

# A superior liver-protector (liver-targeted anti-inflammaging) Phytocompound in liver disease



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## Biography

Francesco Marotta, MD, PhD (Japan) with experience in gastroenterology, oxidative stress, aging and nutrigenomics in USA, Cape-Town and Japan with extensive publications and book chapters. Cooperates with Nobel laureate Prof. Montagnier and is Hon. Research Professor at Dept of Nutrition, Texas Women University, USA, Advisory Board Panel of the Center for Life Science at Nazarbayev University, Astana, Kazakhstan and External Examiner for PhD candidates at McGill University, Canada. Chair of Longevity in Med. Sci. Commission for WHO-affiliated FEMTEC. Non-faculty lecturer in Functional Food in Aging at Harvard University, Boston, USA. Founder of EU-registered ReGenera R&D International for Aging Intervention.



## Abstract

Over the last decade, there is a growing concern regarding the exponential increase of obesity, diabetes, metabolic syndrome and all worrisome related cardiovascular and neurological complication. Most of the time, under modified detrimental dietary and lifestyle, there is a creeping, silent fatty liver infiltration. This entity is far more than a simple excess fat accumulation but it does represent the first step leading to a much worse cascade of events, as above mentioned. The global prevalence of NAFLD from meta-analysis has been estimated to be 25%, as average. The highest prevalence is in the Middle East and South America (over 30%), but the prevalence in the US, Europe, and Asia, ranges between 25% to 27%. It's more commonly reported in men, and it increases with age. Starting 15 years ago, our group patented a phytoformula in Japan which showed very promising liver protecting effect in vitro and in animal model of liver injury and HCC. However, this formula (YHK) failed to be supported by clinical studies. Based on this experience, some of us have started several years ago a meticulous and high-technology powered (LC-ESI-Q-TOF-MS/MS-analysis) extraction and purification work up of some of the key components of YHK. This made also possible to lead to isolating the most functionally active moieties (SBF: Specific Bioactive Fractions) and discarding the non active if not also interfering. Moreover other, equally SBF-isolated components from further effective ingredients acting on the lipid and glucose metabolic pathways have been added to. The latter were: Glucosinolate-derived compounds and pentacyclotriterpene acid, all endowed by supportive studies addressing specific novel molecular targets. This new research formula has been finally enhanced with a glyconutrient carrier to improve gut transit and intestinal absorption which is one of the weak and unpredictable factor of ginsenosides. In house experiments and pilot studies confirm the net superiority over the prototype formula. Thus, under pharmaceutical-grade control, a multicenter study has been launched involving populations from different countries either with NAFLD, NASH or normal liver function and morphology. To briefly sum up studies are ongoing in Italy (significant decrease/normalization of liver enzymes in NASH subjects), Ukraine (biopsy-proven, preliminary positive data after 6 months treatment on inflammatory and fibrosis changes), Japan yielded a varying degree of beneficial gene expression modulation in healthy subjects acting on the mitogen-activated protein kinase signalling, MicroRNA 122, chemerin receptor, chemokine-like receptor 1 and Cellular repressor of E1A-stimulated genes), Egypt (ongoing clinical trial in overweight NASH subjects) and Malaysia (completed in-house observational cross-over study in diabetics with NASH showing a statistically significant superiority vs initial prototype Japanese compound). Interestingly, most of the afore-mentioned beneficial gene expression modulating properties exerted by modified new formulation did not significantly change when under prototype formula (S. Pathak et al., Environmental and dietary metabolic stress in workers: Novel avenues in oral heavy metal chelation and fatty liver aids. Nova Publisher, New York, 2019). This novel compound has remarkable clinical application in gastroenterology, metabolic disease and aging liver pathophysiology as well.

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