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Newsletter

November 2016



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Did you know? The researchers at Imperial College London and DNA Electronics are developing a portable test shaped as a USB stick to perform HIV test. How does it work? Read it here!

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It has been a year since the last MECOR course was conducted in 2015. This year, the INA-RESPOND network is also sending some of its researchers to attend the 2016 MECOR course. What do they think about it? Find out here.

Smuggled Bacteria: When We Don't Realize Airports Toilet Doors Are Teeming with It

The end of the year is closing in, and that means only one thing... Holiday is coming soon! ☺ Some of us have probably made some arrangement to fly back home to our hometowns or perhaps go abroad to visit some new and exciting places. No matter where we go, we should always keep one thing in mind: hygiene!

Observations and tests have been conducted at many international airports on pathogenic bacteria, and the test results show that travelers should always be mindful of their hygiene, especially when using public facilities such as the rest rooms.

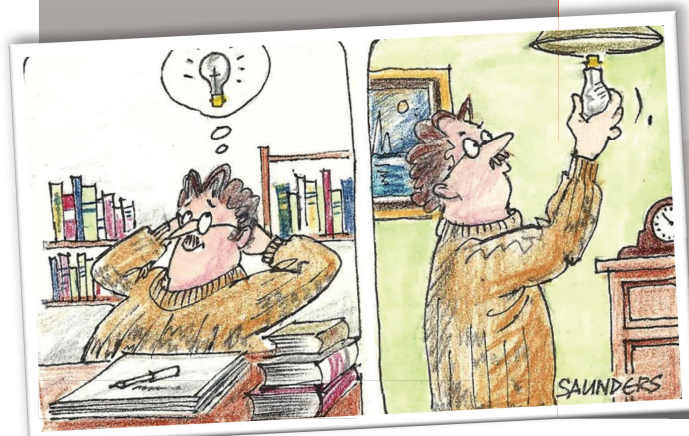
We are not going to tell you how to be mindful of your own hygiene in this edition. Instead, we will tell you the risks and danger of not paying attention to your hygiene when using public facilities.

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Writer's Block: Our Common Enemy

In the process of writing, there are times when we sometimes find it hard to come up with something creative. If we don't do anything about it, we would be facing a writer's block before we realize. How do we avoid this condition? Find it here!

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Save The Date

Important Events & Meetings

7 – 17
November

Data Management SOPs
Discussion, NIHRD

18 – 20
November

Hari Kesehatan Nasional (National
Health Day), Jakarta International
Expo



November Birthday

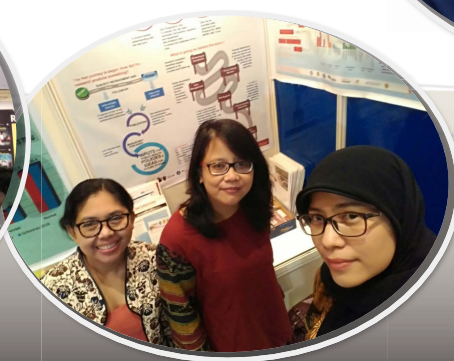
3 Nov	dr. Bambang Sigit Riyanto	PI INA102 Site 580
4 Nov	Prof. Dr. Mansyur Arif	SC Member at Site 550
5 Nov	Ms. Rina Sirait	LT INA101 Site 560
9 Nov	dr. Mulya Rahma Karyanti	Co-PI INA101 Site 530
11 Nov	Ms. Dewi Sriyanti	LT INA101 Site 560
16 Nov	dr. Akbar Fahmi	RA INA101 Site 570
28 Nov	Ms. Widoretno	Center 1 NIHRD

Announcement

Our family is getting bigger and bigger! In this edition, we would like to welcome our two new Site Specialists (SS), Ms. Maria Intan Josi and dr. Venty Muliana Sari.

The two new SS will be working together with our current SS, dr. Anandika and dr. Nurhayati.

