Revivify a Science Based Product
In-Vitro Study Graphs

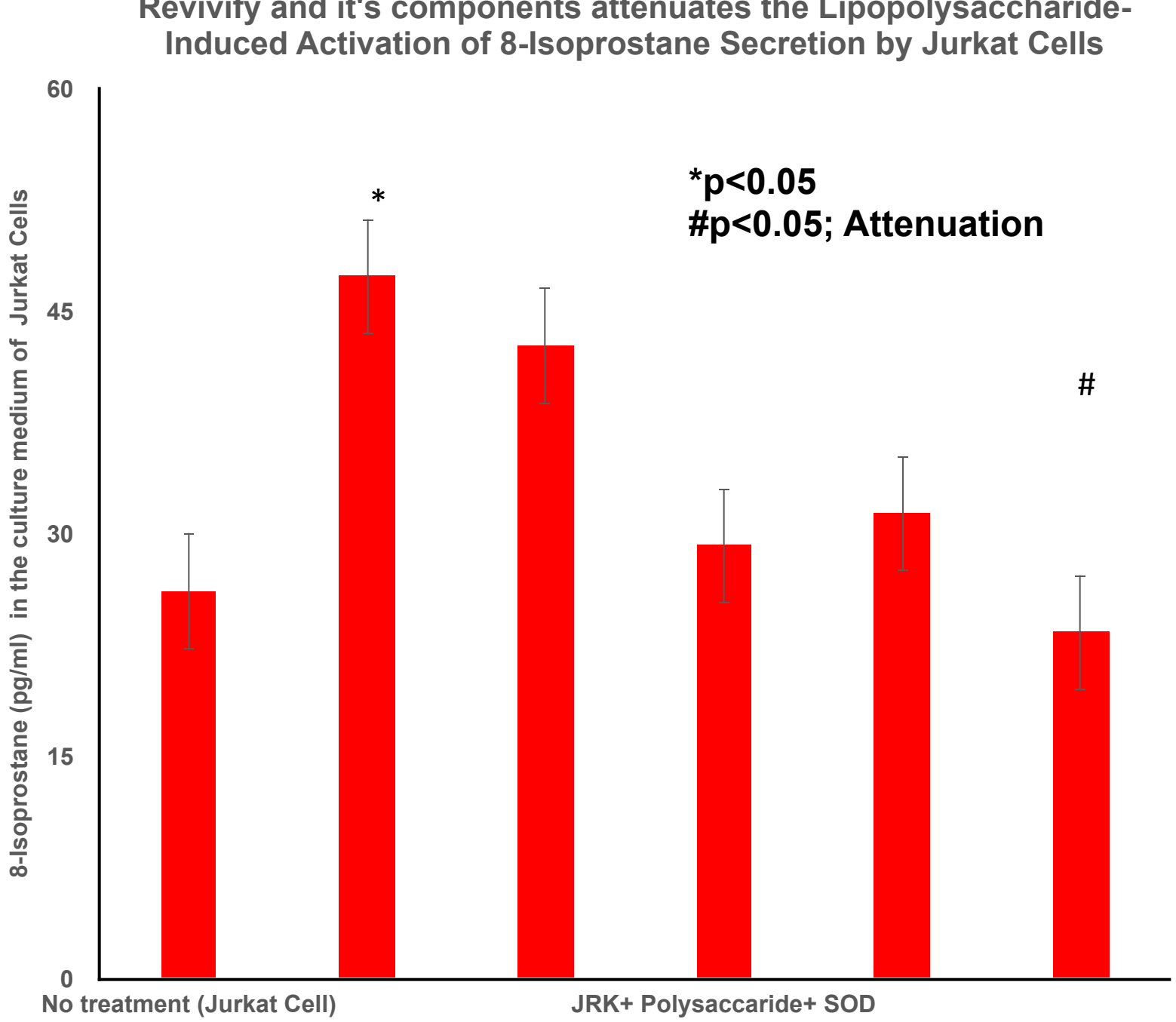
Revivify studies suggest as a strong Anti-oxidant diverse capabilities of inflammatory reductions and most importantly enhance immunity responses

- **Antioxidant Biomarker (8-Isoprostane):** Isprostanes constitute the important product of lipid peroxidation of arachidonic acid and are considered as the makers of the oxidative lipid damage.
- **Lipid Per-oxidation Attenuation (MDA, 4-HNE):** MDA and 4-HNE, the toxic and products of lipid peroxidation that cause damage to the DNA and proteins.
- **Protein Degradation Attenuation (PC, 3-NT) :** The presence of carbonyl groups in proteins has been considered as the marker of ROS mediated protein oxidation. The other specific markers of protein oxidation are O-tyrosine and 3-nitrotyrosine.

Revivify Health Benefits Study Suggests

Revivify study suggests that it protects cellular integrity by encountering all the major free radicals and also attenuate 8-isoprostane a biomarker of oxidative stress.

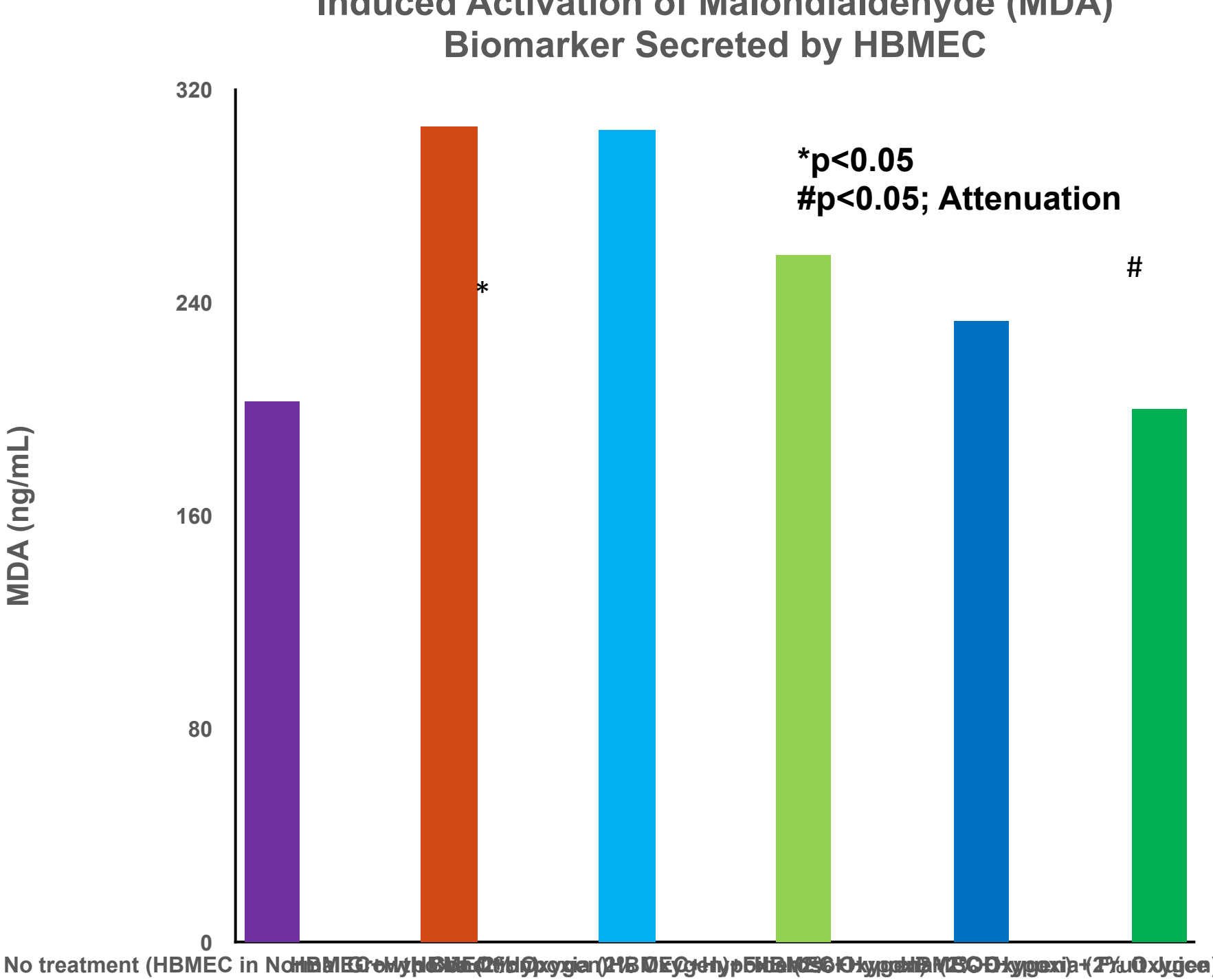
8-Isoprostane control benefits cardiovascular disease, diabetes, liver disease, neurological disease, joint inflammation, immunity, colon health & skin.



Revivify Health Benefits Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH SHOWING ATTENUATION OF LIPID PEROXIDATION AND PROTEIN DEGRADATION

Lipid peroxidation is the major cause of cellular dysfunction associated with many diseases like neurological, cardiovascular, intestinal inflammation diseases.



Revivify Health Benefits
Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH SHOWING ATTENUATION OF LIPID PEROXIDATION AND PROTEIN DEGRADATION--3 GRAPHS

Reduction of Lipid peroxidation is the major cause of cellular dysfunction associated with many diseases like neuroglial, cardiovascular, intestinal inflammation diseases.

*

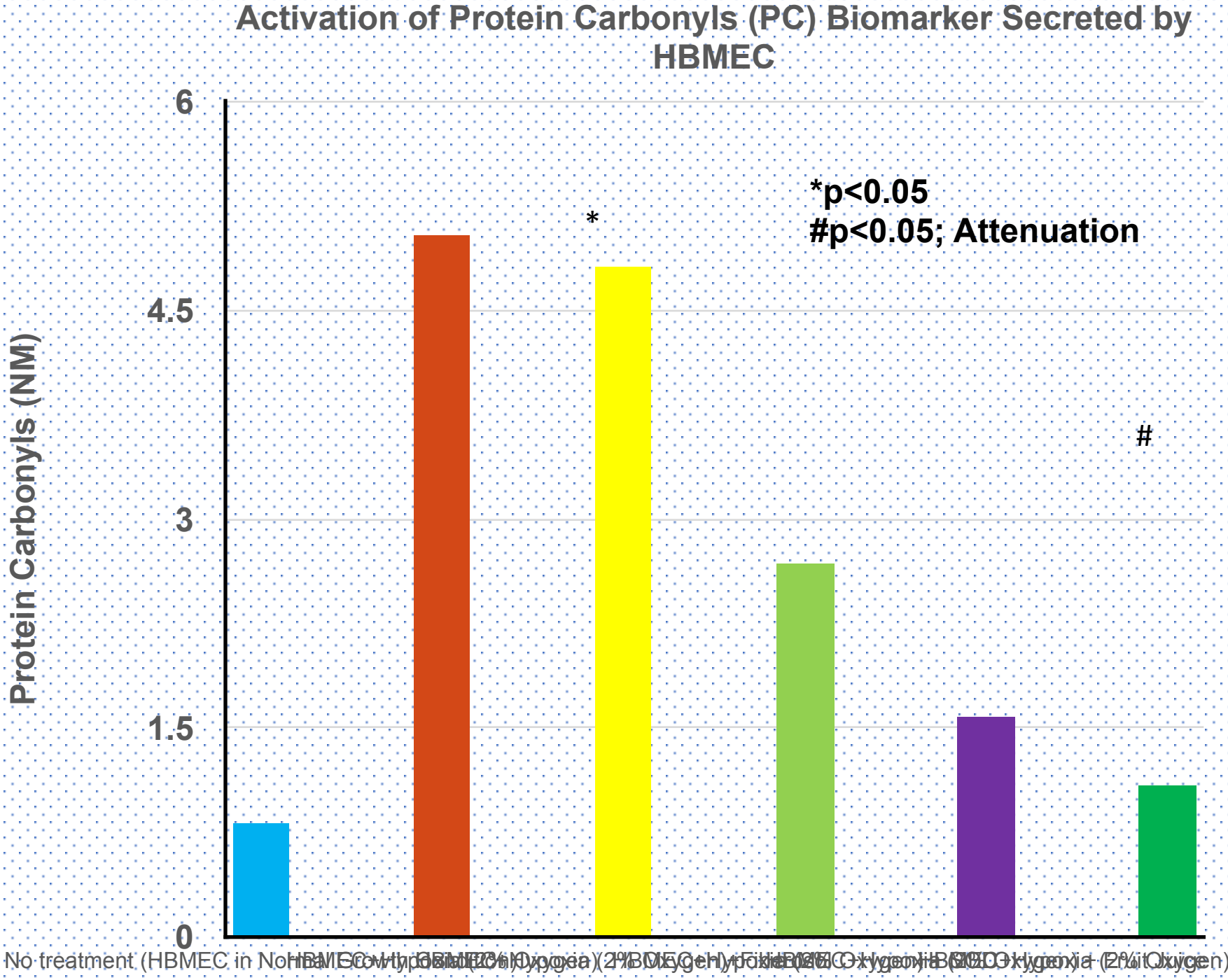
***p<0.05**
#p<0.05; Attenuation

#

Revivify Health Benefits Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH SHOWING ATTENUATION OF LIPID PEROXIDATION AND PROTEIN DEGRADATION.

