

Outbreak Nutrition BUILD: Muscle-Builder of the Apocalypse

written by Mike Roberto | November 19, 2018

Outbreak Nutrition – the alternative-reality themed brand of the 2044 nuclear winter – doesn't do things by the book. When it comes to muscle building supplements, they've skipped the whole "creatine + betaine + carnitine" stack for muscle growth and recovery (for the time being, at least), going right to the *advanced* next-generation muscle builders.



Once Outbreak's foretold zombie apocalypse comes, you'll definitely want as much muscle your body can pack in order to fight off the undead! Luckily, they're

here to offer some *new* tools to help us get ready. With their all-natural body recomposition product, **Build**, they're packing some serious ingredients to help *naturally* promote anabolism and pack on more muscle!

Outbreak Nutrition Build – Muscle-Growth Detonator

It doesn't do all the work for you, but combined with solid programming and nutrition, you can bet that Build will help unlock the door leading to more gains.

The brand has been on an absolute tear in 2018. Just to name a few, they've hit us with *Adapt* (a glucose disposal agent), *F.P.S* (focus & performance nootropic targeting gamers), and *Reclaim* (hard-hitting fat burner), all of which have been monstrous. Continuing with that trend, *Outbreak Build* is formulated for one purpose: putting on muscle. Some of the potential areas it covers include:

- **mTOR Activation**
- **Muscle Protein Synthesis (MPS)**
- **Insulin-Like Growth Factor-1 (IGF-1)**

Best of all? It's *completely natural*, and nothing in the formula has any documented health risks.

Based on what we've come to expect from Outbreak Nutrition, we're incredibly excited for Build. That being said, just how potent are the ingredients in its formula, and will it help you pack on lean gains? Read on to dive into the ingredients, but before you start learning about how you'll bulk up for ensuing zombie hordes, take a look at PricePLOW's price comparisons and sign up for Outbreak Nutrition news updates:

Outbreak Nutrition BUILD – Deals and Price Drop Alerts

Get Price Alerts

Get BUILD Price Alerts Get Outbreak Nutrition alerts Get Phosphatidic Acid price drops

Also get hot deal alerts

No spam, no scams.

Disclosure: PricePLOW relies on pricing from stores with which we have a business relationship. We work hard to keep pricing current, but you may find a better offer.

Posts are sponsored in part by the retailers and/or brands listed on this page.

Outbreak Nutrition Build Ingredients

SUPPLEMENT FACTS		
Serving Size: 5 Veggie Caps		
Servings per Container: 20		
	Amount Per Serving	% Daily Value*
Mediator® (Phosphatidic Acid 50%)	1500 mg	†
Rosemary (Rosmarinus officinalis) [Leaf] (Standardized to 50% Ursolic Acid)	300 mg	†
Pomegranate (Punica granatum) [Fruit] (Standardized to 40% Ellagic Acid, providing metabolite Urolithin B)	200 mg	†
5α-Hydroxy-Laxogenin	75 mg	†
AstraGin™ (Panax notoginseng [root] Extract and Astragalus membranaceus [root] Extract)	50 mg	†

* Percent Daily Value (DV) Based on a 2,000 Calorie Diet
† Daily value not established.

OTHER INGREDIENTS (VEGGIE CAPSULE), SILICA, MAGNESIUM STEARATE.

BUILD features four main muscle-building ingredients with one ingredient amplifier in an effort to boost Muscle Protein Synthesis and mTOR Signaling!

Outbreak recommends taking Build one hour before your workout, with water. In each 5-capsule serving, you're going to be getting a hefty anabolic boost – just what you need in your quest to get bigger and stronger! Here's exactly what you're getting in each dose:

- **Mediator** (Phosphatidic Acid 50%) – 1500mg

Coming from the researchers at Chemi Nutra, a U.S. business unit of the Italian company Chemi S.p.A,[1] is **phosphatidic acid**, sometimes abbreviated as *PA*. A relatively new entrant into the supplement industry, PA has returned some incredible research results – its been shown to enhance muscle gain, increase strength, and enhance fat loss in athletes!

Phosphatidic acid is a phospholipid that acts as a regulator for the signaling proteins within the body.[2] The most relevant protein that phosphatidic acid stimulates is the *mammalian target of rapamycin*, more commonly referred to as *mTOR*. Our readers should at least know about **mTOR**, as it's the principle regulator for protein metabolism and muscle growth.

