



CLINICAL MONOGRAPH · TISSUE REPAIR (UNDER FDA REVIEW)

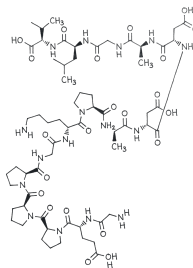
BPC-157

Research pentadecapeptide with patient-specific requests reviewed case by case

BPC-157 ("body protection compound," pentadecapeptide) is a 15-amino-acid synthetic peptide that has been studied since the early 1990s, almost entirely in rats and mice [sikiric1992]. It is not approved by the FDA for any medical use, and there are no published large human trials of any disease indication.

Most of what is known comes from one research group in Zagreb, Croatia, which has published rodent studies suggesting that BPC-157 may speed healing of tendons, ligaments, muscle, bone, gut ulcers, and skin wounds [staresinic2003]. These findings have not been confirmed by independent large human trials.

BPC-157 has no FDA approval in the United States. This ingredient is part of an evolving FDA review process. Physicians may submit patient-specific prescription requests for pharmacy review. Availability is determined case by case, and availability may change after FDA review, PCAC discussion, final agency action, or state-board guidance.



EVIDENCE POSTURE

PRECLINICAL

EMERGING

REVIEWED 2026-05-11



State-licensed
503A



Pharmacist
reviewed



Doctor
led



Cold-chain
ready



Patient choice
preserved



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FOR CLINICIANS

BPC-157 (Body Protection Compound, pentadecapeptide GEPPPGKPADDAGLV) is a synthetic 15-amino-acid peptide derived from a stable region of a putative gastric juice protein, characterized starting in 1991, 1993 by the Sikiric laboratory at the University of Zagreb [sikiric1992; sikiric1993; sikiric1994]. Preclinical evidence in rats and mice has reported accelerated healing of transected Achilles tendon [staresinic2003], tendon-to-bone attachment after Achilles detachment [krivic2006], transected quadriceps muscle [staresinic2006], muscle crush injury [novinscak2008], ligament/muscle and bone healing [brcic2009; gwyer2019; japjec2021], spinal cord injury [perovic2019], burn wounds [mikus2001; sikiric2003_burns], corneal epithelial defects [lazic2005], periodontitis, short bowel syndrome [sever2009], cysteamine colitis and colon-anastomosis healing [klicek2013], and a range of gastric and duodenal ulcer models. Proposed mechanisms include modulation of VEGF/angiogenesis [seiwert2014_blood; seiwert2018_factors; sikiric2025_no_review], the NO pathway (with both L-NAME and L-arginine interactions across many models) [sikirić1997; balenovic2009; sikiric2025_no_review], dopaminergic and serotonergic systems [tohyama2004; blagaic2005; sikiric2024_neurotrans], growth hormone receptor upregulation in tendon fibroblasts [chang2014], and "collateral pathway" activation in vascular occlusion models [sikiric2023_collateral; kalogjera2023].

Human evidence is sparse. The only multi-patient human program referenced in the Sikiric-lab literature is a small Phase 2 series of trials in ulcerative colitis under sponsor codes PL-10/PLD-116/PL 14736 (Pliva, Croatia), summarized in review form [sikiric2006_ibd, vuksic2007] but without published primary trial reports indexed in PubMed. A small case series of intra-articular BPC-157 for knee pain has been published in a low-tier journal [lee2021], and one orthopedic narrative review and one systematic review explicitly note the absence of high-quality human randomized data [gwyer2019, vasireddi2025, mcguire2025].

BPC-157 has no FDA approval in the United States. This ingredient is part of an evolving FDA review process. Physicians may submit patient-specific prescription requests for pharmacy review. Availability is determined case by case, and availability may change after FDA review, PCAC discussion, final agency action, or state-board guidance.



🔗 Why Personalized BPC-157

The evidence base for BPC-157 remains mostly preclinical. Published work is dominated by rodent tendon, gut, bone, and wound models, with limited human case-series exposure and no large randomized human trial establishing a medical use.

Physicians may submit patient-specific prescription requests for BPC-157 for pharmacy review. Certain preparations may be available now when clinically appropriate, lawfully prescribed, supported by patient-specific documentation, and approved by the dispensing pharmacy. Availability is determined case by case. This is not a consumer access promise; it is a clinical, sourcing, formulation, and regulatory review process. FDA has scheduled BPC-157-related bulk drug substances for discussion at the 23-24 Jul 2026 Pharmacy Compounding Advisory Committee meeting.

The legitimate path is a physician-directed, patient-specific prescription request reviewed by a state-licensed pharmacy, not a research-chemical checkout page selling vials with no prescriber, pharmacist, lot accountability, or recall path.

🔗 Quick Facts About BPC-157

Category: Synthetic pentadecapeptide (research compound), not an FDA-approved drug

Active ingredient: BPC-157, a 15-amino-acid sequence (GEPPPGKPADDAGLV) derived from a stable region of a putative human gastric juice protein; commonly supplied as the acetate salt

FDA-approval status: Category 2, evolving FDA review process. Valid patient-specific prescription required; supporting clinical rationale may be requested.

503A bulk-substances status: Category 2, evolving FDA review process. Valid patient-specific prescription required; supporting clinical rationale may be requested.

Evidence posture: Almost entirely preclinical (rodent). No published phase 3 trials in humans. Only one small unpublished Phase 2 program in ulcerative colitis (PL-10/PLD-116/PL14736, Pliva, Croatia) is referenced in Sikiric-lab review papers; primary trial reports are not indexed in PubMed.

Primary research group: Sikiric laboratory, University of Zagreb School of Medicine (Croatia). The lab has published the discovery work and the great majority of preclinical mechanistic papers since 1992.

Compounded under: Not currently compounded by RonanRx. Pending FDA Category 1 placement following the July 2026 PCAC review.

Important regulatory caution: BPC-157 is prohibited in sport (WADA Prohibited List, class So, Non-Approved Substances). Pharmacies and prescribers should also note that FDA's compounding guidance



treats peptides without an approved drug application and without a USP monograph as ineligible for routine 503A compounding outside the bulks list.

SPECIALS: PATIENT-SPECIFIC PRESCRIPTION ONLY

Physicians may submit patient-specific prescription requests for BPC-157 for pharmacy review. Certain preparations may be available now when clinically appropriate, lawfully prescribed, and approved by the dispensing pharmacy. Availability is determined case by case.

- **Made to order, not off a shelf.** No batch sits in a warehouse waiting for buyers. Your prescription triggers the prep.
- **Named-patient label.** The bottle carries one patient's name. The batch records carry one prescription.
- **Dose, strength, and route chosen for the patient.** A prescriber decides what gets compounded, not a manufacturer who set the strength for a trial population.
- **Licensed pharmacist on the hook.** A real person, with a license that can be pulled, signs off on every prep. State inspectors check the facility.
- **Compounded drugs are not FDA-approved.** They should not be evaluated using branded-drug trial data alone. Availability varies by state and prescribed medication.

✓ How This Differs from a Research-Use-Only Website

A research-use-only website ships a vial from a warehouse. There is no prescription, no pharmacist, no facility inspection, and no way to recall the product if something is wrong with it. If the vial is mislabeled, contaminated, or under-potent, there is nobody whose license is at stake.

A 503A compounding pharmacy is the other thing. The doctor writes the prescription. A licensed pharmacist, whose name is on the label, prepares the medicine in a facility the state inspects. If something goes wrong, there is a person and a license on the hook, and a documented chain of custody on every lot. That accountability is what makes it safe.

📖 What is BPC-157?

BPC-157 ("Body Protection Compound," 15 amino acids; sequence GEPPPGKPADDAGLV) is a synthetic peptide originally described by Sikiric and colleagues in Zagreb in the early 1990s as a stable fragment of a larger "body protection compound" isolated from human gastric juice [sikiric1992, sikiric1993] [fda_503a_categories_2026]. The term "stable gastric pentadecapeptide" used throughout the Sikiric-lab literature refers to its reported stability in human gastric juice and acid for >24 hours, which the lab has presented as the basis for oral as well as parenteral activity in rodents [sikiric1994, sikiric1996_dds].

BPC-157 is not a naturally circulating peptide hormone with a defined human receptor. The originating sequence in the larger "BPC" protein has been reported by the Sikiric lab but is not independently re-isolated or annotated in major human peptide/protein databases as a discrete signaling peptide. For practical purposes, BPC-157 is a research peptide: it is synthesized chemically, supplied for laboratory use,



and used in rodent studies and a small number of human reports outside the FDA-approved drug pathway [fda_503a_categories_2026].

