Keep Three-Hypers Away
Prevent Dementia

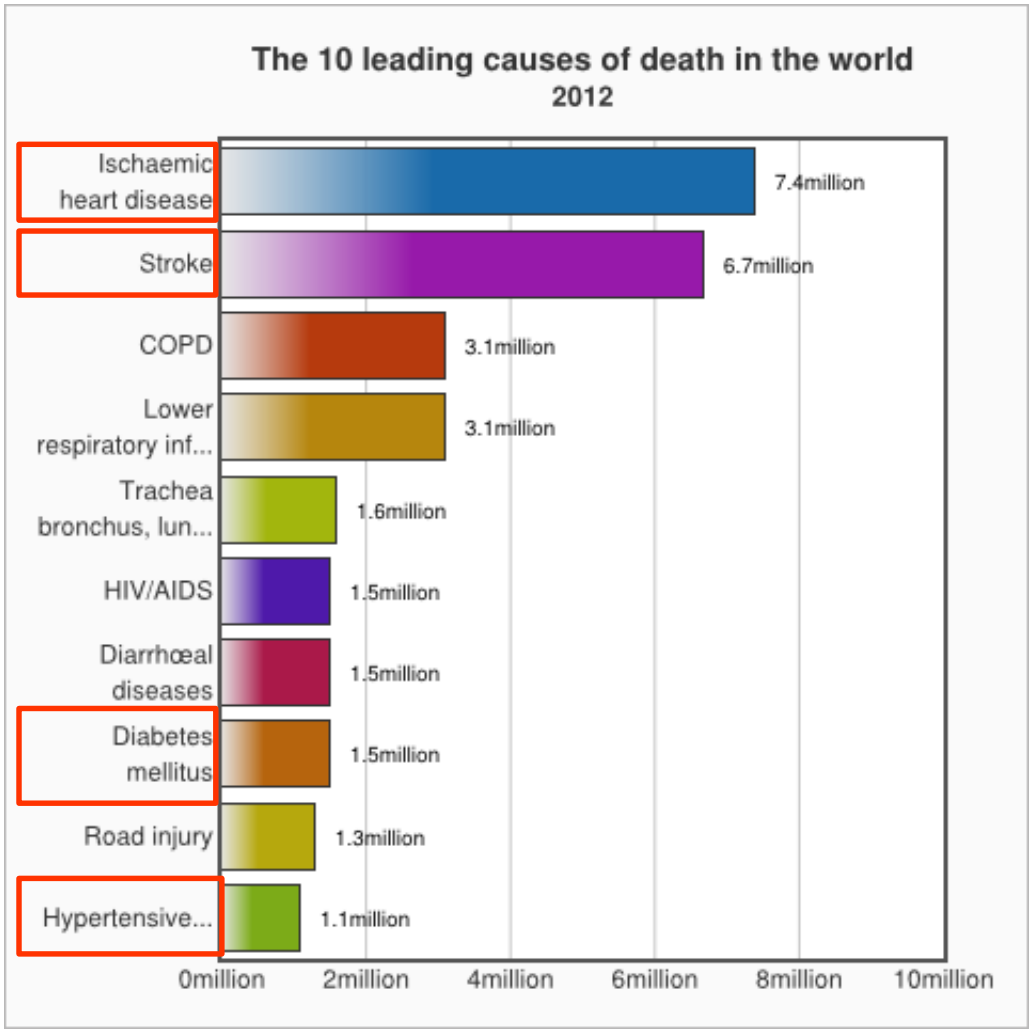
ANKASCIN® 568-R

with *Monascus purpureus* NTU 568

Ingredient Introduction

晨暉生物科技股份有限公司
SunWay Biotech Co., LTD.

Developments of chronic diseases



- Heart diseases, diabetes, and hypertension listed in the top 10 causes of death in the world, 2012.
- The risk factors of cancer and Alzheimer's Disease (AD)
- The focus of disease prevention for every nation

What is red yeast rice (RYR)

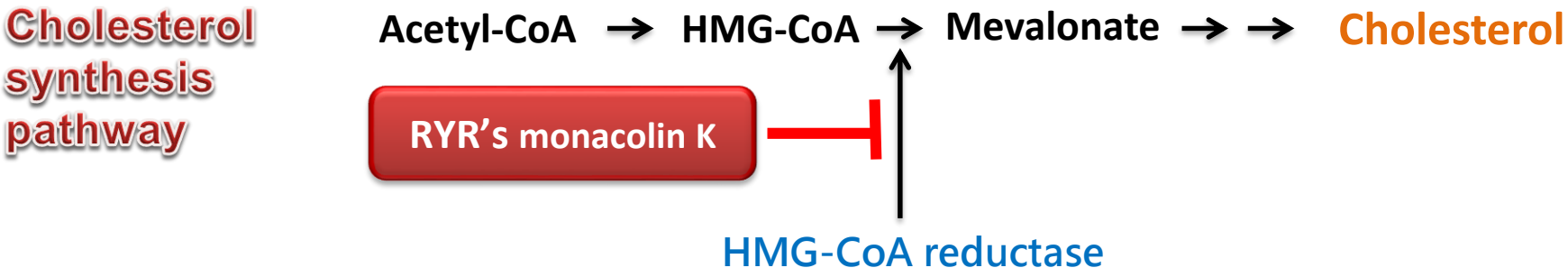
- The thousand-year-old traditional food ingredient
- A natural coloring with a special flavor to food
- The French researcher Van Tieghem created the genus "*Monascus*" in 1884.

(Active ingredients)

- Anti-oxidative
- Lowering cholesterol
- Lowering blood pressure
- Anti-inflammatory

What is red yeast rice (RYR)

- **Monacolin K**, one kind of statins, discovered by Japanese professor Endo in 1979
- **Inhibition of cholesterol synthesis**.



Monacolin K risks

- "Monacolin K" and "Lovastatin" are synonyms and prescription drugs
- Long-term consumption and abuse may cause cumulative side effects, such as **liver damage, rhabdomyolysis** and **acute kidney injury.**
- Medicines that can not be taken with Monacolin K:

Statins
Azoles
Warfarin

→ Confusion of usage and physical damage to consumers

ANKASCIN® 568-R with *Monascus purpureus* NTU 568 does not contain any Monacolin K, so it is safer and more effective!

Reports on monacolin K risks

- Risks of monacolin K reported by FDA

FDA Consumer Health Information
www.fda.gov/consumer

FDA Expands Advice on STATIN RISKS

If you're one of the millions of Americans who take statins to prevent heart disease, the Food and Drug Administration (FDA) has important new safety information on these cholesterol-lowering medications.

been reported by some statin users.

- People being treated with statins may have an increased risk of raised blood sugar levels and the development of Type 2 diabetes.
- Some medications interact with lovastatin (brand names include Mevacor) and can increase the risk of muscle damage.

reflect these new concerns. (These labels are not the sticker attached to a prescription drug bottle, but the package insert with details about a prescription medication, including side effects.)

The statins affected include:

- Altoprev (lovastatin extended-release)

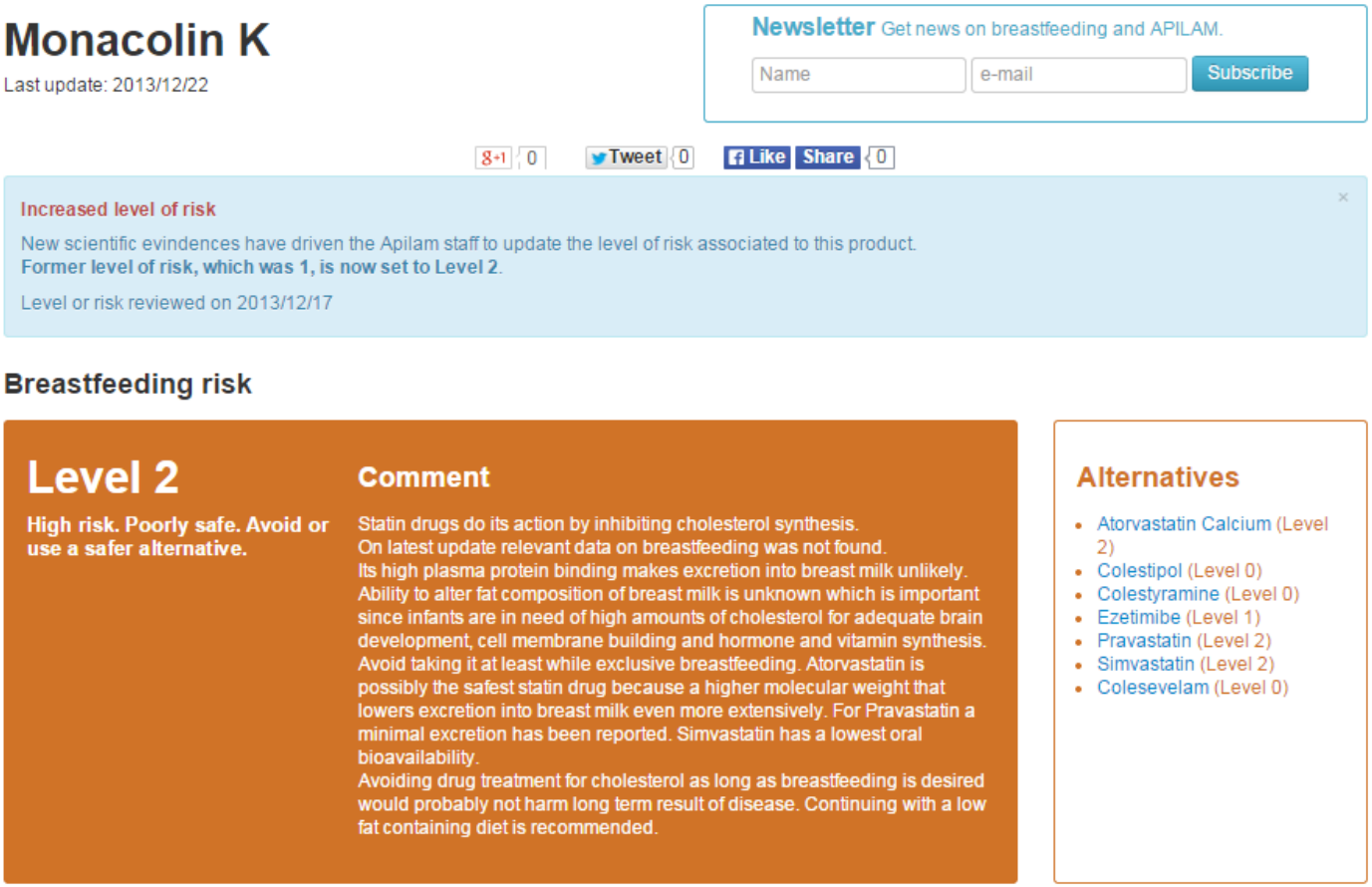
Reports on monacolin K risks

- Risks of drug interactions with monacolin K announced by FDA

New lovastatin label
Contraindicated with lovastatin: • Itraconazole • Ketoconazole • Posaconazole • Erythromycin • Clarithromycin • Telithromycin • HIV protease inhibitors • Boceprevir • Telaprevir • Nefazodone
Avoid with lovastatin: • Cyclosporine • Gemfibrozil
Do not exceed 20 mg lovastatin daily with: • Danazol • Diltiazem • Verapamil
Do not exceed 40 mg lovastatin daily with: • Amiodarone
Avoid large quantities of grapefruit juice (>1 quart daily)

Reports on monacolin K risks

- The breastfeeding risk reported by APILAM (Association for Promotion and Cultural and Scientific Research of Breastfeeding)



Monacolin K

Last update: 2013/12/22

Newsletter Get news on breastfeeding and APILAM.

Name | e-mail | Subscribe

g+1 0 | Tweet 0 | Like Share 0

Increased level of risk

New scientific evindences have driven the Apilam staff to update the level of risk associated to this product.
Former level of risk, which was 1, is now set to Level 2.

Level or risk reviewed on 2013/12/17

Breastfeeding risk

Level 2

High risk. Poorly safe. Avoid or use a safer alternative.

