Kymata Health

FREE REFERENCE · EDITION 1 · NOV 2026

41 PEPTIDES · 12 TISSUE SYSTEMS · 38 CITED RECORDS

The Khavinson *Atlas*

Every canonical Khavinson bioregulator, mapped by tissue and graded by what was actually measured — including the trials that came back null.

EDR AEDP AEDG EDP KE EW
AEDR KED EDG AEDL EDL KEDA
KEDW ED KEDG KEDP AED

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Why this exists. Bioregulators are one of the most discussed peptide classes on X, and most of what circulates misattributes studies between look-alike molecules. This atlas puts every claim next to its study design and its PubMed record, so readers can check it themselves.

Built from the kymatahealth.com Khavinson hub and its 48 leaf pages (checked Nov 6–23, 2026) and PubMed abstracts retrieved Nov 23, 2026. Credit for the underlying science belongs to Vladimir Khavinson and colleagues at the St. Petersburg Institute of Bioregulation and Gerontology and the Kiev Institute of Gerontology. Credit for bringing much of it to English-language readers belongs to translators and educators including Brenden Henry (Peptide Science Institute).

Before you read

WHAT THIS IS

A map of what has been *studied*: which tissue each peptide was designed around, what researchers measured, in whom, and whether anyone outside the developer's network has repeated it.

WHAT THIS IS NOT

Not a protocol. It contains no doses, cycles, routes, vendors or product recommendations. None of these compounds is FDA-approved. A tissue label describes a research target, not a proven benefit.

FIVE FACTS THAT FRAME EVERYTHING

1. Only **2 of 41** reach our "Moderate" tier (Epithalamin and Thymalin, both extracts), and every supporting human study was run or co-authored by Khavinson's network.
2. The best-known mortality data come from **extracts**, not the synthetic peptides people buy.[1]
3. The largest independent randomised test of a Khavinson-school sequence (Glu-Trp, as IM862) **did not beat placebo**.[2]
4. Epitalon's telomerase effect has an **independent cell-line replication** (2025), which also found lengthening in cancer cells.[3]
5. For Ovagen and Normoftal, a PubMed search found **no study of the peptide itself**.

HOW THIS ATLAS WAS BUILT

01 **Scope.** The 41 canonical leaves on our hub: 21 Cytomaxes, 18 Cytogens and 2 pharmaceutical extracts. Adjacent products (Cortexin, Retinalamin and others) are labelled as such.

02 **Records.** Every PubMed ID cited on the 48 leaf pages was re-fetched from NCBI on Nov 23, 2026; all resolved. DOIs are given where PubMed holds one.

03 **Reading.** Claims are stated at the level of the abstract or the page's own source review: design, n, comparator and who ran it.

04 **Conflicts.** kymatahealth.com currently carries affiliate retail links on some pages, including peptide pages. This atlas contains none, and no grade here depends on them.

> **Talk to a clinician.** If you are considering any peptide, discuss it with a qualified clinician who knows your history and medicines.

Three generations, one school

Vladimir Khavinson spent five decades arguing a stubborn idea: ageing is partly a failure of tissue-specific peptide signals, and those signals can be supplied again.[4] The products came in three layers.

01

Extracts (Cytamin era)

Polypeptide fractions isolated from a named organ of young animals and registered as drugs in the former Soviet pharmacopoeia: Thymalin, Epithalamin, Cortexin, Retinalamin, Prostatilen.

02

Cytomax (capsule complexes)

Commercial refinements of those fractions, still mixtures, still defined by source organ rather than sequence. Sold as oral food supplements; 21 SKUs on the public list.

03

Cytogens (synthetic)

When short active motifs were identified inside the mixtures, they were synthesised as di-, tri- and tetrapeptides with a one-letter code: KE, EDR, AEDG, KED.

THE SAME TISSUE, THREE GENERATIONS

TISSUE	EXTRACT	CYTOMAX	CYTOGEN
Pineal gland	Epithalamin	Endoluten	Epitalon AEDG
Thymus	Thymalin	Vladonix	Vilon KE · Thymogen EW · Crystagen EDP
Brain	Cortexin	Cerluten	Pinealon EDR · Cortagen AEDP
Retina	Retinalamin	Visoluten	Normoftal
Prostate	Prostatilen	Libidon	Prostamax KEDP

Pairings as listed on the developer's public catalogue and our hub. A result for one column does not transfer to another.

THE PROPOSED MECHANISM

The published mechanism is epigenetic, not receptor agonism in the GLP-1 sense. Short peptides of 2–7 residues are reported to enter nuclei, bind histones and DNA, and reopen tissue-specific transcription that condensed with age.[5,6,7] Di- and tripeptides are also substrates of the PEPT1/POT and LAT transporters, which is why oral forms are discussed at all.[8]

WHAT IS NOT ESTABLISHED

Western phase 3 programmes have not shown organ-by-organ disease treatment, telomere reversal as a clinical endpoint, or the manufacturer claim that Cytomax is "a third stronger" than Cytogen. The literature is real — hundreds of papers — but concentrated in one group and one journal family, with small samples and limited independent replication.

How to read the evidence

Each entry carries the evidence tier used on its kymatahealth.com page. A tier rates the *evidence*, never the product.

Moderate	**Human studies, developer-run** Cohorts or controlled studies in people, run or co-authored by the developing institute. Not confirmed in Western trials.	Epithalamin, Thymalin
Early human	**Small biomarker studies** Short human studies of a blood or urine marker; no clinical outcome.	Epitalon
Low	**Cell, animal or tiny human work** Cultured cells, rodent models, or a single small uncontrolled report.	38 of the 41

WHERE THE 41 SIT

2 Moderate	1 Early	38 Low — cell, animal or very small human work

SIX QUESTIONS TO ASK OF ANY BIOREGULATOR CLAIM

1 **Which molecule?** Extract, Cytomax or Cytogen — and the exact sequence.

