

Scientific Research on HMD™

HMD™, a **100%** natural heavy metal detox product has undergone extensive testing and scientific research – it is one of the few natural chelation products with such extensive research.

HMD™ is the result of a three-year long research that cost over \$1 Million. During those 3 years over 25 different natural products and combinations were scientifically tested using double blind, placebo controlled trials with 350 people and the only combination that managed to eliminate the most toxic heavy metals was HMD™ (Heavy Metal Detox). It is a truly natural toxic metal detox supplement.

SCIENTIFIC RESEARCH ON HMD™: THE GOLD STANDARD OF RESEARCH

The scientific research on HMD™ followed rigorous scientific protocol known as the “Gold Standard” of scientific testing: The “double-blind, placebo-controlled” protocol.

ABSTRACT

Introduction

There are a number of reports in the literature that discuss the heavy metal chelation properties of various natural substances[1-7]. Many of these have never been tested systematically using the “gold standard” methodology of the double-blind, placebo controlled trial.

Our research group were commissioned by a Russian metal foundry to examine the chelating effects of these natural substances, and attempt to identify a natural compound that would be effective at chelating a number of toxic metals from Russian metal foundry workers.

Design, Methods and Analysis

The scientific research on HMD™ consisted of a randomised, double-blind, placebo controlled trial with 350 metal foundry workers using a number of natural

substances purported in the literature to chelate heavy metals. Adult males aged 18 – 60 years old were randomly allocated to various groups taking a number of natural substances to determine their chelating potential for heavy metals. Each of these groups consisted of a control as well as an experimental group. ICP-MS pre- and post- analysis of urine, blood and hair samples was carried out over a 3-year period.

Discussion

This trial was designed to find the best natural toxic metal detox compound that could safely be used for chelating men working in environments that are toxic with heavy metals. If successful, this researched natural compound may play a significant role in the treatment, prevention and general well-being of people working in toxic environments such as metal foundries and other industries with toxic by-products in the environment.

Key Words: Heavy metals, toxic metals, natural oral heavy metal chelators, metal detox, mercury detox, heavy metal detox, toxic metal detoxification.

1. Introduction

Environmental pollution is very prominent in point-source areas such as mining, foundries and smelters, and other metal-based industrial operations[8].

1.1 Background and rationale

The main rationale and objective of this research was to identify effective natural heavy metal chelators that can be safely used by people that have varying degrees of heavy metal toxicity. To date, the research in this field of natural chelators has been methodologically weak and scant.

1.2 Objectives

The scientific research on HMD™ lasted three years where a number of natural substances were tested using double blind, placebo controlled trials. Over this period, natural compounds were identified that could safely and effectively chelate heavy metals from people that had accumulated high levels of these metals from their working environment.

1.3 Trial Design

Pre- and post urine and faeces tests were conducted on all these natural compounds using ICP-MS spectrometry[9].

2. Methods and Analysis

2.1 Study setting

The scientific research on HMD™ involved the participation of a group of medical doctors from a local Russian hospital who also formed the ethics committee. There were also a group of analytical chemists from the plant, a group of nurses, translators, secretaries, administrators and other experts in analytical chemistry that took part in the research over the three-year period.

2.2 Subjects

All subject participation was on a voluntary basis, each person signed a Consent Form, which had clear criteria for participation in the research. There was a sample of 347 men, aged between 18 – 60 years old that took part in all the trials.

2.3 Natural Substances Analysed

In total, there were 14 different natural substances and combinations of these that were tested. The natural substances tested were as follows:

- Chlorella pyrenoidosa
- Homeopathic Chlorella
- Cilantro tincture
- Chlorella Growth Factor
- Homeopathic DMSA
- PleoChelate (a German homeopathic)
- Homeopathic Chlorella + Chlorella Growth Factor (CGF) + Cilantro
- Homeopathic Chlorella + Chlorella Growth Factor (CGF) + Cilantro + PleoChelate
- Homeopathic Chlorella + Chlorella Growth Factor (CGF) + Cilantro + PleoChelate + Homeopathic DMSA
- Cilantro paste (not tincture) with vitamin C

- Cilantro paste, vitamin C and homeopathic lead
- Cilantro paste, vitamin C and homeopathic arsenic
- Cilantro paste, vitamin C and homeopathic cadmium
- Cilantro paste, vitamin C and homeopathic antimony

3. The Research Design

3.1 Initial Screening for Toxicity

In order to initially determine the levels of toxicity and the specific heavy metals that were common to the metal foundry, a convenient and cost-effective screening method was used known as Tissue Hair Mineral Analysis (THMA). [10] Of the total number of over 2,000 employees from the metallurgical smelting plants (most toxic areas), a random sample of 374 (18.7%) were chosen to undergo a Tissue Hair Mineral Analysis (THMA) [11] at a reputable laboratory in the USA.

