

Research guide

What the published research says about each compound in the USA Standard Research catalogue, with the studies linked.

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Find a product by research area

Each product page lists what its compounds are studied for, what the studies found and where the evidence stops. Human trials, small studies and animal or cell work are labelled, because a result in rats is not a result in people. Approval of a medicine belongs to that medicine and its indication; it does not extend to every product containing the same molecule.

Sexual desire	Desire (PT-141)
Sleep	Deep Sleep (Melatonin, DSIP, Pinealon and GABA)
Stress and calm	Calm (Selank); Calm Focus (Selank and Semax)
Focus and memory	Focus (Semax); Calm Focus (Selank and Semax); Brain Longevity (Pinealon)
Injury recovery	Deep Recovery (BPC-157 and TB-500)
Weight and appetite	Tirzepatide / B12 (Tirzepatide and Vitamin B12); Lean Energy (NAD+, MOTS-c and 5-Amino-1MQ)
Energy and aging	Core Energy (NAD+); Lean Energy (NAD+, MOTS-c and 5-Amino-1MQ); Brain Longevity (Pinealon)
Growth hormone	GH Boost (CJC-1295 and Ipamorelin)
Bonding and connection	Love Chemistry (Oxytocin)
Antioxidant research	Detox (Glutathione)

Desire

PT-141

Nasal spray PT-141 10 mg per 10 mL bottle

[View Desire at USA Standard Research](#)
[Discuss it on the forum: peptidesgenie.org/t/product-desire](https://peptidesgenie.org/t/product-desire)

PT-141 (bremelanotide) Human trials for a specific indication

Melanocortin agonist studied for low sexual desire; the active ingredient in the FDA-approved Vyleesi.

What it is	Activates melanocortin receptors; the exact pathway behind its effect on sexual desire is unknown.
Studied for	Bremelanotide has been studied for persistently low sexual desire that causes distress. Vyleesi's studies assessed changes in desire and related distress in a defined patient group. Earlier small studies tested a nasal form in men with erectile dysfunction and in women with sexual arousal disorder.
What the evidence says	The approval is specific to Vyleesi and its indication; it does not cover every PT-141 formulation. The label excludes general sexual-performance enhancement and lists nausea and temporary blood-pressure increases among important risks. In two 24-week phase 3 trials of 1,267 women, desire scores rose 0.3 to 0.4 points more than with placebo on a 1.2 to 6 scale, with more nausea, flushing and headache.
How it was studied	Early human studies in the 2000s gave bremelanotide through the nose. Developers then moved to injections under the skin because nasal absorption varied widely, which could raise side-effect risks such as blood-pressure increases, and the phase 3 trials behind Vyleesi used injections.
Regulatory status	Vyleesi is FDA-approved for acquired, generalized hypoactive sexual desire disorder in premenopausal women who meet its label criteria.

Full profile: peptidesgenie.org/peptides/pt-141

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2. [Vyleesi prescribing information](#) US prescription label dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=f1d0c1b5-2f39-4bad-a6a4-0066e3ad5dcf
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5. [White et al. \(2017\): Ambulatory blood pressure with subcutaneous bremelanotide, including why the nasal form was dropped](#) Randomized human trial pubmed.ncbi.nlm.nih.gov/27977473
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Love Chemistry

Oxytocin

Nasal spray Oxytocin 10 mg per 10 mL bottle

[View Love Chemistry at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-love-chemistry

Oxytocin Established prescription obstetric uses

Hormone used in childbirth care; early findings that nasal oxytocin boosts trust and social behavior were not confirmed in larger trials.

What it is	Activates oxytocin receptors in uterine muscle, increasing calcium signalling and contractions.
Studied for	Oxytocin is a naturally occurring peptide hormone studied for its role in uterine contractions. Prescription products use that activity in defined obstetric settings under medical supervision. Researchers have also given it through the nose to study trust, social behavior and autism, building on animal research linking it to social attachment.
What the evidence says	Its established obstetric role does not establish general mood, bonding or wellness benefits. The Pitocin label requires clinical monitoring and does not support elective labor induction without a medical reason. A 2005 human study of nasal oxytocin reported more trust, but large replications found no clear effect, and a 24-week trial in 290 children and teens with autism found no social benefit over placebo.
How it was studied	Prescription oxytocin is given by intravenous drip or injection into muscle under medical supervision. The trust and autism studies in people gave it through the nose, so the nasal route has been tested, though a 2016 review argued that very little nasal oxytocin reaches the fluid around the brain.
Regulatory status	Prescription oxytocin has specific obstetric indications, including medically indicated labor induction or augmentation and control of postpartum bleeding.

Full profile: peptidesgenie.org/peptides/oxytocin

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2. [Pitocin prescribing information](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=969d5b35-0add-4c23-9605-6a5b6ab65c95) US prescription label
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3. [Kosfeld et al. \(2005\): Oxytocin increases trust in humans](https://pubmed.ncbi.nlm.nih.gov/15931222) Human experiment
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4. [Kroll et al. \(2026\): No meaningful effect of intranasal oxytocin on trust, a registered replication with pooled analysis](https://pubmed.ncbi.nlm.nih.gov/41880977) Registered human replication study
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Calm

Selank

Nasal spray Selank 5 mg per 10 mL bottle

[View Calm at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-calm

Selank Small human studies and animal research

Peptide studied in small Russian trials for anxiety; registered in Russia as nasal drops.