2 **In whom?** Cells, rodents, or people — and how many.

3 **Compared with what?** Placebo, usual care, or nothing.

4 **Between groups?** Several reports test change within a group only.

5 **Who ran it?** Developer network, or an independent team.

6 **What endpoint?** A marker (telomere length, CD4) or an outcome people feel.

Independent here means **no Khavinson-group author**. By that standard, the record holds one large negative phase III (IM862)[2] and one positive cell-line replication (Epitalon).[3]



All 41 compared 1/2

BIOREGULATOR	TYPE	SOURCE TISSUE	SEQ.	WHAT WAS STUDIED	BEST HUMAN EVIDENCE	TIER
Cerluten Brain & nerves	Cytomax	Brain	–	Brain tissue	None; developer cell and animal work	Low
Pinealon Brain & nerves	Cytogen	CNS / pineal-adjacent neurons	EDR	Neuronal oxidative stress; rat maze learning	Small reports, e.g. 32 people with Vesugen; no placebo group	Low
Cortagen Brain & nerves	Cytogen	Cerebral cortex	AEDP	Sciatic-nerve regeneration in rats (PMID 11276314)	None	Low
Endoluten Pineal gland	Cytomax	Pineal gland (epiphysis)	–	Pineal tissue; skin thickness in older women	30 older women, combined with two other extracts — own effect not separable	Low
Epitalon Pineal gland	Cytogen	Pineal gland	AEDG	Telomerase in cultured cells; a melatonin marker	Small biomarker studies; one 2002 developer-run retinitis pigmentosa report	Early human
Epithalamin Pineal gland	Extract	Pineal gland	–	Melatonin rhythm; lifespan in flies, mice, rats	266-person cohort; 79 coronary patients (PMID 22451889)	Moderate
Vladonix Thymus & immune	Cytomax	Thymus	–	Thymus and immune cells	None; developer cell and animal work	Low
Bonomarlot Thymus & immune	Cytomax	Bone marrow	–	Haemoglobin in iron-deficiency anaemia	26 women, 2011 institute report; group assignment not described	Low
Crystagen Thymus & immune	Cytogen	Thymus / immunocompetent cells (not colon)	EDP	Class reviews only	None specific to Crystagen	Low
Vilon Thymus & immune	Cytogen	Thymus	KE	T-cell subsets; chromatin in lymphocytes	520 adults, Regevil vs placebo (Vrach 2021); developer-run	Low
Thymogen Thymus & immune	Cytogen	Thymus / immune	EW	T-cell markers; pre-surgery use	As IM862, phase III Kaposi's: not better than placebo (PMID 15598977)	Low
Thymalin Thymus & immune	Extract	Thymus	–	T-cell markers, CD4/CD8; mortality in older adults	266 adults over 60, 6–8 yrs (PMID 14523363)	Moderate
Visoluten Eye & retina	Cytomax	Retina / eye tissue	–	Photoreceptor and retinal-pigment-epithelium gene expression	None; developer cell and animal work	Low
Normoftal Eye & retina	Cytogen	Retina	–	Retina; no study of Normoftal found	None	Low
Chelohart Heart & vessels	Cytomax	Heart muscle	–	Heart tissue (peptides <10 kDa + nucleoproteins)	None; developer cell and animal work	Low
Ventfort Heart & vessels	Cytomax	Blood vessels / endothelium	–	Endothelial (vessel-lining) gene expression	None; developer cell and animal work	Low
Cardiogen Heart & vessels	Cytogen	Heart muscle	AEDR	Heart-muscle cell growth in culture and animals	None	Low
Vesugen Heart & vessels	Cytogen	Blood vessels / endothelium	KED	Endothelial markers incl. endothelin-1	32 people, with Pinealon (PMID 26390612); no dose stated	Low
Taxorest Lungs & bronchi	Cytomax	Bronchial mucosa	–	Bronchial tissue	None; developer cell and animal work	Low
Chonluten Lungs & bronchi	Cytogen	Lungs and bronchi	EDG	Bronchial cells; a human cell line (Avolio 2022)	None	Low
Bronchogen Lungs & bronchi	Cytogen	Bronchi	AEDL	Bronchial differentiation; rat obstructive-lung models	None measuring lung function	Low