3.2 Samples tested

Pubic hair was chosen as this is less exposed to environmental pollution from the plant and was sent to the laboratory and analysed for 8 different types of heavy metals, namely Antimony (Sb), Uranium (U), Arsenic (As), Beryllium (Be), Mercury (Hg), Cadmium (Cd), Lead (Pb) and Aluminium (Al). There were also a further 15 minerals analysed.

The four main metals that were common to all the workers were antimony (Sb), arsenic (As), cadmium (Cd) and lead (Pb), which were at very high levels. These metals were the ones chosen for further study, as they were the main by-products of the metal foundry's manufacturing process. Mercury was not really an issue as Russians do not use amalgam fillings, but gold alloys, and seldom eat fish.

3.3 Research Design

The research design was a double blind, placebo-controlled study – neither did participants, researchers nor the analytical chemists doing the spectrometry analysis

know which treatment protocol each participant belonged to. The coding was stored in the coordinators safe until it was time to interpret the statistical data.

4. The Research Method

4.1 Testing Methods

A baseline pre-urine sample was collected over 24 hours in a 2-litre plastic container designed for such urine collection. After mixing thoroughly, a 50 ml sample of this urine was collected and sent to certified laboratories in the USA for testing using ICP-MS analysis. The subject was then given another 2 litre container and began taking the natural substance that was being tested. This they took three times daily in the dosages stated below, while continuing to collect all urine over 24 hours. A further post-sample was sent to the same laboratory and the levels of the pre- and post-urine samples were compared.

In order to determine the route of elimination (biliary vs urinary), the same was done for each subject but pre- and post-faeces samples were collected and sent to the same laboratory – this was done over 48 hours while taking the natural substance in question, due to the slower transit time. Pre and post levels of faeces samples were also compared and statistically analysed.

Immediately after the trials, blood samples were taken from all the participants and analysed for a number of liver and kidney function tests to determine whether the detoxification organs were being stressed with the natural chelating compounds used.

All the participants were given time off work during the trials as it was important for them not to continue being exposed to the heavy metals during the pre-post testing period.

There were however two workers in the sample who continued working during the trial due to work pressures.

After the baseline urine samples were collected for 24 hours as well as the faeces, as soon as the need arose, each participant was given their precise detoxification remedy, which they began to take three times per day (see Treatment Protocols below).

All participants took certified metal-free, high-grade cell-decimated Chlorella tablets[12-16] (500 mg x 3 daily), in order to prevent the reabsorption of metals

from the gut due to the high levels of toxic metals that were measured in these workers. This was an added precaution to prevent any adverse reactions.

The placebo group also took this chlorella. The results indicated that the chlorella by itself was not chelating metals per se. High impact jet-spray drying that pulverizes the algae wall breaks the Chlorella cell walls, making it into cell-decimated chlorella. [17] The pulverizing helps to increase absorption of its vital nutrients.

Furthermore, all the homeopathic homaccords used in the study were prepared by a reputable homeopathic pharmacy in the UK.

4.2 Statistical Analysis

Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS) [18]. A biostatistician was responsible for running all the analyses using ANOVA, Pearson's correlation coefficients and other descriptive statistics.

4.3 Natural Substances Trials

Over the three years of the scientific research on HMD™ there were a number of trials conducted using 14 different natural substances and combinations of these, that the literature purported as being effective chelators. All the 374 workers that were initially screened using the THMA took part in at least one of these trials. The various substances and their combinations tested in the trials consisted of the following – the dosages of each are mentioned in the results section – 5.1 below:

1. Placebo or Control Group – taking only water with a little cognac added to mask the taste.
2. Homeopathic Chlorella Group – this consisted of a homaccord of homeopathic chlorella ranging from 6c to 30c.
3. Cilantro Group[19] – taking Cilantro or Coriandrum sativum leaf tincture.
4. Chlorella Growth Factor, taken alone.
5. Homeopathic DMSA, using a homaccord of homeopathic DMSA of 6c to 30c as a tincture.

