

出國報告（出國類別：進修）

韓國鼻科醫學會第 65 屆年度會議

**The 65th Korean Rhinologic Society Annual  
Congress**

服務機關：臺中榮民總醫院 醫學研究部

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## 摘要（含關鍵字）

職從 112 年 3 月 9 日至 3 月 13 日赴韓國大邱參加韓國鼻科醫學會第 65 屆年度會議。職在大會中受邀參加其中的國際議程口頭發表自己最近有關鼻竇炎基因病因的研究成果。在會議期間，我也和韓日鼻科教授們交流，討論未來三國例行性交流的方式。

韓國鼻科醫學會是亞洲歷史悠久的鼻科醫學會，一直將其學會國際化，每年均邀請國外學者參與其年會，以達到國際交流目標。近年來，日本鼻科醫學會也開始例行邀請國外學者參與其年會。台灣鼻科醫學會去年在本院舉辦年會，也開始邀請國外學者參與，不過由於疫情因素，只線上參與，將來希望能朝向台日韓三國聯盟方式舉辦，擴大台灣鼻科醫學會的知名度及影響力，同時提昇國內耳鼻喉科年輕醫師的國際觀。

關鍵字：慢性鼻竇炎、基因、病因

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## 一、目的

受邀參加韓國鼻科醫學會第 65 屆年度會議，並口頭發表自己最近有關鼻竇炎基因病因的研究成果，同時和韓日鼻科教授們交流，討論未來三國例行性交流的方式。

## 二、過程

### 1. 參加

職於 112 年 3 月 9 日從桃園搭機直達韓國大邱參加韓國鼻科醫學會第 65 屆年度會議。韓國鼻科醫學會第 65 屆年度會議今年在大邱 Inter-Burgo Hotel（圖 1）舉行。有來自韓國、台灣、日本及泰國的耳鼻喉科醫師參加（圖 2），國內參加的醫師還有台大的葉德輝教授、北榮的藍敏瑛教授及嘉義聖馬爾定的盧彥廷醫師。



圖 1 韓國鼻科醫學會第 65 屆年度會議今年在大邱 Inter-Burgo Hotel 舉行



제65차 대한비과학회 **총계 학술대회**  
65<sup>th</sup> Korean Rhinologic Society Annual Congress Theme: Revolutionary Convergence in Rhinology