What it is	Animal experiments suggest effects on GABA-related nerve signalling, but its mechanism in people remains uncertain.
Studied for	Selank has been studied for anxiety symptoms and changes in nerve signalling. A 2008 study of 62 people compared it with medazepam; separate rat experiments measured changes in genes involved in neurotransmission. A 2014 study of 60 people with anxiety disorders compared it with phenazepam, a benzodiazepine.
What the evidence says	The 2008 comparison reported similar anxiety outcomes between groups, but that alone cannot establish broad effectiveness or long-term safety. The 2014 study was also small and is published in Russian. FDA says important human safety information for Selank acetate is missing, and that compounded Selank acetate may carry a risk of immune reactions by some routes.
How it was studied	Russia registers Selank as nasal drops, and the 2008 anxiety trial and a rat brain study gave it through the nose. Dissolving strips and Selank combined with Semax were not the forms studied.
Regulatory status	Experimental findings do not establish an approved treatment; FDA flags unresolved human safety questions for Selank acetate.

Full profile: peptidesgenie.org/peptides/selank

SOURCES

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3. [Volkova et al. \(2016\): Selank and genes involved in GABAergic neurotransmission](#) Animal study
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4. [FDA: Bulk substances that may present significant safety risks](#) FDA safety information
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5. [Medvedev et al. \(2014\): Selank compared with phenazepam in anxiety disorders \(in Russian\)](#) Small human comparative study
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6. [RLS Russian drug register: Selank 0.15% nasal drops, prescribing information \(in Russian\)](#) Russian prescribing information
www.rlsnet.ru/drugs/selank-36612

Focus

Semax

Nasal spray N-acetyl Semax amidate 10 mg per 10 mL bottle

The label lists N-acetyl Semax amidate, a modified form of Semax.

Semax Animal research; limited clinical evidence

Peptide researched in Russia for stroke recovery and as a nootropic; FDA's 2026 review found little evidence in people.

What it is	In rat studies, Semax changes the activity of genes involved in nerve-cell growth and responses to brain injury.
Studied for	Researchers investigate responses to reduced blood flow in the brain. One rat study measured neurotrophin-related gene activity after an induced stroke-like injury; this is a biological signal, not a human recovery outcome. Small human studies, mostly published in Russian, looked at stroke rehabilitation and at brain-scan activity in healthy adults.
What the evidence says	FDA's 2026 assessment found insufficient evidence to support effectiveness for cerebral ischemia, migraine or trigeminal neuralgia. Animal gene-expression findings do not establish better memory or clinical recovery in people. FDA also found too little information to describe its safety in people and noted a possible blood-thinning effect that raises bleeding concerns.
How it was studied	The human studies FDA reviewed gave Semax through the nose, and Russia registers it as nasal drops; FDA found no human studies of injections and no human data on how it is absorbed by any route. Dissolving strips, Semax combined with Selank, and modified forms such as N-acetyl Semax amidate were not the forms studied.
Modified forms	No peer-reviewed study of N-acetyl Semax amidate itself was found in PubMed. Two lab papers examined N-acetylated Semax; in one, acetylation removed the protection plain Semax gave cultured cells against copper toxicity. Findings on unmodified Semax do not automatically apply to this form.
Regulatory status	Neither Semax nor Semax acetate is a component of an FDA-approved drug in the cited FDA assessment.

Full profile: peptidesgenie.org/peptides/semax

SOURCES

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3. [Gusev et al. \(2018\): Semax in patients at different stages of ischemic stroke \(in Russian\)](https://pubmed.ncbi.nlm.nih.gov/29798983) Human clinical study, not randomized
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4. [Lebedeva et al. \(2018\): Intranasal Semax and the brain's default mode network in healthy volunteers](https://pubmed.ncbi.nlm.nih.gov/30225715) Small human study
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5. [Shevchenko et al. \(2013\): Stability of N-acetylated Semax to breakdown by enzymes in biological media](https://pubmed.ncbi.nlm.nih.gov/23652441) Laboratory study
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6. [Magri et al. \(2016\): N-terminal acetylation of Semax changes its copper and zinc binding and its effect on cultured cells](https://pubmed.ncbi.nlm.nih.gov/27586814) Laboratory and cell study
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Calm Focus

Selank and Semax

Nasal spray Selank 5 mg and Semax 5 mg per 10 mL bottle

Dissolving strips Selank 1 mg and Semax 1 mg per strip, 30 strips

[View Calm Focus nasal spray at USA Standard Research](#)

[View Calm Focus dissolving strips at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-calm-focus

Selank Small human studies and animal research

Peptide studied in small Russian trials for anxiety; registered in Russia as nasal drops.