Comment

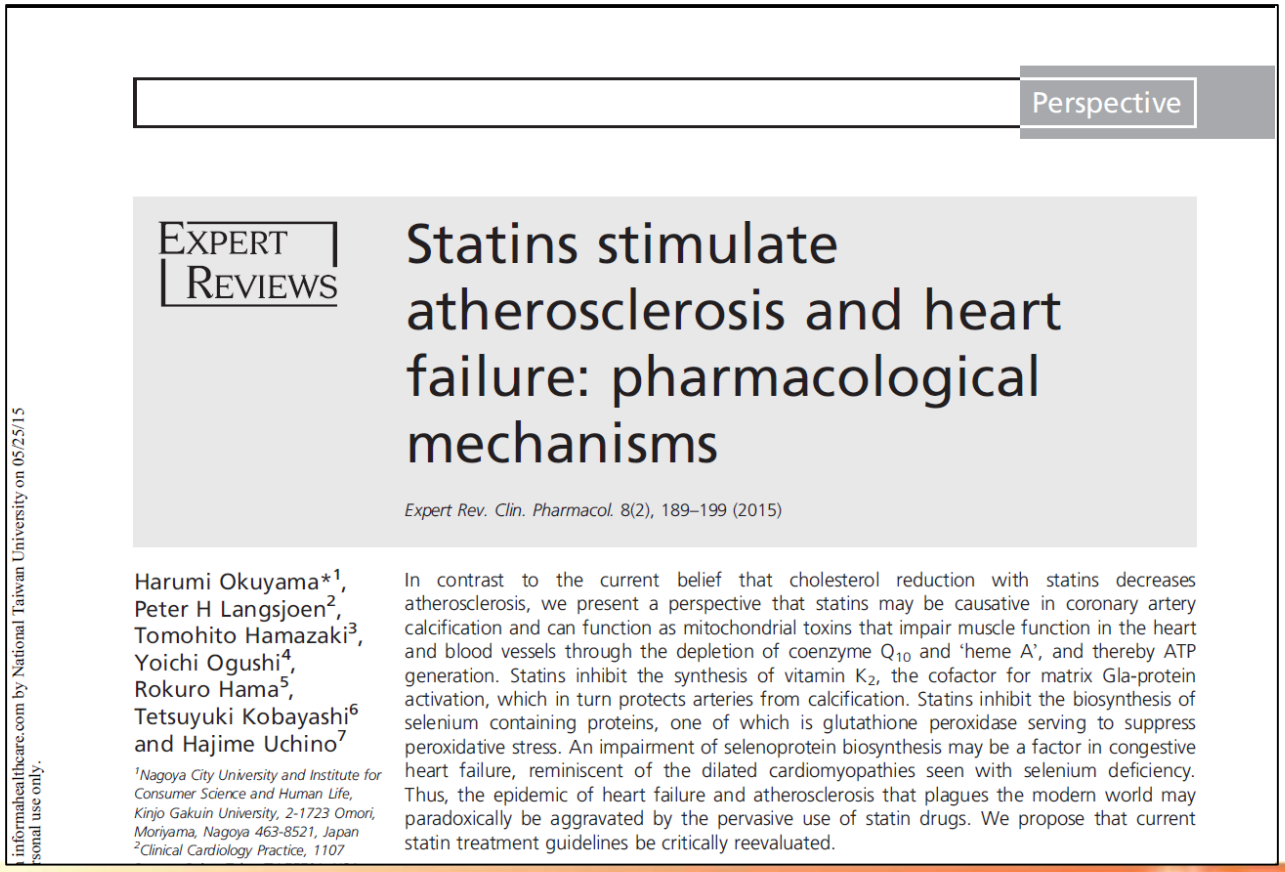
Statin drugs do its action by inhibiting cholesterol synthesis.
On latest update relevant data on breastfeeding was not found.
Its high plasma protein binding makes excretion into breast milk unlikely.
Ability to alter fat composition of breast milk is unknown which is important since infants are in need of high amounts of cholesterol for adequate brain development, cell membrane building and hormone and vitamin synthesis.
Avoid taking it at least while exclusive breastfeeding. Atorvastatin is possibly the safest statin drug because a higher molecular weight that lowers excretion into breast milk even more extensively. For Pravastatin a minimal excretion has been reported. Simvastatin has a lowest oral bioavailability.
Avoiding drug treatment for cholesterol as long as breastfeeding is desired would probably not harm long term result of disease. Continuing with a low fat containing diet is recommended.

Alternatives

- Atorvastatin Calcium (Level 2)
- Colestipol (Level 0)
- Colestyramine (Level 0)
- Ezetimibe (Level 1)
- Pravastatin (Level 2)
- Simvastatin (Level 2)
- Colesevelam (Level 0)

Reports on monacolin K risks

- Statins may be causative in coronary artery calcification and impair muscle function in the heart and blood vessels



Perspective

EXPERT REVIEWS

Statins stimulate atherosclerosis and heart failure: pharmacological mechanisms

Expert Rev. Clin. Pharmacol. 8(2), 189–199 (2015)

Harumi Okuyama*[1], Peter H Langsjoen[2], Tomohito Hamazaki[3], Yoichi Ogushi[4], Rokuro Hama[5], Tetsuyuki Kobayashi[6] and Hajime Uchino[7]

[1]Nagoya City University and Institute for Consumer Science and Human Life, Kinjo Gakuin University, 2-1723 Omori, Moriyama, Nagoya 463-8521, Japan
[2]Clinical Cardiology Practice, 1107

In contrast to the current belief that cholesterol reduction with statins decreases atherosclerosis, we present a perspective that statins may be causative in coronary artery calcification and can function as mitochondrial toxins that impair muscle function in the heart and blood vessels through the depletion of coenzyme Q_{10} and 'heme A', and thereby ATP generation. Statins inhibit the synthesis of vitamin K_2, the cofactor for matrix Gla-protein activation, which in turn protects arteries from calcification. Statins inhibit the biosynthesis of selenium containing proteins, one of which is glutathione peroxidase serving to suppress peroxidative stress. An impairment of selenoprotein biosynthesis may be a factor in congestive heart failure, reminiscent of the dilated cardiomyopathies seen with selenium deficiency. Thus, the epidemic of heart failure and atherosclerosis that plagues the modern world may paradoxically be aggravated by the pervasive use of statin drugs. We propose that current statin treatment guidelines be critically reevaluated.

Cutting-edge RYR extract:

ANKASCIN® 568-R

with *Monascus purpureus* NTU 568

- Original strain *Monascus purpureus* NTU 568 isolated by NTU professor Tzu-Ming Pan and his research team
- Exclusive technology transfer and patent manufacture methods to SunWay Biotech to produce "ANKASCIN 568-R".
- Special and safe active ingredients
- **The only RYR ingredient with NO monacolin K, backed by the FDA-approved new dietary ingredient (NDI) (# 855)**
- Widely accepted by academia with 120 publications (1999 ~ now)

Active components of

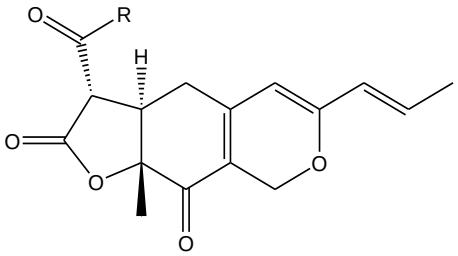
ANKASCIN® 568-R

with *Monascus purpureus* NTU 568

- **Monascin (MS) & Ankaflavin (AK)**

*Natural red yeast's yellow pigments, rare and hard to extract

*With azaphilone structure, with bioactivities



Monascin R=C_5H_{11}
Ankaflavin R=C_7H_{15}

Proven health functions

- Prevention of Alzheimer's Disease (AD)
- Increase in HDL cholesterol
- Decrease in total cholesterol, triglycerides, and LDL cholesterol
- Reduction in blood sugar and resistance to insulin
- Reduction in body fat accumulation
- Inhibition of TPA-induced skin inflammation and tumorigenesis (Monascin)
- Selective induction of human hepatoma cells "Hep G2" into death (Ankaflavin)

Ingredient effect studies in ANKASCIN® 568-R

with *Monascus purpureus* NTU 568

- Managing blood lipid
  - ✓ Increasing HDL-C to prevent embolization
  - ✓ Decreasing LDL-C, total cholesterol, and triglycerides
  - ✓ Decreasing body fat accumulation
- Prevention and delay of Alzheimer's Disease (AD)
- Managing blood sugar
  - ✓ Reduction in resistance to insulin
  - ✓ Reduction in blood sugar to improve type 2 diabetes
- Managing blood pressure
  - ✓ Managing SBP/DBP
  - ✓ Increasing vascular elasticity to strengthen responses to blood pressure changes

One multi-effect ingredient ➡ **All metabolic syndromes**

Comparison between ANKASCIN® 568-R with *Monascus purpureus* NTU 568 and other red yeast rice products

	Other RYR products	ANKASCIN 568-R
Fungal species	General *Monascus* species	Patent strain, multiple effects with international publications, complete research and study data
Active components	Monacolin K (The commercial drug for lowering cholesterol)	Monascin and Ankaflavin
Fermentation methods	Traditional fermentation, hard to control levels of citrinin and active ingredients	HACCP、ISO22000 certification, automated manufacture, specialized fermentation technology with active components and citrinin levels strictly controlled
Patents	Not required	Multiple patents (functions, methods, composition, and applications)
Effects	Managing blood lipid (lowering cholesterol)	Managing blood lipid, blood sugar, blood pressure, and preventing and delaying Alzheimer's Disease
Drug interactions	Risks of accumulative side effects with cholesterol-lowering drugs	Studies showed no interactions with: 1. Lovastatin (lowering cholesterol) 2. Actos (lowering blood sugar) 3. Norvasc (lowering blood pressure)

ANKASCIN® 568-R's strengths

with *Monascus purpureus* NTU 568

- Manufacture with patent *Monascus* strain
- Unique components with multiple effects
- Supported by plentiful studies and data
- Complete safety assessment reports
- International patents and certificates

Verification of beneficial effects

- Reducing fat accumulation
- Lowering blood lipid
- Lowering blood sugar
- Lowering blood pressure
- Improving symptoms of Alzheimer's Disease

✓ **Animal testing**

✓ **Clinical trials**

ANKASCIN® 568-R lowers fat accumulation

with *Monascus purpureus* NTU 568

Effects of MS and AK on obese rats

Group	Weight gain (g)	Total fat weight (g)	Body fat ratio (%)	Weight of perirenal fat (g)	Weight of periepididymal fat (g)
NOR	116.3 ± 12.5	13.7 ± 3.3	2.6 ± 0.5	7.5 ± 1.8	6.4 ± 1.5
HFC	154.1 ± 34.5	25.7 ± 5.5	4.7 ± 0.8	14.9 ± 3.0	11.0 ± 2.5
MS	75.3 ± 20.9	13.1 ± 2.4	2.7 ± 0.5	7.1 ± 1.5	5.8 ± 0.9
	↓ 51.1% cf. HFC				
AK	76.9 ± 18.3	14.7 ± 3.6	3.0 ± 0.7	8.4 ± 2.5	6.3 ± 1.5
	↓ 50.1% cf. HFC				

NOR: normal diet, HFC: high-fat and high-cholesterol diet, MS: Monascin, AK: Ankaflavin.

Both MS and AK could lower weight of perirenal and periepididymal fat, which meant lower fat accumulation in the belly.

J. Agric. Food Chem. (2013) 61: 1493-1500

ANKASCIN® 568-R manages blood lipid

with *Monascus purpureus* NTU 568

Effects of NTU 568 and its metabolites, MK, MS, and AK on obese hamsters

Group	TC (mg/dL)	TG (mg/dL)	HDL-C (mg/dL)	LDL-C (mg/dL)	LDL-C/HDL-C ratio
NOR	111.8 ± 10.7	168.8 ± 35.6	66.6 ± 5.0	19.9 ± 2.6	0.28 ± 0.04
HC	236.5 ± 18.9	226.3 ± 76.5	98.1 ± 8.9	68.3 ± 9.8	0.57 ± 0.09
MK	190.3 ± 25.1	131.1 ± 36.7	96.9 ± 8.8	45.0 ± 7.0	0.49 ± 0.05
MS	165.8 ± 10.6	82.8 ± 9.0	114.2 ± 9.4	45.1 ± 3.4	0.42 ± 0.02
AK	168.9 ± 11.5	94.5 ± 18.0	118.6 ± 8.1	39.4 ± 5.8	0.36 ± 0.05

MK could not elevate HDL cholesterol

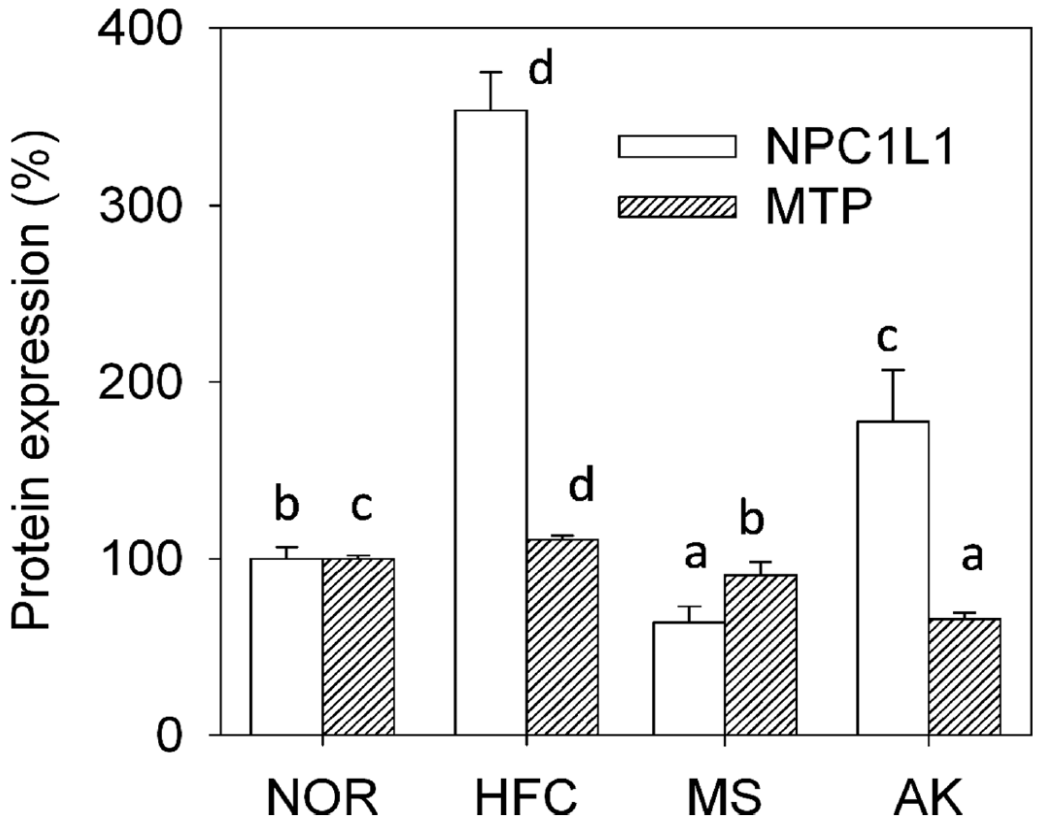
NOR: normal diet, HC: high-cholesterol diet, MK: monacolin K, MS: Monascin, AK: Ankaflavin.