All 41 compared 2/2

BIOREGULATOR	TYPE	SOURCE TISSUE	SEQ.	WHAT WAS STUDIED	BEST HUMAN EVIDENCE	TIER
Svetinorm Liver	Cytomax	Liver	–	Liver tissue	None; developer cell and animal work	Low
Ovagen Liver	Cytogen	Liver (official NPCRIZ cytogen list, not ovary)	EDL	Liver group; no study of the peptide found	None — PubMed hits are an unrelated veterinary product	Low
Livagen Liver	Cytogen	Liver	KEDA	Chromatin in cultured lymphocytes (PMID 12533768)	None	Low
Suprefort Pancreas & stomach	Cytomax	Pancreas	–	Glucose after a glucose drink	One 2011 institute report; uneven groups, medicines changed	Low
Stamakort Pancreas & stomach	Cytomax	Gastric mucosa	–	Gastric mucosa	None; developer cell and animal work	Low
Pancragen Pancreas & stomach	Cytogen	Pancreas	KEDW	Islet-cell gene activity; fasting glucose	33 older adults with T2D; text and tables disagree (PMID 22448364)	Low
Pielotax Kidney & bladder	Cytomax	Kidneys	–	Kidney tissue	None; developer cell and animal work	Low
Chitomur Kidney & bladder	Cytomax	Urinary bladder	–	Bladder tissue	None; developer cell and animal work	Low
Vesilut Kidney & bladder	Cytogen	Urinary bladder	ED	Urinary symptoms with usual care	One Russian clinical report; added effect unclear	Low
Libidon Reproductive	Cytomax	Prostate	–	Urine flow in men with prostate enlargement	2011 institute study; change from baseline, not between groups	Low
Testoluten Reproductive	Cytomax	Testes / male reproductive	–	Testicular tissue	None; developer cell and animal work	Low
Zhenoluten Reproductive	Cytomax	Female reproductive system (ovary-focused Cytomax)	–	Granulosa and theca cells of ageing ovarian follicles	None; developer cell and animal work	Low
Testagen Reproductive	Cytogen	Testes	KEDG	Testicular tissue	None; no human hormone or sperm data	Low
Prostamax Reproductive	Cytogen	Prostate	KEDP	Prostate lobe size in a rat model	None published; patent case series only	Low
Sigumir Joints & muscle	Cytomax	Joints, cartilage, and spine	–	Pain and mouth opening in jaw-joint disorders	62 older adults on combined care (PMID 22708467)	Low
Gotratix Joints & muscle	Cytomax	Skeletal muscle	–	Grip and jump performance in training athletes	One 2011 institute report; within-group comparisons only	Low
Cartalax Joints & muscle	Cytogen	Cartilage	AED	Collagen II and aggrecan in ageing stem cells (lab)	None measuring joints in people	Low
Thyreogen Endocrine glands	Cytomax	Thyroid gland	–	Thyroid follicular-cell genes	None; developer cell and animal work	Low
Bonothyrk Endocrine glands	Cytomax	Parathyroid glands	–	Parathyroid tissue and calcium balance	None; developer cell and animal work	Low
Glandokort Endocrine glands	Cytomax	Adrenal glands	–	Adrenal tissue	None; developer cell and animal work	Low

PINEAL GLAND

Epithalamin

Extract · registered in Russia

peptide mixture

NO SINGLE SEQUENCE

EVIDENCE TIER	US STATUS	RELATED
Moderate	Not FDA-approved	Epitalon (AEDG) is the synthetic tetrapeptide; Endoluten is the pineal Cytomax capsule.

WHAT WAS STUDIED

Khavinson-group work examined night-time melatonin secretion and reported longer mean lifespan (11–31%) in fruit flies, C3H mice and LIO rats, with mortality rate unchanged in SHR mice [11]. In healthy older people, a course raised night melatonin in those with low baseline pineal output and lowered it slightly in those with normal output [10].

BEST HUMAN EVIDENCE

266 adults over 60 followed 6–8 years; extract given in the first 2–3 years. The authors report 1.6–1.8-fold lower mortality with Epithalamin alone and 2.5-fold with Thymalin added, versus control [1]. In 79 older coronary patients (Kiev, co-authored by Khavinson), Epithalamin added to usual care was followed by lower mortality [9].

WHAT IS NOT ESTABLISHED

Developer-run or co-authored; allocation and blinding are not described in the abstracts; doses are not stated. Not confirmed in Western trials. Not FDA-approved.

KYMATA READ

This is the strongest human signal in the whole school — and it belongs to the **extract**. Quoting it for synthetic Epitalon is the single most common error online.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Controlled = 79-patient randomised comparison, Kiev, Khavinson co-author.

KEY RECORDS

PMID 14523363 — Khavinson VKh et al. *Neuro Endocrinol Lett* 2003. Peptides of pineal gland and thymus prolong human life.

PMID 22451889 — Korkushko OV et al. *Bull Exp Biol Med* 2011. Peptide geroprotector from the pituitary [sic: the drug is the pineal extract Epithalamin] gland inhibits rapid aging of elderly people: results of 15-year follow-up.

PMID 15452611 — Korkushko OV et al. *Bull Exp Biol Med* 2004. Effect of peptide preparation epithalamin on circadian rhythm of epiphyseal melatonin-producing function in elderly people.

PMID 9701766 — Anisimov VN et al. *Mech Ageing Dev* 1998. Pineal peptide preparation epithalamin increases the lifespan of fruit flies, mice and rats.

Source page: kymatahealth.com/peptides/epithalamin

PINEAL GLAND

Epitalon

Cytogen · synthetic tetrapeptide

AEDG

EVIDENCE TIER	US STATUS	RELATED
Early human	Not FDA-approved	Synthesised to mimic Epithalamin with a defined sequence. N-acetyl-amidate analogue has no human study.

WHAT WAS STUDIED

Added to telomerase-negative human fetal fibroblasts, Epitalon induced the catalytic subunit, telomerase activity and telomere elongation [12]. An independent Brunel University group reported telomere lengthening in normal cells via hTERT and telomerase, and via ALT in breast-cancer lines; three figures were later corrected [3].

BEST HUMAN EVIDENCE

Small biomarker studies, plus a 2002 developer-run report in retinitis pigmentosa that describes no control group in its abstract [15]; a short study in night-shift women measured a urinary melatonin marker, not sleep. No dose-finding study exists. In female SHR mice, monthly injections did not change mean lifespan or total tumour incidence; maximum lifespan rose 12.3% [13].

WHAT IS NOT ESTABLISHED

Telomere length in a dish is not a clinical endpoint. Whether Epitalon changes human sleep, ageing or lifespan is unknown. Not FDA-approved.

KYMATA READ

The only Khavinson molecule with an **independent** mechanistic replication — and the replication also showed lengthening in cancer cell lines via ALT. That cuts both ways and deserves to be said out loud.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Independent = cell lines only (Brunel 2025).

KEY RECORDS

PMID 12937682 — Khavinson VKh et al. *Bull Exp Biol Med* 2003. Epithalon peptide induces telomerase activity and telomere elongation in human somatic cells.

