

# ANSORP NOW

## CONTENTS :

1. Notice to ANSORP investigators : use of ANSORP study data
2. Publication of main papers from ANSORP HAP study and pneumococcal study
3. Current status of ANSORP network
4. Introduction of new ANSORP studies in 2012
5. Report of APEC project in 2011

## Dear ANSORP Investigators

Greetings from Seoul !

I hope all ANSORP investigators are doing well and wish you and your family the New Year filled with joy and happiness.



This is the **2012 January issue of ANSORP NOW**. It provides update information and current status of ANSORP activities. "ANSORP NOW" is a monthly newsletter, delivered to all ANSORP investigators by e-mail and website of APFID ([www.apfid.org](http://www.apfid.org)). Please read this ANSORP NOW carefully to update our international collaboration. If you have any ideas, opinions, or issues that can be shared with other ANSORP investigators, please send us e-mails or FAX.

I always appreciate your active participation in the ANSORP activities.

Jae-Hoon Song, MD, PhD  
Organizer, ANSORP  
Founder & Chairman, APFID

## Important Notice to ANSORP investigators

First of all, we would like to thank ANSORP investigators for sincere support and participation in ANSORP activities. Thanks to your contribution, ANSORP has been successfully growing.

Two ANSORP studies, hospital acquired pneumonia (HAP) and pneumococcal studies have been performed during 2008-2009. The first paper from the ANSORP HAP study was published in the American Journal of Respiratory and Critical Care Medicine (SCI impact factor = 10.191) with title of "High prevalence of multidrug-resistant non-fermenters in hospital-acquired pneumonia in Asia". And, a main paper from the pneumococcal study was accepted by the Antimicrobial Agents and Chemotherapy (SCI impact factor = 4.672) with title of "Changing trend of antimicrobial resistance and serotypes in *Streptococcus pneumoniae* in Asian countries: an ANSORP study".

As we announced, results from the ANSORP HAP and pneumococcal studies are now available to ANSORP investigators who have participated in these studies. Therefore, if any ANSORP investigators would like to use ANSORP study data including microbial isolates, in vitro antimicrobial susceptibility data of bacterial isolates, or clinical data of patients collected from ANSORP studies for publication or education purposes, please submit the Request Form to the headquarter of ANSORP. The submitted Request Form will be reviewed by ANSORP Executive Committee and ANSORP investigators can use the ANSORP study data after approval of their request by ANSORP Executive Committee. Regarding the Request Form, please contact ANSORP Project Manager (Dr. So Hyun Kim, [shkim@ansorp.org](mailto:shkim@ansorp.org)).

Again, we deeply appreciate your contribution and support.

## Contact Information

**Jae-Hoon Song, MD, PhD**  
Organizer, ANSORP / Chairman, APFID  
Samsung Medical Center  
Tel: 82-2-3410-0320, FAX: 82-2-3410-0041  
E-mail: [ansorp@gmail.com](mailto:ansorp@gmail.com) or  
[songjh@skku.edu](mailto:songjh@skku.edu)

**Doo Ryeon Chung, MD, PhD**  
Coordinator, ANSORP  
Samsung Medical Center  
Tel: 82-2-3410-6826, FAX: 82-2-3410-0041  
E-mail: [iddrchung@gmail.com](mailto:iddrchung@gmail.com) or  
[drchung@skku.edu](mailto:drchung@skku.edu)

**So Hyun Kim, DVM, PhD**  
Project Manager, ANSORP  
Asia Pacific Foundation for Infectious Diseases  
Tel: 82-2-3410-6826, FAX: 82-2-3410-6667  
E-mail: [shkim@ansorp.org](mailto:shkim@ansorp.org) or  
[shkim.ansorp@gmail.com](mailto:shkim.ansorp@gmail.com)

# Publications from ANSORP HAP and pneumococcal studies

## High prevalence of multidrug-resistant nonfermenters in hospital-acquired pneumonia in Asia

*Am J Respir Crit Care Med.* 2011;184(12):1409-17

Chung DR, Song JH, Kim SH, Thamlikitkul V, Huang SG, Wang H, So TM, Yasin RM, Hsueh PR, Carlos CC, Hsu LY, Buntaran L, Lalitha MK, Kim MJ, Choi JY, Kim SI, Ko KS, Kang CI, Peck KR; ANSORP Study Group

### ABSTRACT

**RATIONALE:** Hospital-acquired pneumonia (HAP) and ventilator-associated pneumonia (VAP) remain important causes of morbidity and mortality. Increasing antimicrobial resistance has aroused the concern of the failure of antibiotic treatment.

**OBJECTIVES:** To determine the distribution of the bacterial isolates of HAP and VAP, their antimicrobial resistance patterns, and impact of discordant antibiotic therapy on clinical outcome in Asian countries

**METHODS:** A prospective surveillance study was conducted in 73 hospitals in 10 Asian countries from 2008-2009. A total of 2,554 cases with HAP or VAP in adults were enrolled and 2,445 bacterial isolates were collected from 1,897 cases. Clinical characteristics and antimicrobial resistance profiles were analyzed.

