



## GREETING FROM EDITOR-IN-CHIEF



This has been a year of emergence. Thanks to the strict protocols and efficient testing and vaccination procedures established by the university, we were able to begin and continue the academic year almost normally. Masked indeed, but together. Despite all the challenges of previous years, in this e-magazine, you will read about perseverance. Contributors write about accomplishments and insights on the month just passed.

We hope this year in an effort to attract more newsletter contributors and readers, we are sending information about what SGU has been doing for the past four months. We hope you enjoy reading about us. If you are among this month's e-magazine contributors, thank you for writing. If you have not sent in an item, please consider doing so next edition don't have to wait until asked (but rest assured, I will ask!) Let me encourage you to write whenever you have something to share. We especially want to hear from more alums. Drop a line or two anytime. Everyone can also check in with us any time via the SGU web or social media @swissgermanuniv (instagram) For everyone else, please have a happy end of semester and a healthy New Year, do good work, and let us hear from you!

**Ryan Idriansyah**

## TABLE OF CONTENTS

SGU Highlight .....	2
SGU Stars .....	16
SGU Corner .....	18
SGU Inspiring .....	20
SGU Innovation .....	21
Event Exposure .....	22
SGU US .....	24



Students who are going to South Korea

## EXPANDING GLOBAL NETWORK, SWISS GERMAN UNIVERSITY SENDS STUDENTS TO SOUTH KOREA

The rapid development of globalization requires students to become global citizens who have an international perspective and are able to establish multicultural interactions. Swiss German University (SGU) prepares its students to be able to adapt to the currents of globalization.

One form of activity is by launching an educational trip program to South Korea for undergraduate students of all majors who will start lectures or intakes in August 2023/2024 with limited quotas. The event was themed "Global Youth Leadership Program to SolBridge International School of Business, South Korea."

SGU Rector Dr. rer. nat. Filiana Santoso explained that students will be sent to South Korea in order to enrich their local cultural experiences, exchange information and innovation, and visit one of the campuses in Korea, SolBridge. The students will be in Korea for five days and three nights.

"One of the core values of SGU is the Global Network Opportunity and Activities. They must experience the global experience for themselves, not only in Indonesia but also abroad. We provide experience before they attend the lecture. We really emphasize this global experience so that when they graduate they can adapt quickly and can network internationally," said Filiana at the SGU Campus, Prominence Tower, Alam Sutera, Tangerang, Banten, Saturday, September 10, 2022.

Filiana added, SGU helps students build a good and broad global network from the start. This network is very important for students who want to build their future. Not only to Korea but also to various other countries, such as Japan, Australia, Switzerland, and Germany.



SGU Rector - Dr. rer. nat. Filiana Santoso gives a speech

"SGU provides an opportunity for its students to add to their study experience in other countries through educational trip programs, so that students are formed to have a global perspective and be competitive at the international level."

This educational trip program received full support from the Korea Tourism Organization (KTO) and Metro TV. The program is planned to take place in December 2022.

Previously, SGU had collaborated with SolBridge for more than two years, namely through a student exchange program. Currently, SGU is in the process of finalizing plans to hold a dual degree program with a Master of Business Administration study program.

SGU Vice Rector Dr. Irvan S. Kartawiria invites all young Indonesians to realize the importance of global experience. This is in line with the Ministry of Education and Culture's policy in the Kampus Merdeka, Merdeka Belajar program, one of which is an off-campus experience

"SGU does not only offer experience in the country but also abroad. This is important for the younger generation of Indonesia to become future leaders with extensive experience and insight, not only competing but meeting and collaborating with colleagues from all over the world," said Irvan.

On this occasion, the launch room seemed crowded with prospective students and their parents or guardians ready to join SGU. Some of them have symbolically accepted that they will depart for Korea in December 2022.



# ICONETSI 2022

## INCREASE INNOVATION AND STRONGER TECHNOLOGY POST-PANDEMIC

ICONIET demonstrates its commitment and contribution to the Swiss German University for the advancement of education, science, and research. In addition, research has always played a very vital role in contributing to knowledge and prospective development in society, especially in critical times such as the post-pandemic that we are currently experiencing.

ICONETSI or International Conference on Engineering and Information Technology for Sustainable Industry 2022, is the second event held as a meeting place for engineers, scientists, practitioners, and students; both from universities and industries from various countries to exchange knowledge about research and development activities.