What it is	Animal experiments suggest effects on GABA-related nerve signalling, but its mechanism in people remains uncertain.
Studied for	Selank has been studied for anxiety symptoms and changes in nerve signalling. A 2008 study of 62 people compared it with medazepam; separate rat experiments measured changes in genes involved in neurotransmission. A 2014 study of 60 people with anxiety disorders compared it with phenazepam, a benzodiazepine.
What the evidence says	The 2008 comparison reported similar anxiety outcomes between groups, but that alone cannot establish broad effectiveness or long-term safety. The 2014 study was also small and is published in Russian. FDA says important human safety information for Selank acetate is missing, and that compounded Selank acetate may carry a risk of immune reactions by some routes.
How it was studied	Russia registers Selank as nasal drops, and the 2008 anxiety trial and a rat brain study gave it through the nose. Dissolving strips and Selank combined with Semax were not the forms studied.
Regulatory status	Experimental findings do not establish an approved treatment; FDA flags unresolved human safety questions for Selank acetate.

Full profile: peptidesgenie.org/peptides/selank

SOURCES

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2. [Selank in generalized anxiety disorders and neurasthenia \(2008\)](#) Small human comparative study
pubmed.ncbi.nlm.nih.gov/18454096
3. [Volkova et al. \(2016\): Selank and genes involved in GABAergic neurotransmission](#) Animal study
pubmed.ncbi.nlm.nih.gov/26924987
4. [FDA: Bulk substances that may present significant safety risks](#) FDA safety information
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5. [Medvedev et al. \(2014\): Selank compared with phenazepam in anxiety disorders \(in Russian\)](#) Small human comparative study
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Semax Animal research; limited clinical evidence

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What it is	In rat studies, Semax changes the activity of genes involved in nerve-cell growth and responses to brain injury.
Studied for	Researchers investigate responses to reduced blood flow in the brain. One rat study measured neurotrophin-related gene activity after an induced stroke-like injury; this is a biological signal, not a human recovery outcome. Small human studies, mostly published in Russian, looked at stroke rehabilitation and at brain-scan activity in healthy adults.
What the evidence says	FDA's 2026 assessment found insufficient evidence to support effectiveness for cerebral ischemia, migraine or trigeminal neuralgia. Animal gene-expression findings do not establish better memory or clinical recovery in people. FDA also found too little information to describe its safety in people and noted a possible blood-thinning effect that raises bleeding concerns.
How it was studied	The human studies FDA reviewed gave Semax through the nose, and Russia registers it as nasal drops; FDA found no human studies of injections and no human data on how it is absorbed by any route. Dissolving strips, Semax combined with Selank, and modified forms such as N-acetyl Semax amidate were not the forms studied.
Modified forms	No peer-reviewed study of N-acetyl Semax amidate itself was found in PubMed. Two lab papers examined N-acetylated Semax; in one, acetylation removed the protection plain Semax gave cultured cells against copper toxicity. Findings on unmodified Semax do not automatically apply to this form.
Regulatory status	Neither Semax nor Semax acetate is a component of an FDA-approved drug in the cited FDA assessment.

Full profile: peptidesgenie.org/peptides/semax

SOURCES

1. [FDA \(2026\): Evaluation of Semax-related bulk drug substances](https://www.fda.gov/media/193348/download) FDA scientific assessment
www.fda.gov/media/193348/download
2. [Semax and Pro-Gly-Pro: neurotrophin-gene transcription after cerebral ischemia](https://pubmed.ncbi.nlm.nih.gov/19633950) Animal study
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3. [Gusev et al. \(2018\): Semax in patients at different stages of ischemic stroke \(in Russian\)](https://pubmed.ncbi.nlm.nih.gov/29798983) Human clinical study, not randomized
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6. [Magri et al. \(2016\): N-terminal acetylation of Semax changes its copper and zinc binding and its effect on cultured cells](https://pubmed.ncbi.nlm.nih.gov/27586814) Laboratory and cell study
pubmed.ncbi.nlm.nih.gov/27586814

Brain Power

Adamax

Nasal spray Adamax 10 mg per 10 mL bottle

[View Brain Power at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-brain-power

Adamax No peer-reviewed research found

Marketed as a Semax-like peptide for focus and memory; its chemical identity and effects are not established in published research.

What it is	Unknown. No peer-reviewed study of Adamax was found. New Zealand's medicines regulator notes that ACTH-analogue products of this kind make cognitive claims while their mechanism of action is often unknown.
Studied for	No published studies of Adamax were found. It is marketed as a cognitive enhancer, and Medsafe reported ACTH-analogue peptides being imported into New Zealand by individuals.
What the evidence says	Its identity and effects are not established in the published literature, and Semax findings cannot be assumed to apply to it. Medsafe notes limited clinical research on ACTH analogues and that little is known about their side effects or long-term effects.
How it was studied	No route of use, including the nasal spray form, has been studied in published research.
Regulatory status	No approved use; its identity and effects are not established in the published literature. In June 2025, New Zealand's Medsafe named Adamax and Semax as ACTH analogues and recommended classifying such analogues as prescription medicines.