Protein degradation causes major critical diseases such as ALS neurological diseases cardiovascular and immunity disorder.



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#p<0.05; Attenuation

Revivify a Science Based Product
In-Vitro Study Graphs

Revivify studies suggest as a strong Anti-oxidant diverse capabilities of inflammatory reductions and most importantly enhance immunity responses

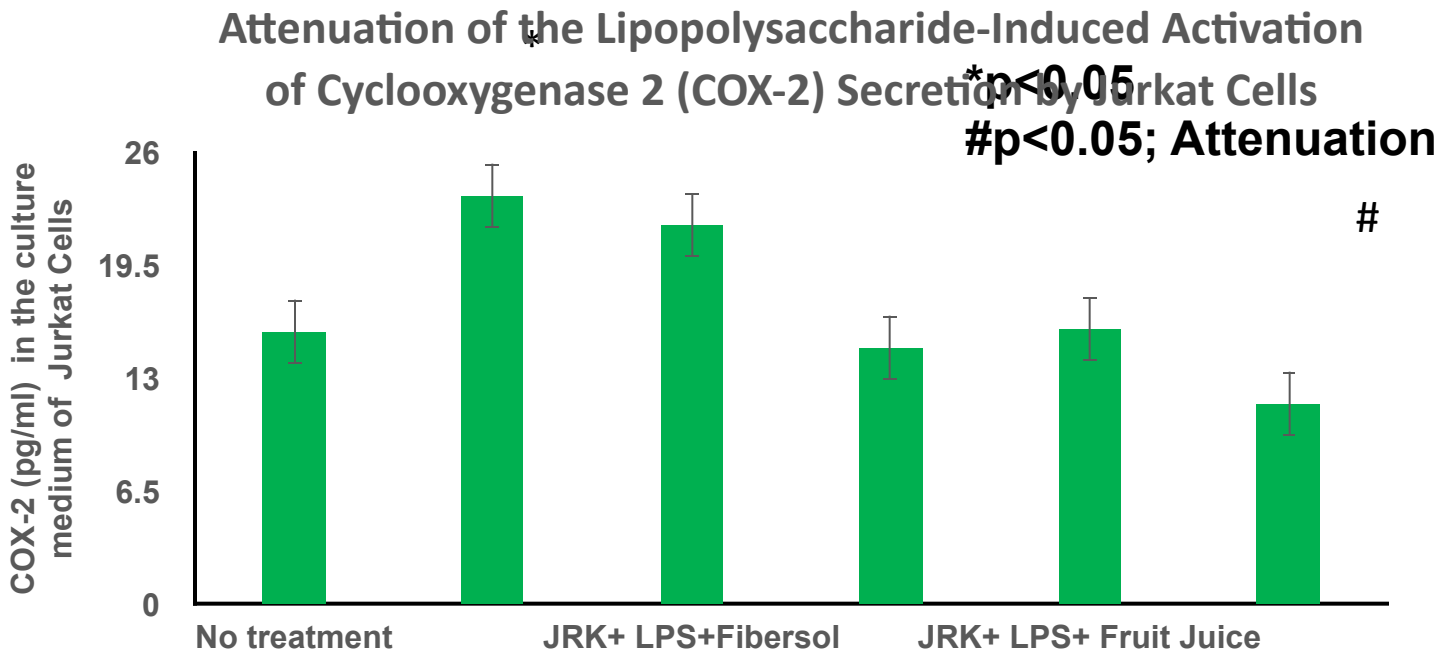
INFLAMMATION:

Chronic inflammation, which begins as a biological response such as; vascular endothelial dysfunction, is thought to be primary cause of atherosclerosis. Factors such as oxidative stress, oxidized LDL, thrombi, and viral bacterial infections induce acute and chronic inflammatory cell infiltrates by enhancing production of inflammatory cytokines by the infiltrating inflammatory cells.

- **Anti-inflammatory Biomarker (Cox-2)**
- **Cytokines Inflammation Attenuation (IL-6, IFN-γ, TNF-α)**

Revivify Health Benefits
Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH BY ENCOUNTERING THE PRO-INFLAMMATORY KINASES SUCH AS COX-2, IL-6



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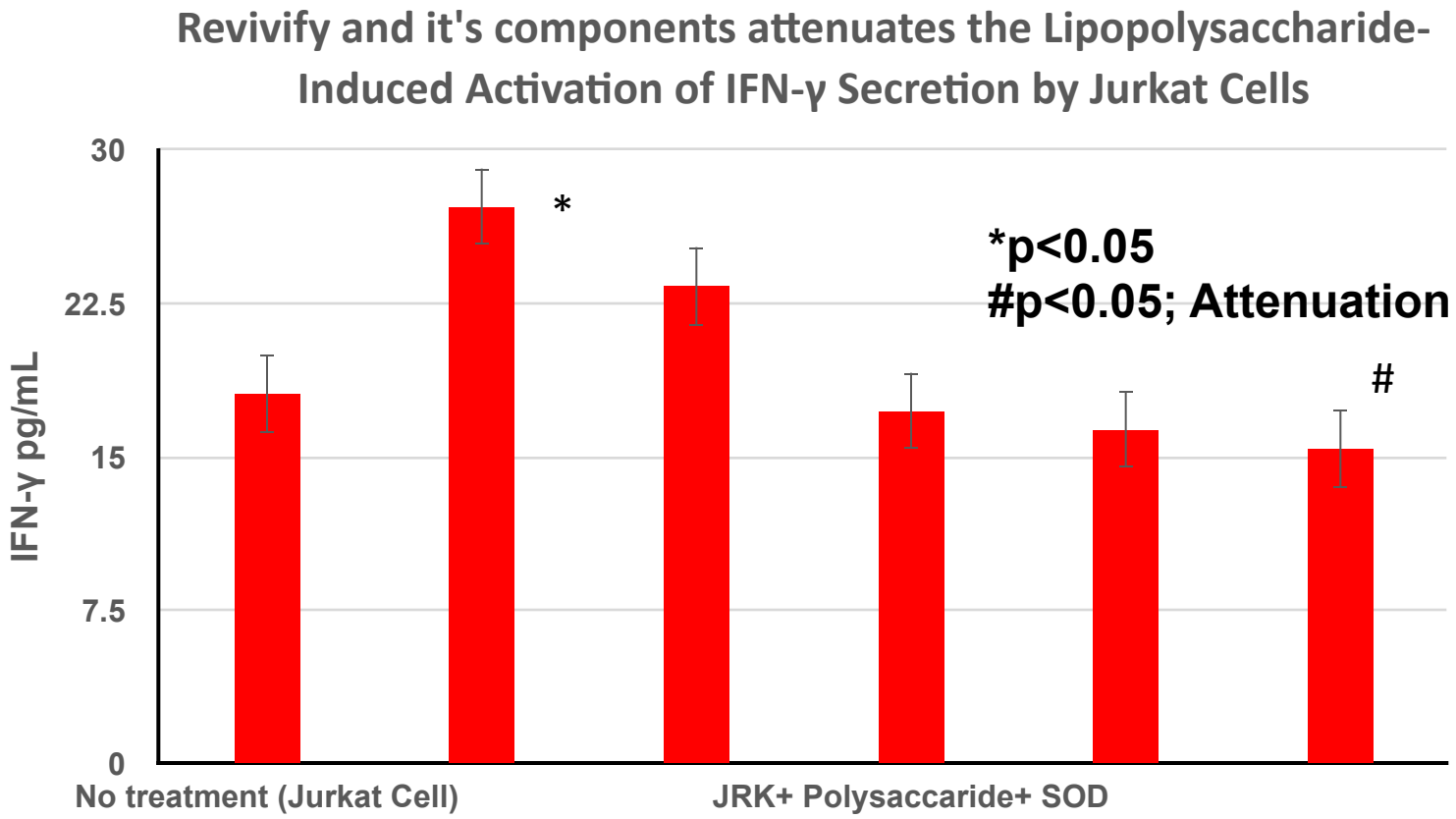
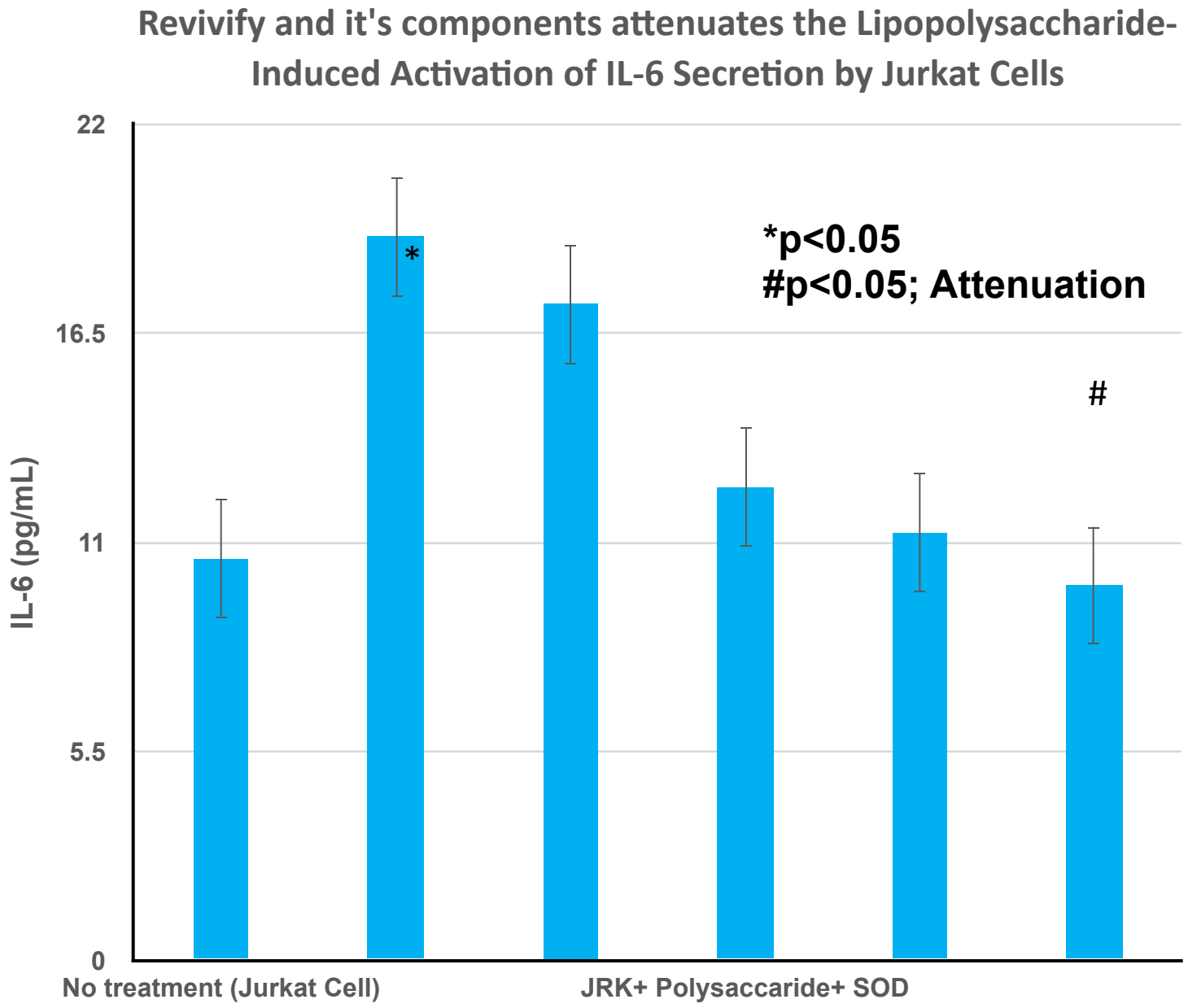


Revivify Health Benefits Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH BY ENCOUNTERING THE PRO-INFLAMMATORY angiogenic factors.