6. PleoChelate[20] – a ready-made remedy prepared by Sanum-Kehlbeck, GmbH & Co, purported to chelate metals. It consists of minerals in homeopathic dosages of D2 in water.
7. Homeopathic cell-decimated Chlorella + Chlorella Growth Factor (CGF) + Cilantro in the form of organic coriander sativum leaf tincture.
8. Homeopathic cell-decimated Chlorella + Chlorella Growth Factor (CGF) + Cilantro in the form of organic coriander sativum leaf tincture + PleoChelate.
9. Homeopathic cell-decimated Chlorella + Chlorella Growth Factor (CGF) + Cilantro in the form of organic coriander sativum leaf tincture + PleoChelate + Homeopathic DMSA (homaccord 6c, 12c and 30c).
10. Cilantro and vitamin C[21,22] together. Cilantro paste (see 5.1 below) was taken at a dosage of one tablespoon daily with 2 grams of vitamin C x 3 times daily.
11. Cilantro, vitamin C and homeopathic lead, arsenic, cadmium and antimony (homaccords of 6c to 30c). The homeopathics were taken separately as individual homaccords such as plumbum (60 drops x 3 daily) concomitantly with the Cilantro paste (See 5.1 below) and the vitamin C (dosage of 5 grams by 2 times daily).

5. Results

5.1 Summary of the Results of the Natural Compounds Tested

The data presented in Table 1 (N=220) shows the success (√) or failure (x) of these trials using the above-named natural substances. Success meant that there was an increase in the specific metal in the post-testing, compared to baseline for the group being tested as a whole. To be considered a “successful” remedy (√) it must have shown the ability to eliminate metals in ALL the people involved in the particular trial.

Natural Compounds Used	P	P	C	C	S	S	A	A
	U	F	U	F	U	F	U	F
Placebo or Control Group	X	X	X	X	X	X	X	X
Chlorella Growth Factor	X	X	X	√	X	X	X	X

PleoChelate	X	X	X	X	X	X	√	X
Homeopathic DMSA	X	X	X	√	X	X	X	X
Cilantro Tincture	X	X	X	X	X	X	X	X
Homeopathic Chlorella	X	X	X	X	X	X	X	X
Homeopathic Chlorella + CGF + Cilantro (LMD™)	√	√	√	√	√	√	√	√
Homeopathic Chlorella + CGF + Cilantro	X	X	X	√	X	X	X	√
Homeopathic Chlorella + CGF + Cilantro + PleoChelate	X	X	X	X	X	X	X	X
Cilantro Paste + Vitamin C	X	√	X	√	X	X	X	X
Cilantro + Vitamin C + Homeopathic Plumbum	√	X	X	X	X	X	X	X
Cilantro + Vitamin C + Homeopathic Arsenicum	X	X	X	X	X	X	X	X
Cilantro + Vitamin C + Homeopathic Antimonium	X	X	X	X	X	X	X	X
Cilantro + Vitamin C + Homeopathic Cadmium	X	X	√	X	X	X	X	X

Table 1 – The Effectiveness of Different Natural Compounds Tested (N=220)

U = Urine; F = Faeces

The results of the various trials over the 3-year period can be summarized below – there was a total of 220 people that took place in these trials:

1. Chlorella Growth Factor[23] by itself was only effective at eliminating cadmium in faeces at a dosage of 40 drops x 3 daily. The post-faeces sample had 150% more cadmium than the baseline sample.

2. PleoChelate, a homeopathic mineral compound produced by Sanum-Kehlbeck in Germany that is used by many Biological Medicine specialists was effective at chelating arsenic in urine only. The dosage was 60 drops x 3 daily and there was an average of about 500% increase of arsenic in the post-urine test, compared to baseline.
3. Homeopathic DMSA, used at 50 drops x 3 daily, showed elimination of cadmium in faeces (400% increase) and arsenic in urine (1,200% increase).
4. Cilantro Tincture (60 drops x 3 times daily). This was the only natural substance used that showed a strong percentage **decrease** of metals in the post-urine and faeces, compared to baseline. The levels were consistently around 90 – 100% decrease in metals for all the metals tested. This consistency and repetitiveness in results is indicative that the Cilantro tincture is probably pushing toxic metals back into the cell. One hypothesis to explain this phenomenon would be that when Cilantro is used alone it is probably removing metals intracellularly into the mesenchyme, but as there are no other chelators to attach to the metals in the mesenchyme, through the law of osmosis (higher concentration to lower concentration) the metals are being reabsorbed back into the cell. The body is therefore withholding more metals than the baseline or pre-provocation sample. This “osmotic backlash” could prove detrimental for a severely toxic person with chronic disease, particularly neurological diseases.
5. Homeopathic Chlorella at potencies of 6c to 30c did not eliminate any of the metals in the post-provocation test.
6. Cilantro, vitamin C and homeopathic lead, arsenic, cadmium and antimony (homaccords of each homeopathic from 6c to 30c). Each homeopathic would chelate and eliminate the metal that represented it, so plumbum would chelate lead, arsenic homeopathic would chelate arsenic and so forth.
7. Homeopathic Chlorella Homaccord, CGF and Cilantro compound that is now known as HMD™ showed the most promise as it eliminated ALL the metals tested, both through the urinary as well as the biliary route. The results for this compound are shown in Table 2 – both for the urine and for the faeces samples. The elimination of the four metals is compared to the placebo trials. Once it was established that the homeopathic Chlorella + Cilantro + CGF was the most promising compound, this was further tested amongst 84 foundry workers to determine the exact percentage of each substance in the compound, as well as the dose that was most effective for each of the metals tested.