BPC-157 has no FDA-approved branded product, no USP monograph, and no published phase 3 trials [fda_503a_categories_2026]. It is not a hormone, enzyme, antibody, or vaccine. RonanRx documents BPC-157 in its monograph library for educational and pharmacy-review context because physicians and patients ask about it and because research-use supply creates real safety questions.

⚙️ How BPC-157 Works

The proposed mechanism of BPC-157 is not a single well-characterized receptor interaction. Across more than 100 rodent papers from the Sikiric laboratory and collaborators, the peptide has been described as a "pleiotropic" agent that modulates multiple endogenous systems implicated in tissue repair and cytoprotection [seiwert2021_wound; sikiric2024_neurotrans].

The most frequently invoked mechanisms are: (1) up-regulation of vascular endothelial growth factor (VEGF) and pro-angiogenic signaling [seiwert2014_blood; seiwert2018_factors]; (2) modulation of the nitric oxide (NO) pathway, with reported counter-action of both L-NAME (NOS inhibitor) and L-arginine (NO precursor) effects across cardiovascular, GI, and CNS models [sikiric1997; balenovic2009; sikiric2025_no_review]; (3) effects on dopaminergic and serotonergic transmission relevant to brain, gut axis and stress models [tohyama2004; blagaic2005; sikiric2024_neurotrans]; (4) up-regulation of growth hormone receptor expression in tendon fibroblasts in vitro [chang2014]; and (5) "collateral pathway" or rescue-circulation activation in acute vascular occlusion models [sikiric2023_collateral; kalogjera2023].

None of these proposed mechanisms has been independently validated in published human trials. A specific receptor for BPC-157 has not been identified. The mechanism literature should be read as preclinical, hypothesis-generating, and largely generated by a single research group with related personnel across papers.

📄 Detailed Mechanism of BPC-157

Angiogenesis and VEGF. Multiple rodent studies report that BPC-157 increases VEGF mRNA and protein expression at sites of injury and is associated with neovascularization in tendon, muscle, and gastric mucosal healing models [seiwert2014_blood; brcic2009; seiwert2018_factors]. Recent Sikiric-lab reviews argue that BPC-157 acts on "endothelial integrity" and bypass-circulation formation in occlusion injuries [sikiric2023_collateral; kalogjera2023]. These observations are descriptive: a specific endothelial receptor mediating BPC-157's effect has not been identified, and the bulk of the evidence remains preclinical.



Nitric oxide system. BPC-157 has been reported to counteract both the pro-ulcerogenic effects of NOS inhibition by N(G)-nitro-L-arginine methyl ester (L-NAME) and the effects of high-dose L-arginine across gastric mucosal, cardiovascular, and CNS injury models [sikirić1997; balenovic2009; sikiric2025_no_review]. The Sikiric lab frames this dual interaction as evidence that BPC-157 "rescues" rather than directly stimulates the NO pathway. This interpretation is mechanistically plausible but has not been validated outside the originating group.

Neurotransmitter systems. Tohyama et al. (2004) reported regional changes in brain serotonin synthesis after BPC-157 in rats using alpha-methyl-L-tryptophan autoradiography [tohyama2004]. Blagaic et al. (2005) reported attenuation of serotonin-syndrome behaviors in rats [blagaic2005]. Sikiric-lab reviews link these findings to a "brain, gut axis" rationale for BPC-157's reported behavioral and CNS-injury effects [sikiric2024_neurotrans]. The morphine-counteraction and serotonin-syndrome papers are consistent with broad central pharmacology but do not isolate a specific transmitter mechanism.

Growth hormone receptor. Chang et al. (2014) reported that BPC-157 increased growth hormone receptor expression in cultured Achilles tendon fibroblasts, accompanied by increased proliferation and migration [chang2014]. This is the most frequently cited cell-biology rationale for the proposed tendon-healing effect, but no in vivo dose, response linking GHR expression to functional tendon-healing endpoints has been independently reproduced in humans.

Pharmacokinetics. There is no published human pharmacokinetic, mass-balance, or population PK analysis of BPC-157. Rodent pharmacokinetics are not well characterized in peer-reviewed literature. The widespread internet-sourced claims of specific oral or subcutaneous bioavailability values, half-lives, or tissue distribution profiles are not supported by peer-reviewed human data and should not be cited as known pharmacology. A recombinant *Lactococcus lactis* oral delivery system for BPC-157 has been described in microbiology literature but is not a human PK study.

🕒 BPC-157 Research History

BPC-157 originated from work in the late 1980s and early 1990s in the Sikiric laboratory at the University of Zagreb School of Medicine, which characterized a "body protection compound" in human gastric juice with reported gastroprotective activity in rat ulcer models [sikiric1992; sikiric1993] [seiwerth2021_wound]. The 15-amino-acid sequence designated BPC-157 (also referred to as PL-10, PLD-116, and PL 14736 in industry-coded literature from Pliva, Croatia) was synthesized as a stable fragment and characterized in a series of papers through the 1990s in cytoprotection and ulcer models [sikiric1994; sikiric1996_dds; sikirić1997].

From approximately 2003 onward, the Sikiric group and collaborators expanded BPC-157 into musculoskeletal injury models [sikiric2024_neurotrans; sikiric2025_no_review]. Landmark rodent papers in this period include the transected Achilles tendon model [staresinic2003], Achilles tendon-to-bone reattachment with corticosteroid co-administration [krivic2006], transected quadriceps muscle [staresinic2006], muscle crush injury [novinscak2008], modulation of angiogenesis in muscle and tendon



healing [bric2009], and segmental bone defect healing in rabbits. The 2010s extended the work into corneal epithelial healing [lazic2005], periodontitis, short bowel syndrome [sever2009], cysteamine colitis and colon-anastomosis healing [klicek2013], spinal cord injury [perovic2019], and a series of "general occlusion / occlusion-like syndrome" papers around the lab's collateral-pathway hypothesis [sikiric2023_collateral; kalogjera2023].

Human research has been very limited. The only published human work that approximates a clinical trial is a series of Pliva-sponsored Phase 2 trials of an injectable formulation (PL-10/PLD-116/PL 14736) in ulcerative colitis, summarized in Sikiric-lab review papers in 2006 and 2007 [sikiric2006_ibd, vuksic2007] but without primary trial reports indexed in PubMed. A small case series of intra-articular BPC-157 for knee pain has appeared in a complementary-medicine journal [lee2021]. The 2025 systematic review by Vasireddi and colleagues in the HSS Journal explicitly concludes that there is insufficient human evidence to support BPC-157 use in orthopedic sports medicine [vasireddi2025], and the McGuire et al. (2025) narrative review in Current Reviews in Musculoskeletal Medicine reaches the same conclusion [mcguire2025].

Recent literature (2023, 2026) has been dominated by Sikiric-lab review papers consolidating prior rodent work [seiwerth2021_wound]. Independent replication outside the originating group remains very limited.

📅 BPC-157 Timeline

- 1991-1993** • Sikiric and colleagues at the University of Zagreb describe the "body protection compound" in human gastric juice and synthesize the 15-amino-acid BPC-157 fragment; first gastroprotective rat ulcer-model papers [sikiric1992; sikiric1993]

- 1994** • Sikiric et al [sikiric1994]. (Life Sciences) report BPC-157 protection against restraint stress, cysteamine, and ethanol-induced gastric/duodenal lesions in rats

- 1996** • Sikiric et al [sikiric1996_dds]. (Digestive Diseases and Sciences) extend the gastric-lesion model to indomethacin and capsaicin-induced injury

- 1997** • Sikiric et al [sikirić1997]. (Eur J Pharmacol) report BPC-157 counteraction of L-NAME and L-arginine effects in rat stomach, first paper framing the NO-pathway hypothesis

- 2001** • Mikus et al [mikus2001]. (Burns) and Sikiric-group papers in J Physiol Paris report BPC-157 cream activity in burn wounds and pulmonary-injury models

- 2003** • Staresinic et al [staresinic2003]. (J Orthop Res) report that BPC-157 accelerates healing of transected rat Achilles tendon and stimulates tendocyte growth in vitro, landmark tendon paper

- 2003** • Sikiric et al [sikiric2003_burns]. (Burns) report BPC-157 cream improves burn-wound healing under corticosteroid suppression in mice



- 2004 • Tohyama et al [tohyama2004]. (Life Sciences) report regional changes in rat brain serotonin synthesis after BPC-157 by alpha-methyl-L-tryptophan autoradiography

- 2005 • Lazić et al [lazic2005]. (Coll Antropol) and Boban Blagaic et al [blagaic2005]. (Eur J Pharmacol) report corneal epithelial healing and protection against serotonin-syndrome behaviors in rats