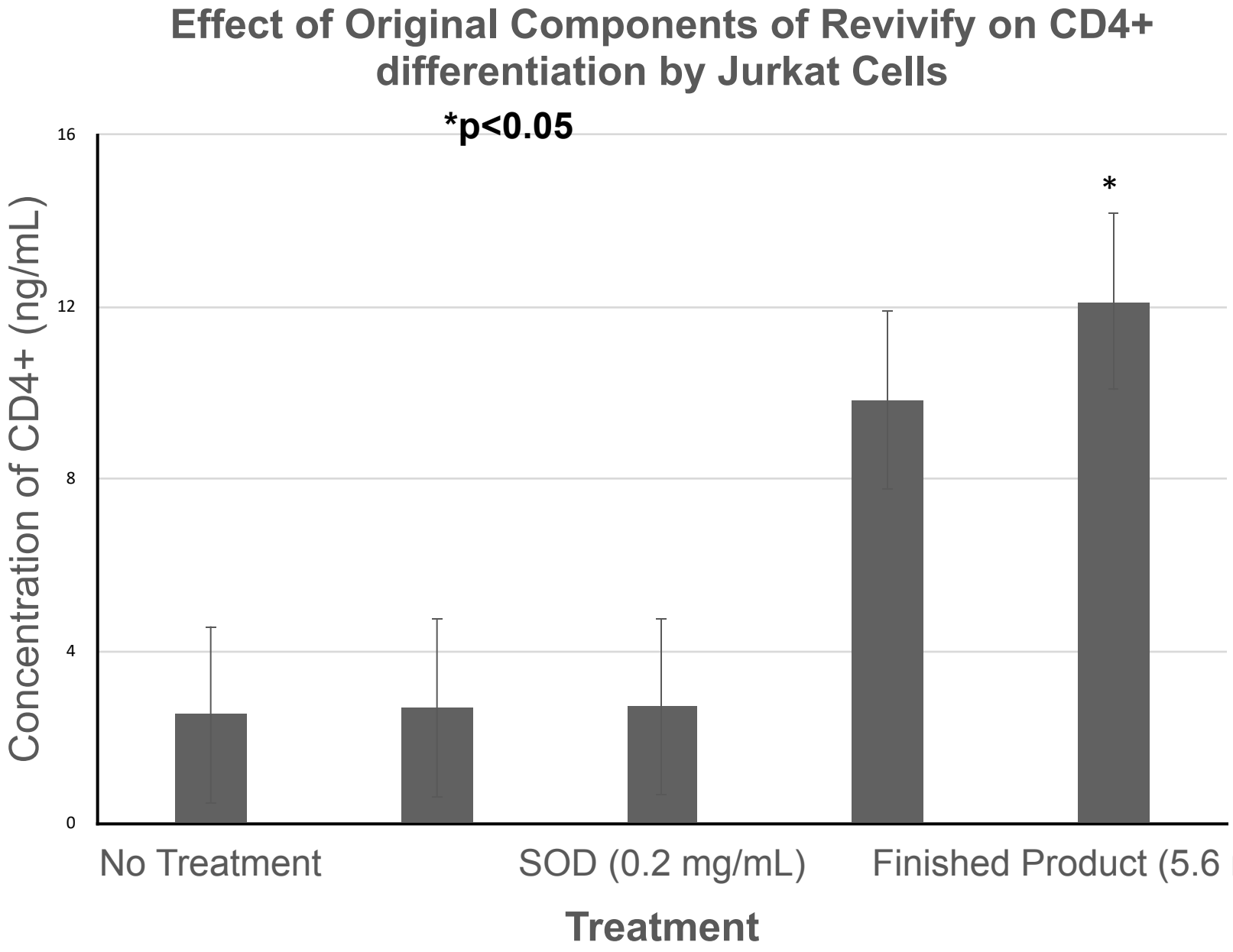
IL-6 reduction has been used in many recovery of many diseases including COVID-19 antiviral drug.



Revivify Health Benefits Study Suggests

REVIVIFY IS THE BEST BROAD RANGE IMMUNE CAPABILITY WITH PROMT AND EFFECTIVE RESPONSE-CD4 CD8

T-cell activation associated with immunity response for virus, bacteria, fungus, and many other pathological condition.

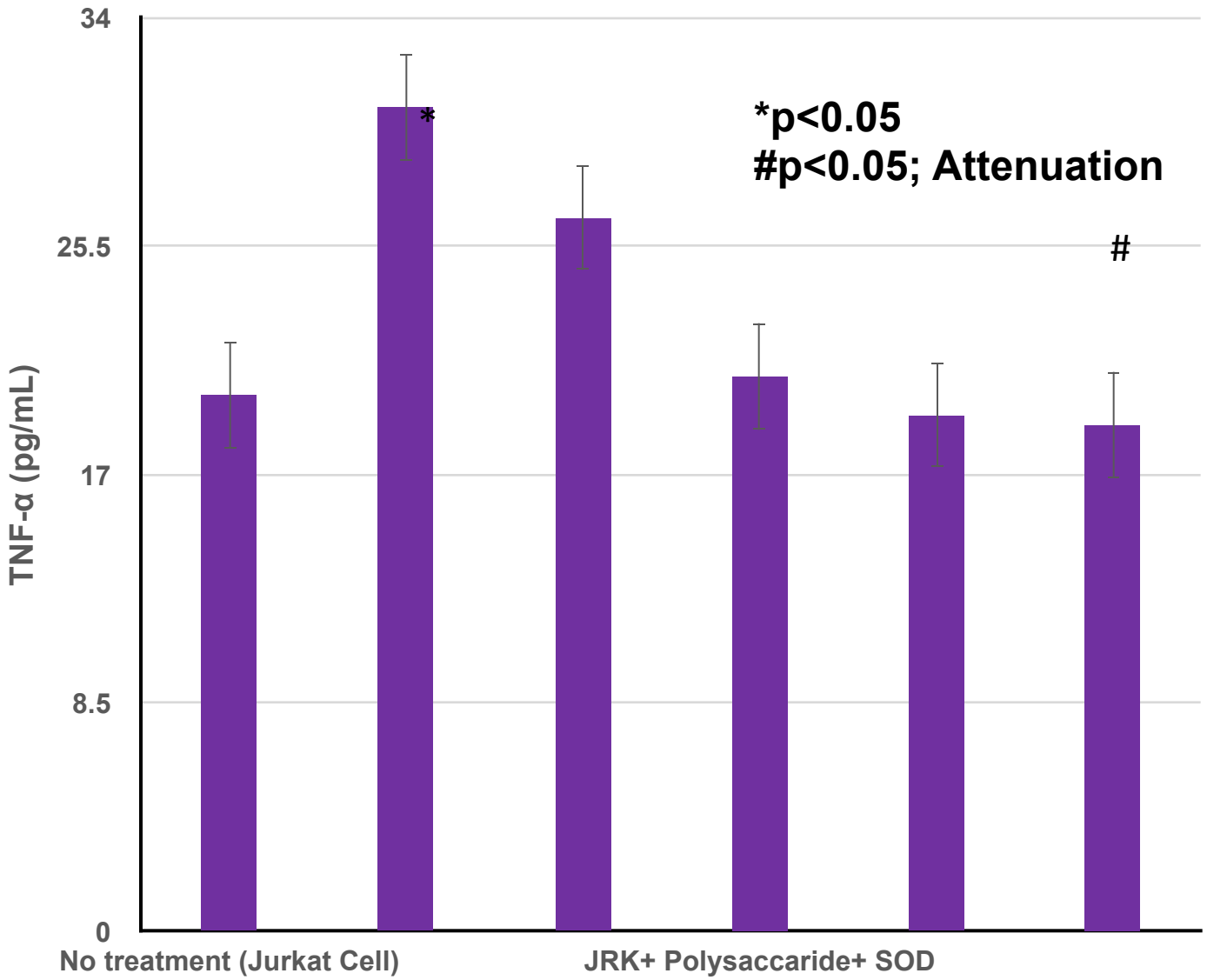


Revivify Health Benefits Study Suggests

REVIVIFY STUDY SUGGESTS THAT IT PROTECTS CELLULAR HEALTH BY ENCOUNTERING THE PRO-INFLAMMATORY angiogenic factors.

TNF-α activates endothelial cells express and release various inflammatory cytokines and reducing risk of cardiovascular disease and many other.

Revivify and it's components attenutes the Lipopolysaccharide-Induced Activation of TNF-α Secretion by Jurkat Cells



Revivify a Science Based Product
In-Vitro Study Graphs

Revivify studies suggest as a strong Anti-oxidant diverse capabilities of inflammatory reductions and most importantly enhance immunity responses

CD4 and CD8 T cells are both key players in the immune response to infections, and they are activated through different mechanisms.

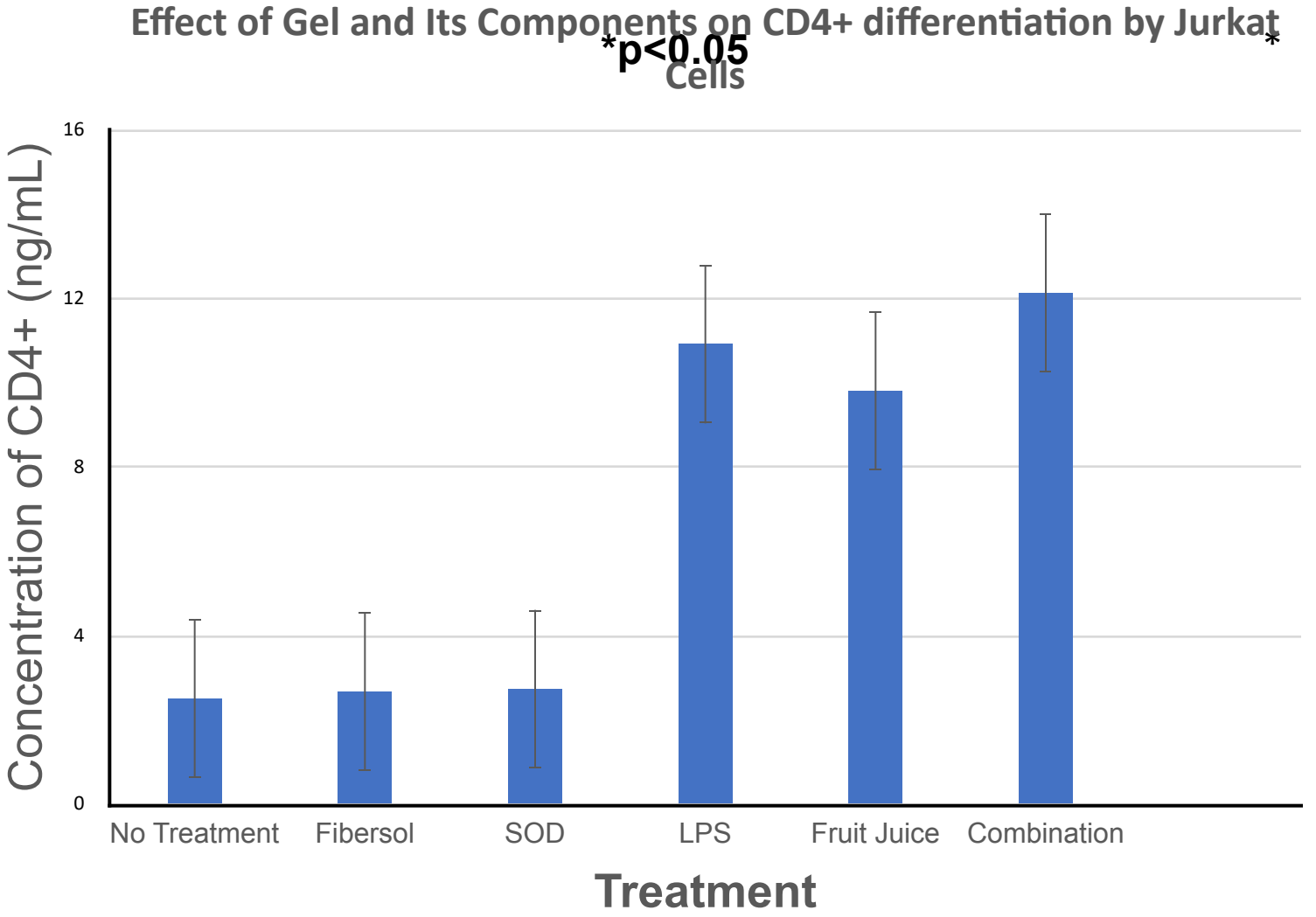
Also known as helper T cells, these cells activate other immune cells and B cells, which in turn create antibodies. CD4 T cells activate by binding to MHC-II, and they help CD8 T cells in several ways.

