

論文審査の要旨  
Summary of Dissertation Review

博士の専攻分野の名称 Degree	博 士 (農学)	氏名 Author	NGUYEN VAN QUAN
学位授与の要件	学位規則第4条第①・2項該当		
論文題目 Title of Dissertation	Medicinal and Pharmaceutical Properties of Momilactones A and B		
論文審査担当者 Dissertation Committee Member	主 査 Committee Chair Tran Dang Xuan, Associate Professor, IDEC, Hiroshima University 印 Seal		
審査委員 Committee	Teruo Maeda, Professor, IDEC, Hiroshima University		
審査委員 Committee	Masaoki Tsudzuki, Professor, IDEC, Hiroshima University		
審査委員 Committee	Tetsuro Hosaka, Associate Professor, IDEC, Hiroshima University		
審査委員 Committee	Yoshiharu Fujii, Professor, Tokyo University of Agriculture and Technology (外部審査員)		
〔論文審査の要旨〕 Summary of Dissertation Review			
<p>This research was carried out to isolate momilactones A (MA) and B (MB) from rice husk bran, and white grain. The applicant also developed novel analytical methods to identify and quantify MA and MB in rice organs as well as cooked rice, using column chromatography, HPLC, GC-MS, LC-MR, IR, NMR, and UPLC. The biological activities of MA and MB including anti-diabetes, anti-obesity, and anti-skin-aging disease were also surveyed.</p> <p>The thesis included 6 Chapters. Chapter 1: Introduction. Chapter 2: Isolation and purification of MA and MB and momilactone-like compounds from rice husk. Chapter 3: MA and MB are <math>\alpha</math>-amylase and <math>\alpha</math>-glucosidase inhibitors. Chapter 4: Contributions of momilactones A and B to diabetes and obesity inhibitory potentials of rice bran: Evidence from in vitro assays. Chapter 5: Antioxidant and anti-skin-aging properties of momilactones A and B. Chapter 6: General discussion and conclusion</p> <p>Findings of this research revealed that MA and MB are potent to inhibit diabetes, obesity, and skin-aging disease in vitro assays. It shows that the presence of MA and MB in rice organs, such as rice bran and rice husk are potential for development to supplements to control diabetes and obesity. MA and MB are also promising to develop cosmetics to treat skin-aging disease. In addition, some momilactone-like compounds found in rice husk were inhibitory against emergence of invasive plant species and weeds. These compounds are suggested as sources to develop natural herbicides.</p> <p>From the achievements noted above, the applicant Nguyen Van Quan has published 3 papers (Molecules, IF 3.060, 2 papers; Saudi Pharmaceutical Journal, IF 3.643, 1 paper) as first name. After carefully examined the results from presentation, graduate thesis, achievements, and the responses on the questions raise from the examiners. The judged committee has agreed that the applicant passed the exam.</p>			