What Changed

An update for readers — the compounds people ask about that the book does not cover

A companion document for readers of *The Complete Peptide Protocols Playbook*. The manuscript closed in mid-2025. Since then the centre of gravity of this whole field has moved, and a handful of compounds readers now ask about by name are not in the book at all. This document covers those, and corrects six entries in the book's stack sections that used a category name where a product name should have been.

Read this first

Nothing in this document is a recommendation, and no doses are given. Several compounds below are **not approved by any regulator for human use anywhere in the world**. That is stated for each one, because it is the single most important fact about them and it is routinely left out. What is appropriate for you is a question for a licensed clinician who knows your history.

1. How to read the status labels

Every compound in this document carries one of four labels. They are not a ranking of how well something works — they describe only what regulators have and have not concluded.

- APPROVED A regulator has approved it for a stated medical indication after reviewing trial data.
- PRESCRIPTION, OFF-LABEL Approved for something, being used for something else. Legal with a prescription; the evidence for the off-label use varies enormously.
- INVESTIGATIONAL In formal clinical trials. Real data exists, sometimes a great deal of it. Not approved. Not legally available to buy.
- NO HUMAN APPROVAL Not approved anywhere, for anything. Usually sold labelled “research use only”. Evidence is typically animal work, and sometimes none.

2. The incretin drugs — the biggest gap in the book

If you bought a peptide book in 2026 expecting to find semaglutide and tirzepatide in it, that expectation was reasonable, and this book does not contain them. Here is the honest position.

APPROVED Semaglutide and tirzepatide

Semaglutide is a GLP-1 receptor agonist; tirzepatide is a dual GIP/GLP-1 receptor agonist. Both are approved for weight management on the strength of large phase 3 programmes, and both are prescription medicines. In December 2025 an **oral semaglutide tablet** for weight management was approved — the first oral GLP-1 for that use — at 25 mg once daily.

The practical point for a reader of this book: in the fat-loss category, the effective, evidence-backed options are prescription drugs obtained through a prescriber. They are not research vials, and the research-vial market is not a cheaper route to the same thing.

INVESTIGATIONAL Retatrutide — and the “GLP-3” confusion

Retatrutide is a triple agonist: it acts at the GIP, GLP-1 *and* glucagon receptors. In a 48-week phase 2 trial published in the *New England Journal of Medicine* in 2023, mean weight change reached roughly −24% at the highest dose against −2.1% for placebo. The phase 3 programme has since read out, and the manufacturer's regulatory filing is expected around 2027.

It is not approved anywhere, for anything. Every vial of retatrutide currently in circulation outside a clinical trial is an unapproved drug.

There is no such thing as GLP-3

Retatrutide is widely called "Reta", and increasingly "GLP-3" — apparently by analogy with GLP-1 and the dual agonists. **GLP-3 is not a hormone, not a receptor and not a drug class.** Human physiology has GLP-1 and GLP-2; there is no GLP-3. The term is a marketplace coinage. If a seller uses it as though it were a scientific classification, that tells you something about the seller.

The compounded route has legally closed

For a period, compounding pharmacies could legally produce copies of semaglutide and tirzepatide because the FDA had declared them in shortage. That basis has gone: the tirzepatide shortage was declared resolved in December 2024 and semaglutide in February 2025, and in April 2026 the FDA proposed excluding semaglutide, tirzepatide and liraglutide from the list of bulk substances outsourcing facilities may use, finding no clinical need for them.

Many people are still buying on the assumption that this is an established grey area. It is considerably less grey than it was eighteen months ago, and that is worth knowing before rather than after.

3. "Research use only" is not a shield — and the FDA has now said so in writing

This matters more than any individual compound, so it is worth stating plainly.

In a warning letter dated **31 March 2026**, the FDA told a peptide vendor that despite labelling its products "Research Use Only" and "not intended for human consumption, medical use, or veterinary use", evidence obtained from the seller's own website established that the products were **intended to be drugs for human use** — and were therefore unapproved new drugs. The letter named retatrutide and tirzepatide among the products.

The disclaimer is not a legal firewall. It never described what anyone was actually doing, and the agency has now said as much on the record. If you buy from this market, that is the reality you are buying into.

Source: FDA Warning Letter, Gram Peptides, 721806, 31 March 2026 — fda.gov/inspections-compliance-enforcement-and-criminal-investigations/warning-letters

4. KLOW, and what blends actually are

NO HUMAN APPROVAL **KLOW is not a peptide.** It is a four-component blend, and the name is literally KPV + GLOW: the older three-peptide GLOW blend with KPV added. The usual vial configuration is:

COMPONENT	TYPICAL MG PER VIAL	SHARE OF TOTAL	WHAT IT IS
GHK-Cu	50 mg	62.5%	Copper tripeptide; the real evidence is cosmetic and topical
BPC-157	10 mg	12.5%	Synthetic gastric peptide fragment; evidence essentially all preclinical
TB-500	10 mg	12.5%	Thymosin beta-4 related; same picture
KPV	10 mg	12.5%	Anti-inflammatory fragment of alpha-MSH
Total	**80 mg**	100%	GLOW is the same without KPV: 70 mg

None of the four is approved for human use. GLOW and KLOW as products do not exist in any regulatory framework at all.