- **T-Cell Activation (CD4, CD8)**

Revivify Health Benefits Study Suggests

REVIVIFY IS THE BEST BROAD RANGE IMMUNE CAPABILITY WITH PROMT AND CORRECT RESPONSE- CD4 CD8

CD4 & CD8 activation associated with immunity response for virus, bacteria, fungus, and many other pathological condition.



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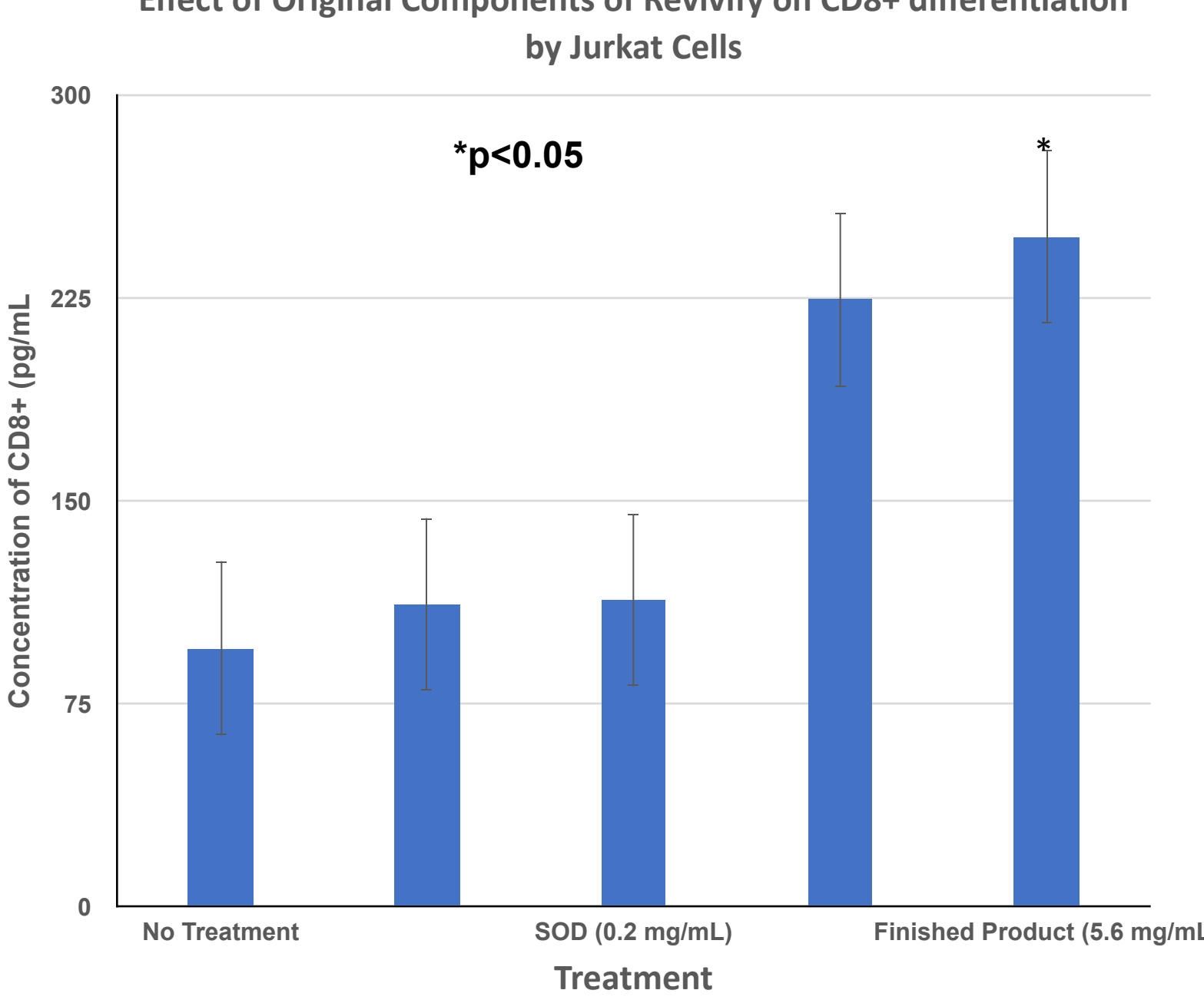

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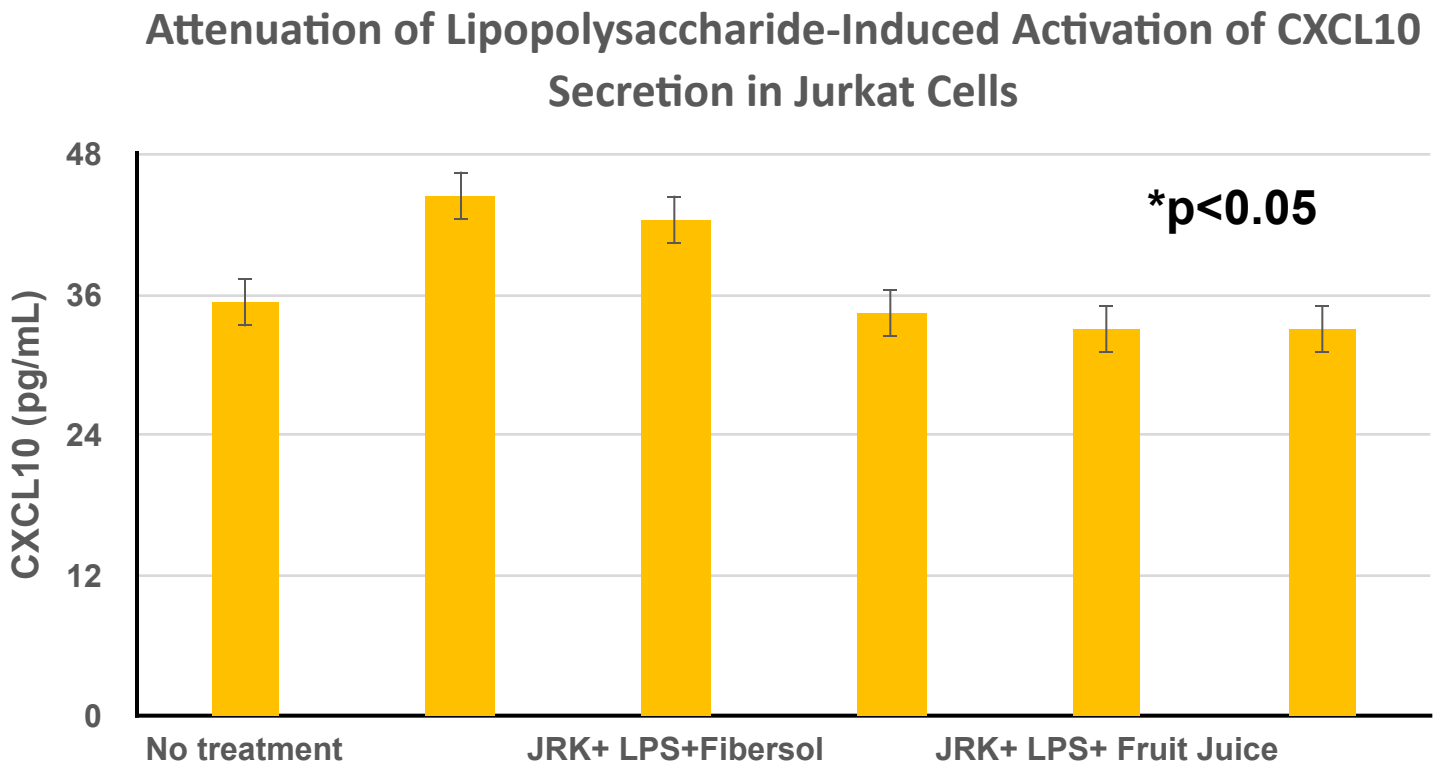


Revivify Case Study

- **COVID-19 Recovery Testimonial**
- **Post COVID-19 Fatigue Study**

Revivify & COVID-19

REVIVIFY™
RESTORES WELL-BEING

Testimonials

We are very happy that Revivify products helped some COVID-19 patients.

For Product Information: www.RevivifyForLife.com
Covid-19 Related Information: TEXT: (631) 690-3790

"It works like magic."
Syeda Marhana

"Quickly and fully recovered and still taking the Gel."
Lisa Kumar Dash

"Post Covid problems resolved."
Mohammed Majid
Mehedi Hassan

"Improved the health condition."
Desiy M Canales

"It helps me a lot, I have lots of problems and now I feel better. Even though I had respiratory conditions."
Syed J Nessa

"Gradually recovered and am still taking Revivify Gel."
Mahbubur & Family

"Worked like magic, prompt energy regained."
Khaleda Bgum

"Quickly and fully recovered."
Del-Angel Andres & Family
S Mubith

"Prompt recovery."
Jamena Sultana

"I feel better using Revivify products."
Shamima Nasreen

"Slowly improved the health condition."
Salmi Haque

"Slowly recovered."
Maria Alfaro

"Steady recovery."
MD Zahidul Islam

"Quickly and fully recovered and was energetic after using Revivify Gel."
Mohammed Haque & Family

"I regained energy and feel better."
Nasima Hassan

"Quick recovery."
Ruhul Amin

"After using Gel, it helped me with a very quick recovery."
Syed S Rahman

"Very happy using this product."
Nasreen Mahbuba

"Revivify Gel helps significantly."
Syed A Ahmed

"Slowly and Fully recovered."
Abu Z Amanatullah
Matthew Ragusa

"Gradually recovered."
Md Moudud

"Feel better."
Khairon Nahar Lira

In the case of the sudden emergence of the new coronavirus, more than 300 newly infected patients gradually recovered significantly while taking SOD. More than 200 mid-infected patients took SOD when suffering from cough, fever and difficulty breathing, and their physical condition gradually got better.

SOD has been scientifically proven to increase mental acuity, help patients recover from Covid-19 quicker, and assist in bettering the treatment of other diseases. Today, the public can be assured the efficacy of SOD in the prevention and treatment of Covid-19 is confirmed.