5.2 Detailed Results of the HMD™ Compound Trials

The only compound that was effective at mobilizing and eliminating all metals was HMD™, a proprietary synergistic blend of three natural ingredients in liquid form that are taken orally:

- Chlorella Growth Factor (CGF)
- Organic Coriandrum sativum leaf tincture
- Homaccord of cell-decimated, energised Chlorella pyrenoidosa

Table 2 shows the summarised results of a number of different trials over a three-year period. The mean percentage increase of heavy metals after provocation with the HMD™ is compared with the elimination with placebo (a highly diluted chlorella tincture). The post-provocation urine samples were collected after 24 hours and the post-provocation faeces samples after 48 hours due to the slower transit time – “U” denotes the Urine samples and “F” the Faeces samples.

Apart from the 4 initial heavy metals tested, other metals such as Nickel (Ni), Bismuth (Bi), Uranium (U) and Mercury (Hg) were also tested in these trials, but only using pre- and post urine samples (not faeces).

HEAVY METALS TESTED	Mean % increa	Mean % incre	Number in sampl	Results on statis	Degrees of Free	Level of Signifi
ARSENIC-U	7,409%	11.16%	84	–	–	p<0.0005
ARSENIC-F	59.83%	61.13%	84	–	–	p<0.05
LEAD-U	466.47%	-16.95%	84	–	–	p<0.0005
LEAD-F	142.16%	-6.012%	84	–	–	p<0.05
CADMIUM-U	67%	-27.91%	84	–	–	p<0.05
CADMIUM-F	43.13%	22.62%	84	–	–	p<0.05

ANTIMONIO U	59.16%	14.91%	84	–	–	p<0.05
ANTIMONIO F	50%	6.61%	84	–	–	p<0.05
NICKEL- U	80%	5.52%	77	t=1.42	76	p<0.15
BISMUTO U	564%	7.95%	19	t=2.10	18	p<0.04
URANIO U	707%	18.23%	76	t=1.01	75	p<0.03
MERCURIO U	448%	0.799%	56	t=5.39	55	p<0.00

**Table 2 Test Results of the Natural Compound HMD™ – number of trials over a 3-year period
U = Urine; F = Faeces**

All post sample measures were statistically significantly higher than the baseline measures for all metals, indicating that HMD™ was eliminating all the metals tested which included As, Pb, Cd, Sb, Ni, Bi, U and Hg. Table 2 also shows that the predominant route of excretion for all metals is via the urine, giving the added advantage of decreasing the possibility of re-absorption through the bowel.

Interestingly, when these individual components were tested separately, there was negligible chelating activity, but when they were combined together there was a **powerful synergy** that helped chelate and eliminate all the metals tested through the urinary route as opposed to the biliary route. This has added advantages as reabsorption of metals from the gut are prevented.

5.3 Testing for Mercury

Subsequent to the initial research, there was a separate trial for mercury alone that was conducted using 56 subjects. All urine analyses were conducted on a mercury-dedicated

PSA Atomic Fluorescence Spectrometer measuring at levels of parts per billion. The 56 subjects participated in a 24-hour provocation trial using HMD™ at dosages of 40, 50 and 60 drops throughout the day. Initial six hour baseline pre-

urine samples were collected, along with a 24-hour collection for the post-urine sample.

The results (Table 3) showed a 448 per cent increase in eliminated mercury in the post-test after 24 hour provocation with HMD™ in the 56 people tested, compared to the baseline sample. Moreover, there was a negligible increase in mercury in the control group that was given only diluted powdered chlorella in a little alcohol. There was a statistically significant difference between the percentage increase of mercury in the post-sample compared to the controls (t=5.395, df=55, p<.0005).

