

福島民報

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英ネイチャー掲載

会津若松市でみそなどを製造している会津天寶醸造(満田盛護社長)は、琉球大医学部の益崎裕章教授による玄米の健康への効果研究を発酵飲料として商品化したことが、英科学誌「ネイチャー」三月三十日号で紹介された。東京電力福島第一原発事故以降、風評被害に苦しむ食品加工企業の挑戦が評価された。

玄米効果の大学研究 商品化に成功 会津天寶醸造

同社は、肥満やメタボの抑制効果があるγ(ガンマ)オリザノールを多く含む玄米発酵飲料「玄米オリザーノ」を開発し、平成二十七年に発売した。商品は会津産ひとめぼれの玄米を甘酒風に仕上げたもので、胚芽や表皮が残る玄米の発酵の調整

や、γオリザノールをより多く含む加工法を、益崎教授や県ハイテクプラザと連携して模索してきた。

満田社長は「県内の風評払拭(ふっしょく)のために産学官連携で取り組んできたことが評価されうれしく思う」とコメントした。

記事はネイチャーの日本食の機能性研究特集の一部として掲載されている。

開発に携わった同社の金本淳一取締役総合企画部長と満田昌代主任が効果的な使用方法を講演しながら販売している。商品などの問い合わせは同社 フリーダイヤル(0120)340142へ。



ネイチャーに掲載された記事と「玄米オリザーノあまざけ」を持つ満田主任

Japan's culinary restoration

How the science behind the washoku food tradition could ease the burden of an ageing society and breathe new life into an ailing agricultural sector.

BY BRETT DAVIS

(Nature 30 March, 2017)

Brown rice for diabetes

In southern Japan, researchers are working with a food and pharmaceutical company to develop fermentation-based beverages and supplements to prevent and treat obesity-diabetes syndrome. Hiroaki Masuzaki of the University of the Ryukyus in Okinawa and colleagues are investigating brown rice, which has long been known to improve glucose tolerance and prevent the onset of diabetes.

The researchers tested the hypothesis that brown rice specifically contains several metabolically-beneficial

compounds not found in other grains.

The endoplasmic reticulum (ER) is a cellular network of tubules responsible for synthesising, folding and trafficking proteins within cells. In various diseases, 'unfolding' proteins accumulate in the ER, a condition called ER stress. These unfolding proteins are toxic to cells and induce apoptotic cell death. In recent years, studies have shown that the pathophysiology of obesity and diabetes is closely related to exaggerated ER stress in obese-diabetic mice. Notably, the fermentation-

based gamma-oryzanol-rich beverage produced by Aizu Tenpo Co.,Ltd. showed strong potential to improve the imbalance of gut microbiota in conjunction with the reduction of ER stress, says Masuzaki.

Unfortunately, the gastrointestinal tract is inefficient in its capacity to absorb gamma-oryzanol. So Masuzaki and his team, including colleagues at SENTAN Pharma Inc., encapsulated the compound in polymer poly (DL-lactide-co-glycolide) nanoparticles. They found that a single bi-weekly oral dose of 'Nano-Orz' markedly improved

glucose and lipid metabolism in obese-diabetic mice compared to regular gamma-oryzanol. It also markedly reduced ER stress in various tissues.

The team is now investigating the potential benefits of gamma-oryzanol in cognitive impairment, decreased physical activity, and addiction to alcohol, nicotine and dietary animal fats, all of which are often associated with obesity and diabetes. ■