MS and AK could lower total cholesterol, triglycerides, and LDL cholesterol, and increase HDL cholesterol as well.

J Agri Food Chem., 2010, 9013-9019

ANKASCIN® 568-R manages blood lipid

with *Monascus purpureus* NTU 568

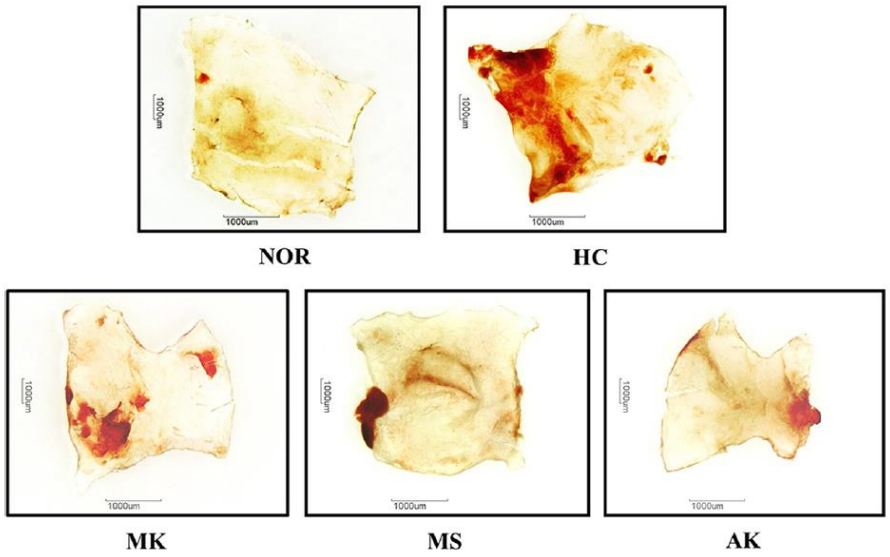


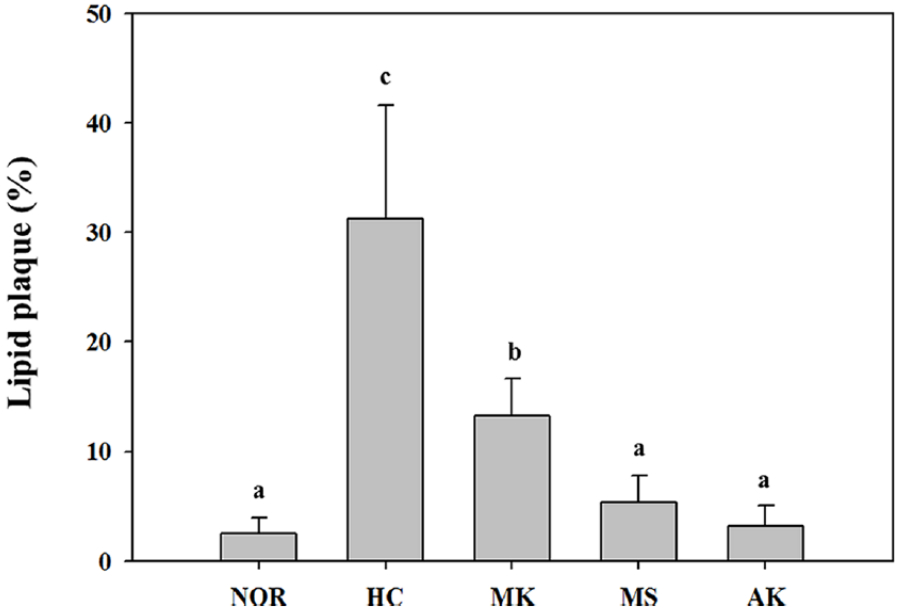
MS and AK could lower expression of NPC1L1 and MTP, which reduced ingestion of cholesterol and other lipids through the small intestine.

J. Agric. Food Chem. (2013) 61: 1493-1500

ANKASCIN® 568-R manages blood lipid

with *Monascus purpureus* NTU 568





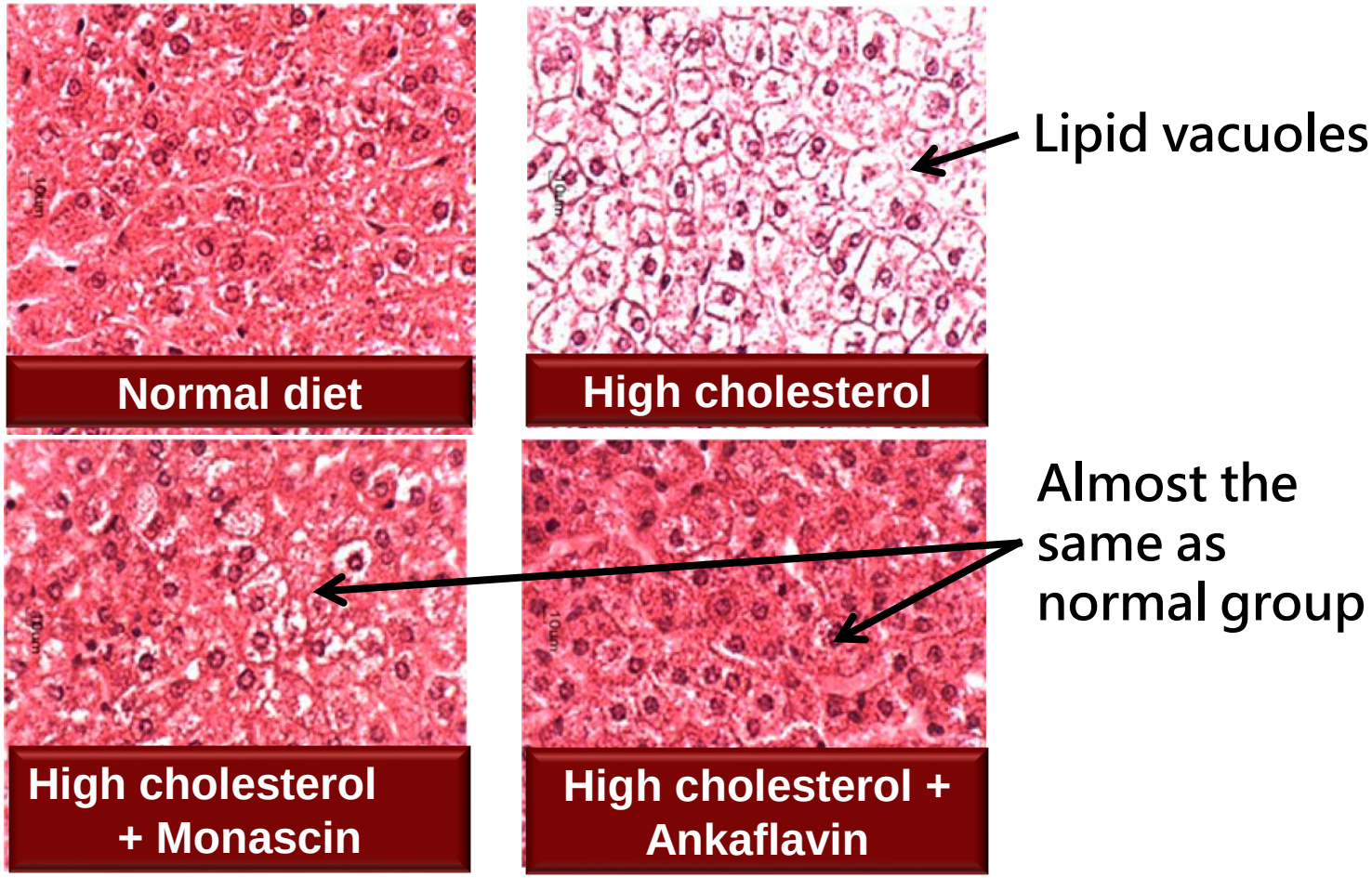
NOR: normal diet, HC: high-cholesterol diet, MK: monacolin K, MS: Monascin, AK: Ankaflavin.

Compared with MK, MS and AK had better effects on anti-atherosclerosis.

J Agri Food Chem. 2013, 61, 143-150

ANKASCIN® 568-R manages blood lipid

with *Monascus purpureus* NTU 568



MS and AK could effectively reduce lipid accumulation in the liver

J Agri Food Chem. 2013, 61, 143-150

ANKASCIN® 568-R manages blood lipid

with *Monascus purpureus* NTU 568

Clinical results (40 subjects)

8 weeks of administration with 4 weeks of follow-up

Daily serving:
Monascin: 3 mg
Ankaflavin: 1 mg

	Week 0	Week 4	Week 8	Week 12 (follow-up)
TC (mg/dL)	228.7 ± 26.3	201.4 ± 32.1*	203.4 ± 31.6*	233.0 ± 24.9
TG (mg/dL)	118.1 ± 59.3	110.0 ± 61.3	119.1 ± 71.7	118.0 ± 60.1
HDL-C (mg/dL)	54.8 ± 20.5	57.6 ± 15.2	59.4 ± 14.9	59.9 ± 12.7
LDL-C (mg/dL)	153.7 ± 15.6	124.5 ± 21.9*	122.3 ± 19.5*	148.2 ± 17.1
LDL-C / HDL-C	2.8±0.6	2.2±0.6*	2.1±0.5*	2.5±0.6*
TC / HDL-C	4.2±0.6	3.5±0.5*	3.4±0.6*	3.9±0.5*

After 8 weeks of administration of the testing products containing ANKASCIN 568-R, serum cholesterol and low-density lipoprotein cholesterol were significantly reduced by 11.1% and 20.4%, respectively.

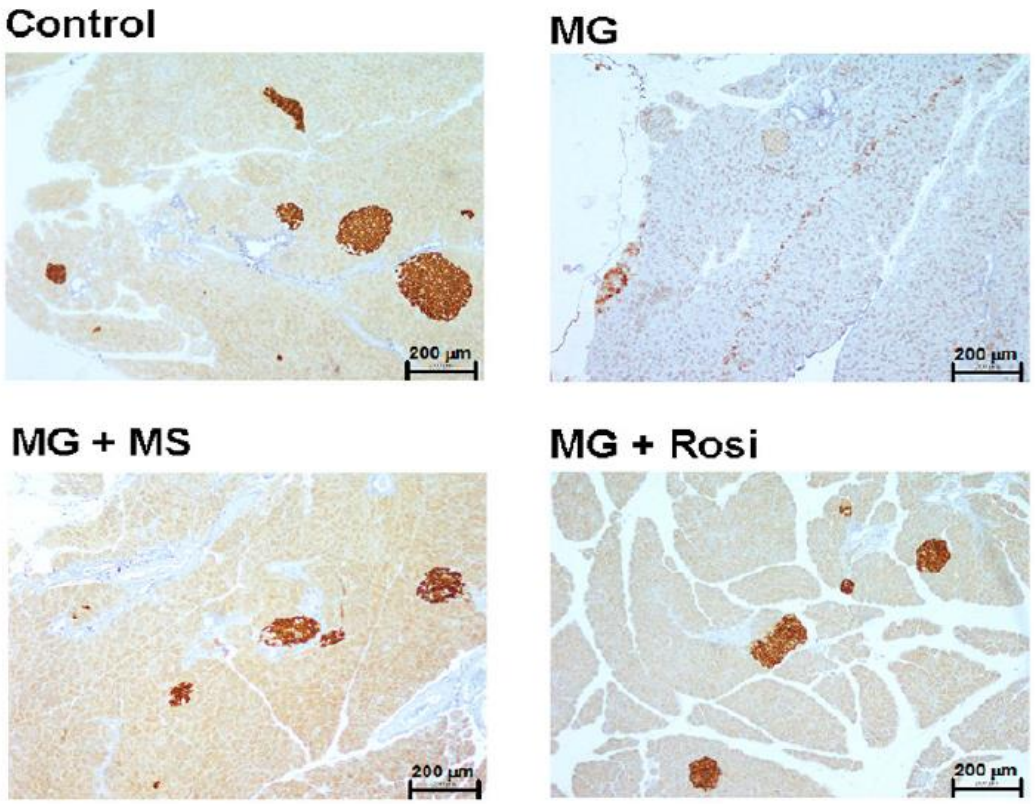
ANKASCIN® 568-R manages blood sugar

with *Monascus purpureus* NTU 568

- **Improving diabetic symptoms:**
  →reducing diabetic rats' water intake
  →reducing blood sugar, insulin concentration, and resistance to insulin
- **Improving pancreatic atrophy and lesion**
  →Lowering inflammation factors (NO and endothelin-1 content)
  →Lowering ROS and enhancing antioxidant enzyme, such as Glutathione peroxidase, superoxide dismutase, and catalase.

