Cognitive Vitality Reports® are reports written by neuroscientists at the Alzheimer's Drug Discovery Foundation (ADDF). These scientific reports include analysis of drugs, drugs-in-development, drug targets, supplements, nutraceuticals, food/drink, non-pharmacologic interventions, and risk factors. Neuroscientists evaluate the potential benefit (or harm) for brain health, as well as for age-related health concerns that can affect brain health (e.g., cardiovascular diseases, cancers, diabetes/metabolic syndrome). In addition, these reports include evaluation of safety data, from clinical trials if available, and from preclinical models.

Policosanol

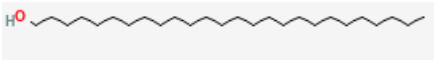
Evidence Summary

Policosanol has been proposed as a safe lipid modifying agent with minimal side effects, but clinical evidence suggests that potential benefits are modest and inconsistent.

Neuroprotective Benefit: Policosanol may have a neuroprotective effect through its antioxidant activity, but clinical evidence is lacking.

Aging and related health concerns: Policosanol may modestly modulate lipid profiles and blood pressure, but effects are inconsistent across studies. Efficacy may depend on formulation as well as genetic factors.

Safety: Policosanol is well-tolerated with an adverse event profile comparable to placebo. Long-term safety has not been established.

Availability: OTC	**Dose**: Typically, 5 to 20 mg per day in the form of oral tablets. There are no approved doses for any indication.	Major components Octacosanol **Chemical formula:** $C_{28}H_{58}O$ **MW**: 410.8 g/mol  Source: PubChem Triacontanol Chemical formula: $C_{30}H_{62}O$ MW: 438.8 g/mol  Source: PubChem Hexacosanol Chemical formula: $C_{26}H_{54}O$ MW: 382.7 g/mol  Source: PubChem
Half life: Varies based on composition and formulation	**BBB**: Not established	
Clinical trials: Policosanol has been tested in dozens of small trials for its lipid modifying properties. The trials have been of variable quality, many conducted by the same research groups, with a high risk of bias.	**Observational studies**: None	

What is it?

Policosanol is the term for a mixture of very long chain aliphatic alcohols (24-34 carbon length). They are naturally found in a variety of plant germs, (plant and insect) waxes, seeds, leaves, and grasses [1]. Clinically tested forms were originally derived from Cuban sugarcane wax. The composition of alcohols varies depending on the origin, but the major components are typically octacosanol, triacontanol, and hexacosanol [1]. Octacosanol is thought to be a key mediator of its potential lipid modulating properties. But, to date, it is not clear how or why this mixture of alcohols would exert health benefits. As such, no optimal composition of policosanol has been established, and it may vary depending on the prospective indication. Policosanol was originally tested in clinical trials for dyslipidemia in Cuba in the 1990s [2]. The

original studies had positive outcomes suggestive of cardiovascular benefit, but subsequent trials in other populations have shown no or only marginal benefits. Based on those early studies, policosanol is widely marketed as a supplement for cholesterol lowering and cardiovascular health.

Neuroprotective Benefit: Policosanol may have a neuroprotective effect through its antioxidant activity, but clinical evidence is lacking.

Types of evidence:

- 2 clinical trials testing policosanol + aspirin in stroke patients
- Several laboratory studies

Human research to suggest prevention of dementia, prevention of decline, or improved cognitive function:

Clinical trials suggest that policosanol may have a positive impact on some dementia risk factors, namely lipid profiles and blood pressure [3]. However, the impacts are highly variable across studies, suggesting that the benefits are largely restricted to specific, yet to be determined, subpopulations, and there is no evidence to date that it impacts cognition.

Human research to suggest benefits to patients with dementia:

Policosanol has not been clinically tested in dementia patients.

Mechanisms of action for neuroprotection identified from laboratory and clinical research:

Non-cardioembolic ischemic stroke: POTENTIAL BENEFIT FOR RECOVERY
Policosanol (20 mg/day) was tested in combination with aspirin (125 mg/day) for six months in two RCTs including a total of 142 hypertensive patients who experienced a non-cardioembolic ischemic stroke in the prior 30 days of moderate severity based on a score of 2 to 4 on the modified Rankin scale (mRS) [4]. Due to the timing of administration the study assessed neurological recovery from the stroke, based on a reduction in disability using the mRS, with lower scores indicating less disability/better recovery. A greater proportion of policosanol-treated patients achieved mRS values ≤ 1 (80.3%), relative to those in

the placebo + aspirin group (8.5%). The improvements were accompanied by a change in the lipid profile, including a reduction in LDL-c (by 31.2%), and an increase in HDL-c (by 5.7%).
Antioxidant: Preclinical studies testing policosanol in models of neurodegenerative disease have shown benefits that appear to stem from its antioxidant properties. These models generally treat right at the onset of pathology, which precedes clinical symptoms, thus these effects may not be translatable to human patients with symptomatic disease.