Full profile: peptidesgenie.org/peptides/adamax

SOURCES

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Brain Longevity

Pinealon

Nasal spray Pinealon 10 mg per 10 mL bottle

[View Brain Longevity at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-brain-longevity

Pinealon Mainly cell and animal studies

A three-amino-acid peptide studied mainly in cells and rats for protecting nerve cells; human evidence is thin.

What it is	Not established. Cell studies report less oxidative damage and cell death. A 2020 review proposes that it enters cells and binds histone proteins or RNA to change gene activity, an idea its authors present as an assumption, not a confirmed finding.
Studied for	Researchers test whether pinealon protects nerve cells under stress. Cell experiments measured oxidative damage and cell death, and in a rat study it was given to pregnant rats with raised homocysteine before their offspring's learning was tested.
What the evidence says	Cell and rat findings do not show benefits in people. Human data are small Russian reports; one study of 32 adults with organic brain syndrome reported mixed effects on ageing and blood markers, and its abstract describes no placebo group. No randomized placebo-controlled trial or sleep study of pinealon was found.
How it was studied	Laboratory studies added pinealon to cultured cells, and a rat study gave it to pregnant rats. A 2020 review describes oral use in Russian clinical reports; no published study of pinealon as a nasal spray, or of the store's sprays, was found.
Regulatory status	Experimental findings do not establish an approved treatment or a proven benefit in people.

Full profile: peptidesgenie.org/peptides/pinealon

SOURCES

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pubmed.ncbi.nlm.nih.gov/26390612

Deep Sleep

Melatonin, DSIP, Pinealon and GABA

Spray DSIP 10 mg, pinealon 10 mg, melatonin 50 mg and GABA 250 mg per 10 mL bottle

[View Deep Sleep at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-deep-sleep

Melatonin Randomized human trials; modest effects

A hormone that helps time the body clock; trials show modest help with falling asleep and less jet lag.

What it is	A hormone the brain produces in response to darkness, often described as a pineal hormone. It helps time the body's roughly 24-hour circadian rhythms and sleep; light at night can block its production.
Studied for	Researchers study melatonin for insomnia, other sleep disorders, jet lag and body-clock problems. A 2013 meta-analysis pooled 19 placebo-controlled trials involving 1,683 children and adults with primary sleep disorders.
What the evidence says	Benefits are modest: the meta-analysis found sleep began about 7 minutes sooner and lasted about 8 minutes longer than with placebo. A Cochrane review found less jet lag after flights crossing five or more time zones. US guidelines find too little strong evidence to recommend it for chronic insomnia, and supplement labels are often inaccurate.
How it was studied	The trials in the jet-lag review gave melatonin by mouth. A small company-funded study in 14 healthy men measured blood levels after a sublingual spray, not sleep outcomes; no study of this four-ingredient spray was found.
Regulatory status	In the US, melatonin is regulated as a dietary supplement, under less strict FDA rules than prescription or over-the-counter drugs. In several other countries it is available only with a prescription and is treated as a drug.

Full profile: peptidesgenie.org/peptides/melatonin

SOURCES

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DSIP (delta sleep-inducing peptide) Small, older human trials; mixed results

A nine-amino-acid peptide once proposed as a natural sleep factor; small insomnia trials found weak, mixed results.

What it is	Not established. A 2006 review noted that no DSIP gene, precursor protein or receptor had been identified. Rat studies summarised by FDA suggest effects run partly through release of the body's own opioid peptides, without direct opioid-receptor binding.
Studied for	DSIP was isolated from rabbit blood in the 1970s and studied as a possible natural sleep factor. Small human studies, mostly from the 1980s and 1990s, tested it in chronic insomnia; a single case report covered narcolepsy, and open-label studies covered alcohol and opioid withdrawal.
What the evidence says	A double-blind study of 16 people with chronic insomnia found only weak effects, unlikely to be of major benefit. FDA's 2026 review found the evidence insufficient for insomnia, narcolepsy or opioid withdrawal, noted headache, nausea, vertigo and low blood pressure in withdrawal studies, and flagged possible immune reactions.
How it was studied	The human studies FDA reviewed gave DSIP by intravenous injection. FDA notes that injection and nasal-spray products are marketed in the US, but no sleep trial of a spray form, or of this four-ingredient spray, was found.
Regulatory status	No approved use. FDA's 2026 review states that neither emideltide nor emideltide acetate is a component of an FDA-approved drug, and FDA proposed not adding them to the list of bulk substances pharmacies may use for compounding.

Full profile: peptidesgenie.org/peptides/dsip

SOURCES

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 5. [FDA: Bulk substances that may present significant safety risks](https://www.fda.gov/drugs/human-drug-compounding/certain-bulk-drug-substances-use-compounding-may-present-significant-safety-risks) FDA safety information
www.fda.gov/drugs/human-drug-compounding/certain-bulk-drug-substances-use-compounding-may-present-significant-safety-risks
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Pinealon Mainly cell and animal studies

A three-amino-acid peptide studied mainly in cells and rats for protecting nerve cells; human evidence is thin.