PMID 40908429 — Al-Dulaimi S et al. *Biogerontology* 2025. Epitalon increases telomere length in human cell lines through telomerase upregulation or ALT activity.

PMID 14501183 — Anisimov VN et al. *Biogerontology* 2003. Effect of Epitalon on biomarkers of aging, life span and spontaneous tumor incidence in female Swiss-derived SHR mice.

PMID 42884164 — Jain A et al. *Int J Mol Sci* 2026. Epitalon and Epithalamin: A Narrative Review of Mechanistic, Preclinical, and Clinical Evidence.

PMID 12195242 — Khavinson V et al. *Neuro Endocrinol Lett* 2002. Pineal-regulating tetrapeptide epitalon improves eye retina condition in retinitis pigmentosa.

Source page: kymatahealth.com/peptides/epitalon

THYMUS

Thymalin

Extract · registered in Russia

peptide mixture

NO SINGLE SEQUENCE

EVIDENCE TIER	US STATUS	RELATED
Moderate	Not FDA-approved	Vilon (KE), Thymogen (EW) and Crystagen (EDP) are the thymic cytogens. Not Thymulin.

WHAT WAS STUDIED

Russian cell, animal and clinical work, mostly from the Khavinson group, reported effects on T-cell differentiation markers and the CD4/CD8 balance.

BEST HUMAN EVIDENCE

The same 266-person cohort: the authors report 2.0–2.1-fold lower mortality with Thymalin and a 2.0–2.4-fold drop in acute respiratory disease, versus control. A subgroup given Thymalin plus Epithalamin yearly for 6 years had 4.1-fold lower mortality [1,16].

WHAT IS NOT ESTABLISHED

Developer-run; group sizes per arm, allocation and dose are not given in the abstracts. Not confirmed in Western trials. Not FDA-approved.

KYMATA READ

Effect sizes this large in a small, unblinded cohort are a reason to **replicate**, not to extrapolate. No independent group has repeated it.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Controlled = cohort with a control group; allocation not described.

KEY RECORDS

PMID 14523363 — Khavinson VKh et al. *Neuro Endocrinol Lett* 2003. Peptides of pineal gland and thymus prolong human life.

PMID 12577695 — Khavinson VKh et al. *Adv Gerontol* 2002. [Geroprotective effect of thymalin and epithalamin].

Source page: kymatahealth.com/peptides/thymalin

THYMUS

Vilon

KE

Cytogen · synthetic dipeptide

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Lys-Glu. Thymogen is Glu-Trp — a different dipeptide.

WHAT WAS STUDIED

In cultured lymphocytes from older donors, Vilon decondensed facultative heterochromatin and reactivated ribosomal genes, without decondensing pericentromeric heterochromatin [7]. A 2007 report added Vilon to care in diabetic patients of different ages [17].

BEST HUMAN EVIDENCE

The largest report: 520 adults recovering from respiratory, bacterial or viral illness, Regevil (Lys-Glu) 276 vs placebo 244 for 20 days (Trofimova et al., Vrach 2021;32(3):27–33, doi:10.29296/25877305-2021-03-05). T-cell subsets rose within the Regevil group; markers were not compared between groups; groups started unevenly; not in PubMed.

WHAT IS NOT ESTABLISHED

Developer's institute ran the trial; blinding not described. Does not establish immune or longevity benefit from a retail product.

KYMATA READ

A 520-person placebo design is unusual for this field — which makes the missing between-group analysis the most important number nobody has.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Controlled = placebo, but markers compared within groups only.

KEY RECORDS

PMID 15105581 — Lezhava T et al. *Biogerontology* 2004. Bioregulator Vilon-induced reactivation of chromatin in cultured lymphocytes from old people.

PMID 18306698 — Kuznik BI et al. *Adv Gerontol* 2007. [Effect of vilon on the immunity status and coagulation hemostasis in patients of different age with diabetes mellitus].

Source page: kymatahealth.com/peptides/vilon

THYMUS / IMMUNE

Thymogen

Cytogen · registered in Russia

EW

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Glu-Trp. Tested in the US as IM862 (oglufanide).

WHAT WAS STUDIED

Small Russian clinical studies, with cell and animal work, reported effects on CD3/CD4/CD8 and cytokine balance; one report used it before surgery in older patients with abdominal tumours [18].

BEST HUMAN EVIDENCE

As IM862: a 24-week double-blind phase III in 202 people with AIDS-related Kaposi's sarcoma. Response 23% vs 21% on placebo — not superior [2].

WHAT IS NOT ESTABLISHED

That null result is for one indication and one route; it does not transfer to Vilon or to immune ageing. Not FDA-approved.

KYMATA READ

The largest **independent** randomised test of any Khavinson-school sequence was negative. Any honest bioregulator thread should mention it.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Independent = IM862 phase III, negative.

KEY RECORDS

PMID 15598977 — Noy A et al. *J Clin Oncol* 2005. Angiogenesis inhibitor IM862 is ineffective against AIDS-Kaposi's sarcoma in a phase III trial, but demonstrates sustained, potent effect of highly active antiretroviral therapy: from the AIDS Malignancy Consortium and IM862 Study Team.

PMID 21957588 — Smirnov VS et al. *Adv Gerontol* 2011. [Application thymogen for preoperative preparation of elderly patients with tumor processes in abdominal cavity].

Source page: kymatahealth.com/peptides/thymogen

CNS (PINEAL-ADJACENT)

Pinealon

EDR

Cytogen · synthetic tripeptide

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Cerluten is the brain Cytomax; Epitalon/Endoluten are the pineal pair.

WHAT WAS STUDIED

Dose-dependent limitation of reactive oxygen species and necrotic death in cerebellar granule cells, neutrophils and PC12 cells, with delayed ERK1/2 activation [19]. Fluorescent short peptides entered HeLa nuclei and bound DNA in vitro [6]. Lys-Glu and Glu-Asp-Arg are proposed to modulate irisin gene expression (review) [20].