ANKASCIN® 568-R with *Monascus purpureus* NTU 568 manages blood sugar

Immunohistochemical staining of pancreatic insulin levels



Control: normal mice
MG: methylglyoxal-injected mice
MS: Monascin
Rosi: Rosiglitazone (diabetic drugs)

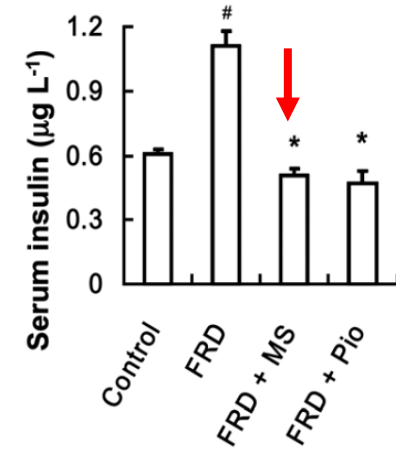
MS maintained insulin expression levels against MG-induced damage to pancreatic tissues.

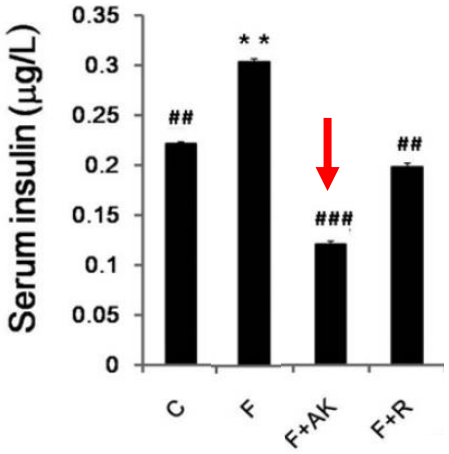
Journal of Agricultural and Food Chemistry, 2013, 61, 5996-6006

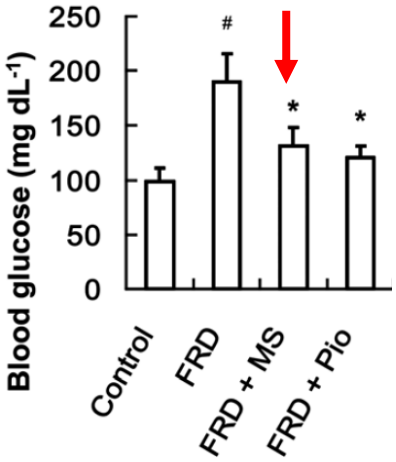
ANKASCIN® 568-R manages blood sugar

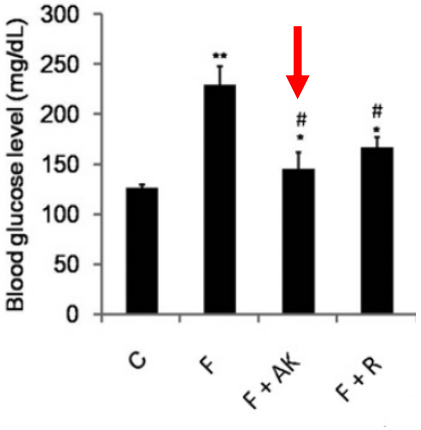
with *Monascus purpureus* NTU 568

C: control
FRD: fructose-rich diet
F: high-fat diet
MS: Monascin
AK: Ankaflavin
Pio: Pioglitazone
(diabetic drugs)
R: Rosiglitazone
(diabetic drugs)









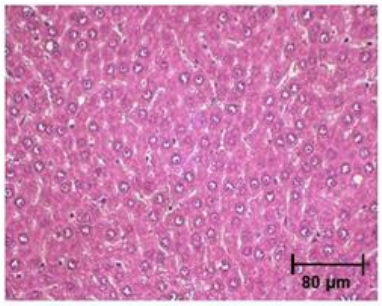
MS and AK effectively lowered the induced blood glucose and insulin concentration

Food & Function, 2012, 950-959
Journal of Functional Foods, 5 (2013) 124-132

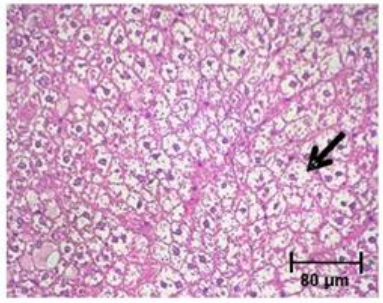
ANKASCIN® 568-R manages blood sugar

with *Monascus purpureus* NTU 568

Normal diet

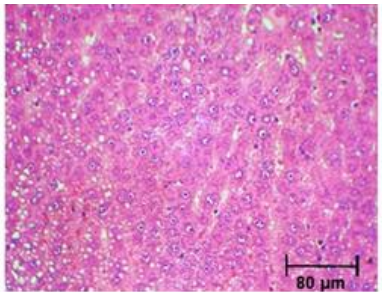


High fat & fructose diet

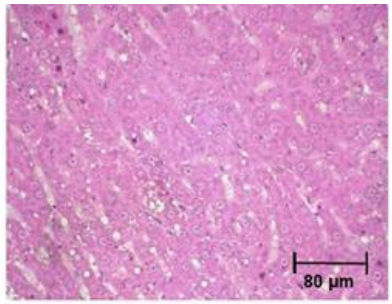


Lipid accumulation

High fat & fructose diet with ANKASCIN 568-R



High fat & fructose diet with Metformin (diabetic drugs)



ANKASCIN 568-R reduced lipid accumulation caused by the high fat and fructose diet.

In-house testing

ANKASCIN® 568-R manages blood sugar

with *Monascus purpureus* NTU 568

Clinical results (39 subjects)

12 weeks of administration with 4 weeks of follow-up

Daily serving:
Monascin: 6 mg
Ankaflavin: 2 mg

	Week 0	Week 6	Week 12	Week 16 (follow-up)
FBG (mg/dL)	115.3 ± 12.0	105.5 ± 15.7*	104.6 ± 12.1*	110.2 ± 7.2*
PC (mg/dL)	143.5 ± 22.5	124.3 ± 31.7	123.6 ± 18.4	133.0 ± 16.0
HbA1c (%)	5.9 ± 0.7	5.9 ± 0.7	6.0 ± 0.7	6.0 ± 0.6
Insulin (mg/dL)	10.8 ± 5.4	11.9 ± 6.1	11.1 ± 4.9	11.6 ± 1.4
HOMA-IR	1.4 ± 0.7	1.6 ± 0.8	1.5 ± 0.6	1.5 ± 0.8

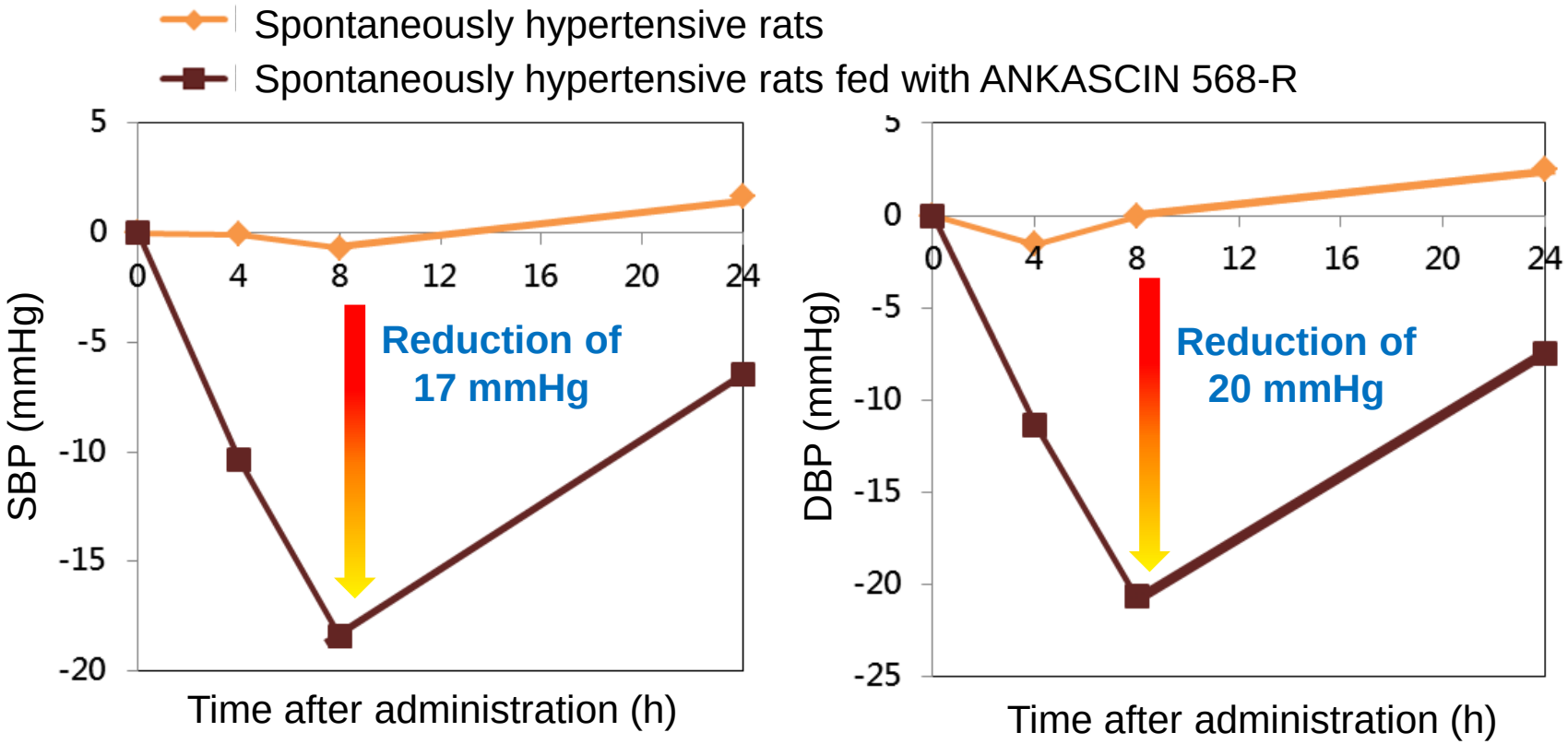
FBG: fasting blood glucose; PC: glucose levels after meals; HbA1c: glycated hemoglobin; HOMA-IR: homeostasis model of insulin resistance

After 12 weeks of administration of the testing products containing ANKASCIN 568-R, fasting blood glucose was significantly reduced by 9.3%.

