Selank Research Summary

Research Library Summary — PHX Performance Research

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What the Research Suggests, in Plain Language

Selank is a lab-made peptide registered as a medicine in Russia. It is not approved in the U.S. or Europe. Almost all of the research comes from Russian labs.

• In animal studies, mostly in mice and rats, results suggest Selank may be linked to less anxious behavior in standard anxiety tests. One mouse study found that how it was given changed which brain receptors were affected.

• In people, the evidence is limited to three small Russian clinical studies of anxiety-related conditions, with 30 to 60 patients each. In one, the anxiety-reducing effect was reported as similar to an established anti-anxiety medicine.

• No human trials of Selank are registered on the main international trial registry.

In short: these small studies point to possibilities for further research. They do not show that Selank is safe or effective in people outside the settings studied.

Overview

Selank is a synthetic peptide registered as a drug in Russia (as nasal drops, since 2009). It is not FDA- or EMA-approved.

What the Research Actually Presents

Animal studies (~54 records, mostly Russian rodents):

• Anxiety-behavior models: Researchers observed reduced anxiety-like behavior compared with controls in the rodent models tested.

• Route comparisons: A 2016 Russian mouse study (PMID 29787664) compared intraperitoneal versus intranasal Selank in BALB/c and C57BL/6 mice. Both routes produced anxiolytic/nootropic effects in the higher-anxiety BALB/c strain, but differed in receptor binding changes (intraperitoneal increased GABA-receptor binding sites in frontal cortex; intranasal increased NMDA-receptor binding in hippocampus).

Human series (small Russian clinical reports) in generalized anxiety disorder and neurasthenia: a 2008 study comparing 30 patients given Selank with 32 given medazepam (PMID 18454096); a 60-patient comparison with phenazepam (2014, PMID 25176261); and a 30-patient study of Selank added to phenazepam (2015, PMID 26356395). These used the intranasal route.

Administration routes reported in the literature (descriptive only): The published human clinical series used the intranasal route. Animal studies used intranasal and intraperitoneal (and in some protocols subcutaneous) administration and reported model-specific behavioral and receptor-binding findings. No published human trials of subcutaneous Selank were identified.

What the Research Suggests

In rodent anxiety models, Selank was associated with reduced anxiety-like behavior. Route-dependent differences in receptor binding and behavioral emphasis have been reported in mice.

Small Russian human series report clinical observations in anxiety-related conditions using the intranasal route. Human data remain limited to a handful of small series.

Mechanism and Signaling Pathways (as described in the literature)

Russian rodent studies describe effects involving the GABA (gamma-aminobutyric acid) and enkephalin systems in the models examined. The mouse route-comparison study also reported NMDA (N-methyl-D-aspartate) receptor binding changes.

Research Landscape

Catalog: 68 records — 2 human randomized controlled trials (RCTs), 4 other human, 54 animal, 0 in-vitro, 2 reviews, 0 systematic reviews/meta-analyses, 6 other.

Key Studies

• Zozulia AA et al. 2008: human study, Selank (30 patients) compared with medazepam (32 patients) in generalized anxiety disorder and neurasthenia (PMID 18454096).

• Medvedev VE et al. 2014: human study comparing Selank and phenazepam; 60 patients (PMID 25176261).

• Medvedev VE et al. 2015: human study of Selank added to phenazepam; 30 patients (PMID 26356395).

• Vasil’eva EV et al. 2016: animal study (mice) comparing intranasal and intraperitoneal routes (PMID 29787664).

Safety Findings Reported in the Studies

Safety data limited to small Russian series. The 2015 study reported fewer phenazepam-related side effects when Selank was added (PMID 26356395).

Limitations and Evidence Gaps

Handful of small studies, mostly in Russian. No registered trials. Human subcutaneous data are absent. Russian databases such as eLIBRARY were not searched.

Regulatory Status

Registered drug in Russia (Peptogen, LSR-003338/09, registered April 30, 2009). Not FDA- or EMA-approved.

References

Vasil’eva EV et al. 2016 (PMID 29787664, route comparison). Zozulia AA et al. 2008 (PMID 18454096). Medvedev VE et al. 2014 (PMID 25176261). Medvedev VE et al. 2015 (PMID 26356395). Additional Russian sources in the catalog.

Evidence reviewed through November 2026 (PHX research catalog snapshot of PubMed, ClinicalTrials.gov and Europe PMC).

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