The science behind phosphatidic acid



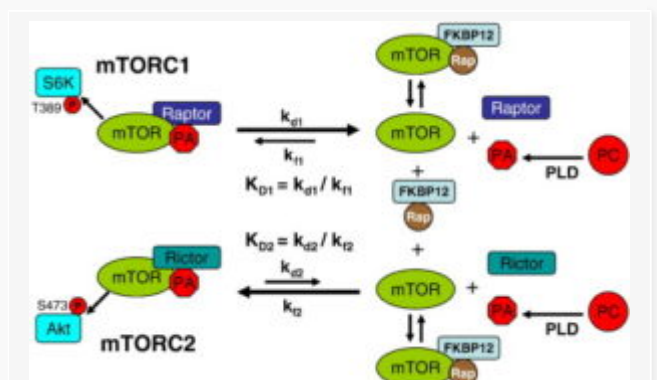
Full disclosure formulas are the norm for Outbreak Nutrition

Thanks to some incredible research from the University of Wisconsin, we now know exactly what triggers mechanically-induced mTOR signaling in the body. Using live imaging of muscle cells under contraction, researchers were able to see that the enzyme *phospholipase D*, which converts phosphatidylcholine into choline and phosphatidic acid, *directly activates mTOR*. [3-10]

That's right, supplementing with phosphatidic acid seems to enhance mTOR activation, which should lead to a boost in muscle growth if used in conjunction with resistance training. As it turns out, the research that has been done so far seems to say just that!

What does the research on *weight training* show?

In 2012, a study on phosphatidic acid and its effects in weight training was published. [11] 20 weight-trained men were randomly split into two groups, with one group receiving a daily dose of 750mg phosphatidic acid, and the other placebo. For eight weeks, each group used the same 4-day per week workout routine and had the same post-workout nutrition.



Phosphatidic Acid and mTOR

After eight weeks, each group was re-assessed. While there were no significant group changes in total body mass, researchers **did find a significant increase in lean body mass** in the phosphatidic acid group when compared to the placebo.[11] They also found that the **phosphatidic acid group saw a 12.7% increase in squat 1-rep maxes**, whereas the placebo only saw a 9.3% improvement (still a solid improvement, showing that this was a legit training program).

A similar study published in 2016 by researchers at California State University, San Bernardino also showed similar results.[12] Compared to placebo, the group receiving 750mg of phosphatidic acid daily saw significantly better results in lean body mass and strength.

Build's starting on the right foot!

In each serving of Build, you'll be getting *the clinical dose of 750mg*. Outbreak is packing each serving with the mTOR-maximizing ingredient to give you an edge in getting bigger and stronger!

- **Rosemary (*Rosmarinus officinalis*) [Leaf] (Standardized to 50% Ursolic Acid) – 300mg**



Ursolic acid is a lipophilic triterpenoid found in plants, most notably in apple peels. Before we get into the weeds, let's start off with the latest news on ursolic acid:

New review on ursolic acid: beneficial for body composition!

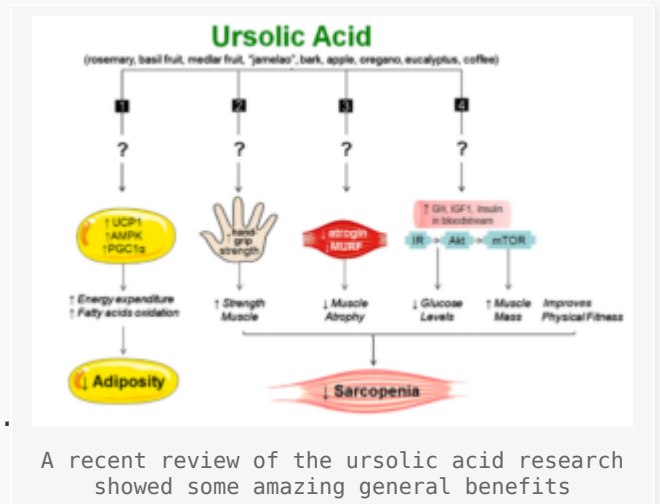
Researchers recently performed a systematic review on the ingredient in 2017, and concluded that *supplementation with ursolic acid may be an adjunctive therapy for prevention and treatment of obesity-mediated and muscle mass-mediated metabolic consequences*. [13]

In the review cited above, the researchers found 69 studies, and found 17 eligible to be analyzed for adiposity/obesity, inflammation, strength /

skeletal muscle / muscle mass loss, and energy expenditure in either rodents or humans.