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Studied for	Researchers test whether pinealon protects nerve cells under stress. Cell experiments measured oxidative damage and cell death, and in a rat study it was given to pregnant rats with raised homocysteine before their offspring's learning was tested.
What the evidence says	Cell and rat findings do not show benefits in people. Human data are small Russian reports; one study of 32 adults with organic brain syndrome reported mixed effects on ageing and blood markers, and its abstract describes no placebo group. No randomized placebo-controlled trial or sleep study of pinealon was found.
How it was studied	Laboratory studies added pinealon to cultured cells, and a rat study gave it to pregnant rats. A 2020 review describes oral use in Russian clinical reports; no published study of pinealon as a nasal spray, or of the store's sprays, was found.
Regulatory status	Experimental findings do not establish an approved treatment or a proven benefit in people.

Full profile: peptidesgenie.org/peptides/pinealon

SOURCES

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-

GABA (gamma-aminobutyric acid) Small human trials; limited evidence

The brain's main inhibitory neurotransmitter, also sold as a supplement; evidence is limited for stress and very limited for sleep.

What it is	In the brain, GABA is the main inhibitory neurotransmitter, damping nerve-cell activity. How oral GABA supplements might act is unclear; reviewers suggest passage into the brain or effects through the gut's nervous system, but neither is established.
Studied for	Placebo-controlled trials have tested natural or fermentation-made GABA, taken by mouth, on stress and sleep measures. In one, 40 adults with insomnia symptoms took GABA or placebo for four weeks; it reported faster sleep onset, but only 10 people received placebo.
What the evidence says	A 2020 systematic review of 14 trials found limited evidence for stress and very limited evidence for sleep; the studies were too varied to combine in a meta-analysis, and 11 had company-employed authors. Whether oral GABA raises brain GABA in people is unknown.
How it was studied	Human trials gave GABA by mouth, in capsules, tablets, chocolate or drinks. Blood GABA rises after oral intake, but brain uptake in people is unproven; no study of a GABA spray, or of this four-ingredient spray, was found.
Regulatory status	In the US, GABA is sold as a dietary supplement. Makers do not have to show that it works, as long as they avoid claims about specific diseases or conditions.

Full profile: peptidesgenie.org/peptides/gaba

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Deep Recovery

BPC-157 and TB-500

Dissolving strips BPC-157 500 mcg and TB-500 300 mcg per strip, 30 strips
[View Deep Recovery at USA Standard Research](#)

 Discuss it on the forum: peptidesgenie.org/t/product-deep-recovery

BPC-157 Mainly animal and laboratory evidence

Peptide studied mainly in rats for tendon, ligament and gut injuries; human evidence is a few very small reports.

What it is	Its mechanism in people is not established; laboratory work examines effects on tendon cells and tissue repair.
Studied for	BPC-157 has been investigated in injury models, including surgically damaged Achilles tendons in rats. One study combined animal healing measurements with experiments on cultured tendon cells. A 2010 rat study examined ligament healing. A 2026 systematic review identified three small human studies, on knee pain, interstitial cystitis (a bladder pain condition) and intravenous safety, totaling 30 people.
What the evidence says	The Achilles study reported improved repair measurements in rats; it did not establish recovery benefits in people. FDA has highlighted limited human safety information and concerns about impurities and immune reactions. FDA also noted blood-clotting and liver-related signals in 28-day injection studies in rats and dogs, and the 2026 review rated the human evidence as very low certainty.
How it was studied	Rat studies gave BPC-157 by injection into the abdomen, in drinking water or as a cream on the injury; the few small human reports used injections into the knee or bladder, an intravenous drip or enemas. FDA found no human studies of BPC-157 taken by mouth, and dissolving strips combined with TB-500 were not the form studied.
Regulatory status	No FDA-approved treatment use. Compounding discussions are separate from approval of a medicine.

 Full profile: peptidesgenie.org/peptides/bpc-157

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TB-500 (thymosin beta-4 fragment) Animal and cell studies; no human studies

A synthetic thymosin beta-4 fragment tested on rat tendons and cultured cells; FDA found no studies in people.

What it is	Its sequence includes the actin-binding region of thymosin beta-4. That protein binds actin, which cells use to keep their shape and move. FDA notes the added acetyl group may change how it acts, and in one cell study TB-500 itself did not speed wound closure.
Studied for	TB-500 has been tested in rats with repaired Achilles tendons, alone and with BPC-157, and on cultured fibroblasts in a wound-closure test. Thymosin beta-4, the full protein, is a separate molecule: in a 72-person dry-eye trial, its eye drops did not beat placebo on the main measures, though some secondary measures improved.
What the evidence says	In the small rat study, which used commercially sourced TB-500, it was linked to stronger tendons and better tissue scores after four weeks, and adding BPC-157 gave no extra benefit. In the cell study, TB-500 itself did not speed wound closure. FDA found no human studies of TB-500, so its effects and safety in people are unknown.
How it was studied	FDA found no human studies; in animals, TB-500 was injected under the skin of horses and into the abdomen of rats. Human trials of full-length thymosin beta-4 used eye drops, and no study of TB-500 in a dissolving strip was found.
Regulatory status	Not part of any FDA-approved drug, and FDA found no approved TB-500 products in the UK, Canada, Australia or through the European Medicines Agency. In 2026 FDA proposed keeping it off its list of bulk substances for pharmacy compounding. It is on the World Anti-Doping Agency prohibited list.