Affiliated Hospital of Ningxia Medical University, China
Peoples Hospital of Ningxia Hui, China
Yinchuan First Peoples Hospital, China

Advance Pharmaceutical Inc. | 895 Waverly Avenue, Holtsville, NY 11742 | www.RevivifyForLife.com

Revivify & Post COVID-19 Fatigue Case Study

Post COVID19 Fatigue Case Study Using Revivify Gel
By Dr. Zia U Ahmed, MD

Sl. #	Age	Sex	Hospital ization	Post covid days	fatigue scale	Other Symtoms	fatigue scale after 7 days	change of fatigue scale
1	56	M	yes	15	31	cough/pal	12	19
2	62	F	no	33	30	co/pal/	12	18
3	49	F	no	26	29	cough	11	18
4	60	M	no	35	28	cough/pal	12	16
5	42	F	no	40	29	cough/pal	13	16
6	46	M	yes	32	28	cough/pal	12	16
7	64	M	no	25	31	cough/pal	14	17
8	58	M	no	31	29	coughpal	13	16
9	46	M	no	33	30	cough/pal	12	18
10	51	M	no	26	29	cough	14	15
11	66	F	no	33	28	cough/pal	11	17
12	58	M	no	31	28	cough/pal	12	16
13	63	F	no	34	30	cough/pal	12	18
14	61	M	no	25	29	cough/pal	14	15
15	63	M	no	23	28	cough	11	17
16	54	M	yes	17	29	cough	12	17
17	43	F	no	19	28	cough	14	14
18	41	M	no	32	30	cough/pal	12	18
19	45	F	no	33	29	cough	11	18
20	52	M	no	31	28	cough	13	15
21	38	F	no	17	29	cough	11	18
22	52	M	no	21	27	cough	13	14
23	42	M	yes	30	28	cough	13	15
24	52	F	yes	25	29	none	12	17
25	39	F	no	29	27	cough	14	13
26	45	M	no	15	28	cough /pal	12	16
27	61	M	yes	26	28	cough/pal	15	13
28	58	F	no	21	27	cough	12	15
29	61	M	no	26	28	cough/pal	12	16
30	64	M	No	6	28	cough/HA	13	
31	31	F	yes	7	27	cough/pal	11	
32	36	F	yes	10	29	cough	13	
33	54	M	no	12	28	cough	12	
34	61	M	yes	14	31	cough/pal	12	
35	56	M	No	11	28	cough/pal	13	

Chalder Fatigue Scale

Name: _____ Date: _____

We would like to know more about any problems you have had with feeling tired, weak or lacking in energy in the last month. Please answer ALL the questions by ticking the answer which applies to you most closely. If you have been feeling tired for a long while, then compare yourself to how you felt when you were last well. Please tick only one box per line.

	less than usual	no more than usual	more than usual	much more than usual
do you have problems with tiredness?				
do you need to rest more?				
do you feel sleepy or drowsy?				
do you have problems starting things?				
do you lack energy?				
do you have less strength in your muscles?				
do you feel weak?				
do you have difficulties concentrating?				
do you make slips of the tongue when speaking?				
do you find it more difficult to find the right word?				
	better than usual	**no worse than usual**	**worse than usual**	**much worse than usual**
how is your memory?				

This scale can be scored "bimodally" with columns representing 0, 0, 1 & 1 and a range from 0 to 11 with a total of 4 or more qualifying for "caseness". Alternatively, it can be scored in "Likert" style 0, 1, 2 & 3 with a range from 0 to 33. Mean "bimodal" score for CFS sufferers was 9.14 (SD 2.73) and for a community sample 3.27 (SD 3.21). Mean "Likert" score was 24.4 (SD 5.8) and 14.2 (SD 4.6).

total (0-33) =

Cella, M. and T. Chalder (2010). "Measuring fatigue in clinical and community settings." J Psychosom Res 69(1): 17-22. This study involved 361 CFS sufferers and 1615 individuals from the community. Average age was in the 30's. Fatigue levels were similar for males and females. A score of 29 discriminated between CFS sufferers and the community sample in 96% of cases and a score in the 30's discriminated in 100% of cases. The CFS sufferers also scored a mean of 26.99 on the Work & Social Adjustment Scale (W&SAS) with a SD of 8.6 (i.e. about 70% scoring between 18.4 and 35.6).

Revivify Study Presentation and Publication

Gastroenterology/Clinical Nutrition:

Revivify modulates healthy gut microbiomes and short chain fatty acids evaluated by an in vitro model of gut microbiome study.

Generic and molecular medicine

Revivify Gel attenuates human brain microvascular endothelial cells (HBMEC) from oxidative stress.

Rheumatology, Immunology and Allergy.

Revivify Gel stimulates the immune system via T-cell activation evaluated in vitro jurkat cells: potential role in the prevention treatment of Covid-19 infection.

Revivify Study Abstract in BMJ Journal

BMJ Journals
Journal of Investigative Medicine
3 October 2022

Gastroenterology/clinical nutrition

40 **REVIVIFY® MODULATES HEALTHY GUT MICROBIOMES AND SHORT CHAIN FATTY ACIDS EVALUATED BY AN IN VITRO MODEL OF GUT MICROBIOME STUDY**

[1]AHM Ashraf, [2]Ahmed Pantho, [3]Syeda Afroze, [1]Thomas Kuehl, [3]Liaquat Hossain, [4]Ziauddin Ahmed, [4]Nasir Uddin. [1]The University of Texas at Austin; [2]Orion Institute for Translational Medicine; [3]Advance Pharmaceutical; [4]Lewis Katz School of Medicine

10.1136/jim-2022-MW.39

Introduction/Background Gut health is very important for healthy living and well-being. The microbial community in the gut plays major role in immune system, hormonal process, cognitive and other neurological functions, digestibility and food metabolism, macro and micro nutrients absorption, vitamins productions and several others. It is essential to maintain healthy gut-eco system by dietary fiber intake, whereby these microbes digest the fiber, produce fermented by-product of Short Chain Fatty Acids [SCFAs]. These short chain fatty acids [SCFAs] have many healthy physiological functions including energy resource, gastro-intestinal epithelial protective, and have influence on immune system as well as enteric neuro-system, etc.

Objective(s) In this study we evaluate REVIVIFY® PRO-VITALITY ANTIOXIDANT GEL, a patent pending dietary supplement that can modulate healthy gut microbes resulting an increased production of Short Chain Fatty Acids [SCFAs], mainly acetate, propionate, butyrate, and small amount of lactate. REVIVIFY® exert beneficial effects acting through multiple pathways involved in oxidative/inflammatory stress signaling and leading to the expression of antioxidant neurotropic factors, and cytoprotective proteins. Also act as strong anti-infective agent for virus, bacteria, and other pathogens. The human intestine harbors nearly 100 trillion bacteria that are essential for health. Firmicutes spp. are usually butyrate producers. This Short Chain Fatty Acids of butyrate mainly supports the intestinal epithelium that protect the gut health from any leakage avoiding pathogens contamination through circulatory system. Butyrate acts as Anti-inflammatory protecting the gut from any gut inflammatory diseases.

Methods An In-vitro Gut Microbiome Culture Model is established. Gut microbes were cultured in 2 ml 96-well plates and treated with control, Melon extract Superoxide dismutase [SOD], Prebiotic Fiber [Fibersol-2], Fruit Juices [polyphenols], and REVIVIFY® Gel [Finished product] for 24 hours. Cultured microbiome samples were harvested 24 h for metaproteomic analysis. Afterwards a culture aliquot was collected for chemical analysis of SCFAs content and microbiome profiling.

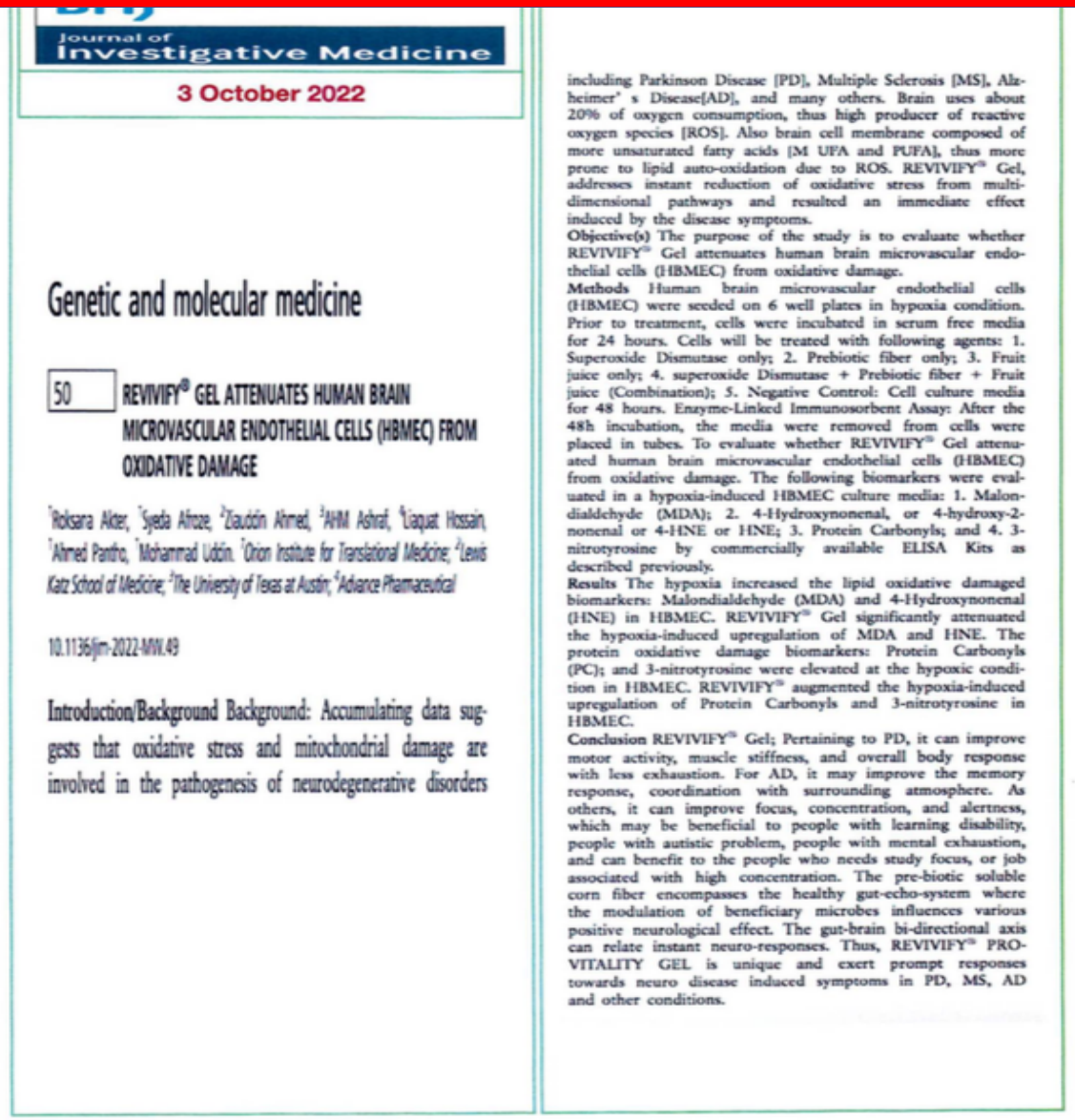
Results Study shows the change in gut microbial composition as well as the SCFAs when they were treated four different compound[s] [SOD, Fiber, Fruit Juice, Finished products]. Study shows the increase of SCFAs significantly when treated with finished product but the ratio of the SCFAs remain the same across all the treatment group including the control. In the control vs finished product the concentrations were as follows : acetate: 30 vs 80 µmol/ml, propionate: 9 vs 25 µmol/ml, butyrate : 15 vs 35 µmole/ml, and lactate: 6 vs 12 µmole/ml, an increase of more than 2 folds compared to control. Interestingly, the ratio of SCFAs of control and each treatment group relatively remain same and it appears to be as follows: acetate [53%], propionate [15%], butyrate [24%], and lactate [8%]. The study shows the finished product promoted the Firmicutes spp., especially lactobacillus.

Conclusion Several species of Lactobacillus are naturally present in the human intestinal tract, and several species and strains have been evaluated for their probiotic activity. Certain probiotic strains have given significant and promising results in human clinical trials and experimental models of gastrointestinal disease. The enhancement of epithelial barrier function is one of the proposed mechanisms by which certain probiotic organisms may confer beneficial activities. REVIVIFY® PRO-VITALTITY ANTIOXIDANT GEL [REVIVIFY® GEL] modulate beneficial gut microbiome with increased Short Chain Fatty Acids [SCFAs].

Revivify considered a product benefits as

Gastroenterology & Clinical Nutrition

Revivify Study Abstract in BMJ Journal



Journal of Investigative Medicine

3 October 2022

Genetic and molecular medicine

50 **REVIVIFY® GEL ATTENUATES HUMAN BRAIN MICROVASCULAR ENDOTHELIAL CELLS (HBMEC) FROM OXIDATIVE DAMAGE**

[1]Roksana Akter, [1]Syeda Afroze, [2]Ezaudin Ahmed, [3]AHM Ashraf, [4]Liaquat Hossain, [1]Ahmed Pantho, [1]Mohammad Uddin. [1]Orion Institute for Translational Medicine; [2]Lewis Katz School of Medicine; [3]The University of Texas at Austin; [4]Advance Pharmaceutical

10.1136/jim-2022-MW.49

Introduction/Background Background: Accumulating data suggests that oxidative stress and mitochondrial damage are involved in the pathogenesis of neurodegenerative disorders including Parkinson Disease [PD], Multiple Sclerosis [MS], Alzheimer' s Disease[AD], and many others. Brain uses about 20% of oxygen consumption, thus high producer of reactive oxygen species [ROS]. Also brain cell membrane composed of more unsaturated fatty acids [M UFA and PUFA], thus more prone to lipid auto-oxidation due to ROS. REVIVIFY® Gel, addresses instant reduction of oxidative stress from multi-dimensional pathways and resulted an immediate effect induced by the disease symptoms.