Alzheimer's disease models: POTENTIAL BENEFIT (Preclinical)
In rats receiving intraventricular injections of Aβ1-40 peptide, treatment with oral policosanol (50 mg/kg) at the time of Aβ exposure mitigated impairments in spatial learning and memory based on performance on the Barnes maze, Morris water maze, and novel object recognition task [5; 6]. This was accompanied by reductions in Aβ plaque formation and an enhancement of antioxidant capacity. In the context of scopolamine-induced cognitive impairment, *E. pela* insect-wax derived policosanol (2 g/kg-6 g/kg) reduced markers of oxidative stress (malondialdehyde), and boosted levels of endogenous antioxidants, such as glutathione and superoxide dismutase (SOD), which was associated with improved performance on the Morris water maze [7]. Treatment of two-month-old 5XFAD male mice, a time when Aβ pathology is starting to develop but mice are asymptomatic, with Cuban policosanol (5 mg/kg) for four months similarly restored levels of SOD and reduced levels of the oxidative marker, 4-HNE [8]. Treated mice also exhibited reduced levels of pro-inflammatory cytokines and higher expression of synaptic markers. In *C. elegans* worms expressing human Aβ1-42, insect wax-derived policosanol treatment extended the lifespan of worms [9].

Parkinson's disease models: POTENTIAL BENEFIT (Preclinical)
In *C. elegans* models of Parkinson's disease, treatment with insect wax-derived policosanol reduced the aggregation of alpha-synuclein and 6-OHDA-induced neurodegeneration [10]. It also extended the lifespan of the worms, though low doses were more protective than high doses. Low doses also showed an antioxidant effect.

APOE4 interactions: Not established

Aging and related health concerns: Policosanol may modestly modulate lipid profiles and blood pressure, but effects are inconsistent across studies. Efficacy may depend on formulation as well as genetic factors.

Types of evidence:

- 5 meta-analyses of RCTs testing policosanol
- 6 clinical trials in healthy populations conducted in South Korea or Japan
- 2 clinical trials in dyslipidemic populations conducted in China
- Numerous laboratory studies

Dyslipidemia: POTENTIAL MINOR VARIABLE BENEFIT

Policosanol has been tested in dozens of small clinical trials for its ability to modulate the profile of circulating lipids and lipoproteins [3]. There has been a high degree of heterogeneity in the outcomes across studies, which appear to stem from a variety of factors, including trial design, genetic background, underlying physiology and comorbid conditions, as well as the composition of the policosanol. The impact on cardiovascular outcomes has not been adequately addressed. The European Food and Safety Authority (EFSA) issued an opinion on policosanol in 2011 that its effects on lipid parameters were inconsistent and claims regarding LDL-c lowering effects were without scientific merit. The American Heart Association (AHA) classifies policosanol as a complementary/alternative medicine with the potential for benefit, but with uncertain safety for heart failure patients.

The vast majority of trials testing policosanol, particularly those conducted prior to 2004, were performed by a single research group in Cuba testing a single preparation of policosanol from Dalmer labs [2]. The results of these trials were overwhelmingly positive, showing LDL-c lowering effects that rival low-dose statins [2]. But, these lipid lowering effects were not observed in subsequent rigorous double-blind, placebo-controlled RCTs performed in diverse populations from independent groups in other parts of world [2]. In these trials, the degree of reduction in circulating lipids in dyslipidemic and hyperlipidemic populations was similar between placebo and policosanol-treated groups.