J Food & Drug Analysis, (2016) I-8

ANKASCIN® 568-R manages blood pressure

with *Monascus purpureus* NTU 568

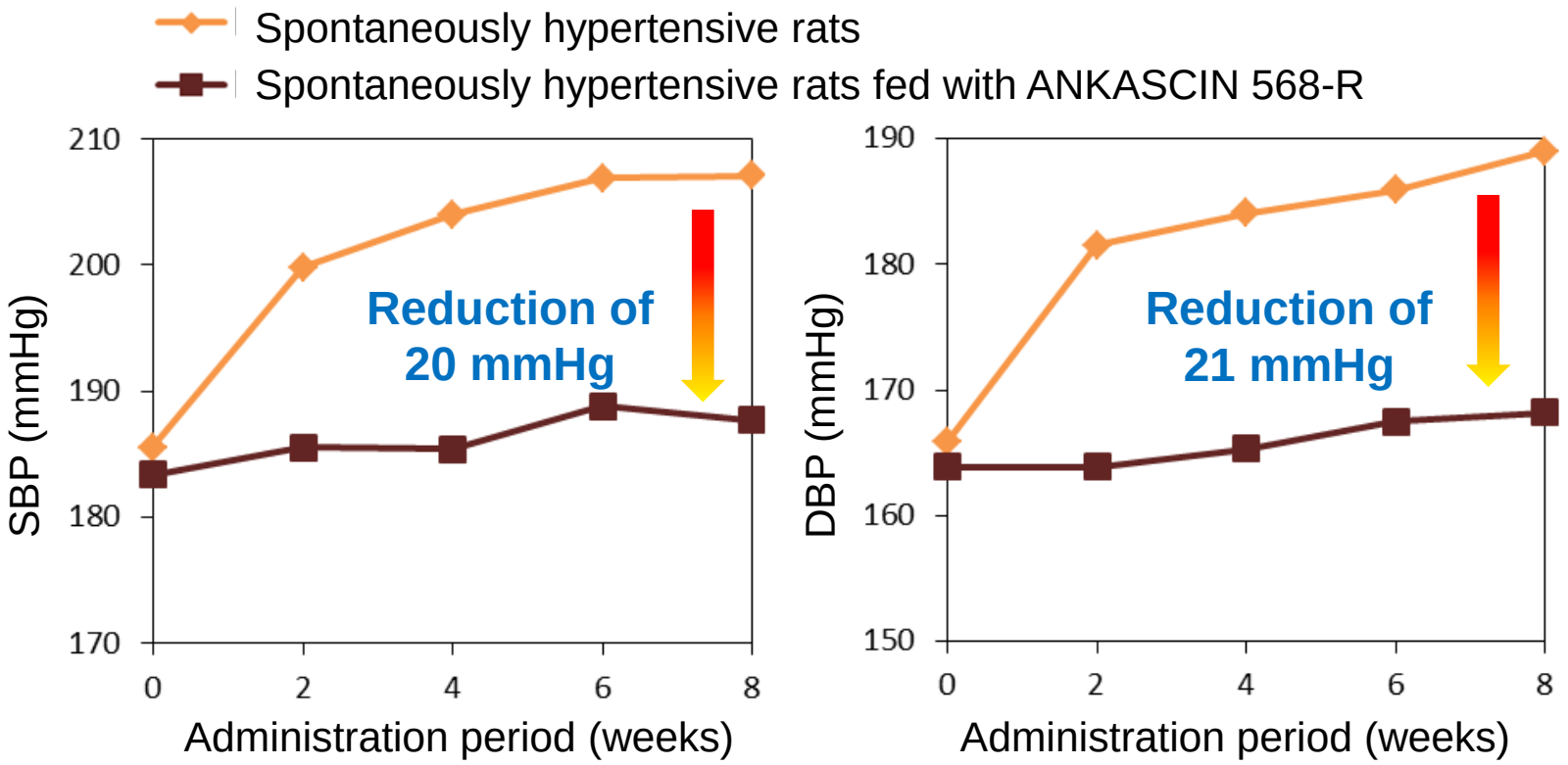


Study showed that single administration of ANKASCIN 568-R could reduce high blood pressure.

In-house testing

ANKASCIN® 568-R manages blood pressure

with *Monascus purpureus* NTU 568



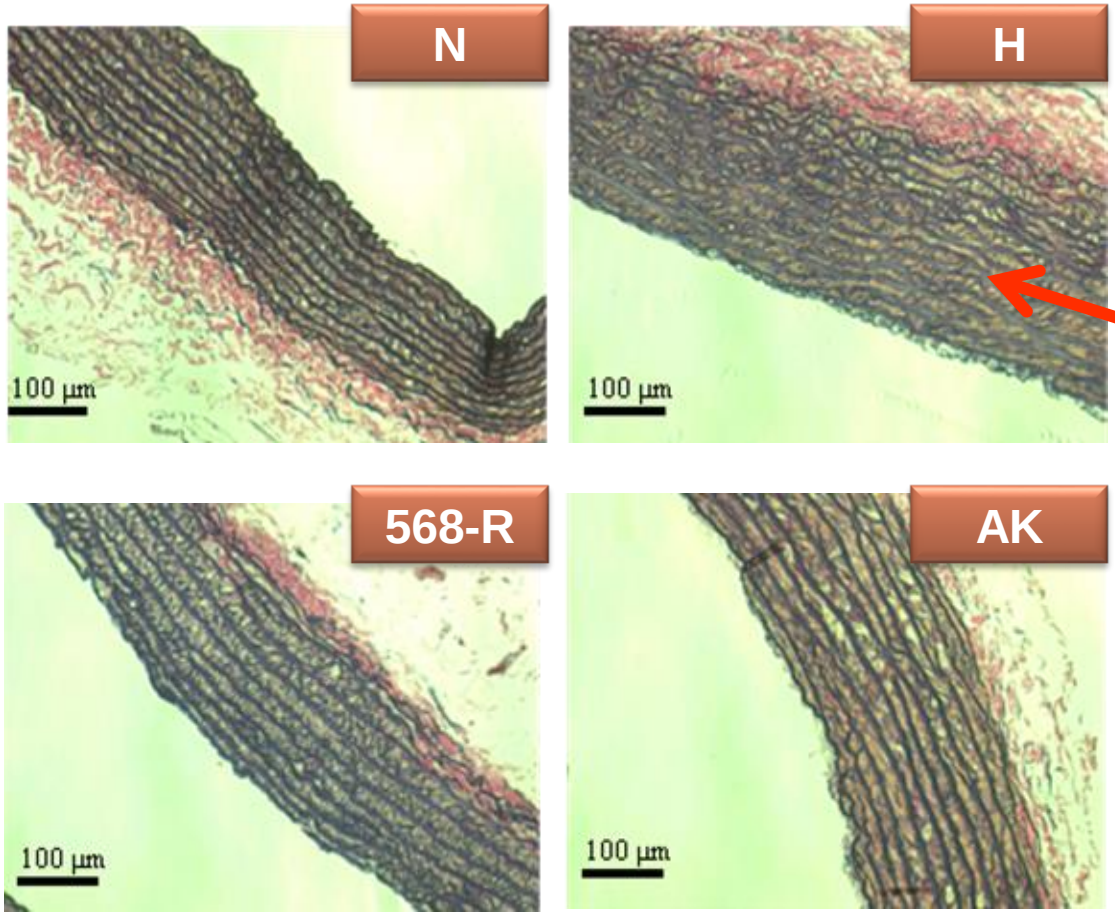
Study showed that continuous administration of ANKASCIN 568-R could help reduce hypertensive symptoms and maintain blood pressure.

In-house testing

ANKASCIN® 568-R manages blood pressure

with *Monascus purpureus* NTU 568

The aorta thin sections of spontaneously hypertensive rats



N: normal rat
H: hypertensive rats
568-R: H + ANKASCIN 568-R
AK: H + ankaflavin

Irregular elastin fibers

With administration of ANKASCIN 568-R or AK, elastin fibers were straighter and easier to manage blood pressure

In-house testing

ANKASCIN® 568-R improves AD

with *Monascus purpureus* NTU 568

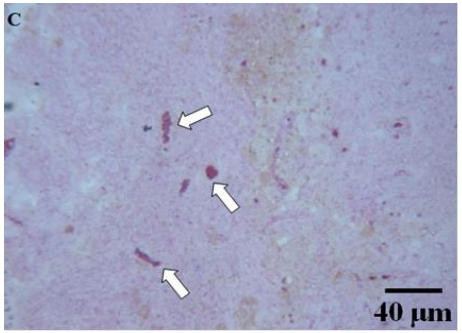
Effects on rats with Alzheimer's Disease (AD):

- **Preventing and improving Aβ40 and apolipoprotein E accumulation in hippocampus**
- Inhibiting Aβ40-infusion-enhanced **acetylcholinesterase activity** and elevating neurotransmitter activities
- Lowering iNOS activity in brain
- Elevating total antioxidant capacity and activities of catalase and superoxide dismutase
- **Helping improve cognitive behavior and memory**

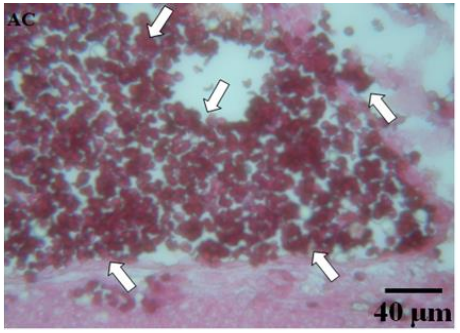
ANKASCIN® 568-R improves AD

with *Monascus purpureus* NTU 568

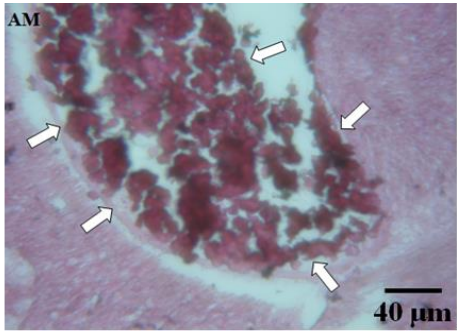
Sections of hippocampus of rats infused with Aβ40 stained with dye



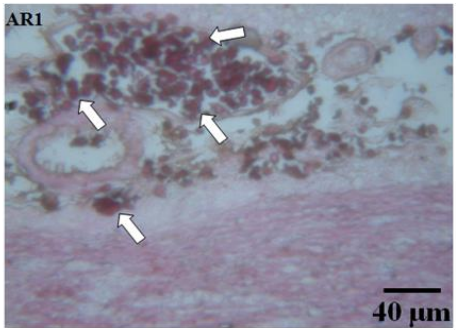
Normal rats



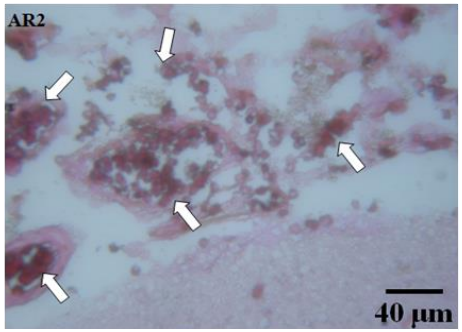
Aβ40-infused rats



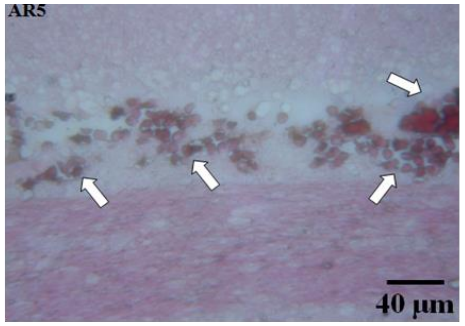
Aβ40-infused rats with drugs



Aβ40-infused rats with
1X ANKASCIN 568-R



Aβ40-infused rats with
2X ANKASCIN 568-R



Aβ40-infused rats with
5X ANKASCIN 568-R

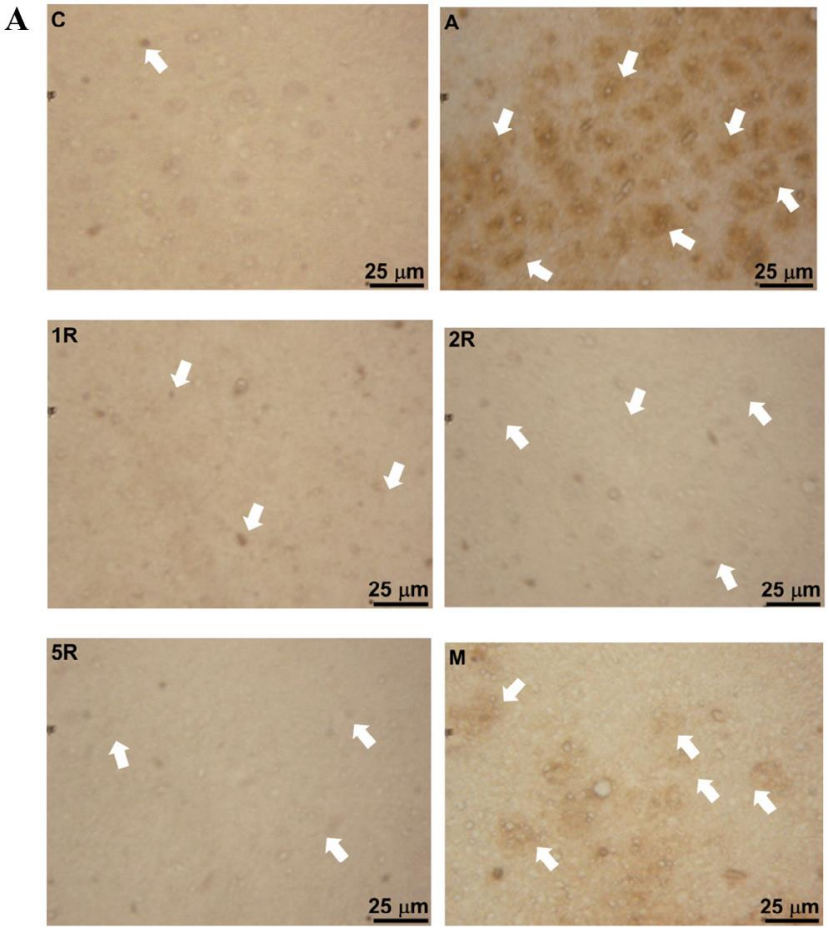
Study showed that ANKASCIN 568-R reduced Aβ40 accumulation in hippocampus, which reduced brain cell damage.