BEST HUMAN EVIDENCE

Small reports: 32 people aged 41–83 with organic brain syndrome, with Vesugen, no placebo group or dose in the abstract [21]; Russian reports in transport workers [23,22].

WHAT IS NOT ESTABLISHED

No controlled human sleep or memory trial. Reported sleep and dream effects online are anecdotal.

KYMATA READ

Practitioners describe it as a brain-metabolism peptide rather than a sleep peptide. The cell data fit that framing; the human data cannot yet test it.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



KEY RECORDS

PMID 21978084 — Khavinson V et al. *Rejuvenation Res* 2011. Pinealon increases cell viability by suppression of free radical levels and activating proliferative processes.

PMID 22117547 — Fedoreyeva LI et al. *Biochemistry (Mosc)* 2011. Penetration of short fluorescence-labeled peptides into the nucleus in HeLa cells and in vitro specific interaction of the peptides with deoxyribooligonucleotides and DNA.

PMID 26742748 — Khavinson VKh et al. *Bull Exp Biol Med* 2016. Short Peptides and Telomere Length Regulator Hormone Irisin.

PMID 26390612 — Meshchaninov VN et al. *Adv Gerontol* 2015. [EFFECT OF SYNTHETIC PEPTIDES ON AGING OF PATIENTS WITH CHRONIC POLYMORBIDITY AND ORGANIC BRAIN SYNDROME OF THE CENTRAL NERVOUS SYSTEM IN REMISSION].

PMID 23734521 — Bashkireva AS et al. *Adv Gerontol* 2012. [The peptide correction of neurotic disorders among professional truck-drivers].

Source page: kymatahealth.com/peptides/pinealon

CEREBRAL CORTEX

Cortexin

Extract · registered in Russia

peptide mixture

NO SINGLE SEQUENCE

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Cortagen (AEDP) is the synthetic; Cerluten the brain Cytomax.

WHAT WAS STUDIED

Russian animal and clinical studies after stroke and brain injury. IV and IM forms compared for therapeutic equivalence in ischaemic stroke [25]. Included in a systematic review of animal-derived nootropics [26].

BEST HUMAN EVIDENCE

DIACORT: 110 adults with type 2 diabetes; adding Cortexin to standard care raised cognition scores more than standard care alone — open-label, no placebo arm [24].

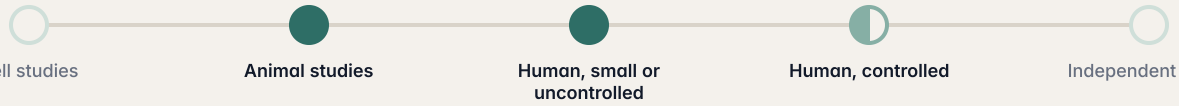
WHAT IS NOT ESTABLISHED

Registered as a medicine in Russia. Not FDA-approved. Not confirmed in Western trials.

KYMATA READ

One of the few with modern multicentre trials — but the design (open-label, no placebo) is exactly where expectancy effects on cognition scores live.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Controlled = open-label vs standard care, no placebo.

KEY RECORDS

PMID 42133422 — et al. *Zh Nevrol Psikhiatr Im S S Korsakova* 2026. [Cortexin in the comprehensive treatment of neurological complications of type 2 diabetes mellitus. (Results of the DIACORT multicenter randomized clinical trial)].

PMID 41524350 — Fedin AI et al. *Zh Nevrol Psikhiatr Im S S Korsakova* 2025. [Therapeutic equivalence of intravenous and intramuscular dosage forms of Cortexin in ischemic strokes].

PMID 36324709 — Alsulaimani RA et al. *Cereb Circ Cogn Behav* 2021. The efficacy and safety of animal-derived nootropics in cognitive disorders: Systematic review and meta-analysis.

Source page: kymatahealth.com/peptides/cortexin

CEREBRAL CORTEX

Cortagen

Cytogen · synthetic tetrapeptide

AEDP

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Name-adjacent to Cortexin (extract) and Glandokort (adrenal) — all different.

WHAT WAS STUDIED

Regeneration of a cut-and-repaired sciatic nerve in rats [27].

BEST HUMAN EVIDENCE

None.

WHAT IS NOT ESTABLISHED

A rat peripheral-nerve experiment does not establish cognition or memory benefit in people.

KYMATA READ

Online claims for cognition rest on a peripheral-nerve rat model. The name, not the data, is doing the work.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



KEY RECORDS

PMID 11276314 — Turchaninova LN et al. *Bull Exp Biol Med* 2000. Effect of tetrapeptide cortagen on regeneration of sciatic nerve.

Source page: kymatahealth.com/peptides/cortagen

BLOOD VESSELS

Vesugen

Cytogen · synthetic tripeptide

KED

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Ventfort is the vessel Cytomax.

WHAT WAS STUDIED

Endothelial-cell research measuring endothelin-1 and related markers.

BEST HUMAN EVIDENCE

32 people aged 41–83 with chronic conditions and organic brain syndrome, given Pinealon and Vesugen; the abstract states no dose and no placebo [21].

WHAT IS NOT ESTABLISHED

Does not establish prevention of heart attack or stroke.

KYMATA READ

Vesugen and Pinealon share their only human report, so neither can be credited separately from it.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



KEY RECORDS

PMID 26390612 — Meshchaninov VN et al. *Adv Gerontol* 2015. [EFFECT OF SYNTHETIC PEPTIDES ON AGING OF PATIENTS WITH CHRONIC POLYMORBIDITY AND ORGANIC BRAIN SYNDROME OF THE CENTRAL NERVOUS SYSTEM IN REMISSION].