**컨벤션 AB홀**

시간	연재	연자(소속)
08:25 - 08:30	Opening Remarks	
Conjoint Session Korea-Japan-Taiwan Conjoint		
08:30 - 08:45	A New Development of Endoscopic Surgery for Sinonasal Malignancies	Heung-Man Lee (Korea Univ, Korea) Jung-Soo Kim (Kyungpook National Univ, Korea)
08:45 - 09:00	Genetics of Chronic Rhinosinusitis: Data from a Taiwanese Population	Toyoyuki Hanazawa (Chiba Univ, Japan)
09:00 - 09:15	Recent Researches on CRS	Rong-San Jiang (Taichung Veterans General Hospital, Taiwan)
09:15 - 09:30	Chronic Rhinosinusitis Associated with IgG4-Related Disease	Ji-Hun Mo (Dankook Univ, Korea)
09:30 - 09:45	Dual-Function Nanostructured Platform for Isolation of Nasopharyngeal Carcinoma Circulating Tumor Cells and EBV DNA Detection	Manabu Nonaka (Tokyo Women's Medical Univ, Japan)
09:45 - 10:00	Endotype-driven Treatment in Chronic Rhinosinusitis	Lan Ming-Ying (Taipei Veterans General Hospital, Taiwan) Dae Woo Kim (Seoul National Univ, Korea)
Special Lecture I Invited Speakers		
10:00 - 10:20	Postoperative Evaluation of Olfactory Dysfunction in Eosinophilic Chronic Rhinosinusitis-Comparison of Histopathological and Clinical Findings	Chang-Hoon Kim (President of KRS, Yonsei Univ, Korea) Shin-ichi Haruna (Chairman of JRS, Dokkyo Medical Univ, Japan)
10:20 - 10:40	Constructing a Blueprint for the Treatment of Chronic Rhinosinusitis by Inflammatory Endotyping	Yeh Te-Huei (President of TRS, Taiwan)
10:40 - 11:00	Cilia and Related Disease	Kazuhiro Takeuchi (President of 62nd JRS, Mie Univ, Japan)
11:00 - 11:20	Coffee Break	
International Session Forefront Topics in Rhinology		
11:20 - 11:35	Retrobulbar Amphotericin B Injection in Invasive Fungal Rhinosinusitis with Orbital Invasion Patients	Sung-Wan Kim (Kyunghee Univ, Korea) Yong Ju Jang (Ulsan Univ, Korea)
11:35 - 11:50	Predictors and Prognosis of Respiratory Epithelial Adenomatoid Hamartoma in Sinonasal Cavities	Jesada kanjanaporn (Chulalongkorn Univ, Thailand)
11:50 - 12:05	Optimal Surgical Techniques for Inverted Papilloma	Hiroyuki Morishita (Mie Univ, Japan)
12:05 - 12:20	Microbiota Dysbiosis in Rhinosinusitis	Myeong Sang Yu (Ulsan Univ, Korea)
12:20 - 12:35	Patient Selection for Immunotherapy in Allergic Rhinitis	Yen-Ting Lu (Chung Shan Medical University Hospital, Taipei, Taiwan)
12:35 - 12:50	The Serum Squamous Cell Carcinoma Antigen Level in Inverted Sinonasal Papilloma and Nasal Polyps Patients	Jin-Young Min (Kyunghee Univ, Korea) Chakapan Promsopa (Prince of Songkha Univ, Thailand)
Luncheon Symposium		
12:50 - 13:10	Xolair, The New and Trusted Treatment as the First Choice of Biologic for Your CRSwNP Patients	김수환(가톨릭대)
13:10 - 13:30	Dupixent, 1 <sup>st</sup> and best biologic in Type 2 CRSwNP treatment	허성재(경북대)
13:35 - 14:00	학술상 수여	
Special Lecture II Invited Speakers (학술상 수상자)		
14:00 - 14:20	빅데이터로 살펴본 Obstructive Sleep Apnea	김용태(영남대) 조재훈(건국대)
Symposium I Cutting-Edge Convergence Research		
14:20 - 14:40	Future Technologies for Rhinologic Research	신승환(대구가톨릭대) 이승훈(고려대)
14:40 - 15:00	Big Data Analysis for Rhinologic Field Research using National Population Health Data	김종엽(건양대)
15:00 - 15:20	Smartphone Applications for Acoustic Screening of Sleep and Sleep Apnea	조재훈(건국대)
15:20 - 15:40	Emerging Role of Robotics in the Surgical Treatment for Rhinologic Diseases	김정훈(서울대) 조형주(연세대)
15:40 - 16:00	Coffee Break	
Symposium II Trends in OSA [수련다원검사 정도관리위원회 연수형질 1형]		
16:00 - 16:20	Understanding Phenotypes of OSA	조진희(가톨릭대) 김용영(서울대)
16:20 - 16:40	How to interpret and report on the PSG findings	김상욱(경상대)
16:40 - 17:00	Update guideline of OSA management	최지호(순천향대)
17:00 - 17:20	Strategies for sustainable management of CPAP	허성재(경북대)
17:20 - 17:40	정기 총회	
17:40 - 17:45	Closing Remarks	

대한비과학회

圖 2 會議議程



職在受邀參加其中的國際議程口頭發表自己最近有關鼻竇炎基因病因的研究成果(圖3,4)。使用本院 TPMI 資料結合院內 HIS 臨床資料來探討國內鼻竇炎病患的基因背景，這是亞洲人首次探討鼻竇炎病患的可能基因病因，以往職發表論文發現和美國資料有所不同，顯示基因變異在鼻竇炎病因上會隨人種有所不同，這次職再使用本院 TPMI 資料結合院內 HIS 臨床資料利用 polygenic score 來預測鼻竇炎的發生率，這也是世界首次嘗試，在本次會議中得到不錯的迴響。