- 2006 • Krivic et al [krivic2006]. (J Orthop Res), Achilles tendon-to-bone detachment in rats: BPC-157 promotes tendon-to-bone healing and opposes corticosteroid aggravation

- 2006 • Staresinic et al [staresinic2006]. (J Orthop Res), transected quadriceps muscle healing in rats with BPC-157

- 2006 • Sikiric et al [sikiric2006_ibd]. (Inflammopharmacology), first consolidated review of BPC-157 in ulcerative colitis trials (PL-10, PLD-116, PL 14736; Pliva, Croatia)

- 2007 • Vuksic et al [vuksic2007]. (Surg Today), Sikiric-lab review covering the Pliva clinical-trial program in inflammatory bowel disease and ileoileal anastomosis healing in rats

- 2008 • Krivic et al. (Inflamm Res) and Novinscak et al [novinscak2008]. (Surg Today), Achilles tendon-to-bone modulation by BPC-157 vs methylprednisolone, and muscle crush injury

- 2009 • Brcic et al [brcic2009]. (J Physiol Pharmacol), modulatory effect of BPC-157 on angiogenesis in muscle and tendon healing

- 2009 • Keremi et al. (J Physiol Pharmacol) and Sever et al [sever2009]. (Dig Dis Sci), anti-inflammatory effect in experimental periodontitis and rescue of short bowel syndrome in rats

- 2009 • Balenovic et al [balenovic2009]. (Regul Pept), methyldigoxin-induced arrhythmia inhibition by BPC-157 with proposed NO-system mechanism

- 2013 • Klicek et al [klicek2013]. (J Physiol Pharmacol), BPC-157 heals cysteamine colitis and colon-colon anastomosis and counteracts cuprizone brain injuries in rats

- 2014 • Chang et al [chang2014]. (Molecules), BPC-157 enhances growth hormone receptor expression in tendon fibroblasts in vitro

- 2014 • Seiwert et al [seiwert2014_blood]. (Curr Pharm Des), review "BPC 157 and blood vessels" consolidating the VEGF/angiogenesis hypothesis

- 2018 • Seiwert et al [seiwert2018_factors]. (Curr Pharm Des) and Škrlec et al. (Appl Microbiol Biotechnol), angiogenic growth factors review and a recombinant Lactococcus lactis oral delivery vehicle for BPC-157



- 2019 • Perovic et al. (J Orthop Surg Res), BPC-157 improves spinal cord injury healing course in rats [perovic2019]. Gwyer et al [gwyer2019]. (Cell Tissue Res), independent narrative review of BPC-157 in musculoskeletal soft tissue healing

- 2021 • Seiwerth et al. (Front Pharmacol), "Stable Gastric Pentadecapeptide BPC 157 and Wound Healing" review [seiwerth2021_wound; japjec2021]. Japjec et al. (Biomedicines), myotendinous junction therapy in rats

- 2021 • Lee et al [lee2021]. (Altern Ther Health Med), small clinical case series of intra-articular BPC-157 for multiple knee-pain phenotypes, the only PubMed-indexed human series

- 2023 • Sikiric et al [sikiric2023_collateral]. (Curr Med Chem) and Kalogjera et al [kalogjera2023]. (World J Gastroenterol), "collateral pathway" / occlusion-like syndrome rescue hypothesis papers

- 2024 • Sikiric et al [sikiric2024_neurotrans]. (Pharmaceuticals), "Pleiotropic beneficial activity and its possible relations with neurotransmitter activity", synthesis of dopaminergic, serotonergic, and stress-axis literature

- 2025 • Vasireddi et al [vasireddi2025]. (HSS Journal), systematic review of BPC-157 in orthopedic sports medicine: insufficient human evidence to support routine use

- 2025 • McGuire et al. (Curr Rev Musculoskelet Med), "Regeneration or Risk [mcguire2025]? A Narrative Review of BPC-157 for Musculoskeletal Healing", emphasizes preclinical character of the evidence base and regulatory uncertainty

- 2025 • Sikiric et al [sikiric2025_no_review]. (Pharmaceuticals), "BPC 157 Therapy: Targeting Angiogenesis and Nitric Oxide" review consolidates the VEGF/NO mechanism hypothesis

- 2026 • FDA April 22, 2026 update to the 503A bulk-drug-substances framework documents that BPC-157 had been placed in Category 2 ("substances that raise significant safety concerns") and was removed only because the nominators withdrew [fda_503a_categories_2026; fda_pcac_july2026]. FDA announces PCAC consultation scheduled for July 23, 2026 regarding potential inclusion of BPC-157 acetate and BPC-157 (free base) on the 503A bulks list



Ⓢ Off-Label Uses of BPC-157

Tendon, ligament, and muscle injury (musculoskeletal soft-tissue healing) PRECLINICAL

Evidence should be interpreted in context for BPC-157. Any patient-specific request requires prescriber rationale and pharmacy review; availability is determined case by case.

Rodent studies report accelerated healing of transected Achilles tendon [staresinic2003], tendon-to-bone reattachment after Achilles detachment with corticosteroid co-administration [krivic2006], transected quadriceps muscle [staresinic2006], muscle crush injury [novinscak2008], myotendinous junction disruption [japjec2021], angiogenic modulation in muscle and tendon [brcic2009], and growth-hormone-receptor up-regulation in cultured Achilles tendon fibroblasts [chang2014]. The 2019 narrative review by Gwyer et al. and the 2025 systematic review by Vasireddi et al. both conclude that human evidence is insufficient to support clinical use in orthopedics or sports medicine [gwyer2019; vasireddi2025; mcguire2025].

Inflammatory bowel disease (ulcerative colitis) PRECLINICAL

Evidence should be interpreted in context for BPC-157. Any patient-specific request requires prescriber rationale and pharmacy review; availability is determined case by case.

A series of Sikiric-lab review papers reference a Pliva-sponsored Phase 2 program of an injectable formulation under codes PL-10, PLD-116, and PL 14736 in ulcerative colitis, with reported encouraging preliminary observations [sikiric2006_ibd; vuksic2007]. The primary trial reports are not indexed in PubMed and have not been independently re-analyzed. Rodent IBD-relevant models (cysteamine colitis, colon-anastomosis healing) are more numerous [klicek2013].

Gastric and duodenal ulcer / cytoprotection PRECLINICAL

Evidence should be interpreted in context for BPC-157. Any patient-specific request requires prescriber rationale and pharmacy review; availability is determined case by case.

BPC-157 is reported to protect against rodent gastric and duodenal lesions induced by restraint stress, ethanol, cysteamine, indomethacin, capsaicin, alcohol, and various NSAIDs [sikiric1994; sikiric1996_dds; sikiric1997]. The Sikiric-lab pharmacology review and the more recent neurotransmitter and collateral-pathway reviews [sikiric2024_neurotrans; sikiric2023_collateral] consolidate this work. Despite >30 years of rodent cytoprotection data, BPC-157 has not progressed to a published human pivotal trial in any GI indication.



Wound and burn healing (topical and systemic) PRECLINICAL

Evidence should be interpreted in context for BPC-157. Any patient-specific request requires prescriber rationale and pharmacy review; availability is determined case by case.

Mikus et al. (Burns 2001) and Sikiric et al. (Burns 2003) report that topical BPC-157 cream improves burn-wound healing and counteracts corticosteroid-impaired wound healing in mice [mikus2001; sikiric2003_burns]. Lazic et al. (Coll Antropol 2005) and Masnec et al. (Pharmaceuticals 2025) describe corneal-defect healing models [lazic2005]. The 2021 Seiwerth wound-healing review consolidates these findings [seiwerth2021_wound]. Human wound-healing data have not been published.

Other rodent indications (CNS injury, dental/periodontal, cardiovascular, short bowel)

PRECLINICAL

Evidence should be interpreted in context for BPC-157. Any patient-specific request requires prescriber rationale and pharmacy review; availability is determined case by case.

Additional rodent indications described by the Sikiric group include spinal cord injury [perovic2019], experimental periodontitis, anti-arrhythmic effects in methyl digoxin and hyperkalemia models [balenovic2009], short bowel syndrome [sever2009], stomach perforation [kalogjera2023], and fistula healing. None of these has been pursued to a published human trial.