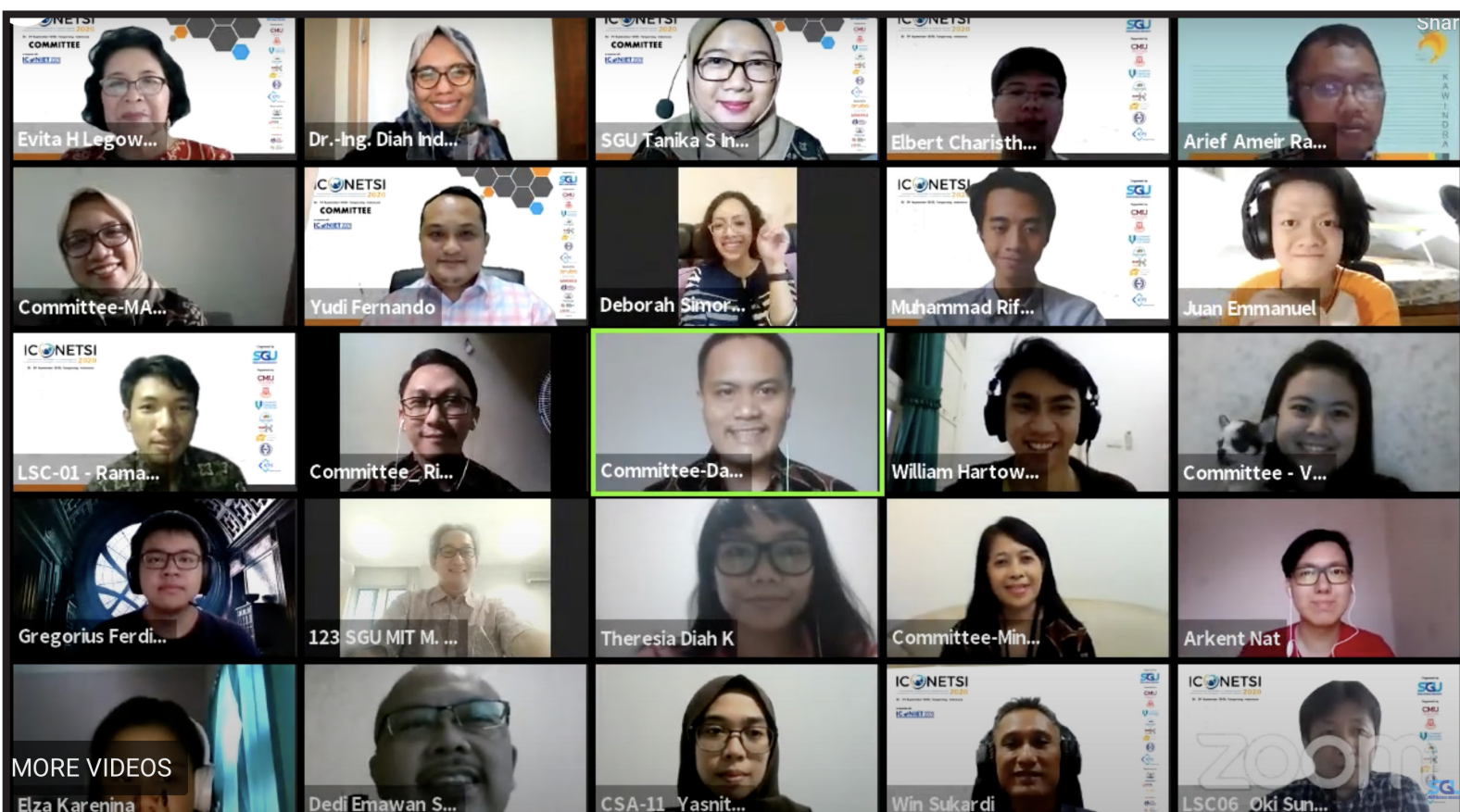
This year's ICONETSI activity was carried out with the theme "Innovation and Technology for Resilient and Sustainable Industry". There are several main sub-topics, namely Sustainable Energy and Environment, Production and Operation Management, Logistics and Supply Chain, Ergonomics and Human Factors, Automation, Mechatronics and Robotics, Cyber Security and AI, and Software Engineering.