Source page: kymatahealth.com/peptides/vesugen

CARTILAGE

Cartalax

Cytogen · synthetic tripeptide

AED

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Sigumir is the cartilage Cytomax (mixture).

WHAT WAS STUDIED

Type II collagen and aggrecan markers in replicatively ageing human mesenchymal stem cells in the lab [28]. Russian dental reports in jaw-joint disease [29,30].

BEST HUMAN EVIDENCE

No study measuring knee pain or cartilage thickness.

WHAT IS NOT ESTABLISHED

Cartilage markers in cultured cells do not establish joint outcomes in people.

KYMATA READ

A coherent cell-biology story with no joint outcome yet. A small blinded trial with imaging would settle more than a hundred anecdotes.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Human = dental reports on combined care.

KEY RECORDS

PMID 37782646 — Myakisheva SN et al. *Adv Gerontol* 2023. [The influence of peptides on the chondrogenic differentiation of human mesenchymal stem cells during replicative aging.].

PMID 22708467 — Iordanishvili AK et al. *Adv Gerontol* 2012. [Application of bioregulating therapy in complex treatment of temporomandibular joint diseases in people of elderly and senile age].

PMID 36617325 — Serikov AA et al. *Adv Gerontol* 2022. [Bioregulation therapy in the treatment of age-related osteoarthropathy of the temporomandibular joint.].

Source page: kymatahealth.com/peptides/cartalax

BRONCHI

Bronchogen

Cytogen · synthetic tetrapeptide

AEDL

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Chonluten (EDG) is the other airway cytogen; Taxorest the Cytomax.

WHAT WAS STUDIED

Gene expression and protein synthesis in bronchial epithelium [31]; obstructive-lung rat models, morphology and inflammation [32,33].

BEST HUMAN EVIDENCE

None measuring lung function.

WHAT IS NOT ESTABLISHED

Cell and animal studies only. Not FDA-approved.

KYMATA READ

Mechanistically one of the better-described airway stories; clinically untested.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



KEY RECORDS

PMID 25015171 — Khavinson VKh et al. *Lung* 2014. Peptide regulation of gene expression and protein synthesis in bronchial epithelium.

PMID 26468022 — Kuzubova NA et al. *Bull Exp Biol Med* 2015. Modulating Effect of Peptide Therapy on the Morphofunctional State of Bronchial Epithelium in Rats with Obstructive Lung Pathology.

PMID 30199201 — Titova ON et al. *Ross Fiziol Zh Im I M Sechenova* 2017. [ANTIINFLAMMATORY AND REGENERATIVE EFFECT OF PEPTIDE THERAPY IN THE MODEL OF OBSTRUCTIVE LUNG PATHOLOGY].

Source page: kymatahealth.com/peptides/bronchogen

PINEAL GLAND

Endoluten

Cytomax · capsule complex

peptide mixture

NO SINGLE SEQUENCE

EVIDENCE TIER	US STATUS	RELATED
Low	Not FDA-approved	Epitalon (AEDG) and Pinealon (EDR) are the related cytogens.

WHAT WAS STUDIED

Pineal-tissue peptide complex; the group frames it around the daily melatonin rhythm.

BEST HUMAN EVIDENCE

30 older women: one group took Endoluten with two other extracts plus further peptide treatment while facial skin thickness was measured by ultrasound.

WHAT IS NOT ESTABLISHED

Combined with other extracts, so its own effect cannot be separated. Not confirmed in Western trials.

KYMATA READ

We grade it Low. Its one human study combined it with two other extracts, so nothing here isolates Endoluten itself.

EVIDENCE LADDER — WHAT EXISTS IN THE RECORDS WE REVIEWED



Combined with two other extracts.

KEY RECORDS

PMID 12374906 — Khavinson VKh et al. *Neuro Endocrinol Lett* 2002. Peptides and Ageing.

PMID 14523363 — Khavinson VKh et al. *Neuro Endocrinol Lett* 2003. Peptides of pineal gland and thymus prolong human life.

Source page: kymatahealth.com/peptides/endoluten

The other 29 at a glance 1/5

BRAIN & NERVES

Cerluten

mixture

Cytomax capsule complex · Brain

STUDIED	Brain tissue
HUMANS	None; developer cell and animal work
PAIR	Pinealon (EDR), Cortagen (AEDP); Cortexin is the pharma extract

Low

THYMUS & IMMUNE

Vladonix

mixture

Cytomax capsule complex · Thymus

STUDIED	Thymus and immune cells
HUMANS	None; developer cell and animal work
PAIR	Vilon (KE), Crystagen (EDP), Thymogen (EW)

Low

THYMUS & IMMUNE

Bonomarlot

mixture

Cytomax capsule complex · Bone marrow

STUDIED	Haemoglobin in iron-deficiency anaemia
HUMANS	26 women, 2011 institute report; group assignment not described
PAIR	Immune cytogens (Crystagen / Vilon): marrow is the upstream hematopoietic bed

Low

THYMUS & IMMUNE

Crystagen

EDP

Cytogen · synthetic · Thymus / immunocompetent cells (not colon)

STUDIED	Class reviews only
HUMANS	None specific to Crystagen
PAIR	Vladonix (thymus Cytomax); neighbors Vilon (KE) and Thymogen (EW)

Low

EYE & RETINA

Visoluten

mixture

Cytomax capsule complex · Retina / eye tissue

STUDIED	Photoreceptor and retinal-pigment-epithelium gene expression
HUMANS	None; developer cell and animal work
PAIR	Normoftal (retina cytogen) and Retinalamin (pharma extract)

Low

EYE & RETINA

Normoftal

mixture

Cytogen · synthetic · Retina

STUDIED	Retina; no study of Normoftal found
HUMANS	None
PAIR	Visoluten (eye Cytomax); Retinalamin is the pharma extract