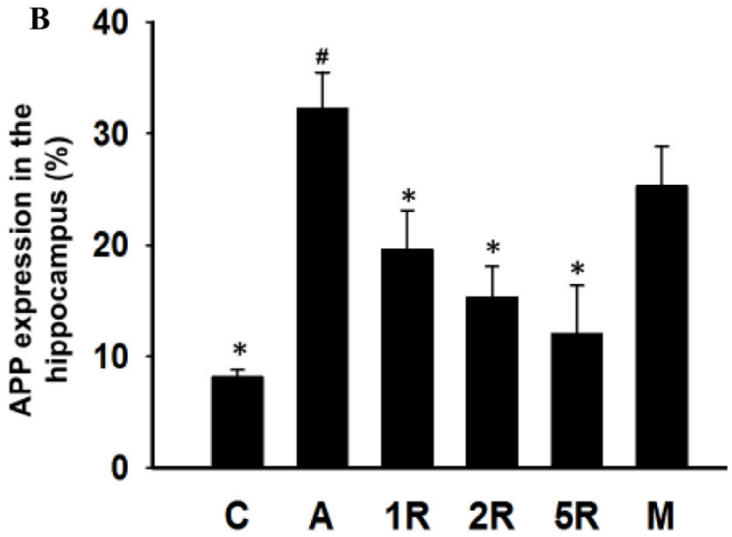
In-house testing

ANKASCIN® 568-R improves AD

with *Monascus purpureus* NTU 568

Effects on APP expression in the hippocampus of aluminium-induced rats





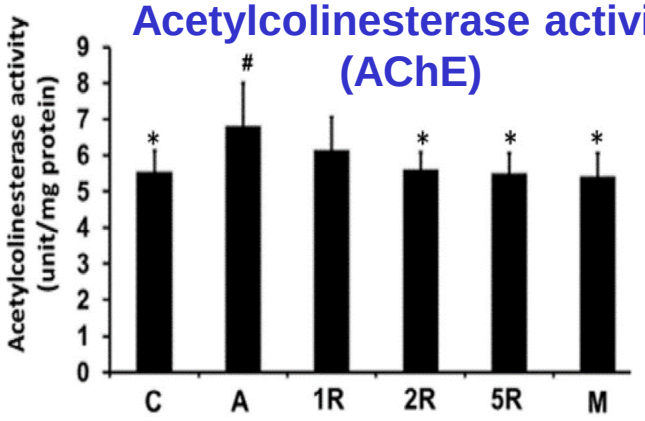
These tests revealed that ANKASCIN 568-R could protect rats from APP over-expression induced by aluminum, which would have, in turn, increased Aβ production.

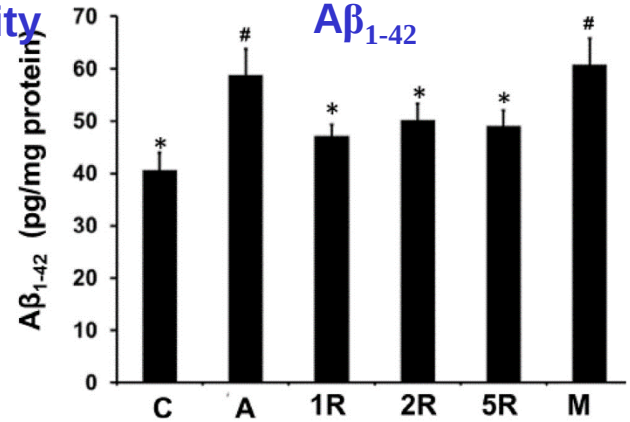
J. Funct. Foods, 2016, 21: 167-177

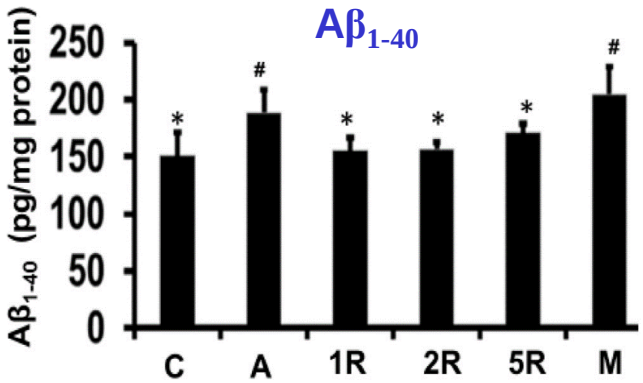
ANKASCIN® 568-R improves AD

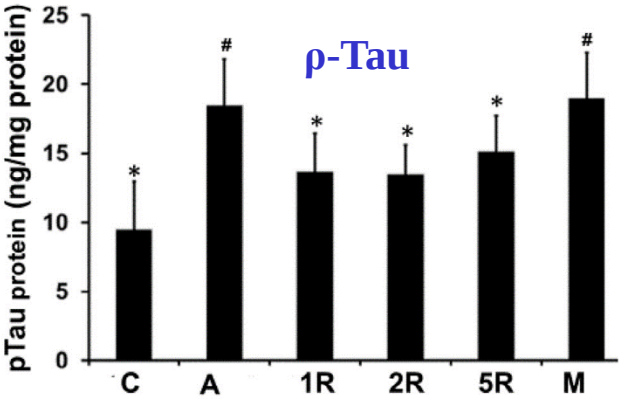
with *Monascus purpureus* NTU 568

Effects on AD risk factors (acetylcholinesterase, $A\beta_{1-42}$, $A\beta_{1-40}$, and ρ-Tau) in the hippocampus of aluminium-induced rats









C: normal diet without administration of aliminium
A: treated with $AlCl_3$
1R: 1-fold dose of ANKASCIN 568 plus and treated with $AlCl_3$
2R: 2-fold dose of ANKASCIN 568 plus and treated with $AlCl_3$
5R: 5-fold dose of ANKASCIN 568 plus and treated with $AlCl_3$
M: Aricept group (positive control group) and treated with $AlCl_3$

ANKASCIN 568-R could reduce key risk factors for Alzheimer's disease.

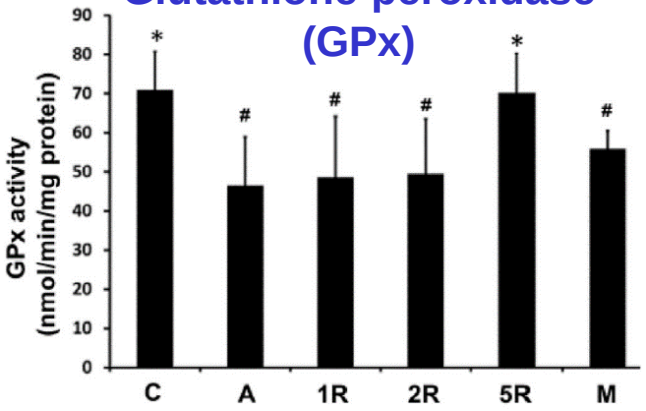
J. Funct. Foods, 2016, 21: 167-177

ANKASCIN® 568-R improves AD

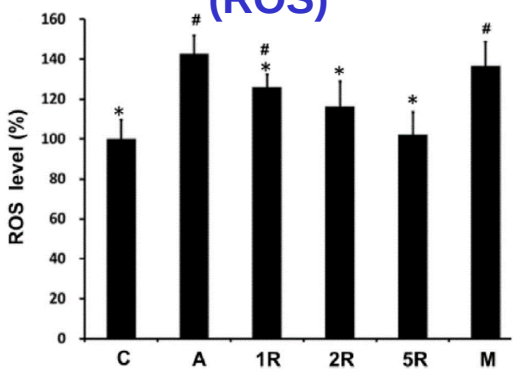
with *Monascus purpureus* NTU 568

Effects on activity of antioxidant enzymes in the hippocampus of aluminium-induced rats

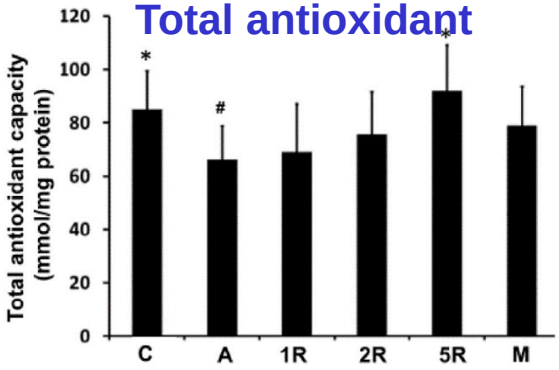
Glutathione peroxidase (GPx)



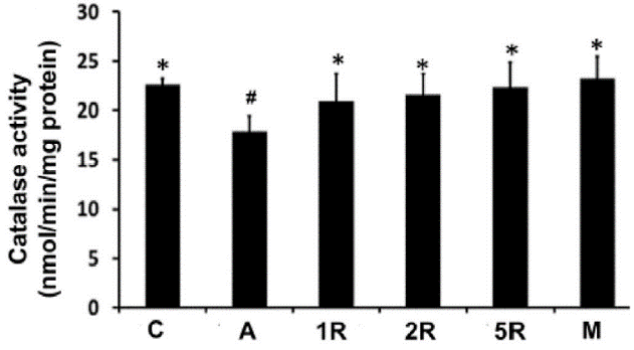
Reactive oxygen species (ROS)



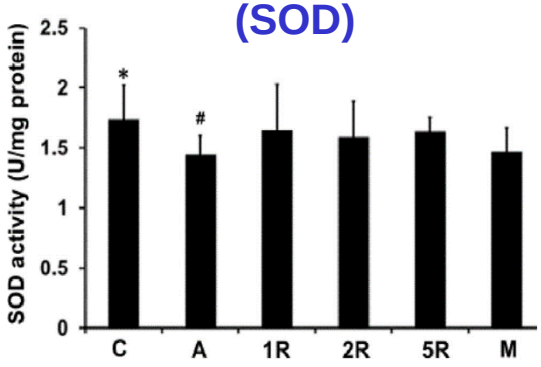
Total antioxidant



Catalase



Superoxide dismutase (SOD)



These tests revealed that ANKASCIN 568-R could reduce oxidative stress in the brain, which reduced Aβ accumulation.

J. Funct. Foods, 2016, 21: 167-177

ANKASCIN® 568-R delays AD

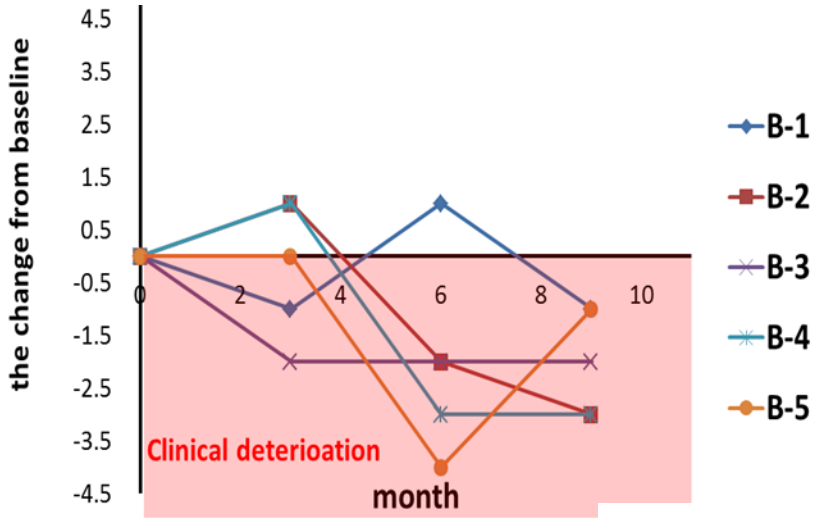
with *Monascus purpureus* NTU 568

Clinical trials – dementia patients

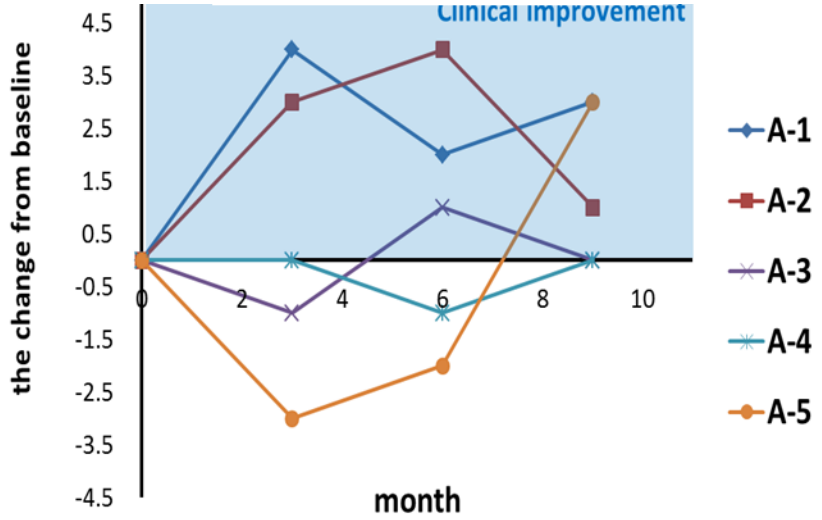
Daily serving
Monascin: 6 mg
Ankaflavin: 2 mg