📦 FDA-Approved Uses of BPC-157

There is no FDA-approved branded product containing BPC-157 and no FDA-approved indication for BPC-157 for any disease state. There is no NDA, ANDA, or BLA on file. The April 22, 2026 FDA update on bulk drug substances nominated for use in compounding under section 503A confirms that BPC-157 had been placed in Category 2 of the 503A framework ("substances that raise significant safety concerns") and is currently outside the framework only because the original nominators withdrew their nominations [fda_503a_categories_2026]. FDA has announced it intends to consult the Pharmacy Compounding Advisory Committee on July 23, 2026 regarding potential inclusion of BPC-157 acetate and BPC-157 (free base) on the 503A bulks list [fda_pcac_july2026].

⚖️ Compounded BPC-157 (503A)

Physicians may submit patient-specific prescription requests for pharmacy review. For BPC-157, certain preparations may be available now when clinically appropriate, lawfully prescribed, and approved by the dispensing pharmacy. Availability is determined case by case and may depend on patient-specific documentation, ingredient status, source qualification, formulation feasibility, state requirements, and pharmacist judgment. The review starts with the evidence constraint: The evidence base for BPC-157



remains mostly preclinical. Published work is dominated by rodent tendon, gut, bone, and wound models, with limited human case-series exposure and no large randomized human trial establishing a medical use.

This ingredient is part of an evolving FDA review process. RonanRx is monitoring FDA's PCAC process and any subsequent agency action. FDA has scheduled BPC-157-related bulk drug substances for discussion at the 23-24 Jul 2026 Pharmacy Compounding Advisory Committee meeting. Availability may change after FDA review, PCAC discussion, final agency action, or state-board guidance. For BPC-157, RonanRx ties that monitoring to the evidence limits described above and to any patient-specific documentation submitted by the prescriber.

Valid patient-specific prescription required. Supporting clinical rationale may be requested. Compounded medications are not FDA-approved. No consumer self-ordering, no office stock, no bulk dispensing. Requests for BPC-157 are reviewed before any preparation is made or released. The legitimate path is a physician-directed, patient-specific prescription request reviewed by a state-licensed pharmacy, not a research-chemical checkout page selling vials with no prescriber, pharmacist, lot accountability, or recall path.

🔗 BPC-157 Formulations and Routes

Form	Concentration	Description
Not currently compounded by RonanRx	N/A	If a patient-specific BPC-157 request is approved after pharmacy review, the route and formulation must be selected by the prescriber and dispensing pharmacy for that named patient. Research-use presentations sold online are not RonanRx preparations.

🛡️ BPC-157 Safety

Human safety data for BPC-157 are very limited. The only PubMed-indexed human case series is an intra-articular knee-pain report by Lee et al. (*Altern Ther Health Med*, 2021) ²⁶. The Pliva Phase 2 program in ulcerative colitis is referenced in Sikiric-lab reviews ¹⁴¹⁵ but without primary trial reports indexed in PubMed; the program is described as having been well tolerated in the small numbers reported, but no formal safety dataset is publicly available.

Preclinical rodent safety has not been characterized with the rigor expected for a drug-development program. The Sikiric-group literature reports broad tolerability across rodent indications without dose-limiting toxicity in the rodent dose ranges used, including with concurrent corticosteroid, ethanol, and NSAID exposure ³⁴¹². Genotoxicity, reproductive toxicity, carcinogenicity, and chronic-administration safety data have not been published in peer-reviewed form for human use. Pharmacovigilance data on BPC-157 sold through compounding-pharmacy and research-peptide channels are not collected



systematically; the McGuire et al ⁸. (2025) narrative review and the FDA 503A framework explicitly cite the absence of a formal safety database as a key reason for the substance's prior Category 2 placement ³³³⁶.

Compounded peptide products marketed outside the 503A bulks framework carry additional safety considerations: peptide identity and purity surveys have documented mis-identification, sub-potency, and endotoxin contamination in research-peptide samples ³⁵. Patients who self-administer BPC-157 from unregulated sources cannot be assumed to be receiving the labeled molecule at the labeled strength, sterility, or pyrogenicity standard.

Contraindications

Honest gap. There is no FDA-approved label for BPC-157 and no formally adjudicated contraindication list. WADA-prohibited status applies to athletes in WADA-governed sport regardless of clinical context (Non-Approved Substances class S0). The absence of human pivotal-trial data means contraindications cannot be derived in the conventional regulatory sense; RonanRx therefore does not dispense BPC-157 to any population pending FDA Category 1 placement.

Searched: PubMed, FDA bulk drug substances framework, WADA Prohibited List on 2026-05-11 · terms *BPC-157 contraindications; pentadecapeptide BPC contraindications; BPC 157 adverse.*

Drug interactions

Honest gap. No formal human drug-interaction studies of BPC-157 have been published. Rodent papers have characterized counter-action of corticosteroid, NSAID, ethanol, L-NAME, L-arginine, morphine, methyldigoxin, and serotonergic agents in injury models [krivic2006, sikiric2003_burns, sikiric1996_dds, sikirić1997, balenovic2009, blagaic2005, sikiric2024_neurotrans], but these are mechanistic-pharmacology observations rather than clinical interaction studies. RonanRx does not provide a drug-interaction matrix for BPC-157 because the underlying human pharmacology is not characterized.

Searched: PubMed, DailyMed, Drugs.com interactions database on 2026-05-11 · terms *BPC-157 drug interaction; pentadecapeptide drug interaction.*

Adverse events

Honest gap. No published human pharmacovigilance series for BPC-157 exists. The 2021 PubMed-indexed knee-pain case series [lee2021] is too small to characterize an adverse-event profile. FAERS reports for BPC-157 are not systematically aggregated because the substance is not an FDA-approved drug. Adverse events reported in the rodent literature are not generalizable to humans. The FDA's prior Category 2 placement explicitly reflected the absence of a formal safety dataset [fda_503a_categories_2026].

Searched: PubMed, FAERS, WHO VigiBase (public dashboard) on 2026-05-11 · terms *BPC-157 adverse event; pentadecapeptide adverse; BPC 157 safety.*



↗ Monitoring BPC-157 Therapy

RonanRx does not dispense BPC-157 and therefore does not provide a monitoring protocol. Clinicians asked about BPC-157 by patients self-administering peptide from unregulated sources should consider documenting source, lot information, dose, and route in the chart and counseling the patient about the unregulated nature of the supply chain, the absence of FDA approval, the WADA-prohibited status, and the lack of human pivotal trial data [fda_503a_categories_2026; wada_prohibited; esposito2023_peptide_quality].

⚖ BPC-157 in Special Populations

⚖ BPC-157 Evidence Quality

The BPC-157 evidence base is almost entirely preclinical and dominated by a single research group. PubMed currently indexes more than 150 papers with "BPC-157" or "pentadecapeptide BPC" in the title or abstract, the great majority authored or co-authored by the Sikiric laboratory at the University of Zagreb and collaborators [sikiric1992; krivic2006; staresinic2006]. The breadth of the rodent literature, covering tendon, ligament, muscle, bone, dental, corneal, GI, CNS, and cardiovascular injury models, is notable, but the depth of independent replication outside the originating group remains very limited [staresinic2003; brcic2009; perovic2019].

Human evidence is sparse. There is no published phase 3 trial of BPC-157 in any indication. The Pliva-sponsored Phase 2 ulcerative colitis program (PL-10/PLD-116/PL 14736) is referenced in Sikiric-lab review papers [sikiric2006_ibd, vuksic2007] but without primary trial reports indexed in PubMed. A small PubMed-indexed case series in knee pain [lee2021] is the only directly-indexed human report. Two 2025 reviews focused on the orthopedic/sports-medicine question, Vasireddi et al. in the HSS Journal (systematic review) and McGuire et al [sikiric2025_no_review]. in Current Reviews in Musculoskeletal Medicine (narrative review), independently conclude that there is insufficient human evidence to recommend BPC-157 in clinical practice [vasireddi2025, mcguire2025] [seiwert2021_wound].

Regulatory evidence quality is also at issue. FDA's April 22, 2026 update to the 503A bulks framework places BPC-157 in a transitional status: previously Category 2 ("substances that raise significant safety concerns"), now outside the formal lists only because the nominators withdrew, with a PCAC review scheduled for July 23, 2026 [fda_503a_categories_2026, fda_pcac_july2026]. Compounded peptide quality surveys have documented mis-identification, sub-potency, and contamination [esposito2023_peptide_quality], reinforcing that even if BPC-157 ultimately moves to Category 1, the



supply chain itself will require attention before clinical use is appropriate [sikiric1994; sikiric2024_neurotrans].

RonanRx's evidence-tier designation of BPC-157 is therefore "preclinical" with a secondary "emerging" tag reflecting the small human case-series literature and the active FDA review [sikiric1992]. This brief is published for educational and pharmacy-review context; Physicians may submit patient-specific prescription requests for pharmacy review. Availability is determined case by case.