Objective(s) The purpose of the study is to evaluate whether REVIVIFY® Gel attenuates human brain microvascular endothelial cells (HBMEC) from oxidative damage.

Methods Human brain microvascular endothelial cells (HBMEC) were seeded on 6 well plates in hypoxia condition. Prior to treatment, cells were incubated in serum free media for 24 hours. Cells will be treated with following agents: 1. Superoxide Dismutase only; 2. Prebiotic fiber only; 3. Fruit juice only; 4. superoxide Dismutase + Prebiotic fiber + Fruit juice (Combination); 5. Negative Control: Cell culture media for 48 hours. Enzyme-Linked Immunosorbent Assay: After the 48h incubation, the media were removed from cells were placed in tubes. To evaluate whether REVIVIFY® Gel attenuated human brain microvascular endothelial cells (HBMEC) from oxidative damage. The following biomarkers were evaluated in a hypoxia-induced HBMEC culture media: 1. Malondialdehyde (MDA); 2. 4-Hydroxynonenal, or 4-hydroxy-2-nonenal or 4-HNE or HNE; 3. Protein Carbonyls; and 4. 3-nitrotyrosine by commercially available ELISA Kits as described previously.

Results The hypoxia increased the lipid oxidative damaged biomarkers: Malondialdehyde (MDA) and 4-Hydroxynonenal (HNE) in HBMEC. REVIVIFY® Gel significantly attenuated the hypoxia-induced upregulation of MDA and HNE. The protein oxidative damage biomarkers: Protein Carbonyls (PC); and 3-nitrotyrosine were elevated at the hypoxic condition in HBMEC. REVIVIFY® augmented the hypoxia-induced upregulation of Protein Carbonyls and 3-nitrotyrosine in HBMEC.

Conclusion REVIVIFY® Gel; Pertaining to PD, it can improve motor activity, muscle stiffness, and overall body response with less exhaustion. For AD, it may improve the memory response, coordination with surrounding atmosphere. As others, it can improve focus, concentration, and alertness, which may be beneficial to people with learning disability, people with autistic problem, people with mental exhaustion, and can benefit to the people who needs study focus, or job associated with high concentration. The pre-biotic soluble corn fiber encompasses the healthy gut-echo-system where the modulation of beneficiary microbes influences various positive neurological effect. The gut-brain bi-directional axis can relate instant neuro-responses. Thus, REVIVIFY® PROVITALITY GEL is unique and exert prompt responses towards neuro disease induced symptoms in PD, MS, AD and other conditions.

Revivify considered a product benefits as

Genetic & Molecular Medicine

Revivify Study Abstract in BMJ Journal

BMJ Journals
Journal of Investigative Medicine

3 October 2022

Rheumatology/immunology/allergy

103 **REVIVIFY® GEL STIMULATES THE IMMUNE SYSTEM VIA T-CELL ACTIVATION EVALUATED IN VITRO JURKAT CELLS: POTENTIAL ROLE IN THE PREVENTION/ TREATMENT OF COVID-19 INFECTION**

[1]Ahmed Pantho, [2]Syeda Afroze, [3]Ziauddin Ahmed, [4]Liaquat Hossain, [1]Thomas Kuehl, [4]Mohammad Uddin. [1]Orion Institute for Translational Medicine; [2]Emergent Biotechnologies LLC; [3]Temple University, Philadelphia; [4]Advance Pharmaceutical Inc

10.1136/jim-2022-MW.102

Introduction/Background REVIVIFY® pro-vitality antioxidant gel composed of primary antioxidant superoxide dismutase [SOD], prebiotic fibers, diverse polyphenols from various fruits juice. SOD diminishes the superoxide anion that is produced due to normal cellular activity. Polyphenols are phenolic compounds act as antioxidant, anti-inflammatory, anti-viral agent. it repairs damaged cells due to reactive oxygen molecules of ROS/RNS. Dietary prebiotic fibers modulate beneficiary gut eco microbiomes and provide many health benefits including immunity. Combination of these three components stimulate the immunity via T-cell activation and antioxidative and anti-inflammatory pathway.

Objective(s) The objective of this study is to evaluate the effect of REVIVIFY® Gel on an in vitro T cell Model.

Methods The JURKAT CELL LINE is an immortalized T lymphocyte cell line that has most often been used as a prototypical T cell line to study multiple events in T cell biology, including T cell signaling. JURKAT cells were seeded on six well plates. Prior to treatment, cells will be incubated in serum free media for 24 hours. Cells will be treated with following agents: 1. Superoxide Dismutase only; 2.Prebiotic fiber only; 3. Fruit juice only; 4. superoxide Dismutase + Prebiotic fiber + Fruit juice (Combination); 5. Positive Control: Phorbol 12-myristate 13-acetate (PMA) in combination with ionomycin; 6. Negative Control: Cell culture media for 48 hours. After the treatment, the media were removed from cells and placed in tubes. Levels of CD-8+; CD-4+; interferon-gamma (IFNγ); Interleukin-6 [IL-6]; Interferon gamma-induced protein 10 [IP-10; also known as CXCL10]; Macrophage inflammatory protein 1α and 1β; Monocyte chemoattractant protein 1 [MCP-1, also known as CCL2]; and eight isoprostane were measured by commercially available ELISA Kits by described previously. Activated JURKAT Cells were seen by upregulated CD69 (MCA2806A647) expression on the CD3 (MCA463A488) positive population. Cells were gated on lymphocytes in the presence of Human Seroblock (BUF070A). The treated JURKAT Cells were stimulated for five days with treatment and were stained with CytoTrack Red 628/643 by Cell Proliferation Assay Kit (1351205). Data were acquired on the ZE5 Cell Analyzer. Data were expressed as mean ± SE. Statistical significance were assessed by ANOVA and Duncan's post-hoc test for differences between treatment groups and treatment with negative control effects with $p < 0.05$ was taken as significant. Results was presented as the mean ±S.E. (n= 6, four replicates).

Results REVIVIFY® and its components activated T cells are seen by upregulated CD69 (MCA2806A647) expression and activated the differentiation of CD4+ and CD8+ compared to culture media. REVIVIFY® and its components attenuated the Lipopolysaccharide-Induced Activation of 8-Isoprostane (8IP), COX-2, IFN-γ, IL-6, TGF-β, TNF-α and CXCL10 Secretion by Jurkat Cells.

Conclusion REVIVIFY® Gel contains superoxide Dismutase, Prebiotic fiber and polyphenols and quercetin from fruit juice. This unique multi direction approaches to keep all body cells free from oxidative stress, maintain, pro-inflammatory and anti-inflammatory balances, and immune responses very prompt and effective. In addition to healthy living, well-being, anti-aging, longevity, anti-oxidative, anti-hypoxia, and anti-inflammatory effect, REVIVIFY® Gel has potential role in the prevention/treatment of COVID-19 infection.

Revivify considered a product benefits as

Rheumatology, Immunology and Allergy.

Revivify - Diabetes Study

REVIVIFY REDUCES FASTING GLUCOSE: HUMAN CASE STUDY

Ahmed F. Pantho BS[1,2]; Syeda H. Afroze, PhD[1,2]; Liaquat Hossain, M.Pharm[3]; Syed A Hussain, MA[3]; Thomas J Kuehl, PhD[1,2]; M. Nasir Uddin, PhD, FAHA[1,2,3,5*]

[1]Orion Institute for Translational Medicine and [2]Emergent Biotechnologies LLC, Temple, Texas 76504; [3]**Advance Pharmaceutical Inc., 895 Waverly Ave, Holtsville, NY 11742; [4]Texas A&M University School of Medicine, Texas

** *Advance Pharmaceutical Inc. has patent for the REVIVIFY GEL*

BACKGROUND AND OBJECTIVE

REVIVIFY pro-vitality antioxidant gel composed of primary antioxidant superoxide dismutase [SOD], prebiotic fibers, diverse polyphenols from various fruits juice. SOD diminishes the superoxide anion that is produced due to normal cellular activity. Polyphenols are phenolic compounds act as antioxidant, anti-inflammatory, anti-viral agent. it repairs damaged cells due to reactive oxygen molecules of ROS/RNS. Dietary prebiotic fibers modulate beneficiary gut eco microbiomes and provide many health benefits including immunity. Combination of these three components stimulate the immunity via T-cell activation and antioxidative and anti-inflammatory pathway. Glucose metabolism with diabetic patient is known as metabolic disorders. We believe glucose metabolism disorder, is due to oxidative stress of body cells particularly liver cell, pancreatic cell, kidney cell and brain cell and a negative impact from gut microbes. Insulin in-adequate supply and or insulin resistance is to believe the reasons for higher blood glucose in diabetic patient.

The objective of this study to evaluate whether revivify reduces the fasting glucose level in type 2 diabetic patients.

STUDY DESIGN

❖We conducted a case and control study in the population of Williamson County, Texas.

❖In total, 30 patients joined who were equally and randomly assigned in the case study: 18 males and 12 females. The selection criteria: male and female aged 20-60 years with type to diabetes 2 diabetes.

❖The patients had average Fasting Blood Glucose (mmol/l): 7.8 ± 1.2 and HbA1c: 8.2 ± 2.1.

❖The study respondents used one pouch of REVIVIFY Pro-Vitality Fruit Blend with Superoxide Dismutase (SOD) and dietary fiber daily after breakfast and one revivify Pro-Energy stick contains dietary fiber with SOD and Resveratrol dissolved in water along with oral diabetic medications for three months.

Revivify gel and stick significantly reduced the fasting blood sugar and HbA1C in group of diabetic patients independent of Insulin and oral medications

Times	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Fasting Blood Glucose (mmol/l)	7.8±1.2	7.6±1.6	7.2±1.5	6.9±1.0	6.9±0.8	6.8±1.1	6.8±1.3	6.5±0.8	5.8±0.9	5.8±1.1	5.5±0.6	5.6±0.9	5.3±0.7	5.5±0.8	5.4±0.4*
HbA1C	8.2±2.1														6.8 ±2.4*
General Health	Poor	Poor	Poor	Poor	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Good	Good	Good
Fatigue Status	Fatigue	Fatigue	Fatigue	Fatigue	Fatigue	Fatigue	Less Fatigue	Less Fatigue	Less Fatigue	Less Fatigue	Less Fatigue	Less Fatigue	No Fatigue	No Fatigue	No Fatigue
Sleeping Pattern	Moderate	Moderate	Moderate	Moderate	Moderate	Fair	Fair	Fair	Fair	Fair	Fair	Good	Good	Good	Good

RESULTS

❖ After three months of taking Revivify gel and stick, we found that a significant decrease of average Fasting Blood Glucose (mmol/l) and HbA1c.

❖ The Fasting Blood Glucose (mmol/l) was decreased from 7.8 ± 1.2 (initial; beginning of study) to 5.4 ± 0.4 (after three months of study) and HbA1c was decreased from 8.2 ± 2.1 (initial; beginning of study) to 6.8 ± 2.4 (after three months of study).

❖ Moreover, the patients reported the improvement of their General Health, Fatigue Status and Sleeping Pattern.