A meta-analysis of 25 trials including 2,680 participants, 20 of which were conducted in Cuba found a significant lowering of blood glucose levels (Weighted mean difference [WMD]: -2.24 mg/dl; 95 % Confidence Interval [CI] -4.05 to -0.42) with policosanol, though there was heterogeneity, such that the effect was driven by studies less than 24 weeks, in those younger than age 50, and using a 10 mg dose, suggesting it is not a robust effect [11]. Another meta-analysis of 23 trials including 2,535 participants, 18 of which were from Cuba, found a reduction in the liver enzymes, alanine aminotransferase (ALT)

(WMD: -1.48 U/L, 95% CI -2.33 to -0.64), and aspartate aminotransferase (AST) (WMD: -1.10 U/L, 95% CI -1.70 to -0.51) with policosanol, primarily in those over age 50, and at the 20 mg dose [12]. A meta-analysis of 19 studies, including 2,426 participants, 13 of which were conducted in Cuba, found that policosanol was associated with a very modest reduction in systolic blood pressure (WMD: -3.423 mmHg, 95% CI -5.315 to -1.531) and diastolic blood pressure (WMD: -1.468 mmHg, 95% CI -2.632 to -0.304), with a high degree of heterogeneity across studies [13]. The lack of consistency in the subgroups showing preferential benefit and lack of a dose-response in these analyses weakens the meaningfulness of these effects. A meta-analysis of 22 studies including 1,886 participants, 13 of which were conducted in Cuba, found that policosanol was associated with a lowering of total cholesterol (WMD: −0.58 mmol/L95% CI −0.87 to −0.30 mmol/L), a lowering of LDL-c (WMD: −0.71 mmol/L, 95% CI −1.02 to −0.40 mmol/L), and an elevation of HDL-c (WMD: 0.13 mmol/L, 95% CI 0.09 to 0.16 mmol/L) when all placebo-controlled trials were included (17 studies, n=1,204) [3]. However, these lipid modulating effects were driven by the Cuban trials, such that in the trials conducted outside of Cuba (7 studies, n=360), policosanol did not have a significant effect on total cholesterol (WMD: 0.10 mmol/L; 95% CI −0.20 to 0.41 mmol/L), LDL-c (WMD: −0.00 mmol/L, 95% CI −0.36 to 0.36 mmol/L), or HDL-c (WMD: 0.03 mmol/L, 95% CI −0.18 to 0.23). A network meta-analysis including only trials conducted outside of Cuba (4 studies, n= 309), similarly found that policosanol had no significant effects on total cholesterol (MD: 0.08, 95% CI -0.02 to 0.45), LDL-c (MD: -0.02, 95% CI −0.26 to 0.23), or HCL-c (MD: 0.02, 95% CI -0.07 to 0.11) [14].

The mechanism of potential benefit has not been clearly established, which adds to the controversy regarding the validity of the benefits observed in some studies [15]. The aqueous insolubility has hindered experiments in preclinical models [15]. Some studies have gotten around this limitation by encapsulating policosanol in reconstituted HDL (rHDL) particles [15]. Together, the studies suggest that policosanol may have the capacity to modify the lipid composition and glycation status of lipoproteins, particularly HDL, but effects are highly context dependent. The specific composition of policosanol affects its lipoprotein modifying properties in preclinical studies, and the mechanism may involve the inhibition of cholesteryl ester transfer protein (CETP), a protein with numerous gene variants and well-established variability in function across different ethnic groups and dietary conditions (see CETP Inhibitors report).

Policosanol composition: Policosanol is a mixture of very long chain aliphatic alcohols, primarily comprised of octacosanol, triacontanol, and hexacosanol, along with a variety of minor alcohols, and the composition varies from preparation to preparation [1]. The combination and proportions of these

alcohols that mediate benefits has not been clearly established, but preclinical studies suggest that the potential lipid modifying capacity varies across different policosanol preparations. Policosanol derived from Cuban sugarcane (Raydel®) was found to be superior in modulating lipid profiles in hypercholesterolemic zebrafish, relative to policosanol derived from rice bran (Shaanxi, China) or a different formulation derived from sugarcane (Lesstanol®) [16]. Those treated with Cuban sugarcane-derived policosanol showed reductions in total cholesterol, triglycerides, and reactive oxidative species (ROS), along with elevations in HDL-c, whereas the other forms had no or marginal impact on the lipid profiles. Similarly, a study by the same group testing policosanol encapsulated in Apo-1 containing rHDL particles found that those containing Cuban sugarcane-derived policosanol (Raydel®) inhibited lipoprotein glycation and oxidation, while this activity was largely absent in rHDL particles containing Chinese policosanol [1].