Welcome aboard and let's do our best to make our network great!



INA-RESPOND INA101 (AFIRE) Study Updates

By:
dr. Nurhayati



Site #	Site Name	SMV	SDV (%)
510	RSUP Hasan <u>Sadikin</u> , Bandung	12 th	44%
520	RSUP <u>Sanglah</u> , Denpasar	12 th	50%
530	RSUP <u>Cipto Mangunkusumo</u> , Jakarta	4 th	45%
540	RSPI <u>Sulianti Saroso</u> , Jakarta	4 th	39%
550	RSUP <u>Wahidin</u> , Makassar	10 th	52%
560	RSUP <u>Kariadi</u> , Semarang	11 th	41%
570	RSUD <u>Soetomo</u> , Surabaya	10 th	40%
580	RSUP <u>Sardjito</u> , Jogjakarta	12 th	84%

Table 1. Detailed SMV & Source Data Verification

As of 30 June 2016, the study had enrolled 1,492 subjects (864 adults and 628 children).

Since then, many Site Monitoring Visits (SMV) have been conducted to ensure that all study teams comply with the Protocol and applicable regulations, which includes verifying subjects' data. According to INA101 monitoring plan, we are verifying Case Report Form (CRFs) at least 20% from enrolled subject. Detailed SMV and Source Data Verification (SDV) can be seen in the table.

A Site Close-Out Visit (SCV) is planned once all CRFs have been completed and all Data Clarification Form (DCF) have been issued, reviewed, and resolved. The diagram below shows INA101 Study Close-Out Visit Plan.



*EDMS : Electronic Data Management System
SAE : Severe Adverse Event
PD : Protocol Deviation
IRB : Institutional Review Board
SRB : Site Regulatory Binder

Detailed screening and enrollment progress is available in portal folder: Studies\INA101\Screening progress.pdf or go to the following link: <https://ina-respond.net/EdmFile/getfile/797233>
For further information about this study please go to: <http://www.ina-respond.net/afire-study/>

Latest News: A Glance of Research Progress in The World

By:

dr. Anandika Pawitri
Ms. Maria Intan Josi



USB Stick That Tests for HIV; For Real?

Good news come from researchers at Imperial College London and DNA Electronics. They are developing a portable test shaped as a USB stick to perform HIV test. A drop of blood is all the device needs. It creates an electrical signal that can show results in less than 30 minutes, according to data published in *Scientific Report*.

Graham S. Cooke, MD, PHD from department of Medicine at Imperial College London said in the press release that this disposable

device allows HIV patients to regularly check their viral load level in the same way that diabetes patients monitor their blood glucose. To rapidly assess level of viral load – which cannot be done with routine HIV test – is important for health care professionals to help them determine whether the patients are adhering to their treatment regimen and to avoid HIV drug resistance.

Although the technology is still in early stages of development, it will overtake the current testing that is often costly and requires complex equipment, that can take several days to produce result.

So, how does this thing work? A low-buffer HIV-1 pH-LAMP (loop-mediated isothermal amplification) assay is incorporated into a pH-sensitive complementary metal-oxide semiconductor (CMOS) chip.

The assay can amplify and detect HIV-1 RNA on a small sample of blood that is placed on the USB stick. If the virus is present, a change in acidity is triggered and transformed into an electrical signal, which is sent to the USB stick. The USB stick then generates the result in a program on a computer or other electronic device.

The HIV USB stick has been tested to screen 991 samples with detectable viral loads. The tests produce results in approximately 20.8 minutes in samples with more than 1000 RNA copies, and yielded a sensitivity of 95% (in vitro).

By utilizing the device, monitoring viral load will be easier. Controlled level of viral load will allow patients to have normal life expectancy, which is our aim for the patients.