📄 Major BPC-157 Clinical Studies

Study	Design	Participants	Duration	Finding
Sikiric et al. (1993, J Physiol Paris), Original BPC overview	Narrative overview from the Sikiric laboratory presenting the "stomach-stress-organoprotection" hypothesis and beneficial effects of body protection compound (BPC)	—	—	Establishes the conceptual frame and rodent gastroprotection evidence that motivated synthesis of the 15-amino-acid BPC-157 fragment [sikiric1993]
Sikiric et al. (1994, Life Sciences), Restraint stress / cysteamine / ethanol	Rat gastric and duodenal lesion models	—	—	BPC-157 attenuates restraint-stress, cysteamine, and 96% ethanol-induced lesions [sikiric1994]
Sikiric et al. (1996, Dig Dis Sci), Multi-agent gastric lesion model	Rat gastric lesion models induced by restraint stress, ethanol, indomethacin, and capsaicin	—	—	BPC-157 reduces lesion area across all four insults [sikiric1996_dds]
Sikiric et al. (1997, Eur J Pharmacol), NO pathway	Rat stomach mucosa integrity and blood pressure with co-administration of L-NAME and L-arginine	—	—	BPC-157 counter-acts effects of NOS inhibition and L-arginine, first framing of the proposed NO-pathway mechanism [sikirić1997]
Mikus et al. (2001, Burns), Burn wound healing (topical)	Mouse burn-wound model with topical BPC-157 cream	—	—	Improved burn-wound healing and attenuation of



Study	Design	Participants	Duration	Finding
				burn-gastric lesions [mikus2001]
Staresinic et al. (2003, J Orthop Res), Achilles tendon	Rat transected Achilles tendon model plus in vitro tendocyte proliferation	—	—	BPC-157 accelerates healing of transected Achilles tendon and stimulates tendocyte growth in vitro, landmark tendon paper, frequently cited as the foundation of the sports-medicine BPC-157 literature [staresinic2003]
Tohyama et al. (2004, Life Sciences), Brain serotonin	Rat brain regional serotonin synthesis measured by alpha-methyl-L-tryptophan autoradiography	—	—	Regional changes in brain serotonin synthesis after BPC-157 administration, frequently invoked as basis for the brain-gut axis hypothesis [tohyama2004]
Krivic et al. (2006, J Orthop Res), Achilles detachment	Rat Achilles tendon-to-bone detachment with corticosteroid co-administration	—	—	BPC-157 promotes tendon-to-bone healing and opposes corticosteroid aggravation of the deficit, most-cited orthopedic BPC-157 paper [krivic2006]
Staresinic et al. (2006, J Orthop Res), Quadriceps muscle	Rat transected quadriceps muscle model	—	—	BPC-157 accelerates functional recovery after quadriceps transection [staresinic2006]
Sikiric et al. (2006, Inflammopharmacology), IBD trials overview	Narrative review of Pliva Phase 2 trials (PL-10, PLD-116, PL 14736) in inflammatory bowel disease and animal anastomosis models	—	—	Reports encouraging tolerability and preliminary clinical signal in ulcerative colitis. Primary trial reports are not indexed in PubMed; this and vuksic2007 are the principal published references to the program [sikiric2006_ibd].
Novinscak et al. (2008, Surg Today), Muscle crush injury	Rat muscle crush-injury model	—	—	BPC-157 improves functional and histological recovery from



Study	Design	Participants	Duration	Finding
				muscle crush injury [novinscak2008]
Brcic et al. (2009, <i>J Physiol Pharmacol</i>), Angiogenesis in muscle/tendon	Rat muscle and tendon healing with vascular and VEGF endpoints	—	—	BPC-157 modulates angiogenesis associated with muscle and tendon healing, mechanistic substrate for the VEGF/angiogenesis hypothesis [brcic2009]
Chang et al. (2014, <i>Molecules</i>), Growth hormone receptor in tendon fibroblasts	Cultured rat Achilles tendon fibroblasts treated with BPC-157	—	—	BPC-157 increased growth hormone receptor expression, proliferation, and migration in tendon fibroblasts, primary cell-biology basis cited for the tendon-healing rationale [chang2014]
Seiwerth et al. (2014, <i>Curr Pharm Des</i>), Blood vessels review	Sikiric-lab narrative review	—	—	Consolidates the VEGF/angiogenesis hypothesis across published rodent models [seiwerth2014_blood]
Perovic et al. (2019, <i>J Orthop Surg Res</i>), Spinal cord injury	Rat spinal cord injury model with functional recovery endpoints	—	—	BPC-157 improves healing course of spinal cord injury and leads to functional recovery [perovic2019]
Gwyer et al. (2019, <i>Cell Tissue Res</i>), Independent musculoskeletal review	Narrative review by independent (non-Sikiric) authors	—	—	Reviews the role of BPC-157 in accelerating musculoskeletal soft tissue healing and explicitly notes the absence of high-quality human evidence [gwyer2019]
Lee et al. (2021, <i>Altern Ther Health Med</i>), Intra-articular knee pain	Clinical case series of intra-articular BPC-157 for multiple knee-pain phenotypes	—	—	Reports symptomatic improvement in a small case series, the only PubMed-indexed human report; not a controlled trial; published in a complementary-medicine journal [lee2021]
	Sikiric-lab narrative review	—	—	Consolidates BPC-157 wound-healing data across skin,



Study	Design	Participants	Duration	Finding
Seiwerth et al. (2021, Front Pharmacol), Wound healing review				burn, corneal, and tendon models [seiwerth2021_wound]
Sikiric et al. (2024, Pharmaceuticals), Neurotransmitter pleiotropy review	Sikiric-lab narrative review	—	—	Synthesizes the dopaminergic, serotonergic, and stress-axis hypothesis around BPC-157's reported pleiotropic activity [sikiric2024_neurotrans]
Vasireddi et al. (2025, HSS Journal), Orthopedic systematic review	Systematic review of BPC-157 in orthopedic sports medicine	—	—	Insufficient human evidence to support routine clinical use; calls for properly powered randomized trials before clinical adoption, the most directly relevant 2025 evidence-quality synthesis [vasireddi2025]
McGuire et al. (2025, Curr Rev Musculoskelet Med), Narrative review	Narrative review titled "Regeneration or Risk? A Narrative Review of BPC-157 for Musculoskeletal Healing"	—	—	Catalogs preclinical evidence, highlights regulatory uncertainty and the WADA prohibited-list status, and concludes that human evidence remains insufficient for clinical recommendation [mcguire2025]
Sikiric et al. (2025, Pharmaceuticals), NO and angiogenesis review	Sikiric-lab narrative review	—	—	Consolidates the proposed dual mechanism (VEGF-mediated angiogenesis plus NO-pathway modulation) across published rodent injury models [sikiric2025_no_review]



⚠ BPC-157 Pharmacokinetics & Pharmacodynamics

Pharmacokinetics

There are no published human pharmacokinetic studies of BPC-157. The Sikiric-lab literature does not report a peer-reviewed human plasma-concentration time course, half-life, volume of distribution, clearance, or bioavailability dataset. Rodent pharmacokinetics are not well characterized in peer-reviewed form. Widely circulated internet figures for BPC-157 half-life and bioavailability are not supported by published human PK studies.

A recombinant *Lactococcus lactis* oral delivery system for BPC-157 has been described in microbiology literature, reflecting interest in oral delivery despite the absence of a published human oral PK study [mcguire2025].

Pharmacodynamics

BPC-157 has no validated human pharmacodynamic biomarker. Rodent studies use injury-model endpoints (tendon load-to-failure, muscle functional recovery, ulcer index, wound area, AHI-equivalents in specific models) rather than circulating biomarkers. The pleiotropic profile described in the Sikiric-lab literature, VEGF, NO, dopamine, serotonin, and growth hormone receptor, has not been distilled into a defined clinical PD signature [seiwert2014_blood; sikiric2024_neurotrans; chang2014].

↕ Comparing BPC-157 Formulations

There is no FDA-approved BPC-157 product to which compounded preparations could be compared. Industry-coded historical preparations (PL-10, PLD-116, PL 14736; Pliva, Croatia) are referenced in Sikiric-lab review papers [sikiric2006_ibd, vukic2007] but are not commercially available. Online sources marketing BPC-157 "acetate" or "arginate" or oral capsules are not FDA-regulated and are outside the scope of RonanRx's compounding practice [fda_503a_categories_2026].

🔒 BPC-157 Storage and Handling

RonanRx does not stock or compound BPC-157. No FDA-approved storage labeling exists. Research-grade peptide is typically stored lyophilized at -20°C and reconstituted with bacteriostatic water shortly before use; these conditions are not pharmacist-prescribed because the substance is not currently dispensed.



