

# NMNN

全球率先实现量产

THE WORLD'S FIRST TO ACHIEVE MASS PRODUCTION

Purity  
≥ 99.5%  
纯度

Chiral Purity  
≥ 99.99%  
手性纯度

Endotoxin  
< 0.1EU/mg  
内毒素

常见塑化剂  
未检出  
Common plasticizers  
were not detected  
(GB)

## 什么是NMN?

What is NMN ?

NMN的全称烟酰胺单核苷酸。NMN是NAD<sup>+</sup>的前体。NMN对人体细胞有重要的生理功能，能在细胞中天然合成，也可以来源于多种食物，包括西兰花、卷心菜、黄瓜、毛豆、鳄梨等。

$\beta$ -nicotinamide mononucleotide is the precursor of NAD<sup>+</sup>. NMN has important physiological functions in human cells, which can be synthesized naturally in cells, and can also come from a variety of foods, including broccoli, cabbage, cucumber, soybean, avocado, etc.

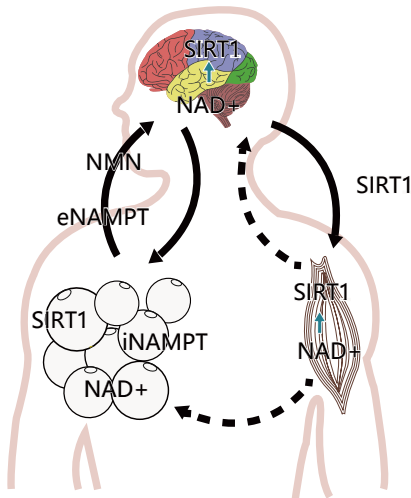
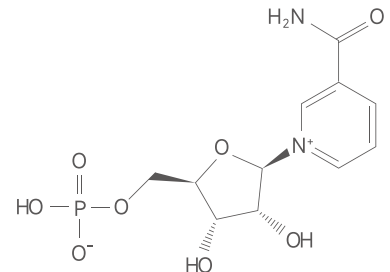
## 规格 Specification

化学名称 / Chemical Name:  $\beta$ -烟酰胺单核苷酸  $\beta$ -Nicotinamide mononucleotide ( $\beta$ -NMN)

分子量 / Molecular Weight: 334.22

分子式 / Molecular Formula: C<sub>11</sub>H<sub>15</sub>N<sub>2</sub>O<sub>8</sub>P

CAS No.: 1094-61-7



## 功能 Functions

- **改善睡眠**  
Improve sleep quality
- **辅助降血脂**  
Assist in lowering blood fat
- **保护心脑血管**  
Protect cardio cerebral vessels
- **保护听力、保护视力**  
Protect hearing and eyesight
- **促进酒精代谢，解酒护肝**  
Improve alcohol metabolism, protect the liver from alcohol
- **保护大脑神经元，预防神经退行性疾病**  
Protect brain neurons and prevent neurodegenerative diseases
- **激活长寿蛋白，抑制氧化应激，延缓衰老**  
Activate longevity protein, inhibit oxidative stress, anti aging
- **激活免疫系统，促进DNA修复，预防肿瘤**  
Activate the immune system, promote DNA repair, and prevent tumors
- **改善葡萄糖耐量和胰岛素敏感性，辅助降血糖**  
Improve glucose tolerance and insulin sensitivity, assist in lowering blood sugar
- **提升NAD含量，优化细胞能量代谢，改善体力，缓解疲劳**  
Increase NAD level in blood, optimize cell energy metabolism, improve physical strength, reduce fatigue

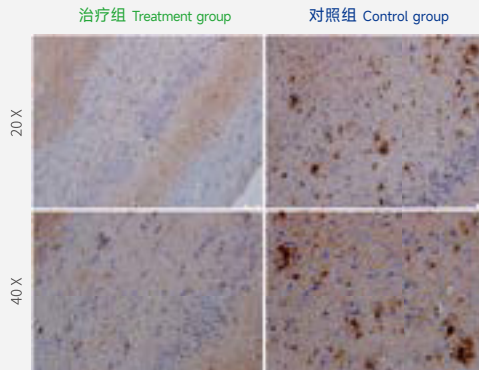
## NMN对脑部影响 Effects of NMN on the brain

AD转基因小鼠大脑海马和额叶组织 Hippocampus and frontal lobe tissue of AD transgenic mice

(邦泰生物与北京天坛医院合作研究 Bontac-Bio collaborated with Beijing Tiantan Hospital)

实验周期: 2019年07-10月  
Experiment period: July to October 2019

组织 / Organization: 脑 / Brain  
抗体 / Antibody: A $\beta$  (amyloid  $\beta$ -protein)



**大脑海马 (颞叶)**  
Brain hippocampus (Temporal lobe)  
学习和记忆  
Learning and Memory

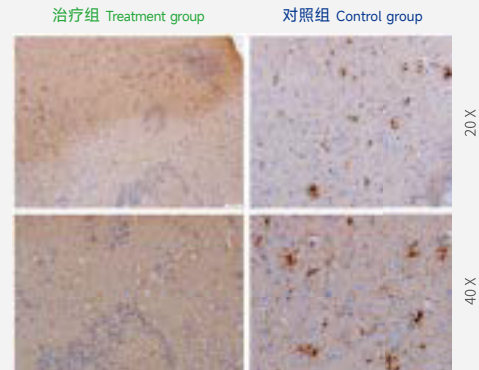
• A $\beta$ 的神经保护作用在阿尔茨海默病的病程进展中发挥着主要作用

The neurotrophic action of A $\beta$  plays A major role in the progression of Alzheimer's disease