CETP: Preclinical and clinical studies have found evidence to suggest that at least some forms of policosanol have the capacity to inhibit CETP [15]. CETP is involved in the transport of cholesterol esters and triglycerides between lipoproteins, and low CETP activity is genetically associated with elevated HDL. Cuban sugarcane wax-derived policosanol (from Rainbow & Nature Pty, parent company of Raydel®) encapsulated in ApoA1-rHDL showed a greater degree of CETP inhibition relative to rHDL particles alone in *in vitro* assays [17]. Eight weeks of supplementation with the same form of policosanol (10 mg) resulted in the inhibition of CETP activity in the HDL3 fraction, relative to baseline, from the serum of young male smokers (n=7), young male non-smokers (n=7), and middled-aged male non-smokers (n=11) by 4%, 19%, and 12%, respectively [18]. This was accompanied by increases in the level of ApoA-1 on the HDL3 particles. Similarly, a study from the same group confirmed that supplementation of 10 mg policosanol (Rainbow & Nature Pty) also reduced CETP activity by 31% in healthy women (n=31), while those in the placebo control group (n=21) did not show a significant change in CETP [15]. It should be noted that both studies were conducted in South Korea, and in the cohort of healthy women, baseline CETP activity levels were relatively high (~38% CE transfer).

HDL modification and antioxidant activity: Several studies have found that policosanol can alter the profile of lipoprotein subclasses, particularly HDL particles. There is a wide diversity of HDL subclasses, which have different modifications and functionality. As such, the benefits associated with HDL are limited to certain subsets, thus the potential benefits of boosting HDL levels depend on which HDL subsets are augmented. The HDL3 subfraction is expected to be protective, as levels are inversely associated with cardiovascular risk [19]. Enhancement of the antioxidant and anti-glycation properties of the HDL3 subfraction was observed in the studies testing eight weeks of Cuban policosanol in healthy

Korean men and women. HDL paraoxonase activity is associated with the inhibition of HDL and LDL oxidation. In the men, HDL3 paraoxonase activity was increased by 12-18%, while in the women it was increased by 38% [15; 18]. This was accompanied by an enhancement of plasma/serum antioxidant activity, based on ferric ion reduction capacity, as well as a reduction in markers of oxidative stress, such as malondialdehyde and uric acid. The production of advanced glycation end products (AGEs) was also reduced in all examined lipoprotein fractions. These changes in HDL3 particles are associated with anti-atherosclerotic activity. In a study testing Cuban policosanol (Raydel®, 20 mg/day) in 32 healthy Japanese adults for 12 weeks, a similar trend was observed, with an increase in Apo-A1 content, as well as in HDL3 particle size, which was driven by an increase in cholesterol content and decrease in triglyceride content, coupled with an increase in cholesterol efflux capacity [20]. Several other studies in healthy Korean or Japanese populations found similar effects regarding the enhancement of serum antioxidant capacity, including paraoxonase activity, as well as a reduction in lipoprotein glycation [21; 22]. Notably, while policosanol was frequently associated with increased ApoA-1 levels on HDL, it was not associated with changes in ApoB100, the apolipoprotein associated with atherogenic LDL-c particles [20; 21]. If policosanol works more through an HDL-based mechanism, it may help explain the variability across studies, as HDL-based therapies have historically been lackluster in reducing cardiovascular risk, with a high degree of variability and subgroup biases [23]. This suggests that policosanol is only likely to be beneficial in populations with particular, yet to be determined, HDL profiles that are conducive to enhancement. In support of this mechanism, one study found that when stratified by baseline HDL-c levels, the increases in ApoA-1 levels and cholesterol efflux capacity only occurred in those with the highest HDL-c levels at baseline [20].
It should also be noted that all of these studies examining the impact of policosanol on HDL profiles have been conducted by the same research group.

This suggests that many of the trials that failed to show an effect may have been using ineffective forms of policosanol, and/or tested it in a population that was unlikely to respond due to ethnic/genetic heterogeneity, diet, or the presence of comorbidities. The majority of trials testing policosanol outside of Cuba in the early 2000s used policosanol preparations from sources other than Cuban sugarcane wax, which may have been less potent. However, one rigorous trial conducted in Germany used the same formulation of policosanol (from Dalmer labs) as the Cuban trials, over a range of doses (10- 80 mg), and also observed no consistent or significant impacts to lipid profiles relative to placebo [2]. Several recent, double-blind, placebo-controlled RCTs have found small, but significant effects of policosanol on blood pressure and circulating lipid profiles. Most of these studies have used a standardized preparation of Cuban policosanol (Raydel®) that has shown benefit in preclinical studies, and tested generally healthy,

ethnically homogenous populations from East Asia with blood pressure and/or LDL-c levels in the normal to borderline high range. The authors of these studies have suggested that Japanese populations may preferentially benefit due to their generally high levels of HDL-c relative to other populations, as well as a tendency toward a relatively healthy diet [21].