圖 3 職在會議中口頭發表論文





圖 4 職在會議中口頭發表論文



## 2. 參加台韓日鼻科醫師晚宴

韓國鼻科醫學會很熱情邀請來參加會議的台日醫師一起晚宴，晚宴除了聯絡感情外，也進一步了解韓國鼻科醫學會運作情形，並討論未來台韓日三國鼻科醫學會合作事項。初步延續目前方式在各國鼻科醫學會年會中例行邀請對方學者及歐美學者參與會議，以達國際會議目標。（圖 5）。



圖 5 參加韓國鼻科醫學會晚宴

## 三、心得

韓國鼻科醫學會年度會議雖短短只有一天，但看得出來主辦單位的用心。從議程的安排，特別是國際議程，許多台韓日學者的熱烈參與，發表的報告都是個人長期研究結果，另人刮目相看。安排的晚宴也讓賓主盡歡，增進台韓日三國鼻科醫學會的感情。總結，此次韓國之旅讓職在在多方面都收穫很多，期待未來能繼續有這赴國外學習之旅。

## 四、建議

1. 職此次參加韓國鼻科醫學會年度會議雖短短只有一天，但仍有不錯的國際議程，是年輕醫師參與國際會議好的起步選擇。想對於大型有名的國際醫學會，年輕醫師常只能貼海報，這種國際會議都很歡迎年輕醫師作口頭報告可惜未能將這些經驗傳承給年青醫師，建議醫院能有一定機制要求年青醫師和資深醫師一起出國參加國際會議或參訪國外機構，來增加出國參訪成效。



2. 台日韓三國是亞洲醫學研究最優秀的國家，在院內舉辦台日韓國際會議是較容易舉行的國際會議，而且水準也相當不錯，又容易增進國際友誼。
3. 職使用 TPMI 資料發表鼻竇炎相關基因變異研究（附錄），是亞洲首次有較大規模的基因研究。利用本院 TPMI 資料可以研究本土疾病的基因病異是個可研究方向。
4. 此次會議中北榮藍主任和嘉義聖馬爾定盧主任發表的研究都是和學校老師共同合作的成果，由於學校老師提供創新技術，研究成果都相當的新穎性。建議院方持續推動院校合作計畫讓同仁在研究上有新的突破方向。

## 五、附錄

職使用 TPMI 資料發表鼻竇炎相關基因變異研究。

## RESEARCH NOTE



# Genetic variations in bitter and sweet taste receptors in Taiwanese patients with chronic rhinosinusitis

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## KEYWORDS

bitter taste receptor, chronic rhinosinusitis, eosinophilic, genetic variation, nasal polyps, sweet taste receptor

## 1 | INTRODUCTION

It has been suggested that genetic variations of taste receptors play a role in the pathophysiology of chronic rhinosinusitis (CRS).<sup>1</sup> Both bitter and sweet taste receptors have been implicated in CRS, and both families of receptors have been understudied in Asian populations. *TAS2R38* is one of the best documented bitter taste receptors.<sup>2</sup> There are three most common polymorphisms in the *TAS2R38* gene. These three polymorphisms are associated with amino acid residues at positions 49(rs713598 C/G p.Ala49Pro), 262(rs1726866 C/T p.Ala262Val), and 296(rs10246939 T/C p.Ile296Val). Purnell et al.<sup>3</sup> reported that the minor allele frequency (MAF) of the rs713598 allele was higher in patients with CRS from West Virginia than those seen in European patients. On the contrary, Gallo et al. did not find an association between the *TAS2R38* genotype and CRS in an Italian population.<sup>4</sup>

On the other hand, the association between the genetic polymorphisms of sweet taste receptors and CRS has not yet been reported. *TAS1R2* is a sweet receptor, not a bitter taste receptor. In this study, we attempted to investigate the association between the genetic polymorphisms of *TAS2R38*(rs713598 and rs10246939) with *TAS1R2*(rs35874116) and CRS in a Taiwanese population.

## 2 | METHODS

This case-control study involved data taken from the Taiwan Precision Medicine Initiative (TPMI) project, which collected information and specimens from Taiwanese volunteers at Taichung Veterans General Hospital (TCVGH) beginning from June 2019. Our study cohort consisted of 58,091 patients whose genotyping information, demographics, medical history, and biochemical reports were all made available. The study protocol was approved by the

Rong-San Jiang and Hsueh-Ju Lin are listed as the first authors who contributed equally to this work.