LIMITLESS PEPTIDES LABS

Research Peptides Resource Document (RUO)

Important RUO disclaimer

This document is for **educational and internal research reference only**. It does **not** provide medical advice, diagnosis, or treatment recommendations, and it is **not** intended to guide human use. Many compounds listed are **not FDA-approved** (or not approved for the listed purposes), may present **significant safety risks**, and may be **prohibited in sport**. Product identity/purity/sterility can vary widely in grey-market supply.

Quick classification key

- **FDA-approved Rx** (for specific indications): Tirzepatide, Tesamorelin, Bremelanotide.
- **Not FDA-approved / primarily preclinical**: Retatrutide, SLU-PP-332, 5-Amino-1MQ, AOD9604, SEMAX, BPC-157, TB-500 blends, CJC-1295 (no DAC), Ipamorelin, Hexarelin, IGF-1 LR3, Epithalon, Glutathione (as "peptide therapy" claims), etc.
- **WADA/anti-doping**: Many GH secretagogues (e.g., **MK-677/ibutamoren**, **ipamorelin**) are explicitly addressed on the Prohibited List.

A) Popular / Weight Loss / Metabolic

1) Tirzepatide (Popular/Weight Loss)

Type / Target: Dual incretin receptor agonist (**GIP + GLP-1**).
Evidence level: High (large RCTs; FDA-approved).
Key studied outcomes: Weight reduction, glycemic control, cardiometabolic risk markers (varies by trial/indication).
Safety notes (high-level): GI adverse effects are common class effects; review prescribing information for contraindications/warnings.
Regulatory: FDA-approved (brand labeling contains full indications/limitations).

2) Retatrutide (weight-loss peptide)

Type / Target: "Triple agonist" of **GLP-1, GIP, and glucagon receptors** (investigational).
Evidence level: Medium (published phase 2; still investigational).
Key studied outcomes: Large body-weight reductions in adults with obesity in a phase 2 trial.
Safety notes (high-level): Adverse effects consistent with incretin-based therapies are discussed

in trial publication; investigational status means evolving safety profile.
Regulatory: Not FDA-approved (as of the cited trial publication).

3) SLU-PP-332

Type / Target: Synthetic agonist of estrogen-related receptors (ERRs); described as an "exercise mimetic" in mice.
Evidence level: Preclinical (mouse models; mechanistic pharmacology).
Key studied outcomes (preclinical): Increased energy expenditure/fatty acid oxidation; reduced fat mass accumulation in obese mouse models.
Safety notes: Translational uncertainty; human safety/efficacy not established in these publications.
Regulatory: Not FDA-approved.

4) SLU-PP-332 (Oral)

Research note: Some ERR agonists are described as **orally active** in the literature, but "oral SLU-PP-332" should be treated as **formulation/route-specific and not assumed equivalent** without primary-source verification for that exact compound/route.

5) 5-Amino-1MQ

Type / Target: Small-molecule **NNMT inhibitor** (often discussed alongside metabolic/weight models; not a peptide).
Evidence level: Preclinical (mouse obesity models; mechanistic work).
Key studied outcomes: Reduced body weight/adipose mass in diet-induced obese mice in proof-of-concept studies.
Safety notes: Human safety/efficacy not established in the cited preclinical work.
Regulatory: Not FDA-approved.

6) AOD9604 (fat-metabolism peptide)

Type / Target: hGH fragment (often cited as amino acids **177–191**; literature varies on numbering).
Evidence level: Mixed (preclinical + scattered clinical discussion; not mainstream-approved therapy).
Key studied outcomes: Weight/fat reduction signals in animal models; discussed in obesity pharmacotherapy reviews as investigational.
Safety notes: Evidence and protocols vary; avoid treating marketing claims as clinical proof.
Regulatory: Not FDA-approved as an obesity drug.

B) Lean Mass / Fat Reduction (Clinical Rx)

7) Tesamorelin (studied for lean mass/fat reduction)

Type / Target: Growth hormone–releasing factor analog (GHRF).
Evidence level: High for its approved indication.

FDA indication (key point): Reduction of excess **abdominal fat in HIV-infected adults with lipodystrophy** (not a general weight-loss drug).
Safety notes (high-level): Label includes contraindications/warnings; long-term outcomes (e.g., CV endpoints) may be limited depending on label statements.
Regulatory: FDA-approved Rx for the above indication.

C) Neuro / Nootropic / Neuroprotection Research

8) SEMAX

Type / Target: Synthetic peptide analog related to **ACTH(4–10)**; studied for nootropic/neuroprotective properties in various models.
Evidence level: Mixed (animal studies + limited human literature; varies by country/context).
Key studied outcomes: Neurochemical and behavioral endpoints in preclinical and limited human reports.
Safety notes: Human-grade regulatory status varies; avoid extrapolating dosing/claims across contexts.