Full profile: peptidesgenie.org/peptides/tb-500

SOURCES

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Tirzepatide / B12

Tirzepatide and Vitamin B12

Capsules Tirzepatide 1 mg and B12 1 mg per capsule, 30 capsules

Capsules Tirzepatide 2 mg and B12 1 mg per capsule, 30 capsules

[View Tirzepatide / B12 capsules \(Tirzepatide 1 mg\) at USA Standard Research](#)

[View Tirzepatide / B12 capsules \(Tirzepatide 2 mg\) at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-tirzepatide-b12

Tirzepatide Large randomized human trials

Dual GIP and GLP-1 receptor agonist studied for weight and blood sugar; the active ingredient in Mounjaro and Zepbound.

What it is	Activates the receptors for the natural hormones GIP and GLP-1. This increases insulin release when blood sugar is high, lowers glucagon, slows stomach emptying and reduces calorie intake, likely through effects on appetite.
Studied for	Researchers study weight, blood sugar, heart and sleep-apnea outcomes. In SURMOUNT-1, 2,539 adults with obesity, or overweight plus a weight-related complication, and without diabetes received tirzepatide or placebo for 72 weeks.
What the evidence says	SURMOUNT-1 found average weight loss of 15% to 21% with tirzepatide versus 3.1% with placebo; gastrointestinal side effects were most common. These results concern the injected medicine. Labels warn of thyroid C-cell tumors seen in rats; human relevance is unknown. FDA says unapproved versions, including compounded ones, are not reviewed for safety, effectiveness or quality.
How it was studied	SURMOUNT-1 and the approved medicines use once-weekly injections under the skin. Oral capsules, with or without vitamin B12, were not the form studied.
Regulatory status	Mounjaro is FDA-approved for type 2 diabetes: with diet and exercise to improve blood sugar from age 10, and to lower major cardiovascular event risk in high-risk adults. Zepbound is approved, with diet and activity, for weight reduction in adults with obesity or overweight plus a weight-related condition, and for moderate to severe sleep apnea in adults with obesity.

Full profile: peptidesgenie.org/peptides/tirzepatide

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Vitamin B12 (cobalamin) Human trials, mainly in deficiency

Essential vitamin, also called cobalamin, used in DNA synthesis and cell metabolism; research centers on deficiency.

What it is	The body converts B12 into coenzyme forms needed to turn methylmalonate into succinate and to make methionine from homocysteine, a step that also needs folate. Through these reactions B12 supports DNA synthesis, methylation and mitochondrial metabolism.
Studied for	Research focuses on B12 deficiency, which can come from low intake, poor absorption or malabsorption and is most common in older adults. Trials have compared high-dose oral B12 with injections, and one trial tested extra B12 for fatigue in people with normal levels.
What the evidence says	A Cochrane review of 3 small trials found low-quality evidence that high-dose oral and injected B12 similarly normalize blood levels in deficiency. In 95 people with bowel disorders, fatigue and normal B12, daily B12 did not ease fatigue more than placebo. A 2026 survey found little justification for adding nutrients such as B12 to injectable tirzepatide or semaglutide.
How it was studied	Studied routes include injection into muscle, high-dose oral B12 and a prescription nasal spray. Capsules combining B12 with tirzepatide were not the form studied.
Regulatory status	Prescription B12 products have specific approved uses. Nascobal (cyanocobalamin nasal spray), for example, is FDA-approved to treat or prevent B12 deficiency in defined adult groups, including maintenance in pernicious anemia after injection therapy.

Full profile: peptidesgenie.org/peptides/vitamin-b12

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Lean Energy

NAD⁺, MOTS-c and 5-Amino-1MQ

Dissolving strips NAD⁺ 80 mg, MOTS-c 2 mg and 5-Amino-1MQ 2 mg per strip, 30 strips

[View Lean Energy at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-lean-energy

NAD⁺ (nicotinamide adenine dinucleotide) Limited human data; mostly precursor studies

Coenzyme central to cell energy metabolism; most human studies test precursors such as NR and NMN rather than NAD⁺ itself.

What it is	Cells use NAD ⁺ and its reduced form, NADH, to carry electrons in metabolism, and signalling enzymes consume NAD ⁺ . Levels fall with age and stress, but much about NAD ⁺ biology remains poorly understood.
Studied for	Research asks whether raising NAD ⁺ improves aging and metabolic health. Most human trials gave oral precursors such as nicotinamide riboside (NR) or NMN. A pilot at a clinic offering NAD ⁺ infusions gave 8 men a 6-hour IV infusion of NAD ⁺ , with 3 men given saline, to track blood and urine levels.
What the evidence says	In that pilot, blood NAD ⁺ did not rise during the first 2 hours, and no adverse events were seen. Oral precursors raise NAD-related markers, but effects on function and metabolism have been mixed and often null. Claims that NAD ⁺ products boost energy or slow aging lack human outcome evidence.
How it was studied	Human studies mostly used oral precursors, and NAD ⁺ itself was given by IV infusion in a small pilot. Intranasal NAD ⁺ was tested in a rat stroke model. Dissolving strips and nasal sprays were not the forms studied in people.
Regulatory status	Not an approved medicine for energy or aging. A 2026 systematic review found no outcome trials of NAD ⁺ itself, given by IV or intramuscular injection, for anti-aging or wellness uses.