The thing about blends nobody says

The ratio is fixed at manufacture. Drawing a smaller volume reduces *every* component by the same proportion. You cannot take more of one and less of another out of one vial.

That has a consequence beyond dosing: because you cannot vary the components independently, **you cannot learn anything from the result**. If something improves, four things changed at once. If something goes wrong, you do not know which one did it. A blend trades all of your information for convenience.

The companion page's *Blends* calculator gives the per-component breakdown for any water volume. As an anchor: KLOW at 80 mg reconstituted in 4 mL is 20 mg/mL, so one unit on a U-100 syringe delivers 200 mcg of total peptide — 125 mcg GHK-Cu, and

25 mcg each of the other three.

5. A peptide drug that *was* approved, and is not in the book

APPROVED **Elamipretide (SS-31)** received FDA accelerated approval in September 2025 for Barth syndrome — the first approved therapy for that condition, and the first approved mitochondria-targeted therapeutic.

It is a rare-disease drug, not a longevity supplement, and it is not something to experiment with. It is included here because a reader who noticed that the book's mitochondrial chapter predates the only approval the field has ever had was noticing something real.

6. Other compounds absent from the book

Readers have asked about each of these. None appears in the book; all are worth knowing exist, and every one carries a status label for a reason.

COMPOUND	STATUS	WHY PEOPLE ASK ABOUT IT
Retatrutide	INVESTIGATIONAL	Largest weight-loss effect sizes reported to date
KPV	NO APPROVAL	Anti-inflammatory; the K in KLOW
Larazotide	INVESTIGATIONAL	Tight-junction regulator for coeliac disease; reached phase 3 and missed its endpoint
MK-677 (ibutamoren)	NO APPROVAL	Orally active growth-hormone secretagogue; water retention and raised fasting glucose are the known issues
Cerebrolysin	RX OUTSIDE THE US	Approved in several countries for stroke and dementia; mixed meta-analytic support
DSIP	NO APPROVAL	Sleep; old literature, poor replication
Kisspeptin, gonadorelin, hCG	PRESCRIPTION	Reproductive axis; belong in a clinician's hands, not a stack
Humanin, SS-31	SS-31 APPROVED	Mitochondrial peptides — see section 5

7. Corrections to the stack sections

A reader pointed out that the book “cites products that do not exist”. That reader was right, and the correction belongs in writing rather than quietly.

Six entries in the stack sections use a *category* where a product name should be. If you went looking to buy one of these and could not find it, that is why — there is nothing to find. Here is what each one refers to.

> **“MOTSc analog” — dosed at 10–20 mg orally**
>
> **This is the most important correction in this document.** MOTS-c is a 16-amino-acid mitochondrial-derived peptide. It is **not orally active**, and no oral analogue exists as a purchasable product. Every piece of human clinical work on a MOTS-c-based compound was given by **subcutaneous injection** — the only such programme to reach humans used 25 mg once daily, injected. Both the route and the product name in those stack entries are wrong. Disregard them.

> **“Senolytic peptide (e.g. FOXO4-DRI analog)”**
>
> FOXO4-DRI is a real research peptide studied for clearing senescent cells — entirely in animals. There is no established human dose and no consumer product. “Senolytic peptide” is a category, not something you can order.

> **“Nitric-oxide peptide”**
>
> A mechanism written where a product name should be. Nothing is sold under this name. What is usually meant in practice is an arginine or citrulline supplement, which is a different class of thing entirely.

“PGC1α peptide”

PGC-1α is a transcriptional coactivator inside your cells. It is not a peptide you can inject, and there is no commercial product by this name.

“VEGF-stimulating peptide”

Another mechanism used as a name. VEGF-modulating peptides exist in research; none is a consumer product.

“Collagen-stimulating peptide”

In practice this means GHK-Cu or one of the cosmetic matrix peptides. Both are real. Neither is sold under this generic label.

8. Where this leaves you

Three things are worth carrying away from this document.

1. **For fat loss, the evidence-backed options are prescription drugs.** That is an unglamorous answer, and it is the accurate one. The research-vial market is not a discount route to the same molecules.
2. **“Not approved” is a fact about evidence, not a marketing obstacle.** For most of the compounds in this field it means no completed human efficacy trial exists — so nobody, including any seller, can honestly quote you the odds.
3. **If you cannot name the measurement that would tell you it failed, you will never stop taking it.** Decide before you start what you are measuring and when you will conclude it did not work.

An interactive companion — including a reconstitution and dose calculator, the blend arithmetic, and this decoder in searchable form — is at **peptidecompanion.pages.dev**. It runs entirely in your browser: nothing you type is stored or transmitted, and there is nothing to sign up for.

Principal sources. Jastreboff et al., “Triple–Hormone-Receptor Agonist Retatrutide for Obesity”, *NEJM*, 2023 · FDA warning letter, Gram Peptides 721806, 31 March 2026 · FDA, “FDA Proposes to Exclude Semaglutide, Tirzepatide and Liraglutide from the 503B Bulks List”, April 2026 · FDA accelerated approval of elamipretide, September 2025 · USADA and BSCG monographs on MOTS-c · Pfizer/Hospira Bacteriostatic Water for Injection USP label · USP <797> and CDC guidance on multi-dose containers.