They found the following conclusions can consistently be found with ursolic acid use:[13]

Increased energy expenditure and fatty acid oxidation



2. Increased muscle strength
3. Decreased muscle atrophy
4. Decreased blood glucose levels
5. Increased muscle mass
6. Improvements in physical fitness

The scientists concluded that the mechanisms discussed below, especially the activation of Akt and AMPK and increased IGF secretion, play major roles.[13]

Ursolic Acid's mechanism and early research

In early research, ursolic acid was found to increase *Akt* activity in skeletal muscle.[14] The PI3K/Akt pathway regulates metabolism and protein synthesis within the body,[15] and increased activation of Akt specifically in skeletal muscle increases energy expenditure, reduces adiposity and blood glucose, and combats fatty liver diseases.[16,17]

Scientists have found that the acid stimulates Akt activity through **enhancing activation of insulin-like growth factor (IGF-1)**, an extension of growth hormone. Additional preliminary research on mice showed ursolic acid *reduced muscle atrophy* while in the fasted state.[18]

Ursolic acid: efficient body recomposition agent?

In a study published in 2012, scientists tested ursolic acid in mice consuming a high-fat, high calorie diet. Mice consuming 55% of their daily calories from fat were given 0.14% ursolic acid for six weeks.[14] Upon analyzing muscle tissue, researchers found that the test group (compared to a control group) had larger *slow and fast-twitch muscle fibers*, and had improved exercise

capacity.[14]



In a world like no other, use a supplement like no other

The mice tested in the experiment also had less weight gain and reduced glucose intolerance than the control group.[14] However, scientists interestingly found that **ursolic acid increased brown fat** in these mice. This is not the *bad* kind of fat – brown adipose tissue is known to *expend* energy, whereas white adipose tissue *stores* it. This means that brown fat actually generates heat and is thermogenic. They weren't exactly sure *how* ursolic acid increased brown fat, but they were able to conclude that this made ursolic acid an important combatant against obesity.[14]

How does UA affect humans?

Currently, there hasn't really been a ton of research performed with human subjects. However, one study where men ingested 150mg of ursolic acid three times daily for eight weeks (unfortunately more than we have here in BUILD), showed some incredibly promising results.

At the end of the study, the group that consumed ursolic acid had very *significant decreases in body fat*. Not only that, but their body weight, lean body mass, glucose, and insulin levels *stayed the same*. [19] This means that the group consuming ursolic acid not only lost significant amounts of body fat, but they *gained lean mass*. The test subjects also showed an increase in IGF-1. [19] Those who took the ursolic acid dropped body fat and gained muscle because their bodies were *primed to do so*. Thanks to ursolic acid, they were able to maximize the results of their training.

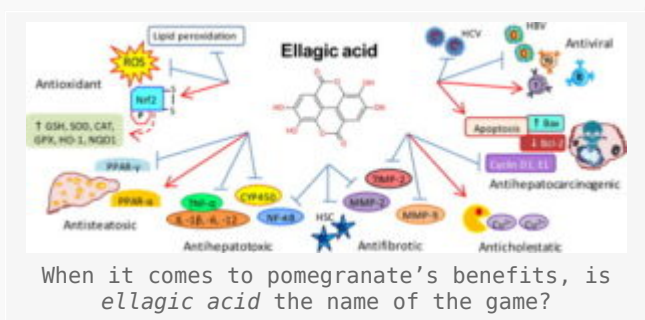
The outcomes measured in the one cited human study are *extremely encouraging*. Scientists also hypothesize that the results found in mice studies would be

similar in human studies. While the overall potential is definitely promising, we'd love to see some more research to confirm the effects of ursolic acid!

- **Pomegranate (*Punica granatum*) [Fruit] (Standardized to 40% Ellagic Acid, providing metabolite Urolithin B) – 200mg**

Through this 200mg dose of *Punica granatum*, we get 80mg of **ellagic acid**. We typically see ellagic acid used to prevent muscle atrophy while promoting muscle growth. But why? Well, an ellagic-acid derived metabolite called *urolithin B* is the driving force behind this acid's muscle-building potential. While urolithins A, C, and D have valuable antioxidant properties,[20] (and are also metabolites derived from ellagic acid), urolithin B has been shown to induce skeletal muscle growth.[20]

Does the "B" stand for Bigger?



Some exciting research regarding urolithin B does exist, although most studies have used mice subjects. In a study from 2017, scientists compared mice myotubes (muscle fibers) incubated with different urolithin concentrations for 24 hours. They found that while the size of the fibers saturated with urolithin A showed no differences, low doses of urolithin B *increased* the diameter of myotubes.[20] Maximum anabolic effect was found at 15 μM, and these myotubes showed increased anabolic properties five days after the original testing. Not only were these muscle fibers larger, but they also were primed for additional growth days later!