Full profile: peptidesgenie.org/peptides/nad

SOURCES

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MOTS-c Mainly animal and laboratory evidence

Peptide encoded in mitochondrial DNA, studied in mice for insulin resistance, obesity and exercise capacity.

What it is	In mouse and cell studies, MOTS-c acts mainly on skeletal muscle, where it inhibits the folate cycle and linked purine synthesis, leading to activation of the enzyme AMPK. Its mechanism in people is not established.
Studied for	MOTS-c has been studied in mice for diet-induced obesity, insulin resistance and age-related physical decline. A 2021 study also found that exercise raised natural MOTS-c levels in human muscle and blood.
What the evidence says	Mouse studies reported prevention of diet-induced obesity and insulin resistance, and better physical capacity when old mice were treated. These are animal results. FDA says it has found no human exposure data for MOTS-c drug products and lacks key information on whether it would cause harm in people.
How it was studied	The mouse studies gave MOTS-c by injection into the abdominal cavity. Dissolving strips, alone or combined with NAD+ and 5-amino-1MQ, were not the form studied.
Regulatory status	Not an approved medicine. FDA lists MOTS-c among compounding substances that may present significant safety risks, citing possible immune reactions, impurity concerns and no human exposure data by any route.

Full profile: peptidesgenie.org/peptides/mots-c

SOURCES

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-

5-Amino-1MQ (5-amino-1-methylquinolinium) Animal and cell studies only

Small-molecule NNMT inhibitor studied in mice and cells for diet-induced obesity and age-related muscle decline.

What it is	Blocks nicotinamide N-methyltransferase (NNMT), an enzyme linked to cell metabolism and energy balance. In cultured fat cells, it reduced fat formation and raised NAD ⁺ and SAM levels at some concentrations; these are laboratory findings.
Studied for	Researchers have tested it in obese mice fed a high-fat diet and in aged mice. One study measured muscle repair after injury in 24-month-old mice; another compared it with and without intensive exercise in older mice.
What the evidence says	In an 11-day study of 9 obese mice per group, treated mice lost about 5% of body weight while controls gained slightly, with no change in food intake. Aged mice showed better muscle regeneration and grip strength. None of these results come from people. The three cited studies share authors; three 2024 authors declared roles at Ridgeline Therapeutics.
How it was studied	The mouse studies gave 5-amino-1MQ by injection under the skin. Dissolving strips, alone or combined with NAD ⁺ and MOTS-c, were not the form studied.
Regulatory status	Not an approved medicine. The cited studies present NNMT inhibitors as candidates for future drug development, based on mouse and cell results.

Full profile: peptidesgenie.org/peptides/5-amino-1mq

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Core Energy

NAD+

Dissolving strips NAD+ 100 mg per strip, 30 strips**Spray** NAD+ 500 mg per 10 mL bottle
[View Core Energy dissolving strips at USA Standard Research](#)
[View Core Energy spray at USA Standard Research](#)

 Discuss it on the forum: peptidesgenie.org/t/product-core-energy.

NAD+ (nicotinamide adenine dinucleotide) Limited human data; mostly precursor studies

Coenzyme central to cell energy metabolism; most human studies test precursors such as NR and NMN rather than NAD+ itself.

What it is	Cells use NAD+ and its reduced form, NADH, to carry electrons in metabolism, and signalling enzymes consume NAD+. Levels fall with age and stress, but much about NAD+ biology remains poorly understood.
Studied for	Research asks whether raising NAD+ improves aging and metabolic health. Most human trials gave oral precursors such as nicotinamide riboside (NR) or NMN. A pilot at a clinic offering NAD+ infusions gave 8 men a 6-hour IV infusion of NAD+, with 3 men given saline, to track blood and urine levels.
What the evidence says	In that pilot, blood NAD+ did not rise during the first 2 hours, and no adverse events were seen. Oral precursors raise NAD-related markers, but effects on function and metabolism have been mixed and often null. Claims that NAD+ products boost energy or slow aging lack human outcome evidence.
How it was studied	Human studies mostly used oral precursors, and NAD+ itself was given by IV infusion in a small pilot. Intranasal NAD+ was tested in a rat stroke model. Dissolving strips and nasal sprays were not the forms studied in people.
Regulatory status	Not an approved medicine for energy or aging. A 2026 systematic review found no outcome trials of NAD+ itself, given by IV or intramuscular injection, for anti-aging or wellness uses.

 Full profile: peptidesgenie.org/peptides/nad

SOURCES

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pubmed.ncbi.nlm.nih.gov/17127275

GH Boost

CJC-1295 and Ipamorelin

Dissolving strips CJC-1295 250 mcg and ipamorelin 250 mcg per strip, 30 strips

View GH Boost at USA Standard Research

Discuss it on the forum: peptidesgenie.org/t/product-gh-boost

CJC-1295 Small human studies of the DAC form

A synthetic GHRH analogue; its long-acting DAC form raised growth hormone and IGF-I for days in small studies of healthy adults.