☒ BPC-157 Compounding & Operations

503A compounding

Physicians may submit patient-specific prescription requests for pharmacy review. For BPC-157, certain preparations may be available now when clinically appropriate, lawfully prescribed, and approved by the dispensing pharmacy. Availability is determined case by case and may depend on patient-specific documentation, ingredient status, source qualification, formulation feasibility, state requirements, and pharmacist judgment. The review starts with the evidence constraint: The evidence base for BPC-157 remains mostly preclinical. Published work is dominated by rodent tendon, gut, bone, and wound models, with limited human case-series exposure and no large randomized human trial establishing a medical use.

This ingredient is part of an evolving FDA review process. RonanRx is monitoring FDA's PCAC process and any subsequent agency action. FDA has scheduled BPC-157-related bulk drug substances for discussion at the 23-24 Jul 2026 Pharmacy Compounding Advisory Committee meeting. Availability may change after FDA review, PCAC discussion, final agency action, or state-board guidance. For BPC-157, RonanRx ties that monitoring to the evidence limits described above and to any patient-specific documentation submitted by the prescriber.

Valid patient-specific prescription required. Supporting clinical rationale may be requested. Compounded medications are not FDA-approved. No consumer self-ordering, no office stock, no bulk dispensing. Requests for BPC-157 are reviewed before any preparation is made or released. The legitimate path is a physician-directed, patient-specific prescription request reviewed by a state-licensed pharmacy, not a research-chemical checkout page selling vials with no prescriber, pharmacist, lot accountability, or recall path.

Pharmacist review

For BPC-157, the pharmacist review starts before any preparation is made. Valid patient-specific prescription required. Supporting clinical rationale may be requested. The pharmacist reviews ingredient status, sourcing, formulation feasibility, state requirements, patient-specific documentation, and whether dispensing is appropriate case by case.

Quality and traceability

If a BPC-157 preparation is approved after pharmacy review, RonanRx applies source documentation, formulation records, lot traceability, release checks, and storage controls appropriate to the actual dosage form. Research-use vial storage practices do not substitute for pharmacy-assigned storage, beyond-use dating, sterility controls when applicable, or recallable batch records. The patient-specific framework and quality controls are documented in the cited compounding references [fda_503a; usp_797].



Cold chain

If a BPC-157 preparation is approved after pharmacy review, RonanRx applies source documentation, formulation records, lot traceability, release checks, and storage controls appropriate to the actual dosage form. Research-use vial storage practices do not substitute for pharmacy-assigned storage, beyond-use dating, sterility controls when applicable, or recallable batch records.

🗨 Frequently Asked Questions About BPC-157

Can physicians request BPC-157 through RonanRx?

Physicians may submit patient-specific prescription requests for pharmacy review. Certain preparations may be available now when clinically appropriate, lawfully prescribed, and approved by the dispensing pharmacy. Availability is determined case by case. Compounded medications are not FDA-approved, and no consumer self-ordering, office stock, or bulk dispensing is offered.

Is BPC-157 FDA-approved for anything?

No. BPC-157 has no FDA approval and no FDA-recognized indication. There is no NDA, ANDA, or BLA on file. There is no FDA-approved branded BPC-157 product [fda_503a_categories_2026].

Why is the evidence base described as preclinical?

More than 150 PubMed-indexed papers describe BPC-157 in rats and mice, covering tendon, ligament, muscle, bone, gut, CNS, and cardiovascular injury models. The great majority come from a single research group at the University of Zagreb (Sikiric laboratory). No published phase 3 trial exists. The only PubMed-indexed human report is a small intra-articular knee-pain case series [lee2021], and the small Phase 2 ulcerative colitis program from Pliva is referenced only in review papers without primary trial reports indexed in PubMed. Two 2025 reviews focused on the orthopedic/sports-medicine question, Vasireddi et al. in the HSS Journal and McGuire et al. in Current Reviews in Musculoskeletal Medicine, independently conclude that human evidence is insufficient to recommend BPC-157 in clinical practice [vasireddi2025; mcguire2025].

Is BPC-157 banned in sport?

Yes. The World Anti-Doping Agency (WADA) lists BPC-157 on its Prohibited List under class So (Non-Approved Substances) [wada_prohibited]. Athletes who compete in WADA-governed sport face disqualification regardless of clinical intent.

What is the mechanism of BPC-157?

There is no single confirmed mechanism. The Sikiric-laboratory literature has proposed several mechanisms across rodent models: up-regulation of VEGF and pro-angiogenic signaling, modulation of the



nitric oxide (NO) pathway (counter-action of both L-NAME and L-arginine effects), effects on dopaminergic and serotonergic transmission, up-regulation of growth hormone receptor expression in tendon fibroblasts in vitro, and "collateral pathway" activation in vascular occlusion models [sikirić1997; chang2014; sikiric2023_collateral]. None of these has been validated in published human trials, and a specific receptor for BPC-157 has not been identified [seiwerth2014_blood; tohyama2004].

What happens at the July 2026 FDA PCAC meeting?

FDA has announced it intends to consult the Pharmacy Compounding Advisory Committee on July 23, 2026 regarding potential inclusion of BPC-157 acetate and BPC-157 (free base) on the 503A bulks list [fda_pcac_july2026]. PCAC reviews the available safety and efficacy data and votes on a recommendation to FDA; the agency then makes the final categorization decision. Possible outcomes include Category 1 (under evaluation, permissible pending final rule), Category 2 (significant safety concerns, ineligible for compounding), or Category 3 (nominated without adequate support) [fda_503a_categories_2026]. RonanRx will update this brief after the meeting.

Why does RonanRx publish a brief for BPC-157?

Clinicians and patients ask about BPC-157, and the unregulated supply chain creates real questions about identity, sterility, evidence, and patient follow-up. This brief separates the published evidence from consumer marketing and explains that any legitimate path runs through a valid patient-specific prescription and pharmacy review.

☰ References

1. [sikirić1992] Sikiric P, Petek M, Rucman R, Seiwerth S, Grabarevic Z, Rotkvic I, Turkovic B, Jagic V, Mildner B, Duvnjak M, et al.. *The significance of the gastroprotective effect of body protection compound (BPC): modulation by different procedures*. Acta Physiologica Hungarica. 1992. PMID 1345210. (accessed 2026-05-11)
2. [sikirić1993] Sikirić P, Petek M, Rucman R, Seiwerth S, Grabarevic Z, Rotkvic I, Turkovic B, Jagic V, Mildner B, Duvnjak M, et al.. *A new gastric juice peptide, BPC. An overview of the stomach-stress-organoprotection hypothesis and beneficial effects of BPC*. Journal of Physiology, Paris. 1993. PMID 8298609. (accessed 2026-05-11)
3. [sikirić1994] Sikiric P, Seiwerth S, Grabarevic Z, Rucman R, Petek M, Jagic V, Turkovic B, Rotkvic I, Mise S, Zoricic I, et al.. *The beneficial effect of BPC 157, a 15 amino acid peptide BPC fragment, on gastric and duodenal lesions induced by restraint stress, cysteamine and 96% ethanol in rats. A comparative study with H2 receptor antagonists, dopamine promoters and gut peptides..* Life Sciences. 1994. PMID 7904712. (accessed 2026-05-11)
4. [sikirić1996_dds] Sikirić P, Seiwerth S, Grabarević Z, Rucman R, Petek M, Jagić V, Turković B, Rotkvić I, Mise S, Zoricic I, et al.. *Beneficial effect of a novel pentadecapeptide BPC 157 on gastric lesions induced by restraint stress, ethanol, indomethacin, and capsaicin neurotoxicity*. Digestive Diseases and Sciences. 1996. PMID 8769287. (accessed 2026-05-11)
5. [sikirić1997] Sikirić P, Seiwerth S, Grabarević Z, Petek M, Rucman R, Turkovic B, Rotkvić I, Jagić V, Duvnjak M, Mise S, et al.. *The influence of a novel pentadecapeptide, BPC 157, on N(G)-nitro-L-arginine methylester and L-arginine effects on stomach mucosa integrity and blood pressure*. European Journal of Pharmacology. 1997. PMID 9298922. (accessed 2026-05-11)