Another mTOR catalyst

The same study then asked whether urolithin B could stimulate muscle hypertrophy. They saw increased activation in the mTORC1 pathway, which is composed of mTOR and its subsequent proteins,[20] that was believed to be dependent on urolithin B.

In addition, they tested protein synthesis in urolithin B-treated myotubes. The metabolite *increased protein synthesis by 96.1%*.[20]

Fighting catabolism and promoting anabolism

These same researchers continued to find intriguing results. They confirmed

that urolithin B:

- Induces skeletal muscle hypertrophy through mTORC1 activation,[20]
- Downregulates activity of the ubiquitin-proteasome system, inhibiting protein degradation,[20] and
- Reduces the loss of muscle weight induced by denervation.[20]

While all of these findings are incredibly encouraging, another study notes that while urolithin B has shown these effects in animals, “*scientific evidence lacks for use as nutraceuticals in humans.*”[21] Nonetheless, the results we’ve seen this far are promising, and it’s a welcome inclusion in Outbreak’s BUILD formula.



Due to the nuclear holocaust that Outbreak Nutrition survived, their bottles glow in the dark

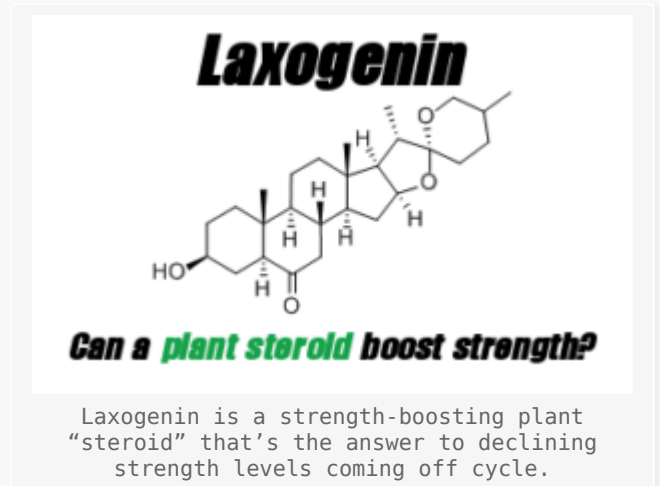
• 5a-Hydroxy-Laxogenin – 75mg

Laxogenin is a naturally-occurring steroidal sapogenin belonging to a family of plant-based steroids called *brassinosteroids*. Now, we know that for you natural lifters out there, the term “steroid” is alarming. However, brassinosteroids are all-natural, non-hormonal, legal, and don’t bring any of the side effects of the more “aggressive” stuff.

Laxogenin comes free of all of those concerns, yet may bring a smidge of the effects we seek? Sign us up!

Benefits of laxogenin

While little research has shown the exact mechanisms behind laxogenin, scientists have found that the brassinosteroid *promotes muscle protein synthesis* and *reduce protein breakdown*. [21,22] Mice given a daily dose of 20-60mg/kg orally saw increased lean body mass and improved athletic performance, compared to an untrained control group. [21]



Other supposed benefits include enhanced recovery, regulated cortisol levels, and decreased inflammation. [23] While all of this sounds great, there's a severe lack of published research regarding laxogenin and its effects in humans.

Anecdotally, the ingredient has been known to help with some *minor* strength gains – like an added rep on your 1RM max – and the alleviation of joint discomfort. We always make sure to never oversell this "plant steroid" because its effects aren't steroid-like, but many do enjoy it a bit.

At 75mg, we really can't confirm if you're getting a sufficient dosage. Anecdotally, 100-150mg seems to be the sweet spot, but such little research exists that an ideal dose hasn't truly been found. That being said, we do think the dose in Build is enough to see some positive strength responses.

- **AstraGin[®] (Panax notoginseng [root] Extract and Astragalus membranaceus [root] Extract) – 50mg**

Last, we have our ingredient amplifier in **AstraGin[®]** from Nuliv Science at 50mg. Made of highly purified saponins from the *Astragalus membranaceus* and *Panax notoginseng* plant, this is included specifically to maximize absorption of all the ingredients in *Build*. [24,25] It's been shown to do just that, and at 50mg, the dose is exactly what's been used in studies!