Lipid profiles: In healthy South Korean women (n=52) with prehypertension (systolic: 120–139 mmHg, diastolic: 80–89 mmHg), treatment with 10 mg Cuban policosanol (Rainbow & Nature) per day for eight weeks led to reductions in plasma total cholesterol by 20% (180 ± 14 to 146 ± 10 mg/dL) and triglycerides by 14% (83 ± 16 to 72 ± 12 mg/dL), while HDL-c levels were increased up to 1.3-fold (42 ± 4 to 53 ± 8 mg/dL), relative to baseline [15]. Correspondingly, the triglyceride/HDL-c ratio was reduced by up to 36% (2.0 ± 0.2 to 1.4 ± 0.1). None of these parameters was significantly altered in the placebo group. Another study in 84 healthy prehypertensive (systolic: 130–139 mmHg, diastolic: 80–89 mmHg) participants testing 10 or 20 mg/day Cuban policosanol (Rainbow & Nature) for 12 weeks found that policosanol reduced total cholesterol levels by 9.6% (183.6 ± 29.9 to 166.1 ± 30.0 mg/dL) and 8.6% (186.3 ± 42.5 to 170.3 ± 31.8 mg/dL) for the 10 mg and 20 mg doses, respectively, while there was no significant change with placebo [24]. Additionally, LDL-c was reduced by 18-20% (20 mg: 127.8 ± 39.1 to 105.0 ± 32.1 mg/dL), while HDL-c was increased by 16-20% (20 mg: 36.9 ± 9.4 to 44.2 ± 7.6 mg/dL), but there were no significant changes in serum triglycerides. A study in healthy normolipidemic (LDL-c <160 mg/dL; HDL >40 mg/dL) Japanese (n=65) participants testing 20 mg/day Cuban policosanol (Raydel®) for 12 weeks found that HDL-c levels increased by about 9.5% (63.7 ± 2.9 to 67.7 ± 3.6 mg/dL), but there were no significant changes in total cholesterol, triglycerides, or LDL-c [21]. Policosanol was also associated with reductions in the liver enzymes ALT and AST [22].
These studies highlight that even in relatively homogenous populations, the impact of policosanol on lipid parameters is variable. While most studies find a modest elevation of HDL-c, the effects on other lipids vary from study to study, indicating a lack of consistency.

Blood pressure: Policosanol has been shown to modestly reduce blood pressure in populations with blood pressure in the normal range, including those with prehypertension (systolic 120–139 mmHg, diastolic 80–89 mmHg). In healthy Japanese participants, policosanol (20 mg/day for 12 weeks) led to a 7.1% (114.0 ± 0.8 to 106.1 ± 2.6 mmHg) and 4.0% (70.6 ± 1.8 to 67.8 ± 2.12 mmHg) change in systolic and diastolic blood pressure, respectively, relative to baseline [21]. In prehypertensive South Korean participants policosanol (20 mg/day for 12 weeks) reduced systolic blood pressure by 7.7% (136.3 ± 6.1 to 125.8 ± 8.7 mmHg) and diastolic blood pressure by 5.5% (84.2 ± 7.3 to 78.0 ± 7.7 mmHg) [24]. Similarly, policosanol (10 mg/day for 8 weeks) reduced systolic blood pressure up to 10% (130 ± 7 to

117 ± 14 mmHg) and diastolic blood pressure up to 14% (83 ± 8 to 72 ± 8 mmHg) in prehypertensive South Korean women [15]. The mechanism underlying the effect on blood pressure is not clear, but in some studies is associated with changes in lipid parameters.

Overall, the body of clinical evidence suggests that certain formulations of policosanol, such as standardized Cuban sugarcane wax-derived policosanol, may modify the profile of HDL particles in a manner that confers cardiovascular benefit. However, the impact appears quite modest and highly variable across populations and individuals. Additionally, the benefits appear more likely to occur in those at elevated risk for hypertension or hyperlipidemia, but are otherwise healthy, compared to those who already have these clinical cardiometabolic risk factors. As such, the potential benefit for any given individual is likely to be quite low, particularly in comparison to well-established lipid modifying medications, such as statins.