**MEASUREMENT AND MAIN RESULTS:** Major bacterial isolates from HAP and VAP cases in Asian countries were *Acinetobacter* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and *Klebsiella pneumoniae*. Imipenem resistance rates of *Acinetobacter* and *P. aeruginosa* were 67.3% and 27.2%, respectively. Multidrug-resistant rates were 82% and 42.8%, and extensively drug-resistant rates were 51.1% and 4.9%. Multidrug-resistant rate of *K. pneumoniae* was 44.7%. Oxacillin resistance rate of *S. aureus* was 82.1%. All-cause mortality rate was 38.9%. Discordant initial empirical antimicrobial therapy increased the likelihood of pneumonia-related mortality (odds ratio, 1.542; 95% confidence interval, 1.127-2.110).

**CONCLUSIONS:** *Acinetobacter* spp., *P. aeruginosa*, *S. aureus*, and *K. pneumoniae* are the most frequent isolates from adults with HAP or VAP in Asian countries. These isolates are highly resistant to major antimicrobial agents, which could limit the therapeutic options in the clinical practice. Discordant initial empirical antimicrobial therapy significantly increases the likelihood of pneumonia-related mortality.

## Changing trend of antimicrobial resistance and serotypes in *Streptococcus pneumoniae* in Asian countries: an ANSORP study

*Antimicrob Agents Chemother.* 2012 Jan 9. [Epub ahead of print]

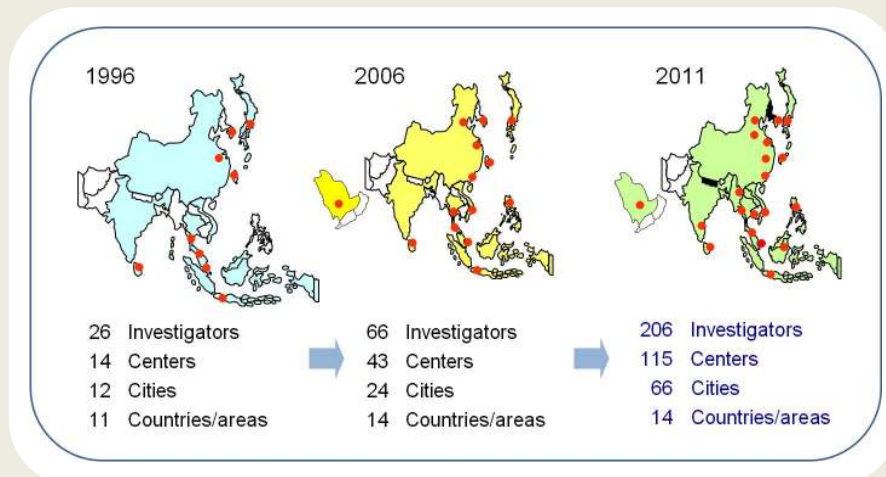
Kim SH, Song JH, Chung DR, Thamlikitkul V, Yang Y, Wang H, Lu M, So TM, Hsueh PR, Yasin RM, Carlos CC, Pham HV, Lalitha MK, Shimono N, Perera J, Shibl AM, Baek JY, Kang CI, Ko KS, Peck KR; on behalf of the ANSORP Study Group.

### ABSTRACT

Antimicrobial resistance in *Streptococcus pneumoniae* remains a serious concern worldwide, particularly in Asian countries, despite the introduction of heptavalent pneumococcal conjugate vaccine (PCV7). The Asian Network for Surveillance of Resistant Pathogens (ANSORP) performed a prospective surveillance study of 2,184 *S. pneumoniae* isolates collected from patients with pneumococcal infections from 60 hospitals in 11 Asian countries from 2008 to 2009. Among non-meningeal isolates, prevalence rate of penicillin non-susceptible pneumococci (MIC  $\geq 4$   $\mu\text{g/ml}$ ) was 4.6% and penicillin resistance (MIC  $\geq 8$   $\mu\text{g/ml}$ ) was extremely rare (0.7%). Resistance to erythromycin was very prevalent in the region (72.7%), which was the highest in China (96.4%), Taiwan (84.9%), and Vietnam (80.7%). Multidrug resistance (MDR) was observed in 59.3% of isolates from Asian countries. Major serotypes were 19F (23.5%), 23F (10.0%), 19A (8.2%), 14 (7.3%), and 6B (7.3%). Overall, 52.5% of isolates showed PCV7 serotypes, ranging from 16.1% in the Philippines to 75.1% in Vietnam. Serotypes 19A (8.2%), 3 (6.2%), and 6A (4.2%) were the most prominent non-PCV7 serotypes in the Asian region. Among isolates with serotype 19A, 86.0% and 79.8% showed erythromycin resistance and MDR, respectively. The most remarkable findings about the epidemiology of *S. pneumoniae* in Asian countries after the introduction of PCV7 were high prevalence of macrolide resistance and MDR and distinctive increases in serotype 19A.