Stacking



If you think this formula's impressive, wait until you see the **Outbreak Nutrition Pathogen** pre workout!

This is the perfect supplement to add to your already using two of the most studied, and proven, supplement ingredients: creatine monohydrate and betaine. Combining these two ingredients with everything in this formula will augment any anabolic effects.

Meanwhile, anyone looking to train hard who's good with some *aggressive* stimulants should look into the *Outbreak Pathogen* pre workout. Those who want to better-utilize their carbs are wise to take them with *Adapt*, and speaking of carbs the *Antidote* EAA/BCAA supplement has some for performance as well!

In the San Bernadino phosphatidic acid study discussed above, the subjects received a supplement called that also contained L-leucine, Beta-Hydroxy-Beta-Methylbutyrate (HMB), and Vitamin D3 in a proprietary blend.[12] Everyone should take extra Vitamin D! L-leucine has long been known as the most anabolic of the essential amino acids (found in *Antidote* linked above), and HMB is well-known for its anti-catabolic properties, but at that point things are starting to get expensive and high doses of leucine-rich foods (eat more dead animals!) should do the job just fine.

For those of you who do choose to use the "harsher stuff", laxogenin is anecdotally said to work synergistically with some of it[23]...but we can't validate anything like that.

Conclusion: BUILD More Lean Muscle and Awaken Dormant Gains



Outbreak Nutrition isn't your standard "nutrition" company!

Outbreak tags Build as a "muscle growth detonator", and based on what we're seeing, it may be just that. Increased mTOR activation, increased levels of muscle protein synthesis, and more efficient burning of brown fatty tissue are just some of the benefits that come from this formula.

We absolutely recommend first making sure you're covered with more basic and proven muscle-building ingredients such as creatine, betaine, and a diet full of dead animals and fish. But, if you're looking to take the next step and add in a more advanced supplement, look no further.

Outbreak Nutrition's Build may be exactly what you need to help you put on that extra muscle you want. The added strength and bulk may come in handy in *any* emergency situation, let alone a nuclear holocaust!

Outbreak Nutrition BUILD – Deals and Price Drop Alerts

Get Price Alerts

Get BUILD Price Alerts Get Outbreak Nutrition alerts Get Phosphatidic Acid price drops

Also get hot deal alerts

No spam, no scams.

Disclosure: PricePlow relies on pricing from stores with which we have a business relationship. We work hard to keep pricing current, but you may find a better offer.

Posts are sponsored in part by the retailers and/or brands listed on this page.

References

1. "Chemi Nutra Products"; ChemiNutra; <https://www.cheminutra.com/ingredients/>
2. Hoffman, Jay R, et al; "Efficacy of Phosphatidic Acid Ingestion on Lean Body Mass, Muscle Thickness and Strength Gains in Resistance-Trained Men"; *Journal of the International*