CONCLUSIONS/PERSPECTIVES:

❖ **Our patented composition "Superoxide Dismutase soluble fiber composition" a unique formulation with added polyphenols, branded as REVIVIFY, resulting of very strong Antioxidants, diverse Anti-inflammatory properties, enhanced immunity and repair system, and anti-infective capability, reduce the oxidative stress caused by various ROS, and able to improve cellular glucose uptake and slowly maintain blood glucose to acceptable level.**

❖ **Revivify composition attenuate 8-isoprostane, an antioxidant biomarker, and COX2 an inflammatory biomarker and modulate lactobacillus, all work to towards cellular integrity and bring efficiency in energy production efficiency in mitochondria, and glucose intake increase and blood glucose level decrease.**

Presented in Scientific Seminar (CSCTR)

April 24-25,20223 Chicago, USA

Revivify – Skin Study (Acne Vulgaris)

A COMPARATIVE STUDY OF REVIVIFY TO RESTORE SKIN WELL-BEING AMONG POPULATION SUFFERING FROM ACNE VULGARIS

Wahida K Chowdhury, MBBS, FRCS[1,2], Nashida K Chowdhury, MS[1,2], Syed A Hussain, MA[3], Liaquat Hossain, M. Pharm[3], Mohammad N Uddin, PhD, FAHA[1,3,4*]

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TEXAS A&M UNIVERSITY
SCHOOL OF MEDICINE

** *Advance Pharmaceutical Inc. has patent for the REVIVIFY GEL*

Advance Pharmaceutical Inc.
QUALITY WE TRUST

BACKGROUND AND OBJECTIVE

Acne vulgaris is a common chronic inflammatory skin disease of pilosebaceous units. It affects both male and females in different times of their lives, but more commonly in adolescents. It primarily affects the face, upper part of the chest, back, arm and thigh. This happens from a complex pathogenesis of overproduction of sebum by the sebaceous gland, clogging of hair follicles leading to formation of plug, and accumulation of bacteria namely Propionibacterium. Thereafter, there occurs an inflammatory reaction leads to reactive species (ROS) production by the damaged follicular walls. In addition, Propionibacterium bacteria produces some enzymes like lipases, protease, hyaluronidases which play an important role in the inflammatory process.

Oxygen, which is an important and vital component for human, can produce reactive types like super-oxide anions, hydroxyl radicals. Super-oxide dismutase (SOD), catalase (CAT) and glucose 6 phosphate dehydrogenase are some of the antioxidant enzymes. Currently, there is a new medication, namely Revivify which is a dietary supplement based on primary antioxidant superoxide dismutase, prebiotic fiber, diverse polyphenols from various fruits juice. It stimulates the immune system by activating T-cell, and acts as an antioxidant and anti-inflammatory product. It works on the cellular level to help to repair damage cells, caused by free radicals. It also increases oxygen, reduce inflammation, and promote skin well-being by promoting healthy digestion and gut flora.

- ***The study objective is to evaluate the effect of Revivify on Bangladeshi population to restore skin well-being suffering from acne vulgaris.***

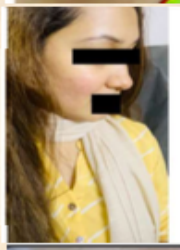
STUDY DESIGN

- We conducted a case and control study in the different clinics under the Dhaka North City Corporation, Bangladesh. In total, 20 patients joined who were equally and randomly assigned in case and control groups i.e., 10 in each group.
- The selection criteria: male and female aged 20 years and above irrespective of marital status who were suffering from moderate to severe ranges of acne vulgaris with post inflammatory hyper-pigmentation, scars and uneven skin tone.
- In the case group, study respondents used Revivify along with Oral Doxycycline and tropical therapy, whereas the control group used only Oral Doxycycline and tropical therapy.

ACNE VULGARIS:
Revivify Study Group;
Before Oral Doxycycline + Revivify

ACNE VULGARIS:
Revivify Study Group;
Before Oral Doxycycline + Revivify

ACNE VULGARIS:
Revivify Study Group;
After Oral Doxycycline + Revivify



ACNE VULGARIS:
Revivify Study Group;
After Oral Doxycycline + Revivify

ACNE VULGARIS:
Control Group (Without Revivify);
Before Oral Doxycycline Only

ACNE VULGARIS:
Control Group (Without Revivify);
Before Oral Doxycycline Only

ACNE VULGARIS:
Control Group (Without Revivify);
After Oral Doxycycline Only

ACNE VULGARIS:
Control Group (Without Revivify);
After Oral Doxycycline Only

RESULTS

- During the clinical assessment, we found that the number and size of blemishes, level of inflammation and post inflammatory effect including hyperpigmentation and scars reduced substantially and their skin tone improved noticeably among the study respondents who used Revivify along with Oral Doxycycline and tropical therapy comparing to the control group.

CONCLUSIONS/PERSPECTIVES:

- Though, this small-scale study findings suggested that Revivify is useful to re-establish skin well-being among Bangladeshi population, yet it also highlighted the necessity of conducting a large-scale study to measure the significant impact of this medication on the Bangladeshi population having acne vulgaris with complications, so that the dermatologists can avoid over-use of antibiotics.

Presented in Scientific Seminar (CSCTR)

April 24-25,20223
Chicago, USA

Revivify Case Study of Blood Brain Barrier

REVIVIFY GEL ATTENUATES HUMAN BRAIN MICROVASCULAR ENDOTHELIAL CELLS (HBMEC) FROM HYPOXIA INDUCED DISRUPTION OF BLOOD BRAIN BARRIER (BBB) PERMEABILITY IN A IN VITRO MODEL

Syeda H. Afroze, PhD[1,2]; Ahmed F. Pantho BS[1,2]; Liaquat Hossain, M.Pharm[3]; Thomas J. Kuehl, PhD[1,2]; M. Nasir Uddin, PhD, FAHA[1,2,3,5*]

[1]Orion Institute for Translational Medicine and [2]Emergent Biotechnologies LLC, Temple, Texas 76504; [3**]Advance Pharmaceutical Inc., 895 Waverly Ave, Holtsville, NY 11742; [4]Texas A&M University School of Medicine, Texas

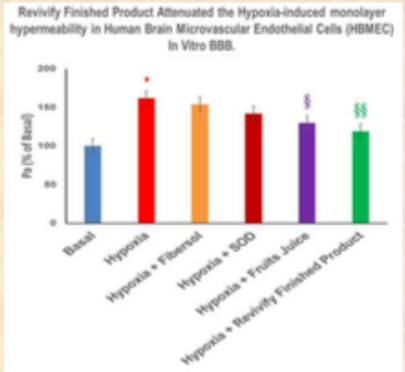
*** Advance Pharmaceutical Inc. has patent for the REVIVIFY GEL***

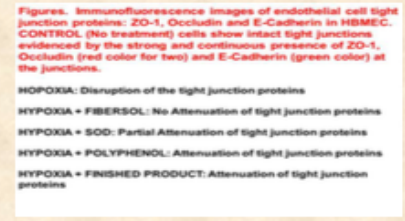
BACKGROUND AND OBJECTIVE

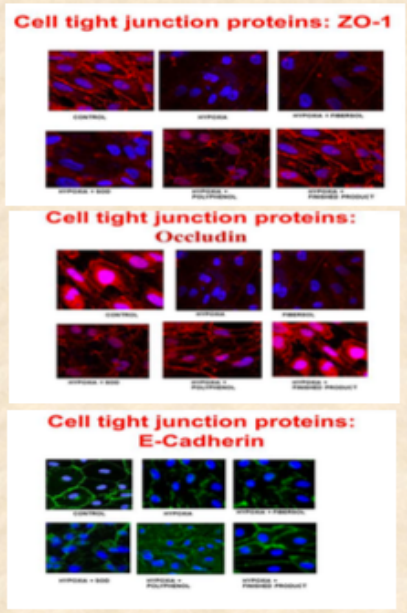
Accumulating data suggests that oxidative stress and mitochondrial damage are involved in the pathogenesis of neurodegenerative disorders including Parkinson Disease [PD], Multiple Sclerosis[MS], Alzheimer' s Disease[AD], and many others. Brain uses about 20% of oxygen consumption, thus high producer of reactive oxygen species [ROS]. Also, brain cell membrane composed of more unsaturated fatty acids [M UFA and PUFA], thus more prone to lipid auto-oxidation due to ROS. REVIVIFY GEL, addresses instant reduction of oxidative stress from multi-dimensional pathways and resulted an immediate effect induced by the disease symptoms. The purpose of the study is to evaluate whether revivify gel attenuates human brain microvascular endothelial cells (HBMEC) from oxidative damage. ***The objective of the study is to evaluate whether Revivify gel attenuates the hypoxia induced disruption of HBMEC Monolayer Permeability.***

STUDY DESIGN

- Human brain microvascular endothelial cells (HBMEC) were seeded on 6 well plates in hypoxia condition. Prior to treatment, cells were incubated in serum free media for 24 hours. Cells will be treated with following agents: 1. Superoxide Dismutase only; 2. Prebiotic fiber only; 3. Fruit juice only; 4. superoxide Dismutase + Prebiotic fiber + Fruit juice (Combination); 5. Negative Control: Cell culture media for 48 hours.
- The monolayer permeability study was performed by a method described previously in hypoxia condition and pretreatment with revivify. HBMEC were grown on poly-L-lysine glass chamber slides. The cells were treated with the treatment conditions mentioned above. After hypoxia condition, cells were washed in PBS and fixed in 4% paraformaldehyde.
- After repeated washing steps, Triton X-100 treatment, and blocking for nonspecific binding, cells were incubated with a primary antibody for ZO-1, Occludin, Claudin-1 or E-Cadherin (Invitrogen) at 4° C overnight. Cells were washed in PBS and exposed to an FITC-conjugated secondary antibody for 1 h. After repeated washing steps, the cells were mounted in an antifade mounting medium that contained the nuclear stain DAPI (Invitrogen, Eugene, OR). Cells were observed under an Olympus FluoView FV 300 confocal laser-scanning microscope with appropriate filters for visualizing FITC and DAPI.







RESULTS

- HBMEC monolayer permeability was significantly increased in hypoxic condition. Revivify significantly attenuated the hyperpermeability induced by hypoxia.
- Revivify Finished Product Attenuated the Hypoxia-induced monolayer hypermeability in Human Brain Microvascular Endothelial Cells (HBMEC) In Vitro BBB.
- Immunofluorescence images of endothelial cell tight junction proteins: ZO-1, Occludin and E-Cadherin in HBMEC.
- CONTROL (No treatment) cells show intact tight junctions evidenced by the strong and continuous presence of ZO-1, Occludin and E-Cadherin at the junctions. HOPOXIA: Disruption of the tight junction proteins; HYPOXIA + FIBERSOL: No Attenuation of tight junction proteins; HYPOXIA + SOD: Partial Attenuation of tight junction proteins; HYPOXIA + POLYPHENOL: Attenuation of tight junction proteins; HYPOXIA + FINISHED PRODUCT: Attenuation of tight junction proteins.

CONCLUSIONS/PERSPECTIVES:

- REVIVIFY GEL; Pertaining to PD, it can improve motor activity, muscle stiffness, and overall body response with less exhaustion.
- For AD, it may improve the memory response, coordination with surrounding atmosphere. As others, it can improve focus, concentration, and alertness, which may be beneficial to people with learning disability, people with autistic problem, people with mental exhaustion, and can benefit to the people who needs study focus, or job associated with high concentration.
- The pre-biotic soluble corn fiber encompasses the healthy gut-echo-system where the modulation of beneficiary microbes influences various positive neurological effect. The gut-brain bi-directional axis can relate instant neuro-responses.
- Thus, REVIVIFY PRO-VITALITY GEL is unique and exert prompt responses towards neuro disease induced symptoms in PD, MS, AD and other conditions.

Presented in Scientific Seminar (CSCTR)

April 24-25,20223 Chicago, USA

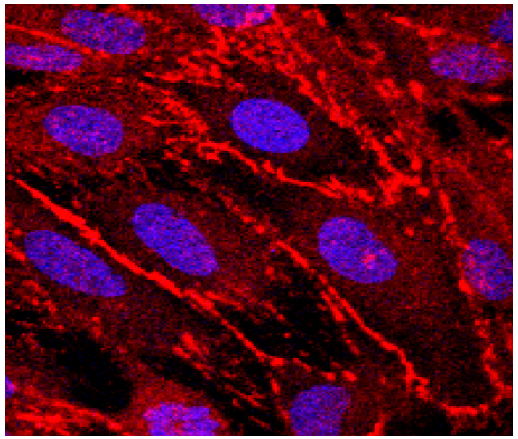
Blood Brain Barrier

Cell tight junction proteins: ZO-1

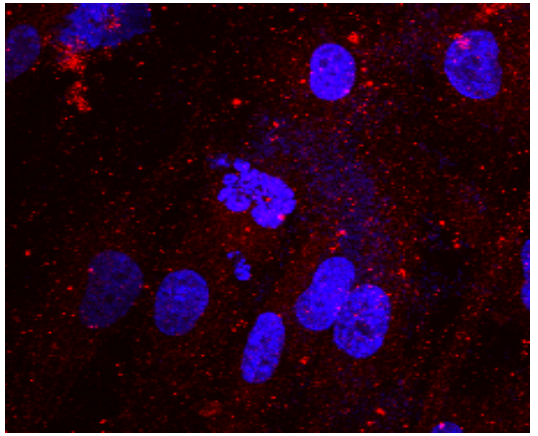
Revivify restores BBB tight junction Z0-1 if disrupted.