MMSE: assessing patients' cognitive statuses

Placebo for 9 months



NTU 568 fermented products for 9 months



Average MMSE score changes from 0th to 9th month
Mild and moderate dementia patients were tested
Starting MMSE scores = 13 – 28, n=5

Ingredient safety assessments

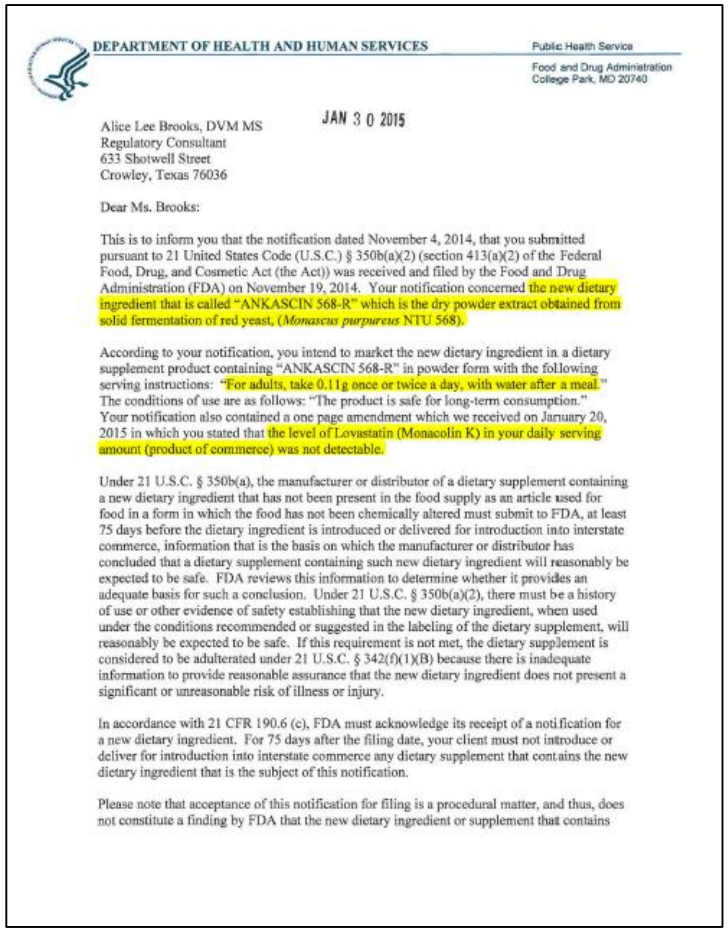
ANKASCIN 568-R's safety assessments

With *Monascus purpureus* NTU 568

- **Compliant with international standards and regulations**
- **Full ingredient safety reports including:**
  - Repeated dose 13-week oral toxicity study in rats (230X dosage) (1X dosage is 0.2 g daily for adults at 60 kg and 172 cm)
  - *In vitro* chromosomal aberration assay in Chinese hamster ovary cells
  - Micronucleus assay in mice
  - Ames test
  - **FDA-approved NDI #855 (New Dietary Ingredient)**
- **Finished product safety report**
  - Repeated dose 4-week oral toxicity study in rats (180X dosage) (1X dosage is 1.0 g daily for adults at 60 kg and 172 cm)


QPS
helps you navigate
PROTOCOL AMENDMENT
No. 1
REPEATED DOSE 4-WEEK ORAL TOXICITY STUDY IN RATS
ANKASCIN 568 PLUS+

FDA-Approved New Dietary Ingredient (NDI) (Report # 855)



DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Food and Drug Administration
College Park, MD 20740

JAN 3 0 2015

Alice Lee Brooks, DVM MS
Regulatory Consultant
633 Shotwell Street
Crowley, Texas 76036

Dear Ms. Brooks:

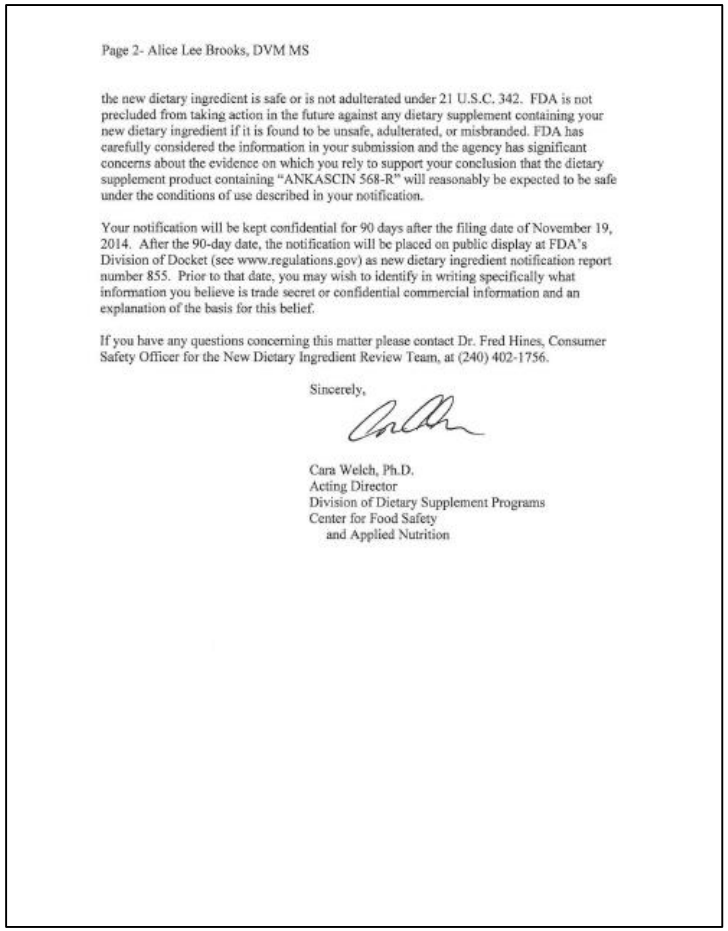
This is to inform you that the notification dated November 4, 2014, that you submitted pursuant to 21 United States Code (U.S.C.) § 350b(a)(2) (section 413(a)(2) of the Federal Food, Drug, and Cosmetic Act (the Act)) was received and filed by the Food and Drug Administration (FDA) on November 19, 2014. Your notification concerned the new dietary ingredient that is called "ANKASCIN 568-R" which is the dry powder extract obtained from solid fermentation of red yeast, (*Monascus purpureus* NTU 568).

According to your notification, you intend to market the new dietary ingredient in a dietary supplement product containing "ANKASCIN 568-R" in powder form with the following serving instructions: "For adults, take 0.11g once or twice a day, with water after a meal." The conditions of use are as follows: "The product is safe for long-term consumption." Your notification also contained a one page amendment which we received on January 20, 2015 in which you stated that the level of Lovastatin (Monacolin K) in your daily serving amount (product of commerce) was not detectable.

Under 21 U.S.C. § 350b(a), the manufacturer or distributor of a dietary supplement containing a new dietary ingredient that has not been present in the food supply as an article used for food in a form in which the food has not been chemically altered must submit to FDA, at least 75 days before the dietary ingredient is introduced or delivered for introduction into interstate commerce, information that is the basis on which the manufacturer or distributor has concluded that a dietary supplement containing such new dietary ingredient will reasonably be expected to be safe. FDA reviews this information to determine whether it provides an adequate basis for such a conclusion. Under 21 U.S.C. § 350b(a)(2), there must be a history of use or other evidence of safety establishing that the new dietary ingredient, when used under the conditions recommended or suggested in the labeling of the dietary supplement, will reasonably be expected to be safe. If this requirement is not met, the dietary supplement is considered to be adulterated under 21 U.S.C. § 342(f)(1)(B) because there is inadequate information to provide reasonable assurance that the new dietary ingredient does not present a significant or unreasonable risk of illness or injury.

In accordance with 21 CFR 190.6 (c), FDA must acknowledge its receipt of a notification for a new dietary ingredient. For 75 days after the filing date, your client must not introduce or deliver for introduction into interstate commerce any dietary supplement that contains the new dietary ingredient that is the subject of this notification.

Please note that acceptance of this notification for filing is a procedural matter, and thus, does not constitute a finding by FDA that the new dietary ingredient or supplement that contains



Page 2- Alice Lee Brooks, DVM MS

the new dietary ingredient is safe or is not adulterated under 21 U.S.C. 342. FDA is not precluded from taking action in the future against any dietary supplement containing your new dietary ingredient if it is found to be unsafe, adulterated, or misbranded. FDA has carefully considered the information in your submission and the agency has significant concerns about the evidence on which you rely to support your conclusion that the dietary supplement product containing "ANKASCIN 568-R" will reasonably be expected to be safe under the conditions of use described in your notification.

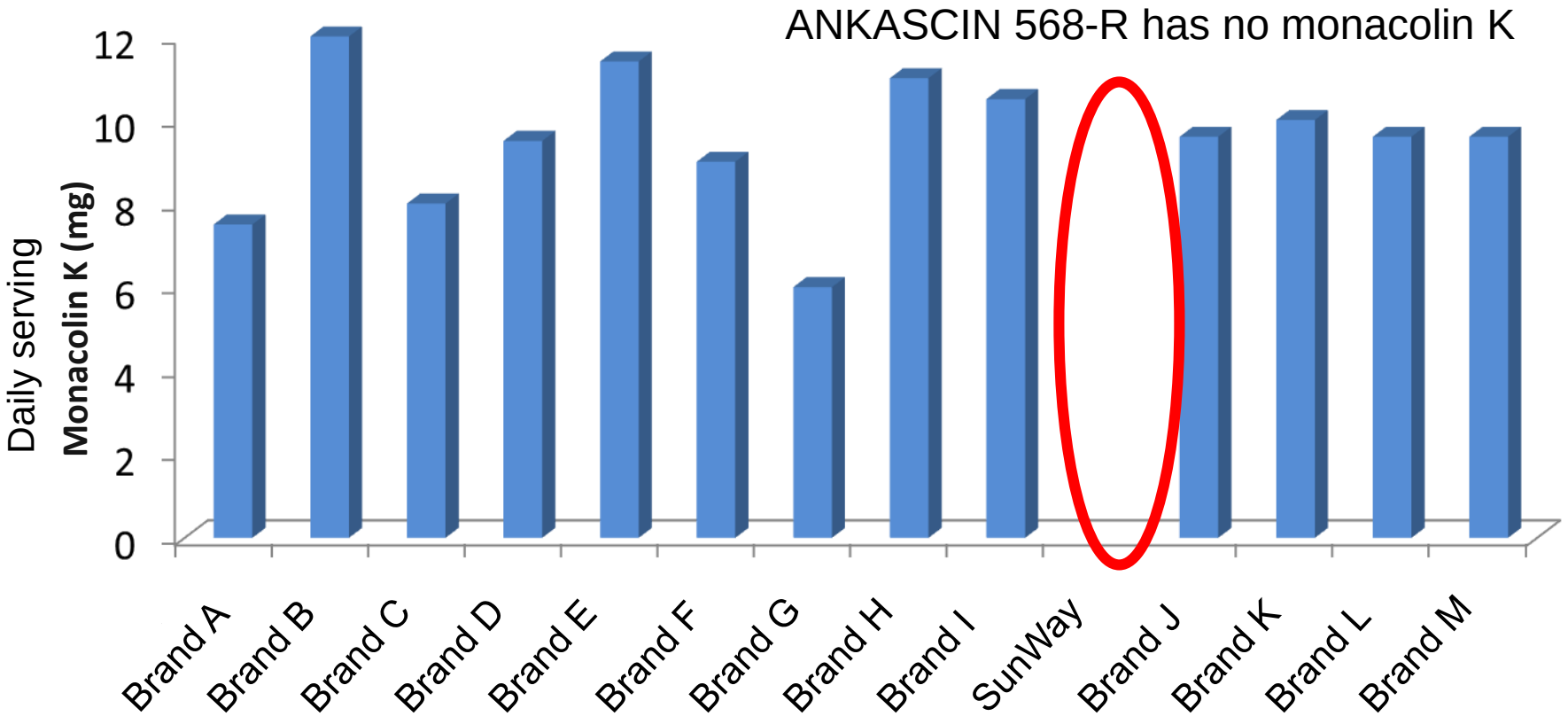
Your notification will be kept confidential for 90 days after the filing date of November 19, 2014. After the 90-day date, the notification will be placed on public display at FDA's Division of Docket (see www.regulations.gov) as new dietary ingredient notification report number 855. Prior to that date, you may wish to identify in writing specifically what information you believe is trade secret or confidential commercial information and an explanation of the basis for this belief.

If you have any questions concerning this matter please contact Dr. Fred Hines, Consumer Safety Officer for the New Dietary Ingredient Review Team, at (240) 402-1756.