Provocation with HMD™	Mercury Elimination in Urine
Pre-test	12.62%
Post-test	448%

Table 3. Results of the HMD™ Testing in Urine for Mercury (N=56)

5.4 Liver and Kidney Serum Test Results During the HMD™ Pre-Post Provocation

Trials

During the HMD™ research trials, blood samples were taken from a small group of people (N=16) to determine the effects of the HMD™ provocation on liver and kidney function tests. The average percentage increase was calculated from the pre-and post sample figures of these biochemical tests.

The main components tested were liver function (bilirubin, Alanine Aminotransferase (ALT), Aspartate Aminotransferase (AST), and kidney function (urea and creatinine).

Table 4 shows the percentage increase of these biochemical parameters in the post-serum samples, compared to the baseline serum sample before HMD™ was taken. Overall, there are small average increases in creatinine, bilirubin, urea, ALT and AST, but nothing that surpassed pathological parameters. The

minimum and maximum levels are also shown, but generally the higher levels were present in one individual only.

LIVER & KIDNEY FUNCTION TEST RESULTS DURING HMD™ PROVOCATION					
	CREATININE	BILIRUBIN	UREA	ALT	AST
% INCREASE	11.95	3.15	25.35	16.74	5.25
MINIMUM	0	0	0	0	0
MAXIMUM	42.80	20.19	53.73	75.00	38.46
N=	16	16	16	16	16

Table 4. Details of the Liver and Kidney Function Tests

It can be concluded from these tests that HMD™ is a “gentle chelator” that does not adversely affect liver and kidney function tests and is tolerable by most adults.

Conclusions

This brief presentation of this three year research study to determine a cost-effective and safe metal chelator that can be used on a mass scale in metal foundries, as well as by the general population, has clearly shown that HMD™ has proven to be an effective natural chelator for As, Pb, Cd, Sb, Ni, Bi, U and Hg in all the trials conducted.

References

1. Karnika AH, Reddy RS, Saradhi SV, Singh J. Biosorption (2007): An eco-friendly alternative for heavy metal removal. *Afr J Biotechnol.* 6:292–31.
2. Shim JA, Son YA, Park JM, Kim MK (2009). Effect of Chlorella intake on Cadmium metabolism in rats. *Nutr Res Pract.* Spring;3(1):15-22. doi: 10.4162/nrp.2009.3.1.15. Epub 2009 Mar 31

3. Queiroz ML, Rodrigues AP, Bincoletto C, Figueirêdo CA, Malacrida S (2003). Protective effects of *Chlorella vulgaris* in lead-exposed mice infected with *Listeria monocytogenes*. [Int Immunopharmacol](#). Jun;3(6):889-900.
4. K. Deldar, E. Nazemi, M. Balali Mood, SA. Emami, AH. MohammadPour, M. Tafaghodi et al (2008). Effect of *Coriandrum sativum* L. extract on lead excretion in 3-7 year old children. *J Birjand Univ Med Sci*. 15 (3) :11-19. URL: <http://journal.bums.ac.ir/article-1-337-en.html>
5. Uchikawa T, Kumamoto Y, Maruyama I, Kumamoto S, Ando Y, Yasutake A (2011). Enhanced elimination of tissue methylmercury in *Parachlorella beijerinckii*-fed mice. *J Toxicol Sci*. Jan; 36(1):121-6. [[PubMed](#)]
6. Abascal K, Yarnell E (2012). Cilantro-culinary herb or miracle medicinal plant? *Alternative and Complementary Therapies*. 18:259–264. [[Ref list](#)]
7. Aga M, Iwaki K, Ueda Y, Ushio S, Masaki N, Fukuda S, Kimoto T, Ikeda M, Kurimoto M (2001). Preventive effect of *Coriandrum sativum* (Chinese parsley) on localized lead deposition in ICR mice. *J Ethnopharmacol*. Oct; 77(2-3):203-8. [[PubMed](#)]
8. Fergusson JE, editor (1990). *The Heavy Elements: Chemistry, Environmental Impact and Health Effects*. Oxford: Pergamon Press; doi: [10.1007/978-3-7643-8340-4_6](https://doi.org/10.1007/978-3-7643-8340-4_6)
9. Dean, J.R (1997). *Atomic Absorption and Plasma Spectrometry* (2nd edition). John Wiley, UK.
10. Passwater, RA. And Cranton, EM (1983). *Trace elements, Hair Analysis and Nutrition*. Keats Publishing, Inc. New Canan.
11. *Toxic Trace Metals in Mammalian and Human Hair and Nails*, EPA-600/4-049, August 1979, U.S. Environmental Protection Agency, Research and Development. This is a review of 400 studies on hair analysis and toxic metals.
12. Janusz Pempkowiak and Alicja Kosakowska (1998). Accumulation of cadmium by green algae *Chlorella vulgaris* in the presence of marine humic substances. *Environment International* Volume 24, Issues 5-6, July-August, Pages 583-588.
13. Akhtara, NJ. Iqbalb and M. Iqbal (2004). Removal and recovery of nickel(II) from aqueous solution by loofa sponge-immobilized biomass of *Chlorella sorokiniana*: characterization studies. *Journal of Hazardous Materials* Volume 108, Issue 1-2, 30 April Pages 85-94.
14. Beceiro-González, E*, Taboada-de la Calzada, E. Alonso-Rodríguez, P. López-Mahía, S. Muniategui-Lorenzo and D. Prada-Rodríguez (2000). Interaction between metallic species and biological substrates: approximation to possible interaction mechanisms between the alga