Platelet aggregation/thrombosis: POTENTIAL BENEFIT
Several trials have been conducted indicating a potential impact of policosanol on platelet reactivity/aggregation in individuals at high risk for thrombotic events. Similar to the trials for dyslipidemia, the original trials were conducted by a particular research group in Cuba. More recently, trials have been conducted in China that have also shown evidence of a modest effect on platelet aggregation. One trial including 350 patients in China with high on-treatment platelet reactivity (HPR, defined as platelet aggregation >65%) were treated with 40 mg/day policosanol for six months, or the standard of care, clopidogrel (75 or 150 mg/day) [25]. The 30-day reversion rates were similar between policosanol (48.7%) and clopidogrel (34-55.2%). The incidence of major adverse cardiovascular events was similar (3.3% vs 4-8%) between groups, suggesting a similar degree of benefit. Additionally, there were no major or moderate bleeding events in the policosanol group, and benefits persisted during the two-year follow-up. Another trial testing policosanol (10 or 20 mg), in comparison with, or in combination with atorvastatin, in 294 older adults with dyslipidemia conducted in China for one year found that ADP-induced platelet aggregation was only reduced following treatment with 20 mg policosanol, and none of the treatments significantly impacted arachidonic acid-induced platelet aggregation [26].
Intermittent claudication: A few trials conducted in Cuba found that treatment with policosanol may help lower vascular risk in patients with intermittent claudication through its antiplatelet effects [27]. In these studies, treatment with policosanol was associated with increased walking distances.

Safety: Policosanol is well-tolerated with an adverse event profile comparable to placebo. Long-term safety has not been established.

Types of evidence:

- 4 meta-analyses of RCTs testing policosanol
- 4 clinical trials
- Several laboratory studies

Policosanol has an excellent safety profile in clinical studies, though the majority of these studies did not conduct rigorous safety analyses. Long-term safety studies have not been conducted. In general, policosanol has been found to be well tolerated, with a low degree of mild, transient adverse events that showed a similar profile to placebo/control treatment. A meta-analysis of 22 trials, including 1,886 participants, found that the adverse event profile of policosanol was safer than the agents used in control groups [3]. Most adverse events were transient and mild, and not significantly different from those observed in control/placebo groups. No significant adverse effects on laboratory tests including liver enzymes or renal function were observed, though, some studies had findings indicative of improved liver or renal function [4]. Similarly, blood pressure was either not affected, or slightly reduced. In trials showing slight changes, the values for all of these parameters remained in the normal range. Some of the reported side effects include gastrointestinal, headache, dizziness, insomnia, tachycardia, muscle cramps, and skin redness [3]. There is no clear or consistent pattern with any of these events, nor any mechanistic rationale.

Drug interactions: Due to potential effects on platelet aggregation and blood pressure, policosanol may interact with blood thinners and antihypertensives, though in studies conducted thus far, no interactions with the blood thinner warfarin have been observed [28]. Two studies testing policosanol and aspirin in stroke patients included participants taking angiotensin-converting enzyme inhibitors (antihypertensives) [4]. While a reduction in blood pressure was observed, the levels remained within normal limits.

Sources and dosing:

Policosanol is available in the form of OTC supplements. It has not been approved for any indication. The formulation from Raydel® is stated to contain 1-tetracosanol ($C_{24}H_{49}OH$, 0.1–20 mg/g); 1-hexacosanol ($C_{26}H_{53}OH$, 30.0–100.0 mg/g); 1-heptacosanol ($C_{27}H_{55}OH$, 1.0–30.0 mg/g); 1-octacosanol ($C_{28}H_{57}OH$,

600.0–700.0 mg/g); 1-nonacosanol ($C_{29}H_{59}OH$, 1.0–20.0 mg/g); 1-triacontanol ($C_{30}H_{61}OH$, 100.0–150.0 mg/g); 1-dotriacontanol ($C_{32}H_{65}OH$, 50.0–100.0 mg/g); 1-tetratriacontanol ($C_{34}H_{69}OH$, 1.0–50.0 mg/g) [21].

Research underway:

According to ClinicalTrials.gov, policosanol is being tested in a Phase 4 trial in comparison with choline fenofibrate in Korean patients with type 2 diabetes and asymptomatic atherosclerosis, which is expected to be completed in 2026 (NCT05365425).

Search terms:

Pubmed, Google: Policosanol

- Alzheimer's disease, neuroprotection, cardiovascular, antioxidant, clinical trials, meta-analysis, safety

Websites visited for Policosanol:

- Clinicaltrials.gov
- Examine.com
- Drugs.com
- WebMD.com
- PubChem (octacosanol, triacontanol, and hexacosanol
- ConsumerLab.com

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