• 棕黄色A $\beta$ 阳性染色颗粒明显减少

The brown-yellow A $\beta$  positive staining particles decreased significantly

组织 / Organization: 脑 / Brain  
抗体 / Antibody: A $\beta$  (amyloid  $\beta$ -protein)



**大脑额叶**  
Frontal lobe of brain

记忆、判断、分析、思考、操作  
Remember, judge, analyze, think, manipulate

## NMN在抗衰老中的作用

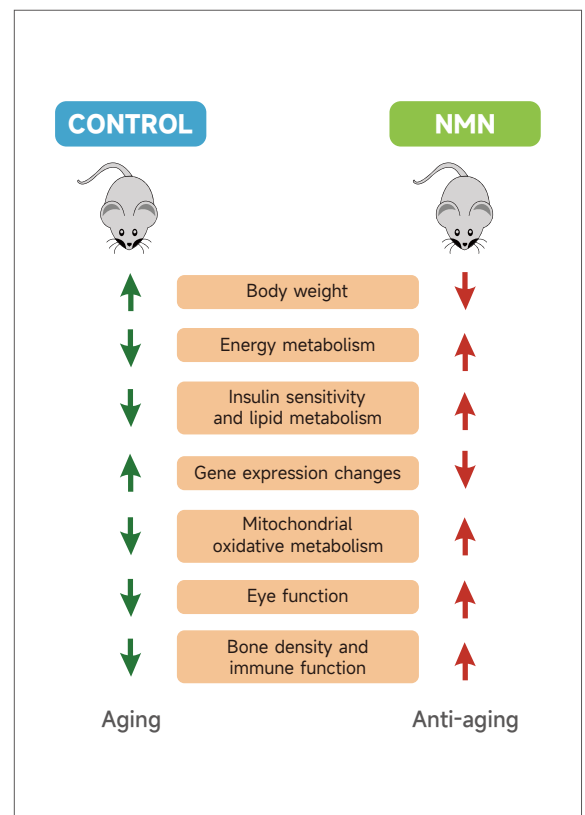
The role of NMN in anti-aging

在本研究中, 我们对正常衰老的普通野生型C57BL/6N小鼠进行了为期12个月的NMN给药。口服NMN可快速合成人体组织中的NAD<sup>+</sup>。值得注意的是, NMN能有效地减轻小鼠年龄相关的生理衰退, 如体重增加, 体力活动增强, 胰岛素敏感性和血脂水平改善等。NMN无明显的毒副作用, 可以看作人类有效抗衰老的潜在药物。

(文献出自 Mills et al., 2016, Cell Metabolism 24, 795-806)

In this study, we conducted a 12-month-long NMN administration to regular chow-fed wild-type C57BL/6N mice during their normal aging. Orally administered NMN was quickly utilized to synthesize NAD<sup>+</sup> in tissues. Remarkably, NMN effectively mitigates age-associated physiological decline in mice. Without any obvious toxicity or deleterious effects, NMN suppressed age-associated body weight gain, enhanced energy metabolism, promoted physical activity, improved insulin sensitivity and plasma lipid profile, etc. Therefore it can be considered as a potential drug candidate for anti-aging in human.

(The literature comes from Mills et al., 2016, Cell Metabolism 24, 795-806)



## 邦泰关于NMN的国际申请和授权专利

BONTAC's international application and authorized patents on NMN

- ZL201510113667.7
- ZL201680003960.0
- ZL201680003973.8
- ZL201680003974.2
- ZL201680003975.7
- ZL201680003981.2
- ZL201680003986.5
- ZL202110677769.7
- US10174298B2
- US10214552B2
- US10519429B2
- US11040996B2
- ZL202110677784.1
- 特许第6712356号
- 特许第6324511号

## 邦泰NMN产品特色优势

BONTAC NMN product features and advantages

- 15项NMN国内外专利，行业领先  
Industrial leading technology: 15 domestic and international NMN patents
- 提供一站式产品解决方案定制服务  
Provide one-stop customized product solution
- 多项体内研究表明，邦泰NMN安全有效  
Multiple in vivo studies show that BONTAC's NMN is safe and effective
- Bonzyme全酶法，绿色环保，无有害溶剂残留  
"Bonzyme"Whole-enzymatic method, environmental-friendly, no harmful solvent residues
- 哈佛大学抗衰之父大卫·辛克莱尔团队原料供应商  
NMN raw material supplier of famous David Sinclair team of Harvard University
- 自有工厂，通过多项国际认证，确保产品高质量稳定供应  
Self-owned factories have passed a number of international certifications to ensure high quality and stability of products
- 独家Bonpure七步纯化技术，高纯度（可达99.9%）、高稳定性  
Exclusive "Bonpure" seven-step purification technology, high purity (up to 99.9%) and stability

## NMN应用方向

NMN Application

- 医药  
Medicine
- 化妆品  
Cosmetic
- 保健食品  
Health food