- Society of Sports Nutrition; vol. 9, no. 1, 5 Oct. 2012, p. 47;
<https://jissn.biomedcentral.com/articles/10.1186/1550-2783-9-47>
3. Hornberger, T, et al; "Regulation of mTOR by mechanically induced signaling events in skeletal muscle"; *Cell Cycle*; 2006 Jul; 5(13):1391-6;
<https://pubmed.ncbi.nlm.nih.gov/16855395>
 4. Hornberger, T A et al; "The role of phospholipase D and phosphatidic acid in the mechanical activation of mTOR signaling in skeletal muscle"; *Proceedings of the National Academy of Sciences of the United States of America* vol. 103,12 (2006): 4741-6;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1450240/>
 5. You, Jae Sung et al; "Mechanical stimulation induces mTOR signaling via an ERK-independent mechanism: implications for a direct activation of mTOR by phosphatidic acid"; *PloS one* vol. 7,10 (2012): e47258; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3471816/>
 6. Foster, David; "Phosphatidic acid and lipid-sensing by mTOR" *Trends in endocrinology and metabolism: TEM* vol. 24,6 (2013): 272-8;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3669661/>
 7. O'Neil, T K et al; "The role of phosphoinositide 3-kinase and phosphatidic acid in the regulation of mammalian target of rapamycin following eccentric contractions"; *Journal of Physiology*; vol. 587,Pt 14 (2009): 3691-701;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2742291/>
 8. Goodman, Craig A et al; "Novel insights into the regulation of skeletal muscle protein synthesis as revealed by a new nonradioactive in vivo technique"; *FASEB journal: official publication of the Federation of American Societies for Experimental Biology*; vol. 25,3 (2011): 1028-39; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3042844/>
 9. Goodman, Craig A et al; "Recent progress toward understanding the molecular mechanisms that regulate skeletal muscle mass"; *Cellular signalling* vol. 23,12 (2011): 1896-906;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3744211/>
 10. Goodman, Craig A et al; "The role of skeletal muscle mTOR in the regulation of mechanical load-induced growth"; *Journal of Physiology*; vol. 589, Pt 22 (2011): 5485-501;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3240886/>
 11. Hoffman, Jay, et al; "Efficacy of phosphatidic acid ingestion on lean body mass, muscle thickness and strength gains in resistance-trained men"; *Journal of the International Society of Sports Nutrition*; 2012; 9:47;
<https://jissn.biomedcentral.com/articles/10.1186/1550-2783-9-47>
 12. Escalante, Guillermo, et al; "The Effects of Phosphatidic Acid Supplementation on Strength, Body Composition, Muscular Endurance, Power, Agility, and Vertical Jump in Resistance Trained Men"; *Journal of the International Society of Sports Nutrition*; vol. 13, no. 1; 2016; <https://jissn.biomedcentral.com/articles/10.1186/s12970-016-0135-x>
 13. Katashima, C, et al; "Ursolic acid and mechanisms of actions on adipose and muscle tissue: a systematic review"; *Obesity Reviews*; 18(6):700-711; June 2017;
<https://pubmed.ncbi.nlm.nih.gov/28335087>
 14. Kunkel, Steven D, et al; "Ursolic Acid Increases Skeletal Muscle and Brown Fat and Decreases Diet-Induced Obesity, Glucose Intolerance and Fatty Liver Disease"; *PLoS One*, 20 June 2012; <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0039332>
 15. "PI3K / Akt Signaling Interactive Pathway"; *Cell Signaling Technology*;
<https://www.cellsignal.com/contents/science-cst-pathways-pi3k-akt-signaling-resources/pi3k-akt-signaling-interactive-pathway/pathways-akt-signaling>
 16. Izumiya Y, Hopkins T, Morris C, Sato K, Zeng L, et al; "Fast/Glycolytic muscle fiber growth reduces fat mass and improves metabolic in obese mice"; *Cell Metab.* 2008; 7:159-172;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2828690/>
 17. Lai KM, Gonzalez M, Poueymirou WT, Kline WO, Na E, et al; Conditional activation of akt in adult skeletal muscle induces rapid hypertrophy; *Mol Cell Biol.* 2004; 24:9295-9304;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC522257/>
 18. Kunkel SD, Suneja M, Ebert SM, Bongers KS, Fox DK, et al; "mRNA Expression Signatures of Human Skeletal Muscle Atrophy Identify a Natural Compound that Increases Muscle Mass"; *Cell Metab*; 2011; 13:627-638; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3120768/>
 19. Bang, Hyun Seok et al; "Ursolic Acid-induced elevation of serum irisin augments muscle strength during resistance training in men"; *Korean journal of physiology & pharmacology: official journal of the Korean Physiological Society and the Korean Society of Pharmacology*; vol. 18,5 (2014): 441-6;
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4211129/>
 20. Francaux, M, and L Deldicque; "Using Polyphenol Derivatives to Prevent Muscle Wasting"; *May 2018*; <https://pubmed.ncbi.nlm.nih.gov/29356695>
 21. Esposito D, Komarnytsky S, Shapses S, Raskin I; "Anabolic effect of plant brassinosteroid";

The FASEB Journal; 2011; 25(10):3708-3719;
<https://www.fasebj.org/doi/abs/10.1096/fj.11-181271>

22. Syrov, V. N., & Kurmukov, A. G; "Experimental study of the anabolic activity of 6-ketoderivatives of certain natural sapogenins"; *Farmakologiya i toksikologiya*; 39(5), 631-635; 1975; <https://pubmed.ncbi.nlm.nih.gov/1028596>
23. Fasciola, Andre Armel; "Phytosterol spirostane and spirostene derivatives having a wide variety of utilities in humans and other animals"; US Patent & Trademark Office; September 18, 2014; <https://patents.google.com/patent/US20140274978A1/en>
24. NuLiv Science; "Method for enhancing nutrient absorption with astragalosides"; United States Patent and Trademark Office; 2005; <https://patents.google.com/patent/US20060292251A1/>
25. NuLiv Science; "Method for enhancing nutrient absorption with astragalosides"; United States Patent and Trademark Office; 2005; <https://patents.google.com/patent/US20100099633A1/>