Low

The other 29 at a glance 2/5

HEART & VESSELS

Chelohart

mixture

Cytomax capsule complex · Heart muscle

STUDIED	Heart tissue (peptides <10 kDa + nucleoproteins)
HUMANS	None; developer cell and animal work
PAIR	Cardiogen (heart cytogen); Ventfort/Vesugen are vessels, not myocardium

Low

HEART & VESSELS

Ventfort

mixture

Cytomax capsule complex · Blood vessels / endothelium

STUDIED	Endothelial (vessel-lining) gene expression
HUMANS	None; developer cell and animal work
PAIR	Vesugen (KED)

Low

HEART & VESSELS

Cardiogen

AEDR

Cytogen · synthetic · Heart muscle

STUDIED	Heart-muscle cell growth in culture and animals
HUMANS	None
PAIR	Chelohart (heart Cytomax); Vesugen/Ventfort are vessels

Low

LUNGS & BRONCHI

Taxorest

mixture

Cytomax capsule complex · Bronchial mucosa

STUDIED	Bronchial tissue
HUMANS	None; developer cell and animal work
PAIR	Bronchogen and Chonluten (airway cytogens); Honluten is a separate lung-extract SKU

Low

LUNGS & BRONCHI

Chonluten

EDG

Cytogen · synthetic · Lungs and bronchi

STUDIED	Bronchial cells; a human cell line (Avolio 2022)
HUMANS	None
PAIR	Taxorest (bronchial Cytomax); Bronchogen is the other airway cytogen

Low

LIVER

Svetinorm

mixture

Cytomax capsule complex · Liver

STUDIED	Liver tissue
HUMANS	None; developer cell and animal work
PAIR	Livagen (KEDA) and Ovagen (liver cytogen on the NPCRIZ list)

Low

The other 29 at a glance 3/5

LIVER

Ovagen

EDL

Cytogen · synthetic · Liver (official NPCRIZ cytogen list, not ovary)

STUDIED	Liver group; no study of the peptide found
HUMANS	None — PubMed hits are an unrelated veterinary product
PAIR	Svetinorm (liver Cytomax); Livagen (KEDA) is the other liver synthetic

Low

LIVER

Livagen

KEDA

Cytogen · synthetic · Liver

STUDIED	Chromatin in cultured lymphocytes (PMID 12533768)
HUMANS	None
PAIR	Svetinorm (liver Cytomax); Ovagen (EDL) is the other liver cytogen

Low

PANCREAS & STOMACH

Suprefort

mixture

Cytomax capsule complex · Pancreas

STUDIED	Glucose after a glucose drink
HUMANS	One 2011 institute report; uneven groups, medicines changed
PAIR	Pancragen (KEDW)

Low

PANCREAS & STOMACH

Stamakort

mixture

Cytomax capsule complex · Gastric mucosa

STUDIED	Gastric mucosa
HUMANS	None; developer cell and animal work
PAIR	Not a GI cytogen on the 12-list: do not confuse with BPC-157

Low

PANCREAS & STOMACH

Pancragen

KEDW

Cytogen · synthetic · Pancreas

STUDIED	Islet-cell gene activity; fasting glucose
HUMANS	33 older adults with T2D; text and tables disagree (PMID 22448364)
PAIR	Suprefort (pancreas Cytomax)

Low

KIDNEY & BLADDER

Pielotax

mixture

Cytomax capsule complex · Kidneys

STUDIED	Kidney tissue
HUMANS	None; developer cell and animal work
PAIR	Adjacent urinary: Chitomur (bladder Cytomax), Vesilut (bladder cytogen)

Low

The other 29 at a glance 4/5

KIDNEY & BLADDER

mixture

Chitomur

Cytomax capsule complex · Urinary bladder

STUDIED	Bladder tissue
HUMANS	None; developer cell and animal work
PAIR	Vesilut / Vesilute (bladder cytogen)

Low

KIDNEY & BLADDER

ED

Vesilut

Cytogen · synthetic · Urinary bladder

STUDIED	Urinary symptoms with usual care
HUMANS	One Russian clinical report; added effect unclear
PAIR	Chitomur (bladder Cytomax)

Low

REPRODUCTIVE

mixture

Libidon

Cytomax capsule complex · Prostate

STUDIED	Urine flow in men with prostate enlargement
HUMANS	2011 institute study; change from baseline, not between groups
PAIR	Prostamax (KEDP) and Prostatilen (pharma extract)

Low

REPRODUCTIVE

mixture

Testoluten

Cytomax capsule complex · Testes / male reproductive

STUDIED	Testicular tissue
HUMANS	None; developer cell and animal work
PAIR	Testagen (testicular cytogen)

Low

REPRODUCTIVE

mixture

Zhenoluten

Cytomax capsule complex · Female reproductive system (ovary-focused Cytomax)

STUDIED	Granulosa and theca cells of ageing ovarian follicles
HUMANS	None; developer cell and animal work
PAIR	Name trap: Ovagen on NPCRIZ is the liver cytogen (EDL), not an ovary peptide

Low

REPRODUCTIVE

KEDG

Testagen

Cytogen · synthetic · Testes

STUDIED	Testicular tissue
HUMANS	None; no human hormone or sperm data
PAIR	Testoluten (testicular Cytomax)

Low

The other 29 at a glance 5/5

REPRODUCTIVE

Prostamax

KEDP

Cytogen · synthetic · Prostate

STUDIED	Prostate lobe size in a rat model
HUMANS	None published; patent case series only
PAIR	Libidon (prostate Cytomax); Prostatilen is the pharma extract

Low

JOINTS & MUSCLE

Sigumir

mixture

Cytomax capsule complex · Joints, cartilage, and spine

STUDIED	Pain and mouth opening in jaw-joint disorders
HUMANS	62 older adults on combined care (PMID 22708467)
PAIR	Cartalax (AED)