6. [mikus2001] Mikus D, Sikiric P, Seiwerth S, Petricevic A, Aralica G, Druzijancic N, Rucman R, Petek M, Pigac B, Perovic D, et al.. *Pentadecapeptide BPC 157 cream improves burn-wound healing and attenuates burn-gastric lesions in mice*. *Burns*. 2001. PMID 11718984. (accessed 2026-05-11)
7. [staresinic2003] Staresinic M, Sebecic B, Patrlj L, Jadrijevic S, Suknaic S, Perovic D, Aralica G, Zarkovic N, Borovic S, Srdjak M, et al.. *Gastric pentadecapeptide BPC 157 accelerates healing of transected rat Achilles tendon and in vitro stimulates tendocytes growth*. *Journal of Orthopaedic Research*. 2003. PMID 14554208. (accessed 2026-05-11)
8. [sikiric2003_burns] Sikiric P, Seiwerth S, Mise S, Staresinic M, Bedekovic V, Zarkovic N, Borovic S, Gjurasin M, Boban-Blagaic A, Batelja L, et al.. *Corticosteroid-impairment of healing and gastric pentadecapeptide BPC-157 creams in burned mice*. *Burns*. 2003. PMID 12781609. (accessed 2026-05-11)
9. [tohyama2004] Tohyama Y, Sikirić P, Diksic M. *Effects of pentadecapeptide BPC157 on regional serotonin synthesis in the rat brain: alpha-methyl-L-tryptophan autoradiographic measurements*. *Life Sciences*. 2004. PMID 15531385. (accessed 2026-05-11)
10. [blagaic2005] Boban Blagaic A, Blagaic V, Romic Z, Sikiric P. *Gastric pentadecapeptide BPC 157 effective against serotonin syndrome in rats*. *European Journal of Pharmacology*. 2005. PMID 15840402. (accessed 2026-05-11)
11. [lazić2005] Lazić R, Gabrić N, Dekaris I, Bosnar D, Boban-Blagaic A, Sikirić P. *Gastric pentadecapeptide BPC 157 promotes corneal epithelial defects healing in rats*. *Collegium Antropologicum*. 2005. PMID 16117343. (accessed 2026-05-11)
12. [krivic2006] Krivic A, Anic T, Seiwerth S, Huljev D, Sikiric P. *Achilles detachment in rat and stable gastric pentadecapeptide BPC 157: Promoted tendon-to-bone healing and opposed corticosteroid aggravation*. *Journal of Orthopaedic Research*. 2006. PMID 16583442. (accessed 2026-05-11)
13. [staresinic2006] Staresinic M, Petrovic I, Novinscak T, Jukic I, Pevec D, Suknaic S, Kokic N, Seiwerth S, Sikiric P. *Effective therapy of transected quadriceps muscle in rat: Gastric pentadecapeptide BPC 157*. *Journal of Orthopaedic Research*. 2006. PMID 16609979. (accessed 2026-05-11)
14. [sikiric2006_ibd] Sikiric P, Seiwerth S, Brcic L, Sever M, Kliccek R, Radic B, Drmic D, Ilic S, Kolenc D. *Stable gastric pentadecapeptide BPC 157 in trials for inflammatory bowel disease (PL-10, PLD-116, PL 14736, Pliva, Croatia). Full and distended stomach, and vascular response*. *Inflammopharmacology*. 2006. PMID 17186181. (accessed 2026-05-11)
15. [vuksic2007] Vuksic T, Zoricic I, Brcic L, Sever M, Kliccek R, Radic B, Cesarec V, Berkopic L, Keller N, Blagaic AB, et al.. *Stable gastric pentadecapeptide BPC 157 in trials for inflammatory bowel disease (PL-10, PLD-116, PL14736, Pliva, Croatia) heals ileoileal anastomosis in the rat*. *Surgery Today*. 2007. PMID 17713731. (accessed 2026-05-11)
16. [novinscak2008] Novinscak T, Brcic L, Staresinic M, Jukic I, Radic B, Pevec D, Mise S, Tomasovic S, Brcic I, Banic T, et al.. *Gastric pentadecapeptide BPC 157 as an effective therapy for muscle crush injury in the rat*. *Surgery Today*. 2008. PMID 18668315. (accessed 2026-05-11)
17. [sever2009] Sever M, Kliccek R, Radic B, Brcic L, Zoricic I, Drmic D, Ivica M, Barisic I, Ilic S, Berkopic L, et al.. *Gastric pentadecapeptide BPC 157 and short bowel syndrome in rats*. *Digestive Diseases and Sciences*. 2009. PMID 19093208. (accessed 2026-05-11)
18. [brcic2009] Brcic L, Brcic I, Staresinic M, Novinscak T, Sikiric P, Seiwerth S. *Modulatory effect of gastric pentadecapeptide BPC 157 on angiogenesis in muscle and tendon healing*. *Journal of Physiology and Pharmacology*. 2009. PMID 20388964. (accessed 2026-05-11)
19. [balenovic2009] Balenovic D, Bencic ML, Udovicic M, Simonji K, Hanzevacki JS, Barisic I, Kranjcevic S, Prkacin I, Coric V, Brcic L, et al.. *Inhibition of methylidigoxin-induced arrhythmias by pentadecapeptide BPC 157: a relation with NO-system*. *Regulatory Peptides*. 2009. PMID 19465062. (accessed 2026-05-11)



20. [klicek2013] Klicek R, Kolenc D, Suran J, Drmic D, Brcic L, Aralica G, Sever M, Holjevac J, Radic B, Turudic T, et al.. *Stable gastric pentadecapeptide BPC 157 heals cysteamine-colitis and colon-colon-anastomosis and counteracts cuprizone brain injuries and motor disability.* Journal of Physiology and Pharmacology. 2013. PMID 24304574. (accessed 2026-05-11)
21. [seiwert2014_blood] Seiwert S, Brcic L, Vuletic LB, Kolenc D, Aralica G, Misic M, Zenko A, Drmic D, Rucman R, Sikiric P. *BPC 157 and blood vessels.* Current Pharmaceutical Design. 2014. PMID 23782145. (accessed 2026-05-11)
22. [chang2014] Chang CH, Tsai WC, Hsu YH, Pang JH. *Pentadecapeptide BPC 157 enhances the growth hormone receptor expression in tendon fibroblasts.* Molecules. 2014. PMID 25415472. (accessed 2026-05-11)
23. [seiwert2018_factors] Seiwert S, Sikiric P, Grabarevic Z, Zoricic I, Hanzevacki M, Lovric-Bencic M, Stancic-Rokotov D, Petek M, Rucman R, Turkovic B, et al.. *BPC 157 and Standard Angiogenic Growth Factors. Gastrointestinal Tract Healing, Lessons from Tendon, Ligament, Muscle and Bone Healing.* Current Pharmaceutical Design. 2018. PMID 29998800. (accessed 2026-05-11)
24. [gwyer2019] Gwyer D, Wragg NM, Wilson SL. *Gastric pentadecapeptide body protection compound BPC 157 and its role in accelerating musculoskeletal soft tissue healing.* Cell and Tissue Research. 2019. PMID 30915550. (accessed 2026-05-11)
25. [perovic2019] Perovic D, Kolenc D, Bilic V, Somun N, Drmic D, Elabjer E, Buljat G, Seiwert S, Sikiric P. *Stable gastric pentadecapeptide BPC 157 can improve the healing course of spinal cord injury and lead to functional recovery in rats.* Journal of Orthopaedic Surgery and Research. 2019. PMID 31266512. (accessed 2026-05-11)
26. [lee2021] Lee E, Walker C, Ayadi B. *Intra-Articular Injection of BPC 157 for Multiple Types of Knee Pain.* Alternative Therapies in Health and Medicine. 2021. PMID 34324435. (accessed 2026-05-11)
27. [japjec2021] Japjec M, Horvat Pavlov K, Petrovic A, Staresinic M, Sebecic B, Buljan M, Vranes H, Giljanovic A, Strbe S, Knezevic M, et al.. *Stable Gastric Pentadecapeptide BPC 157 as a Therapy for the Disable Myotendinous Junctions in Rats.* Biomedicines. 2021. PMID 34829776. (accessed 2026-05-11)
28. [seiwert2021_wound] Seiwert S, Milavic M, Vukojevic J, Gojkovic S, Krezic I, Vuletic LB, Pavlov KH, Petrovic A, Sikiric S, Vranes H, et al.. *Stable Gastric Pentadecapeptide BPC 157 and Wound Healing.* Frontiers in Pharmacology. 2021. PMID 34267654. (accessed 2026-05-11)
29. [sikiric2023_collateral] Sikiric P, Skrtic A, Gojkovic S, Krezic I, Zizek H, Lovric E, Sikiric S, Knezevic M, Strbe S, Milavic M, et al.. *Stable Gastric Pentadecapeptide BPC 157: Prompt Particular Activation of Collateral Pathways.* Current Medicinal Chemistry. 2023. PMID 36200148. (accessed 2026-05-11)
30. [kalogjera2023] Kalogjera L, Krezic I, Kolovrat M, Oroz K, Dretar V, Tepes M, Vranes H, Strbe S, Smoday IM, Bojanic I, et al.. *Stomach perforation-induced general occlusion/occlusion-like syndrome and stable gastric pentadecapeptide BPC 157 therapy effect.* World Journal of Gastroenterology. 2023. PMID 37545637. (accessed 2026-05-11)
31. [sikiric2024_neurotrans] Sikiric P, Udovicic M, Barisic I, Balenovic D, Zivanovic Posilovic G, Strinic D, Uzun S, Sikiric S, Krezic I, Zizek H, et al.. *The Stable Gastric Pentadecapeptide BPC 157 Pleiotropic Beneficial Activity and Its Possible Relations with Neurotransmitter Activity.* Pharmaceuticals (Basel). 2024. PMID 38675421. (accessed 2026-05-11)
32. [vasireddi2025] Vasireddi N, et al.. *Emerging Use of BPC-157 in Orthopaedic Sports Medicine: A Systematic Review.* HSS Journal. 2025. PMID 40756949. (accessed 2026-05-11)
33. [mcguire2025] McGuire FP, et al.. *Regeneration or Risk? A Narrative Review of BPC-157 for Musculoskeletal Healing.* Current Reviews in Musculoskeletal Medicine. 2025. PMID 40789979. (accessed 2026-05-11)