Reference: <http://www.healio.com/infectious-disease/hiv-aids/news/in-the-journals>



Figure 1. USB Stick that tests for HIV

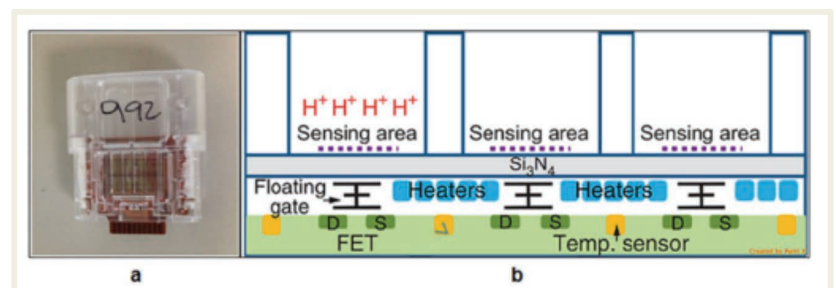


Figure 2. (a) Prototype chip for amplification and detection of nucleic acids compatible with a USB port. (b) Schematic of a chip. Each chamber functions independently. When the pH of the chamber changes, the transistor generates an electrical signal.

Smuggled Bacteria:

When We Don't Realize Airports Toilet Doors Are Teeming with It

Sanitizing our hands seems simple, yet sometimes we don't know how big the impact could be. While we travel, microorganism living in our body are also migrating.

Researcher **Frieder Schaumburg, MD** from University Hospital Munster Germany and team swabbed 400 toilets door handles from 136 airports in 59 countries to assess pathogens bacteria such as *Staphylococcus aureus* (extended-spectrum beta-lactamase-producing Enterobacteriaceae or ESBL-E and vancomycin-resistant enterococci or VRE).

He and his team found that those

bacteria are resistant to some antibiotics as shown in fig.1. He also found one MRSA strain with resistance to aminoglycosides,

quinolones, macrolides, clindamycin and trimethoprim/sulfamethoxazole was imported to France from Indian subcontinent.

Resistance Towards Antimicrobial

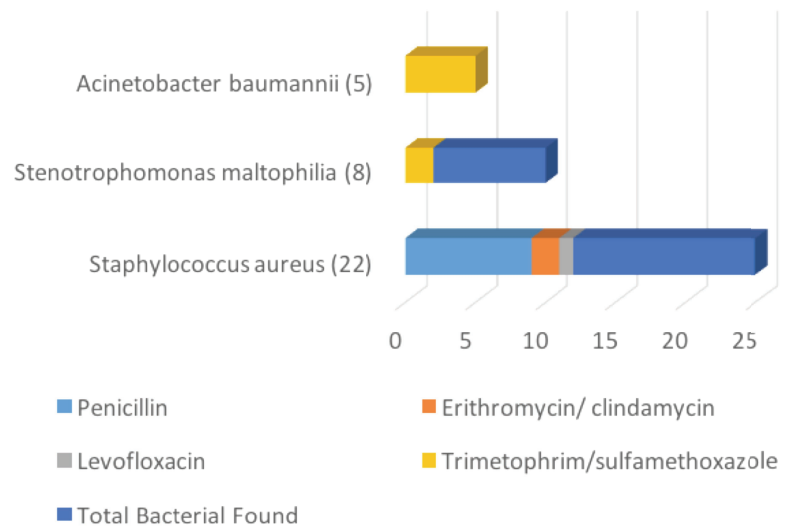
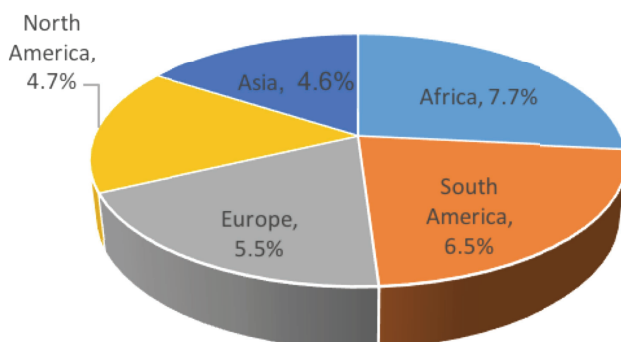


Figure 3. Bacterial Resistance Toward Some Antimicrobial

“Almost every geographic region has its problems with antimicrobial resistance. These challenges are not restricted to industrialized regions. A joint strategy that brings together low-middle-and-high-income countries is probably the most important aspect in the fight against antimicrobial resistance.”