ICONIET 2022 will oversee two conferences, namely the International Conference on Engineering and Information Technology for Sustainable Industry (ICONETSI) and the International Conference on Biomedical and Pharmaceutical Sciences and Technology (ICOBIPST). ICONIET will be held

on September 21–22, 2022 while ICOBIPST which is jointly organized by the Swiss German University and the Faculty of Medicine Universitas Brawijaya will follow on October 1 and 2, 2022. It is hoped that our conference this year will stimulate new ideas and collaborations for the advancement of science, knowledge, and society towards a more sustainable future.

At ICONETSI 2022, the Minister of Communication & Information, Johny G. Plate, was present to give his speech at this conference, as was also R. Herdian (Deputy for Research and Innovation Utilization, BRIN). In this event, Nuki Agya Utama and Prof. Wasseem Heider will give presentations at the plenary session. In the parallel session, there were professors and practitioners from various scientific backgrounds, such as Prof. Dominik Aufderheide from FH Soest-Germany, Prof. Mattias Schirmer from EAH Jena-Germany, Prof. Wahyudi Sutopo from Sebelas Maret University, Surakarta, Dr. Selvakumar Ramachandran from Kerkhoff Ltd.-UK, Assoc. Prof. Dr. Intan Safinar Ismail from University Putra Malaysia, and Dr. Kholis Abdurachim Audah from Swiss German University, Indonesia.

This year, there were 84 papers submitted from Japan, Taiwan, Peru, France, Saudi Arabia, and Indonesia, and only 68 papers were accepted and entitled to be published in ACM-ICPS.





## CONTRIBUTING TO THE HERBAL INDUSTRY, SGU COOPERATES WITH DELTOMED AND JAVAPLANT

From left to right: crew of Javaplant, Heny Aprijanti, S.E – Operational Director Javaplant, Drs. Victor S. Ringoringo, S.E., M.Sc. - Chief Business Development and R&D Deltomed, Dr. Dipl.-Ing. Samuel P. Kusumocahyo – Dean of LST Faculty, Dr. rer. nat. Filiana Santoso – SGU's Rector

The food industry in Indonesia is growing very rapidly along with the growth of Indonesia's population. The fast-growing food industry must be supported by strong education and research on food science and technology. Apart from that, health care is another important topic that requires our awareness. Much research is being carried out in Indonesia on the development of healthy natural products as well as drug discovery and manufacture. Indonesia has extraordinary biodiversity and natural resources, which makes it ideal for such research. Health also requires the development of modern medical devices.

Therefore, the potential of Indonesia's natural resources through medicinal plants known as natural herbs is not wasted by three different institutions for the welfare of the people both in Indonesia and abroad. Swiss German University (SGU) through the Faculty Life of Science & Technology Study Program signed a Memorandum of Understanding as outlined in a Memorandum of Understanding (MoU) with PT. Deltomed Laboratories. and PT. Tri Rahardja (Javaplant) on Tuesday, August 23, 2022.

This cooperation document was made to be carried out by the three parties in accordance with their respective main tasks and functions in order to build synergy, and strengthen the mutual interests of both parties on the basis of the principle of mutual benefit and mutual good intentions. The form of collaboration between SGU, Deltomed, and Javaplant, namely the SGU Food Technology Department is entitled to obtain raw

materials for research and use of laboratory facilities and R & D resources for formulations at Deltomed's Mahitala Building and extraction facilities at the Javaplant factory.

The Rector of Swiss German University, Dr. rer. nat. Filiana Santoso, said, "The cooperation is valid for a period of 3 years from the signing of this agreement."

The research collaboration in question is for the production of lemongrass (*Cymbopogon citratus*) leaf processing. By applying lemongrass leaf extract to herbal medicinal products, it is hoped that it will increase their use in health services. The drug has been tested for its effectiveness and safety. This drug can later be purchased by the general public without a prescription. Because it is good for consumption as a lifestyle product that is safe for daily consumption.

Dr. Maria D.P.T. Gunawan Puteri, Ph.D., as the Head of the Food Technology Department at SGU added, lemongrass can prevent an increase in blood sugar, so it is good for controlling blood sugar in people who have the potential to get diabetes. In addition, lemongrass is also rich in antioxidants. The antioxidants in lemongrass are chlorogenic acid, isoorientin, and Swertia japonica. This content can help prevent abnormal cell function in the blood vessels of the heart. A 2015 study found that lemongrass can be used as a mouthwash. This mouthwash contains antioxidants that can be used to treat gingivitis.