Sincerely,

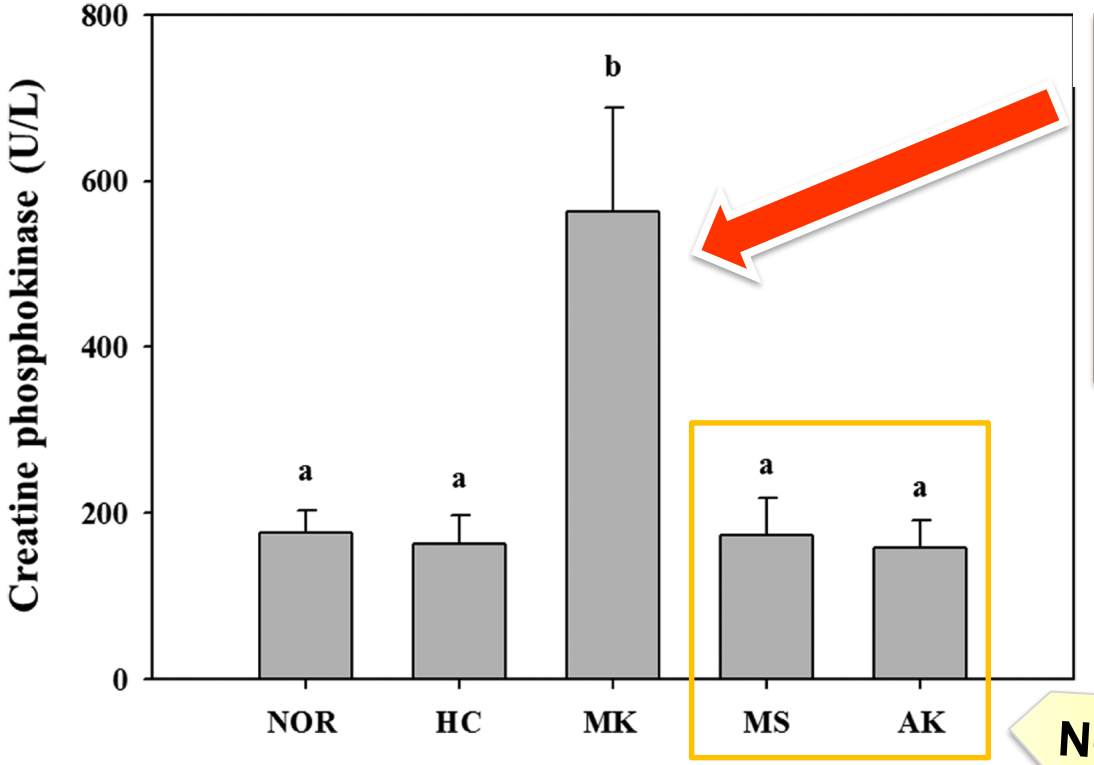
Cara Welch, Ph.D.
Acting Director
Division of Dietary Supplement Programs
Center for Food Safety
and Applied Nutrition

Comparison of monacolin K levels in commercial RYR products



Study revealed that effects of **ANKASCIN 568-R** were not contributed by monacolin K, which meant **this ingredient had equivalent effects without side effects of monacolin K**

MS and AK have no effect on the activities of creatine phosphokinase



Monacolin K would significantly increase the activity of creatine phosphokinase, leading to myopathy, rhabdomyolysis, and liver toxicity

NOR: normal diet
HC: high-cholesterol diet
MK: monacolin K
MS: Monascin
AK: Ankaflavin.

No effect

ANKASCIN 568-R With *Monascus purpureus* NTU 568 is safer and more effective, compared with other commercial RYR products containing monacolin K.

J Agri Food Chem. 2013, 61: 143-150.

Clinically supported safety of ANKASCIN® 568-R

with *Monascus purpureus* NTU 568

Clinical trial (40 subjects)

8 weeks of administration with 4 weeks of follow-up

Daily serving:
Monascin: 3 mg
Ankaflavin: 1 mg

	Week 0	Week 4	Week 8	Week 12 (follow-up)
Liver function				
AST (IU/L)	22.4 ± 12.7	23.5 ± 14.1	23.7 ± 12.4	21.3 ± 9.2
ALT (IU/L)	21.6 ± 10.5	21.1 ± 9.1	21.0 ± 6.0	23.2 ± 10.7
γ-GTP (IU/L)	17.7 ± 10.6	20.6 ± 20.0	21.3 ± 18.1	20.9 ± 19.6
Kidney function				
Creatinine (mg/dL)	0.8 ± 0.3	0.8 ± 0.2	0.8 ± 0.2	0.8 ± 0.2
BUN (mg/dL)	13.0 ± 2.9	11.5 ± 2.8	11.7 ± 2.4	12.1 ± 2.6
pH in urine	6.4 ± 0.8	6.5 ± 0.6	6.4 ± 0.8	6.4 ± 0.8

During the clinical study, no effect was found in liver and kidney functions, while TC and LDL-C were significantly reduced.

Patents and certificates

Patents on “Composition and method for prevention and treatment of Alzheimer’s Disease”

특 허 증

CERTIFICATE OF PATENT

특 허 제 10-0959001 호 (PATENT NUMBER)

출원번호 (APPLICATION NUMBER) 제 2007-0139017 호

출원일 (FILING DATE) 2007년 12월 27일

등록일 (REGISTRATION DATE) 2010년 05월 12일

발명의명칭 (TITLE OF THE INVENTION)

알츠하이머병을 예방 및 치료하기 위한 조성물 및 그제조방법

특허권자 (PATENTEE)

선웨이 바이오테크 코., 엘티디.

대만 타이페이 시티 114 네이후 디스트릭트 루에이구앙 로드 레인 358 엘리 30 넘버 1 2층

발명자 (INVENTOR)

등록사항란에 기재

위의 발명은 「특허법」에 의하여 특허등록원부에 등록되었음을 증명합니다.

(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2010년 05월 12일

특 허 청 장

COMMISSIONER, THE KOREAN INTELLECTUAL PROPERTY OFFICE

特 許 証

(CERTIFICATE OF PATENT)

特許第４９７４０３１号

(PATENT NUMBER)

発明の名称 (TITLE OF THE INVENTION) アルツハイマー病を治療するための医薬とその製造方法

特許権者 (PATENTEE) 台湾台北市内湖區１１４９４行愛路１３９號 国籍 台湾 サンウェイ バイオテック シーオー エルティディ

発明者 (INVENTOR) バン ツーミン リー チュンーリン

出願番号 (APPLICATION NUMBER) 特願２００７－３３４５０４

出願日 (FILING DATE) 平成１９年１２月２６日(December 26, 2007)

登録日 (REGISTRATION DATE) 平成２４年 ４月２０日(April 20, 2012)

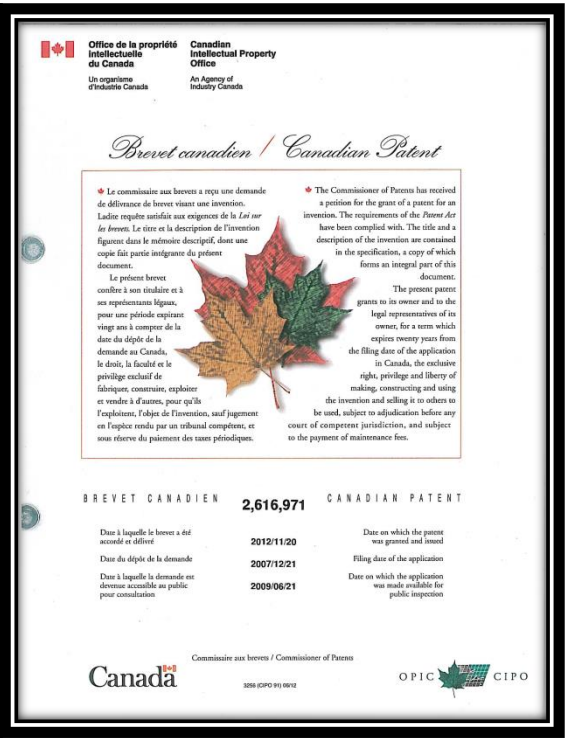
この発明は、特許するものと確定し、特許原簿に登録されたことを証する。

(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE JAPAN PATENT OFFICE.)

平成２４年 ４月２０日(April 20, 2012)

特許庁長官 (COMMISSIONER, JAPAN PATENT OFFICE)

岩井良行



Office de la propriété intellectuelle du Canada
Un organisme d'Industrie Canada

Canadian Intellectual Property Office
An Agency of Industry Canada

Brevet canadien / Canadian Patent

Le commissaire aux brevets a reçu une demande de délivrance de brevet visant une invention. Ladite requête satisfait aux exigences de la *Loi sur les brevets*. Le titre et la description de l'invention figurent dans le mémoire descriptif, dont une copie fait partie intégrante du présent document.

Le présent brevet confère à son titulaire et à ses représentants légaux, pour une période expirant vingt ans à compter de la date du dépôt de la demande au Canada, le droit, la faculté et le privilège exclusif de fabriquer, construire, exploiter et vendre à d'autres, pour qu'ils l'exploitent, l'objet de l'invention, sauf jugement en l'espèce rendu par un tribunal compétent, et sous réserve du paiement des taxes périodiques.

The Commissioner of Patents has received a petition for the grant of a patent for an invention. The requirements of the *Patent Act* have been complied with. The title and a description of the invention are contained in the specification, a copy of which forms an integral part of this document.

The present patent grants to its owner and to the legal representatives of its owner, for a term which expires twenty years from the filing date of the application in Canada, the exclusive right, privilege and liberty of making, constructing and using the invention and selling it to others to be used, subject to adjudication before any court of competent jurisdiction, and subject to the payment of maintenance fees.

BREVET CANADIEN 2,616,971 CANADIAN PATENT

Date à laquelle le brevet a été accordé et délivré	2012/11/20	Date on which the patent was granted and issued
Date du dépôt de la demande	2007/12/21	Filing date of the application
Date à laquelle la demande est devenue accessible au public pour consultation	2009/06/21	Date on which the application was made available for public inspection

Canada

Commissaire aux brevets / Commissioner of Patents

3256 (CIPO 91) 06/12

OPIC CIPO

Patent on “Composition for Lowering Blood Lipid and Elevating High Density Lipoprotein and Method for Manufacturing the Same”

中華民國專利證書

發明第 I 415619 號

發明名稱：一種可降血脂且提升高密度脂蛋白膽固醇之組合物及其製造方法

專利權人：晨暉生物科技股份有限公司

發明人：潘子明、李俊霖、吳政倫

專利權期間：自 2013年11月21日至2031年 8月 1 日止

上開發明業經專利權人依專利法之規定取得專利權

經濟部智慧財產局
局長 王美花

中華民國 102 年 11 月 21 日

Patent List-1

Title	Patent
Composition and method for prevention and treatment of Alzheimer's Disease	Korea (2010.05), Singapore (2010.10), Taiwan (2011.05), Japan (2012.04), Australia (2013.06), Taiwan (2013.09), European Union (Germany, France, United Kingdom, Switzerland, Ireland, Netherlands, Sweden, Austria, Belgium, Italy, Portugal, Spain, and Turkey) (2016.03)
A composition comprising an extract of red mold rice for treatment of Alzheimer's Disease	Canada (2012.11)
A method for manufacturing a composition comprising an extract of red mold rice for treatment of Alzheimer's Disease	Canada (2016.02)
Method for prevention and treatment of Alzheimer's Disease	U.S.A (2012.01)

Patent List-2

Title	Patent
Manufacturing process of red mold *Dioscorea*	Taiwan (2011.10), Japan (2012.03), Korea (2013.01), China (2013.09), U.S.A (2014.04), U.S.A (2014.04)
Composition of *Monascus* fermented product with a function that reduces body fatness formation and the method for manufacturing the same	China (2012.09)
Composition for lowering blood lipid and elevating high density lipoprotein and method for manufacturing the same	Taiwan (2013.11), Korea (2014.07), European Union (Germany, France, United Kingdom, Switzerland, Netherlands, and Italy) (2014.11), Singapore (2015.07), Canada (2015.10), Japan (2016.04), Canada (2016.04), Canada (2016.04), China (2016.05), U.S.A (2016.06), U.S.A (2016.06)

ANKASCIN® 568-R's specifications

with *Monascus purpureus* NTU 568

Active ingredients
Monascin ≥ 28 mg/g Ankaflavin ≥ 9 mg/g
Aspect
Powder
Dosage
Blood lipids: 110 mg/day Blood sugar: 220 mg/day Blood pressure: 220 mg/day Alzheimer's Disease: 220 mg/day (Memory & cognitive health)
Applicable formulation
Powder sachets, tablets, and capsules

ANKASCIN® 568-R

Enhances Quality of Your Life

PhytoActive Nutraceuticals, LLc.
Authorized Distributor of ANKASCIN 568-R Ingredients and
Authorized Co-Packer of ANKASCIN 568-Plus Finished Product Capsules
www.ankascin.com
sales@gophytoactive.com
1-818-297-9054

SunWay Biotech Co., LTD.