What it is	Mimics growth-hormone-releasing hormone (GHRH): it activates GHRH receptors in the pituitary, which releases growth hormone and in turn raises IGF-I. In the DAC form, an added chemical linker binds albumin in blood, giving a half-life of 5.8 to 8.1 days in healthy adults.
Studied for	CJC-1295 with DAC was developed as a long-acting way to raise the body's own growth hormone. Two randomized, placebo-controlled trials in healthy adults measured growth hormone, IGF-I and safety after injections, and another study tracked overnight growth-hormone pulses in healthy men aged 20 to 40.
What the evidence says	Single injections raised growth hormone 2- to 10-fold for 6 days or more and IGF-I for 9 to 11 days, with natural pulses preserved. The studies did not measure lean or fat mass. Reported effects included injection reactions, flushing and faster heart rate; a 2006 trial in HIV patients stopped after a death the attending doctor thought most likely due to silent heart disease.
How it was studied	Human studies gave CJC-1295 with DAC as injections under the skin; FDA found no human studies of the form without DAC. No study of CJC-1295 in a dissolving strip or any other oral form was found.
Regulatory status	Not part of any FDA-approved drug, with or without DAC. In 2024 FDA reviewed it for growth hormone deficiency, found no published studies in patients, and proposed keeping it off its list of bulk substances for pharmacy compounding. It is on the World Anti-Doping Agency prohibited list.

Full profile: peptidesgenie.org/peptides/cjc-1295

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Ipamorelin Small human trials; animal research

A synthetic peptide that acts on the ghrelin receptor to trigger short growth hormone pulses; a surgery trial found no benefit over placebo.

What it is	Activates the ghrelin receptor, prompting the pituitary to release growth hormone. In pigs it raised growth hormone without the rise in the stress hormones ACTH and cortisol seen with GHRP-2 and GHRP-6.
Studied for	Ipamorelin was developed as a selective growth hormone releaser. In healthy men, intravenous infusions were used to model its blood levels and growth hormone response. A phase 2 trial in 114 bowel-surgery patients tested whether it shortened the time until they could tolerate a solid meal.
What the evidence says	In healthy men, growth hormone peaked about 40 minutes after an infusion and fell to low levels within hours. In the surgery trial it did not beat placebo. The authors called it well tolerated, but FDA noted two deaths in the ipamorelin group, though it is unclear whether they were drug-related, and more low potassium and high blood sugar.
How it was studied	Human studies gave ipamorelin by intravenous infusion; FDA found no human data on how it behaves when injected under the skin or given by other routes. Animal studies used injections and, in rats, oral dosing by tube; no study of a dissolving strip was found.
Regulatory status	Not part of any FDA-approved drug. FDA's 2024 review found no data supporting its use for growth hormone deficiency or for slowed bowel function after surgery (postoperative ileus). It is on the World Anti-Doping Agency prohibited list.

Full profile: peptidesgenie.org/peptides/ipamorelin

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Detox

Glutathione

Nasal spray Glutathione 500 mg per 10 mL bottle

[View Detox at USA Standard Research](#)

Discuss it on the forum: peptidesgenie.org/t/product-detox

Glutathione Small human trials with mixed results

An antioxidant tripeptide the body makes itself; small trials of oral and intranasal glutathione show mixed or no clear benefits.

What it is	Works as an antioxidant: it helps enzymes such as glutathione peroxidases and glutathione S-transferases neutralize peroxides and inactivate foreign chemicals. The liver is the main source of glutathione in blood.
Studied for	Trials have tested whether oral glutathione raises the body's own levels or lowers oxidative stress in healthy adults, and whether intranasal glutathione helps people with Parkinson's disease, in which glutathione is depleted early. FDA's 2022 review also covered uses such as heavy-metal poisoning and skin lightening.
What the evidence says	A 6-month trial in 54 adults found oral glutathione raised blood levels, which fell back after stopping; a 4-week trial in 40 adults found no change. In a 45-person Parkinson's trial, intranasal glutathione did no better than saline. FDA found no or insufficient evidence for every use it reviewed, including oxidative stress and heavy-metal poisoning.
How it was studied	Human trials have used oral glutathione in healthy adults and intranasal glutathione in small Parkinson's disease trials; FDA's review also describes small intravenous trials. No study of this particular nasal spray was found.
Regulatory status	Not part of any FDA-approved drug, according to FDA's 2022 review; oral glutathione is sold in the US as a dietary supplement. Glutathione disulfide, a different molecule, is an ingredient of an approved eye irrigation solution.

Full profile: peptidesgenie.org/peptides/glutathione

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Reading this guide

Every statement in this guide is tied to the sources listed under it, and each source was checked against PubMed, PubChem or the regulator's own page on 27 October 2026. Where research used a different route from the product (for example injections rather than a nasal spray, strip or capsule), the guide says so.

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