See the Control and Finished Product image (HYPOXIA)

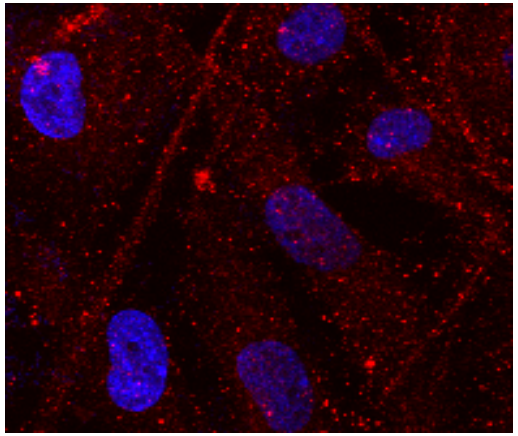
It's imaging !!!!!



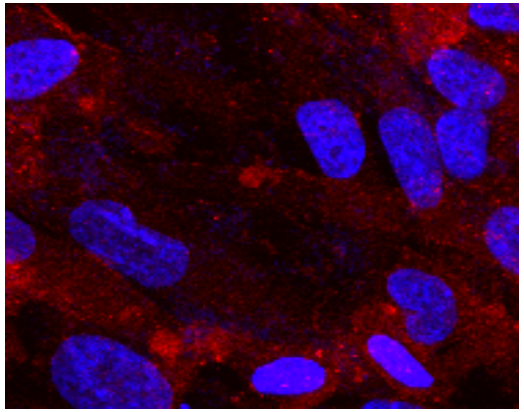
CONTROL



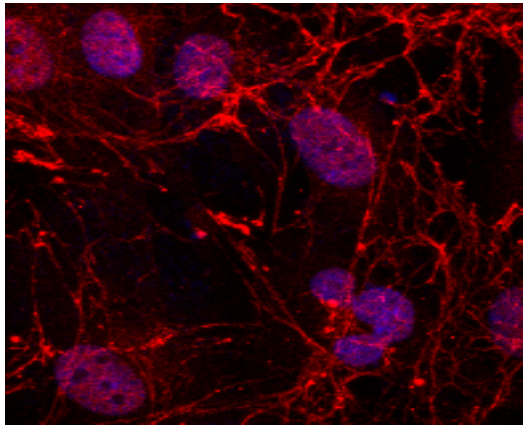
HYPOXIA



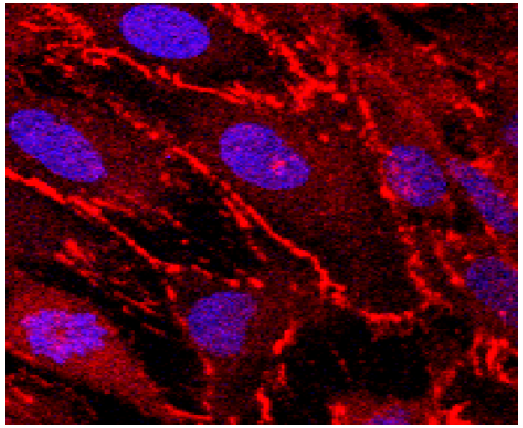
HYPOXIA + FIBERSOL



HYPOXIA + SOD



HYPOXIA + POLYPHENOL



HYPOXIA + FINISHED PRODUCT

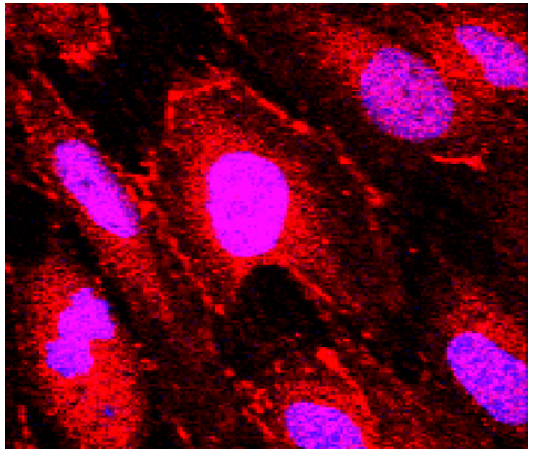
Blood Brain Barrier

Cell tight junction proteins: Occludin

Revivify restores BBB tight junction Occludin if disrupted.

See the Control and Finished Product image (HYPOXIA)

It's imaging !!!!!



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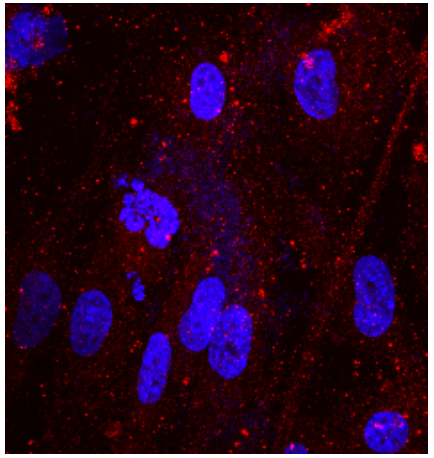
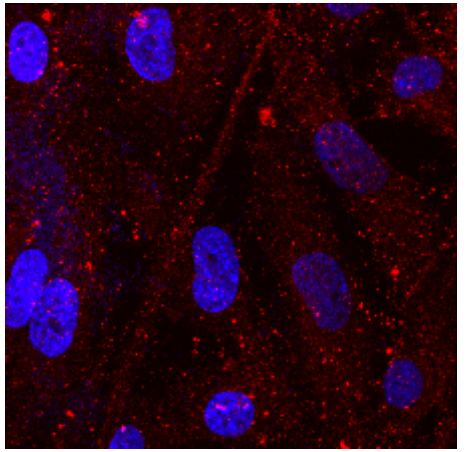
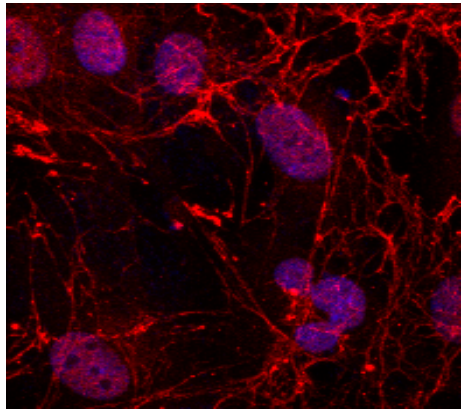


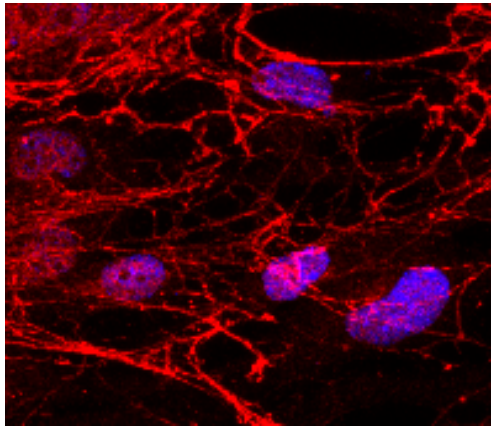
HYPOXIA



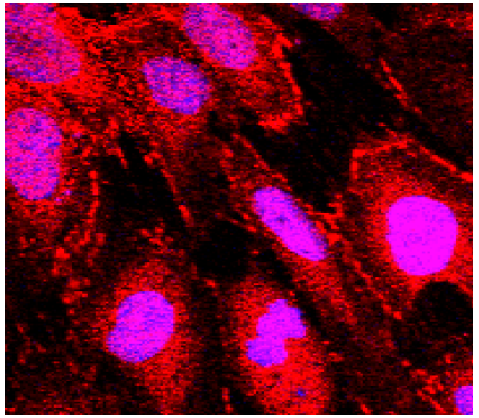
FIBERSOL



HYPOXIA + SOD



HYPOXIA + POLYPHENOL



HYPOXIA + FINISHED PRODUCT

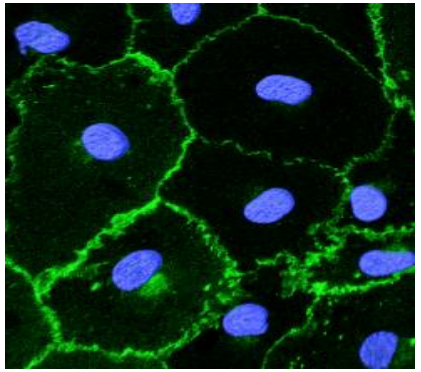
Blood Brain Barrier

Cell tight junction proteins: E-Cadherin

Revivify restores BBB tight junction E-Cadherin if disrupted.

See the Control and Finished Product image (HYPOXIA)

It's imaging !!!!!



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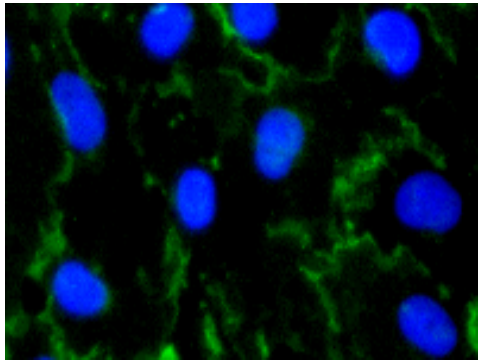
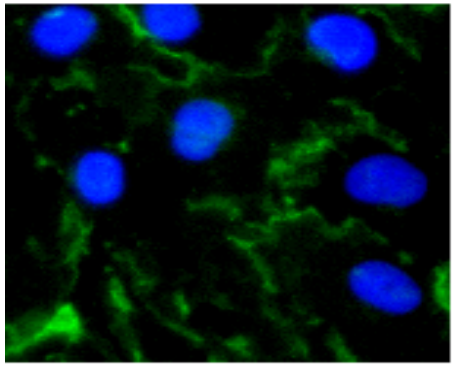
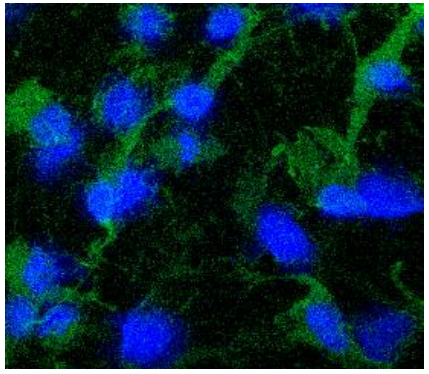


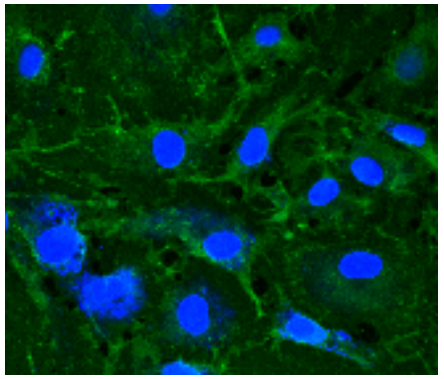
HYPOXIA



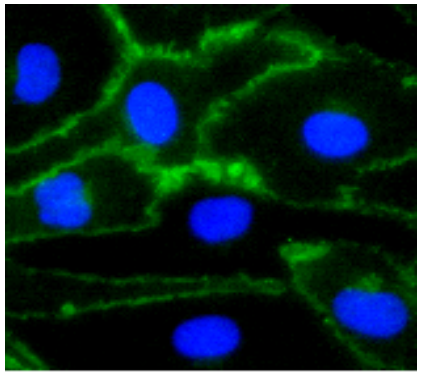
HYPOXIA + FIBERSOL



HYPOXIA + SOD



HYPOXIA + POLYPHENOL



HYPOXIA + FINISHED PRODUCT