D) Regeneration / Tissue Repair / "Healing" (Primarily Preclinical)

9) BPC-157 (regenerative peptide)

Type / Target: Pentadecapeptide; proposed cytoprotective/angiogenic and tissue repair mechanisms (largely preclinical).
Evidence level: Low-to-medium (lots of animal work; limited human data).
Key studied outcomes: Musculoskeletal and soft tissue healing signals in animal models; limited small human reports exist but overall clinical evidence remains thin.
Safety / regulatory notes: USADA notes BPC-157 is an **unapproved substance** and highlights athlete risk.

10) BPC-157 (Oral)

Research note: Oral use is widely marketed, but **bioavailability and study comparability** depend on formulation and endpoints; treat as "evidence uncertain—verify primary sources." (Keep this as a flagged item in your matrix.)

11) BPC-157 / TB500 Blend (combo peptide blend)

Type / Target: "Blend/stack" concept (not a single, standardized drug entity).
Evidence level: Very low as a *combination* (mechanisms/risks may not be additive and are rarely studied together).
Safety note: Combining unapproved agents increases uncertainty; contamination/potency variability is a known concern in grey-market peptides.

12) TB500 (commonly linked to thymosin beta-4 concepts)

Type / Target: Often marketed as TB-500; related to **thymosin beta-4** domain concepts used in wound repair research.
Evidence level: Mixed (preclinical + some human trials for thymosin beta-4 in wound contexts).
Safety notes: Product identity is a major issue in the TB-500 marketplace (sequence/impurities may differ from thymosin beta-4).

E) Growth Hormone Axis / Secretagogues

13) CJC-1295 (w/o DAC) + Ipamorelin (combination)

Type / Target: GH-axis stimulation via **GHRH analog activity** (CJC-1295 variants) and **ghrelin receptor/GHS-R** agonism (ipamorelin). (Combination use is mostly "stack" culture; not an approved paired therapy.)
Evidence level: CJC-1295 has human pharmacology data showing increased GH/IGF-1 for certain formulations; combinations are less formally studied.
Safety / regulatory notes: FDA has flagged safety concerns for ipamorelin in compounding context (including serious AEs reported with IV administration in a published context).

14) Hexarelin (growth hormone-releasing peptide)

Type / Target: GHS-R agonist; GH secretagogue class.
Evidence level: Preclinical to limited clinical (varies by endpoint).
Key studied outcomes: Metabolic endpoints in animal models (e.g., glucose/insulin/lipids).
Anti-doping: GH secretagogues are addressed in WADA materials.

15) MK-677 (Oral) (ibutamoren; GH secretagogue)

Type / Target: Oral GH secretagogue (small molecule; not a peptide).
Evidence level: Human trials exist (e.g., older adult endocrine endpoints studied).
Anti-doping: Specifically listed/covered under WADA Prohibited List materials.
Regulatory: Not FDA-approved as a GH therapy.

F) Growth Factors

16) IGF-1 LR3 (insulin-like growth factor peptide)

Type / Target: Long-acting IGF-1 analog used in research; interacts with IGF-1 receptor signaling (PI3K/Akt, MAPK/ERK pathways are commonly cited).
Evidence level: Strong mechanistic/biological plausibility for IGF-1 signaling; LR3 is largely a research reagent context rather than an approved therapeutic entity.
Safety note: Growth-factor signaling has theoretical risks (e.g., proliferative signaling); do not treat vendor descriptions as clinical guidance.

G) Sexual Health / Reproductive Axis

17) PT-141 (Bremelanotide peptide)

Type / Target: Melanocortin receptor agonist; FDA-approved as **Vyleesi** for acquired, generalized HSDD in certain populations.
Evidence level: High for labeled indication.
Safety notes: See label warnings/contraindications (BP effects and nausea are commonly discussed in label/clinical summaries).

18) Gonadorelin (GnRH peptide)

Type / Target: GnRH analog used clinically in some contexts; also exists as veterinary product (e.g., Factrel).
Evidence level: Established physiology/clinical use historically; current availability varies by product/market.
Note for your doc: Separate clearly:

- **Human clinical references** (if applicable in your use case)
- **Veterinary-labeled products** (Factrel is veterinary labeling)

H) Skin / Cosmeceutical / Antioxidant

19) GHK-CU (copper peptide)

Type / Target: Naturally occurring tripeptide (GHK) that complexes copper; studied for skin repair/wound healing and gene expression modulation.
Evidence level: Moderate for topical/cosmetic contexts; much of the literature is mechanistic + small studies/reviews.
Key studied outcomes: Collagen/elastin signaling, wound healing, skin appearance measures in some contexts.

20) Glutathione (tripeptide antioxidant)

Type / Target: Endogenous antioxidant tripeptide; widely discussed in "wellness" contexts, including skin-lightening claims.
Evidence level: Mixed; safety concerns especially noted for IV use in non-standardized settings.
Key safety notes: Review literature on adverse reactions and lack of standardized protocols in certain uses.

I) Longevity / Aging Research

21) Epithalon (Epitalon)

Type / Target: Tetrapeptide often discussed in aging/telomere-related research; much evidence is mechanistic/preclinical, with limited modern clinical trial support.
Evidence level: Low-to-moderate depending on claim; treat strong longevity claims as unproven.
Key studied outcomes: Telomerase activity/telomere length effects in cell studies are reported in recent literature summaries.