If you need PDF version of the papers, please contact ANSORP Project Manager (Dr. So Hyun Kim, [shkim@ansorp.org](mailto:shkim@ansorp.org)).

## Current status of ANSORP network



Country	City	Center	Investigator
Korea	9	19	32
China	13	35	63
Hong Kong	1	1	4
Taiwan	8	8	10
Japan*	3	3	4
Thailand	4	5	5
Singapore	1	4	10
Malaysia	9	11	41
Indonesia*	4	5	6
Vietnam*	3	8	10
Philippines	5	8	13
India*	1	1	1
Sri Lanka	4	6	6
Saudi Arabia	1	1	1
<b>14 countries</b>	<b>66</b>	<b>115</b>	<b>206</b>

\* Reorganization of ANSORP network is currently underway.

## Introduction of new ANSORP studies in 2012

A prospective, hospital-based, multicenter surveillance on antimicrobial resistance and serotypes of *Streptococcus pneumoniae* in hospitalized patients over 50 years with invasive pneumococcal diseases or pneumonia in Asia

- This study was proposed by Dr. Jae-Hoon Song at Samsung Medical Center in Korea and will be sponsored by Pfizer.
- This study is multicenter, prospective, hospital-based, active surveillance study on *S. pneumoniae* and is planned and performed by the ANSORP. Among the ANSORP countries, 8 countries (Korea, China, Thailand, Malaysia, the Philippines, Singapore, India, and Indonesia) are supposed to participate in this study.
- The primary objective of this study is to investigate serotype distribution of *S. pneumoniae* isolates from the adult patients with invasive pneumococcal diseases or community-acquired pneumonia in the PCV era.
- As of Jan 2012, 63 centers in 8 countries (Korea, 19; China, 15; Philippines, 6; Malaysia, 10; Singapore, 5; Thailand, 5; India, 1; Indonesia, 2) have joined this study. The target enrollment will be 2,500 during a two-year study period.

A prospective multi-center, multi-national serosurvey study for pertussis among children in Asian countries

- This study was proposed by Dr. Cheng-Hsun Chiu at Chang Gung Children's Hospital in Taiwan and Dr. Yae-Jean Kim at Samsung Medical Center in Korea and could be sponsored by Sanofi-Aventis.
- This study is multicenter, prospective, hospital-based, serosurvey study on pertussis and is planned and performed by the Pediatric Network of ANSORP.
- The primary objective of this study is to identify the pertussis burden in the Asian region by performing serosurvey of pertussis among children.
- Preparation of study proposal is currently underway and as of Jan 2012, 8 centers in 6 countries (Korea, 1; China, 2; Japan, 1; Taiwan, 2; Thailand, 1; Sri Lanka) showed their interest in participating in this study.

*If you would like to participate in new ANSORP studies and/or if you would like to submit study proposals, please contact ANSORP Project Manager (Dr. So Hyun Kim, [shkim@ansorp.org](mailto:shkim@ansorp.org)).*

## Report of APEC project performed in 2011

### ：“International initiatives to control antimicrobial resistance in the Asia-Pacific region”

As we announced, our international project proposal entitled "International initiatives to control antimicrobial resistance in the Asia-Pacific region" was accepted for APEC support in Dec 2010.

Given the serious clinical and economic impact of antimicrobial resistance (AMR) in the Asia-Pacific (AP) region, the main objective of the project was to prepare the future strategies for control and prevention of AMR in the AP region by organizing the Strategic Focus Group (SFG) and the Expert Forum to discuss the current issues on AMR and to explore solutions to AMR in the region.

The APEC project was successfully completed in 2011 by 1) establishment of the first international group (SFG) consisting of multi-sectoral experts from private and government sectors in the AP region, 2) organization of Expert Forum twice in April and October, 2011, respectively, in Seoul, Korea, and 3) development of Strategic Action Plan to control and prevent AMR in the region.

Strategic Action Plan to control and prevent AMR in the AP region was successfully developed by SFG and prepared based on Expert Forum. The future strategies will be published in an international medical journal to disseminate the information and contents of the strategies and will also be submitted to APEC as an official document of APEC project in due course.

### Future Plan for APEC Project

Among strategic action plans, the first and the most urgent plan is to increase the awareness of AMR and to promote the appropriate use of effective antibiotics that can prevent the emergence of AMR in the AP region. Therefore, new project entitled "*International campaign program to control antimicrobial resistance (AMR) in the Asia-Pacific region*" will be proposed to APEC at APEC meeting in Moscow, Russia in February 2012.



- The 2nd Expert Forum (International strategies for control and prevention of AMR in the AP region).  
- Date : October 15, 2011  
- Venue : Grand Intercontinental Hotel, Seoul, Korea



*We always appreciate your active contribution to ANSORP activities. If you have any questions, or issues that can be shared with other ANSORP investigators, please let us know them at any time.*