- Chlorella vulgaris* and arsenic(III). *TrAC Trends in Analytical Chemistry*. Volume 19, Issue 8, August, Pages 475-480.
15. Morrison, GMP and Florence, TM (1988). Comparison of physicochemical speciation procedures with metal toxicity to *Chlorella pyrenoidosa*. *Analytica Chimica Acta*, Volume 209, Pages 97-109.
 16. Rai, LC., Gaur, JP., and Kumar, HD (1981). Protective effects of certain environmental factors on the toxicity of zinc, mercury, and methylmercury to *Chlorella vulgaris* *Environmental Research*, Volume 25, Issue 2, August, Pages 250-259.
 17. Mitsuda, H., Nishikawa, Y., Higuchi, M., Nakajima, K., Kawai, F (1994). Effects of breaking of *Chlorella* cells on the digestibility of *Chlorella* protein. *J Jpn Soc Food Nutr*. 1977; 30: 93-98.
 18. Norusis, MJ. *SPSS Professional Statistics 6.1*, SPSS Inc., Chicago, USA.
 19. Omura Y; Beckman SL (1995). Role of mercury (Hg) in resistant infections & effective treatment of *Chlamydia trachomatis* and Herpes family viral infections (and potential treatment for cancer) by removing localized Hg deposits with Chinese parsley and delivering effective antibiotics using various drug uptake enhancement methods. *Acupunct Electrother Res*, Aug, 20:3-4, 195-229.
 20. Pleochelate – www.sanum.com
 21. Ariel H. B. Poliandria, Jimena P. Cabillaa, Miguel O. Velardeza, Cristian C. A. Bodoa and Beatriz H. Duvilanski (2003). Cadmium induces apoptosis in anterior pituitary cells that can be reversed by treatment with antioxidants. Volume 190, Issue 1, 1 July, Pages 17-24.
 22. Gurer, H., and Ercal, N (2000). Can antioxidants be beneficial in the treatment of lead poisoning? *Free Radical Biology and Medicine*, Volume 29, Issue 10, 15 November, Pages 927-945.
 23. Sano, T., Kumamoto, Y., Kamiya, N., Okuds, M. and Tanaka, Y (1988). Effects of lipophilic extracts of *Chlorella vulgaris* on alimentary hyperlipidemia in cholesterol fed rats. *Artery*, 15, 217.

The author

Dr Georgiou Georgiou, Ph.D.,N.D has been an active clinician for over 35 years, and Founder/Director of the Da Vinci Holistic Health Center which specializes in the treatment of chronic diseases. He is also the principal investigator of this HMD™ research as well as Director of the Da Vinci BioSciences Research Center, in Larnaca, Cyprus where he conducts laboratory and clinical research on heavy metals, novel ways of eradicating infectious diseases as well as Biophysics research.

If you would like to read the full research results simply download the articles below:

1. [Scientific Research on Natural Heavy Metal Chelators: Testing What Works](#) (Sept 2018). International Journal of Alternative and Complementary Medicine.
2. [Georgiou, G.J. Natural Heavy Metal Chelators: Do They Work? Explore! Vol. 16, No. 6, 2007.](#)
3. [Georgiou, G.J. A Natural Heavy Metal Chelator is Born: It's Use in Paediatric Cases, British Naturopathic Journal, Vol. 24, No. 1, 2007](#)