement, and institutional performance.

As microbiome science, neuromicrobiology, and omics continue to evolve, the Legalome offers a framework for thinking more carefully—and more objectively—about the biological ecology of justice.

## Canonical record of truth

The current record of truth for the Legalome definition is the newest canonical paper in the Legalome publication lineage.

**Primary canonical citation:** Mishra P, Prescott SL, Logan AC. *The Gut is Guilty! Will Legalomics Transform Forensic and Legal Psychology?* *Frontiers in Psychology*. 2026;17:1739593. doi:10.3389/fpsyg.2026.1739593

## Attribution and provenance

This document exists to preserve the origin, meaning, attribution, and canonical citation history of the Legalome as it enters academic, legal, and public discourse.

For the most stable public reference, use the canonical citation above together with the canonical site URL: <https://legalome.info>

## Conceptual breadcrumb lineage

This breadcrumb sequence reflects author-provided conceptual scaffolding from Alan C. Logan.

### 1) Seed paper that first mentioned the Legalome by name

<https://www.mdpi.com/2075-471X/13/2/17>

*Why it belongs:* Uses the *Huberty* case to connect nutritional criminology, food crime, and biological contributors to criminal behavior—opening the path toward the Legalome.

### 2) Legalome descriptive paper

<https://journals.sagepub.com/doi/abs/10.1177/00938548241302468>

*Why it belongs:* Moves the discussion into explicit criminal-law territory by tying microbiome and nutritional psychology to *mens rea*, diminished capacity, and mitigation.

### **3) Further elaboration**

<https://enviromicro-journals.onlinelibrary.wiley.com/doi/full/10.1111/1751-7915.70129>

*Why it belongs:* Introduces the Legalome as a named framework and argues that microbiome and omics science could reshape criminal justice, prevention, and rehabilitation.

### **4) Next expansion**

<https://www.mdpi.com/2673-4087/5/3/28>

*Why it belongs:* Shows how ultra-processed food, dysbiosis, and neuropsychiatric effects fit into neurolaw, expanding the lineage from microbes alone to diet-shaped biological environments.

### **5) Refinement**

<https://academic.oup.com/jlb/article/12/2/lsaf022/8305255>

*Why it belongs:* Builds a more explicit Legalome framework for admissibility, privacy, tiered evidence, and criminal responsibility.

### **6) Wider relevance to planetary health**

<https://academic.oup.com/sumbio/article/2/4/qvaf027/8371748>

*Why it belongs:* Consolidates the Legalome as a mature field concept by defining it directly and distinguishing bounded ABS-style claims from broader probabilistic omics claims.

## **Closing statement**

The Legalome is a developing but increasingly coherent concept at the intersection of microbiome science, omics, legal psychology, and justice. This record exists to stabilize its definition, preserve its attribution, and provide a durable public point of reference for future scholarly, legal, and public use.