34. [sikiric2025_no_review] Sikiric P, et al.. *BPC 157 Therapy: Targeting Angiogenesis and Nitric Oxide's Cytotoxic and Damaging Actions, but Maintaining, Promoting, or Recovering Their Essential Protective Functions. Comment on Józwiak et al. Multifunctionality and Possible Medical Application of the BPC 157 Peptide-Literature and Patent Review. Pharmaceuticals 2025, 18, 185..* Pharmaceuticals (Basel). 2025. PMID 41155565. (accessed 2026-05-11)
35. [esposito2023_peptide_quality] U.S. Food and Drug Administration. *Compounding Laws and Policies – Section 503A of the Federal Food, Drug, and Cosmetic Act (cited generally for FDA-recognized peptide quality and identity concerns in the compounding supply chain).* FDA Drug Compounding. 2024. <https://www.fda.gov/drugs/human-drug-compounding/compounding-laws-and-policies> (accessed 2026-05-11)
36. [fda_503a_categories_2026] U.S. Food and Drug Administration. *Bulk Drug Substances Nominated for Use in Compounding Under Section 503A of the Federal Food, Drug, and Cosmetic Act – Category 1, 2, and 3 lists (Updated April 22, 2026).* FDA Drug Compounding. 2026. <https://www.fda.gov/media/94155/download> (accessed 2026-05-11)
37. [fda_pcac_july2026] U.S. Food and Drug Administration. *FDA Announcement: Pharmacy Compounding Advisory Committee Meeting Scheduled July 23, 2026 – BPC-157 acetate and BPC-157 (free base) review (referenced in the April 22, 2026 503A categories update).* FDA Drug Compounding – PCAC. 2026. <https://www.fda.gov/media/94155/download> (accessed 2026-05-11)
38. [fda_503a] U.S. Food and Drug Administration. *Compounding Laws and Policies – Section 503A of the Federal Food, Drug, and Cosmetic Act.* FDA Drug Compounding. 2024. <https://www.fda.gov/drugs/human-drug-compounding/compounding-laws-and-policies> (accessed 2026-05-11)
39. [wada_prohibited] World Anti-Doping Agency. *World Anti-Doping Agency Prohibited List – Class So Non-Approved Substances (includes BPC-157).* WADA Prohibited List. 2026. <https://www.wada-ama.org/en/prohibited-list> (accessed 2026-05-11)
40. [usp_797] United States Pharmacopeia. *USP General Chapter <797> Pharmaceutical Compounding – Sterile Preparations.* USP Compounding Compendium. 2023. <https://www.usp.org/compounding/general-chapter-797> (accessed 2026-05-11)



🔗 How to Access BPC-157

Compounded BPC-157 is dispensed under 503A on a patient-specific prescription. Depending on your role, the next step looks different.



FOR PRESCRIBING CLINICIANS

Offer this medication

A pharmacist will follow up within two business days. We'll cover state availability, supported formulations, and what integration looks like for your clinic.



ronanrx.com/request-partnership-call



PATIENT WITH A DOCTOR

Receive your prescription

If your doctor has prescribed BPC-157, sign up so we can prepare and ship your medication. The signup wizard collects intake and connects you to the prescribing workflow.



ronanrx.com/patients



PATIENT WITHOUT A DOCTOR

Find a partner clinic

RonanRx prescribes through partner clinics — we don't initiate prescriptions on this site. Read how the referral process works and how to find a partner clinic in your state.



ronanrx.com/find-clinic



Other compounds RonanRx makes

This monograph is one of many in the RonanRx formulary. Every compound below is prepared under 503A on a patient-specific prescription. Browse the full catalog at ronanrx.com/medications and ronanrx.com/peptides, or scan the codes at right for each index.



Medications



Peptides

MEDICATIONS (40)

Alpha-Lipoic Acid (ALA) – Antioxidant & mitochondrial
 Coenzyme Q10 (CoQ10) – Antioxidant & mitochondrial
 Glutathione – Antioxidant & mitochondrial
 NAD+ / NMN – Antioxidant & mitochondrial
 Compounded Topical Anesthetics (BLT, LET) – Dermatology
 Topical Minoxidil – Dermatology
 Topical Tretinoin – Dermatology
 Compounded Magnesium – Energy & nutritional
 Cyanocobalamin – Energy & nutritional
 High-Dose Vitamin D – Energy & nutritional
 Hydroxocobalamin – Energy & nutritional
 Iron (Compounded) – Energy & nutritional
 L-Carnitine – Energy & nutritional
 Methylcobalamin (B12) – Energy & nutritional
 Methylfolate – Energy & nutritional
 Anastrozole – Hormone optimization
 Clomiphene & Enclomiphene – Hormone optimization
 DHEA – Hormone optimization
 Estradiol – Hormone optimization
 Estriol – Hormone optimization

Human Chorionic Gonadotropin (HCG) – Hormone optimization
 Pregnenolone – Hormone optimization
 Progesterone – Hormone optimization
 Testosterone – Hormone optimization
 Compounded Metformin – Metabolic & weight
 Compounded Semaglutide – Metabolic & weight
 Compounded Tirzepatide – Metabolic & weight
 Lipotropic Injection (MIC, MICC) – Metabolic & weight
 Low-Dose Naltrexone (LDN) – Metabolic & weight
 Naltrexone-Bupropion Combination – Metabolic & weight
 Topiramate – Metabolic & weight
 Bremelanotide / PT-141 – Sexual health
 Compounded Sildenafil – Sexual health
 Compounded Tadalafil – Sexual health
 Trimix Injection – Sexual health
 Compounded Gabapentin – Sleep & recovery
 Compounded Melatonin – Sleep & recovery
 Compounded T3 (Liothyronine) – Thyroid
 Compounded T3/T4 Combinations – Thyroid
 Compounded T4 (Levothyroxine) – Thyroid



PEPTIDES (21)

Sermorelin — Available now

Tesamorelin — Available now

AOD-9604 — Growth-hormone axis (under FDA review)

CJC-1295 — Growth-hormone axis (under FDA review)

GHRP-2 / GHRP-6 — Growth-hormone axis (under FDA review)

Hexarelin — Growth-hormone axis (under FDA review)

Ipamorelin — Growth-hormone axis (under FDA review)

MK-677 / Ibutamoren — Growth-hormone axis (under FDA review)

5-Amino 1MQ — Metabolic & longevity (under FDA review)

Epitalon / Epithalon — Metabolic & longevity (under FDA review)

MOTS-C — Metabolic & longevity (under FDA review)

Thymosin Alpha-1 / Thymalin — Metabolic & longevity (under FDA review)

DSIP, Delta Sleep-Inducing Peptide — Neuro & cognitive (under FDA review)

Selank — Neuro & cognitive (under FDA review)

Semax — Neuro & cognitive (under FDA review)

Vasoactive Intestinal Peptide (VIP) — Neuro & cognitive (under FDA review)

BPC-157 — Tissue repair (under FDA review)

KPV — Tissue repair (under FDA review)

LL-37 — Tissue repair (under FDA review)

Pentadeca Arginate (PDA) — Tissue repair (under FDA review)

TB-500 / Thymosin Beta-4 — Tissue repair (under FDA review)