Harbored *S. Aureus* in Some Airports



Beside are numbers of airports that have been visited. Airports in Africa were more likely to harbor *S. Aureus* than airports in South America, followed by Europe, North America and Asia.

The ability of bacteria to resist the effects of medication will spread globally. Furthermore, the bacteria can develop into something new. Considering these facts, efforts to contain the spread of bacteria to avoid resistance and new transformation should be made by the global society, together.



Comic Corner

Writer's Block: Our Common Public Enemy

By:

dr. Aly Diana

As a writer, there are (will be) moments when our brain just stops thinking, and we don't feel like doing anything even though we have a thousand things to do on our list. In these situations, we easily make excuses and justifications; we say that we are experiencing a writer's block.

What is a writer's block, anyway? By definition, writer's block is an inability to write, despite the desire and ability to do so. To put it in a harsh way, people with writer's block do not write despite being intellectuality capable of doing so, and they suffer because they are not writing. This predicament usually lasts for a long period of time; It could take weeks, months, or even years for a writer to get out of the condition!

So, what are the causes? Different experts have different opinions about the causes of writer's block, and they also have various tips to overcoming it. The bottom-line is still the same, though... Start writing NOW!

Although the cause may vary from an individual to another, the main underlying causes are basically anxiety or fear, problems with organization, and problems with

prioritization. The anxiety or fear usually come from the fact that we want the writing to be perfect, and we expect it to be extraordinary great; but again if we worry too much, we would stop ourselves from doing the very thing that we are worrying about.

In this case, our inner critic is our biggest enemy that needs to be tamed. The best way to overcome it is by saying to ourselves that it is okay to make mistakes, and that practice makes perfect. Perfection is not something that comes overnight and will not be obtained by staring into a blank screen or paper for hours. Making progress and accomplishing a small goal every time is important to boost our confidence and making us less worry.

Then, how do we handle the problems with organization and with prioritization?

First thing first, we can ask ourselves whether writing is one of our priorities? If yes, then we can make the needed preparations, so we can reach our goals. Make writing as a routine activity; assign several hours in one day (based on our necessity) specifically to write.

Choose the time that we believe to be the most productive writing hours in a day. The very strong suggestion is to think and treat academic writing as a nine-to-five job and not as an art. Set realistic daily goals and monitor our achievement. Success in writing 2 pages feels much better than trying to write 10 pages, but to no avail.

Remember that procrastination, no matter what the form is, is still procrastination, so you cannot blame writer's block.

Closing remarks:

Contrary to what most people think, one of the best ways to overcome a writer's block is to write. Writing is more than just about publish or perish. It is our social responsibility to give back to the community. Enjoy the process and be committed to it. Keep that creative juices flowing!

References:

Henning, L.H., 1981, Paradox as a Treatment for Writer's Block, The Personnel and Guidance Journal, p.112-113.

Penn State Graduate Writing Centre, 2010, Overcoming Writer's Block.

Rose, M., 2009, Writer's Block: The Cognitive Dimension, Southern Illinois University Press, Carbondale.

University of Illinois, 2013, Writers Workshop: Writer Resources, Center for Writing Studies.