Low

JOINTS & MUSCLE

Gotratix

mixture

Cytomax capsule complex · Skeletal muscle

STUDIED	Grip and jump performance in training athletes
HUMANS	One 2011 institute report; within-group comparisons only
PAIR	Adjacent musculoskeletal: Cartalax (cartilage cytogen), Sigumir (joint Cytomax)

Low

ENDOCRINE GLANDS

Thyreogen

mixture

Cytomax capsule complex · Thyroid gland

STUDIED	Thyroid follicular-cell genes
HUMANS	None; developer cell and animal work
PAIR	Adjacent: Bonothyrk is parathyroid, a different gland

Low

ENDOCRINE GLANDS

Bonothyrk

mixture

Cytomax capsule complex · Parathyroid glands

STUDIED	Parathyroid tissue and calcium balance
HUMANS	None; developer cell and animal work
PAIR	Adjacent: Thyreogen (thyroid Cytomax), different gland, same neck

Low

ENDOCRINE GLANDS

Glandokort

mixture

Cytomax capsule complex · Adrenal glands

STUDIED	Adrenal tissue
HUMANS	None; developer cell and animal work
PAIR	Name-adjacent only: Cortagen is cerebral cortex (AEDP), not cortisol

Low

Null results, and the name traps behind most errors

A reference that only reports positive findings is a brochure. These are the results that did not go the way the hypothesis predicted.

COMPOUND	WHAT WAS FOUND	RECORD
Glu-Trp (Thymogen's sequence), as IM862	Independent phase III, 202 people with AIDS-related Kaposi's sarcoma, 24 weeks: response 23% vs 21% on placebo; time to progression was shorter on IM862 (16 vs 35 weeks)	Noy A et al. J Clin Oncol 2005[2]
Retinalamin	Randomised, 147 adults with stage I–II glaucoma, 24 months: no between-group difference in nerve-fibre layer, ganglion-cell layer or visual field at the end, yet the authors concluded it "arrests" progression	Strakhov VV et al. Vestn Oftalmol 2020[36]
Epitalon in SHR mice	No change in mean lifespan or total tumour incidence; maximum lifespan +12.3%, leukaemia lower	Anisimov VN et al. Biogerontology 2003[13]
Epithalamin in SHR mice	Mean lifespan rose 11–31% across flies, SHR and C3H mice and rats, but the mortality rate (rate of ageing) did not change in SHR mice	Anisimov VN et al. Mech Ageing Dev 1998[11]
Epitalon, independent review	US narrative review searched to Sep 2026: "no adequately powered randomized trial has established therapeutic efficacy"	Jain A et al. Int J Mol Sci 2026[14]

NAME TRAPS

Epithalamin ≠ Epitalon
The cohort and Kiev data are for the extract.

Thymalin ≠ Thymulin
Thymulin (FTS) is a French-line zinc nonapeptide.[35]

Vilon (KE) ≠ Thymogen (EW)
Different dipeptides; only EW had an independent phase III.

Ovagen ≠ ovary
Ovagen (EDL) is on the liver list; Zhenoluten is the ovary Cytomax.

Cortexin ≠ Cortagen ≠ Glandokort
Brain extract, AEDP synthetic, adrenal Cytomax.

Cartalax ≠ Sigumir
Defined AED vs cartilage mixture.

Open questions worth a real trial

1. **Between-group re-analysis of the 520-person Vilon trial.** Markers were tested only within groups. A between-group analysis of the existing data would answer more than any new anecdote.
2. **Independent replication of the 266-person cohort.** Do Thymalin and Epithalamin effects on mortality survive randomisation, blinding and pre-registration?
3. **Oral bioavailability.** Di- and tripeptides are PEPT1 substrates, but systemic levels of intact peptide after oral dosing are poorly quantified for most sequences.
4. **Telomeres and cancer.** The 2025 replication found telomere lengthening via ALT in cancer lines. What does that imply for long-term use?
5. **Fragment biology.** Several cytogen motifs occur inside larger known proteins (for example KE within thymic peptides). Does that explain tissue specificity, or is it coincidence for sequences this short?
6. **Synthetic vs extract.** No head-to-head human trial compares Epitalon with Epithalamin, or Vilon with Thymalin.
7. **Identity testing.** Retail vials are sold under names that are easily swapped (Thymalin vs Thymulin). A purity chromatogram alone cannot confirm the sequence.

> If you are a researcher working on any of these, we would like to read and cite your work: **contact@kymatalabs.com**.

Glossary

ALT	Alternative lengthening of telomeres: a telomerase-independent way cancer cells keep telomeres long.
Cytamin	Early organ-derived polypeptide fractions; the extract era.
Cytogen	A synthetic short peptide (2–4 residues) with a defined sequence.
Cytomax	A capsule peptide complex from one organ, defined by tissue, not sequence.
Epigenetic	Changes in gene activity without changes in DNA sequence, e.g. chromatin opening.
Heterochromatin	Tightly packed DNA that is mostly silent; reported to increase with age.
hTERT	The catalytic subunit of telomerase.
IM862	The US development code for Glu-Trp (oglufanide); the same sequence as Thymogen.
Independent	A study with no author from the developing group.
NPCRIZ	The St. Petersburg producer whose public list defines the 21 Cytomaxes and 12 Cytogens.
One-letter code	Amino-acid shorthand: A Ala, D Asp, E Glu, G Gly, K Lys, L Leu, P Pro, R Arg, W Trp.
PEPT1	An intestinal transporter that carries di- and tripeptides.
Telomerase	The enzyme that extends telomeres, the protective ends of chromosomes.
Thymulin (FTS)	A zinc-dependent nine-residue thymic hormone from a French research line; not Thymalin.

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