BioAge™ — Rapid Physiologic Stability Score for Surge Triage

30–60 second finger-clip PPG reading → Stability Score (0–100) + Green/Yellow/Red triage flag
Non-diagnostic decision-support designed for **pandemic preparedness** and **health security surge operations**.

Primary output (what they'll remember):
BioAge™ Stability Score + Instability Risk Tier + Confidence + Signal-Quality Gate (PASS/NO SCORE)

CTA button: *Request Pilot / Program Evaluation*

The Problem (Health Security Reality)

During outbreaks, CBRN incidents, and surge events, teams face:
- High volume + limited staff
- Intermittent vitals and inconsistent triage
- Missed early deterioration → delayed escalation

Grant relevance: This is a **preparedness/operations gap**, not a consumer "wellness gadget."

The Solution

BioAge™ provides a fast, standardized stability signal:
- **Stability Score (0–100)**
- **Instability Risk tier:** Green / Yellow / Red
- **Confidence level:** High / Medium / Low
- **Signal Quality gate:** PASS or **NO SCORE** (fail-safe)

Why it matters: It helps teams **prioritize monitoring and escalation** when resources are constrained.

How It Works (Simple + Reviewer-Friendly)

1. Finger-clip PPG capture (30–60 seconds)
2. Automated artifact screening + signal quality scoring
3. If quality passes → Stability Score + Risk tier + Confidence
4. If quality fails → **NO SCORE** + on-screen guidance (reposition / warm hands / retry)

Key safety posture: no misleading outputs when data quality is poor.

Intended Users & Settings

Users: triage nurses, EMS transfer points, ED overflow teams, temporary care sites
Settings: pandemic influenza / emerging infectious disease surges, mass-casualty triage, constrained field operations

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What Makes It Different

- **Surge-first design:** minimal steps, fast time-to-signal
- **Fail-safe gating:** "NO SCORE" instead of false certainty
- **Operational output:** score + tier + confidence (not diagnosis)
- **Accountability:** audit logs + version control (for program evaluation)

Evidence Plan (What Grant People Look For)

Primary endpoints (measurable):
- Time-to-score (seconds)
- Usable reading rate (% PASS vs NO SCORE)
- Test-retest reliability
- Robustness to motion/low perfusion
- Drift resistance over time
- Agreement/discrimination vs clinician adjudication in simulated surge workflow

Pilot design: simulated surge + clinician tiering + feasibility metrics.

Technology Maturity (Choose This On Forms)

Technology maturity: *Proof of concept / generating data* (or *Rough prototype* if you have a working unit)
TRL: *TRL 3–4* (PoC demonstrated / lab validation)
(If you already have a working integrated prototype: TRL 4–5.)

IP / Ownership (Grant-Friendly)

All IP and technology rights are owned by **Lathell Nutraceuticals LLC**.
We provide **non-confidential disclosures only**; proprietary implementation remains protected.

Non-Diagnostic Statement (Must be on the page)

BioAge™ is a **non-diagnostic decision-support tool** intended to support triage workflows and monitoring prioritization. It does not diagnose disease or replace clinical judgment.

Footer / Contact

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