REPORT:

A Story from Methods in Epidemiologic, Clinical and Operations Research (MECOR) Indonesia 2016

By

dr. Retna Mustika Indah,
dr. Dona Arlinda,
dr. Armaji Kamaludi,
Ms. Salfia Lastari



Level 2 Participants and Lecturers

From left to right: Adit, Armaji, Ratna, Retna, Tari, Neil (lecturer), Wati, Tom (lecturer), Fenty, Farid (lecturer)

On 4-9 October 2016 members of INA-RESPOND family, dr. Retna Mustika, dr. Dona Arlinda, dr. Armaji Kamaludi, and Ms. Salfia Dian Lastari had the opportunity to participate in Methods in Epidemiologic, Clinical and Operations Research (MECOR) course at Harris Hotel, Bekasi.

MECOR course is periodically held by the ATS (American Thoracic Society) in developing countries, such as Africa, India, Latin America, Turkey, Indonesia, and Vietnam. In Indonesia, they collaborate with The Indonesia Society of Respiriology (PDPI), and dr. Erlina Burhan, our TRIPOD study Principal Investigator, is appointed as the country leader for MECOR Indonesia.

MECOR Program includes 4 different levels. This year, Indonesia managed to conduct 3 levels with a total of 34 participants. Dr. Dona Arlinda joined Level 1: Introduction to Clinical Research Methods with

20 other participants, whereas Retna, Armaji, and Tari had a great time in Level 2: Advanced Clinical Research Methods. Level 3: Level 3: Advanced Clinical Research Methods: Protocol Development was attended by participants who had finished their level 2, and Level 4: Advanced Clinical Research Methods: Data Analysis & Scientific Writing had not yet started.

In that effective week, we were given intensive lectures and working actively on our study projects. Our daily goals had been set to help us plan our study comprehensively. The lecture topics were relevant to all participants (regardless the particular study we had planned) as they were part of general development of research capabilities.

In MECOR level 1, dr. Dona Arlinda and her team from Occupational Health Group developed a study outline titled "Knowledge, Attitude

and Intent to Counsel Patients Against Electronic Cigarette Use Among Medical Students in Jakarta, Indonesia".

In level 2, Tari, Armaji, and Retna successfully presented their study concepts titled; "Association Between Glycemic Control and Active Tuberculosis among Patients with Diabetes Mellitus"; "Sensitivity of Chest Radiograph Reading and Recording System (CRRS) to Screen TB in Prisons in Jakarta"; and "Transmission of Tuberculosis in Children Aged 5 - 14 Years Contacting with Multi Drug Resistant Compared to Drug Susceptible Tuberculosis", respectively.

As always, the course upholds the "everyone is a learner" tradition i.e. everyone in the course is a learner regardless of the title or rank s/he possesses. We are expected to put our hierarchical culture behind us in the course. At the opening of the

course, the course director stated that facilitators of the course are also learning from their students. Unsurprisingly, this particular mindset worked great.

We learned in a more effective and innovative way. There was no culture barrier between the facilitator and the students. The discussions in every lecture given were alive. The style of the facilitators in giving the topic could be easily understood, with many examples derived from their many experiences given.

In the making of the project, the course director in every level ensured that every student acquired the most appropriate mentor. The mentors did not hesitate to pull out any data in their possession to fill any missing information in every student's work. Amazingly, the students were also allowed to express their ideas out



All MECOR Indonesia 2016 Lectures and Participants

loud, no matter how unusual they might be. It was really an eye-opener experience. We are determined to practice it in our daily life. Moreover, should we have the opportunity, we will pass it on to the new generation.

Last but not least, the course gave us an opportunity to expand our network since the participants came from all over Indonesia and

had different backgrounds. We were able to introduce INA-RESPOND and exchange new information and insights with them. Thank you for sending us to MECOR and we hope that other members of INA-RESPOND family will have the same experience in the following years.

INA-RESPOND Newsletter

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Kamaludi, Ms. Maria Intan Josi, dr. Nurhayati, dr. Retna
Mustika Indah, Ms. Salfia Lastari.

Thanks to
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