## DEVELOPING STRATEGIC PARTNERSHIP AS A CONTRIBUTION TO THE NATION

(SIEMENS & SGU COLLABORATE TO OFFER A CERTIFICATION: SMSCP)

It is undeniable that the development of the industrial revolution era 4.0 has changed many arrangements in human resources (HR). Simply put, Industrial Revolution 4.0 is a transformation effort towards improvement. Of course, we often encounter this phenomenon in various daily activities and in the development of human resources (HR) in every company. Many companies are starting to take steps with updates and innovations that are relevant to the industrial era.

Therefore, Swiss German University (SGU), as the first international university in Indonesia, certainly helps ensure that its students are sensitive to changes at the international level. In response to this, the SGU Mechatronics study program collaborates with PT Siemens Indonesia to provide the required educational standards. This collaboration was marked by the signing of a memorandum of understanding (MoU), which was held on Monday, August 22, 2022, at the Swiss German University campus, Alam Sutera.

The event was attended by several senior officials from the Swiss German University, namely Dr. rer.nat. Filiana Santoso as the Rector of SGU, Dr. Irvan S. Kartawiria, S.T., M.Sc as Vice Rector Academic of SGU, Chris Kanter as Chairman of SGU's Board of Founders, and Evan Kanter - Trustee of SGU's School Board. In addition, Dr Lamine Jendoubi - President Director and CEO of Siemens Indonesia, Hong Lei as Head of Digital Industries Siemens Indonesia, and Efraim Mayer as Head of Promotion and Support from Siemens Indonesia were also present.

The form of collaboration between SGU and Siemens Indonesia is through a teaching program that meets Siemens' work process quality standards or the so-called Siemens Mechatronic System Certification Program (SMSCP). This program is the most prestigious certification program in the world related to the initiation of the Industry 4.0 era. Of course, in the face of today's competition, one way that can be done is to join a certification program. When someone takes a certification, then he shows the existence of an expertise they have.

As one of the companies from Germany that plays a major role in the industry, Siemens certifies and partners with various educational institutions that have been spread all over the world. The training from SMSCP is implemented in the curriculum for four years of study at SGU. The certificate of competence itself has many benefits for the workforce and the company. Competency certificates can be certificates that are able to increase competitiveness in the global job market. In addition, it can also improve the quality and productivity of workers.



Participants who attended the MoU Signing event



From left to right: Dr Lamine Jendoubi – Presiden Direktur, Dr. rer. nat. Filiana Santoso – SGU's Rector

"It is very important for the human resources sector in Indonesia to have engineering graduates with the skills and expertise required by today's world of work. The signing of this memorandum of understanding is a good opportunity to collaborate with SGU, and of course it will be very beneficial for students and also Siemens," said Dr. Lamine Jendoubi, President Director and CEO of PT Siemens Indonesia. "We hope that this program can help students of the Faculty of Engineering and Information Technology, Mechatronics Study Program to learn about mechatronic engineering technology. Graduates of this program will receive an industry certificate from Siemens, which has been recognized internationally, so that graduates will not only have great selling points, but also great job opportunities in automation and manufacturing."

SGU is the first institution in Indonesia to receive the SMSCP training program. Every student who studies mechatronics at SGU will be presented with a training method by first studying the industrial equipment module, then studying in depth the various components, and also carrying out these practical activities with theory.

Dr. rer. nat. Filiana Santoso, Rector of Swiss German University, stated that with this certification, SGU graduates will undoubtedly be prepared to enter the world of work in global industries.

"Alumni from SGU will certainly be superior because all of them are equipped with international certificates officially endorsed by this industry leader. Our graduates will be a more prepared workforce. SGU students can also more easily find career opportunities in Germany, as they also have internships and theses there. This international certification allows them to have a career not only in Indonesia but also in the global industry," he said.

In an effort to implement the Independent Learning Campus policy and the Tridharma of Higher Education, LLDIKTI Region IV, together with the LLDIKTI Region IV Professors Association and PERGUBI DPD West Java and Banten, held thematic Real Work Lectures (KKN). In this program, Swiss German University sent 10 students from the Concentration of Hotel and Tourism Management (HTM) – Faculty of Business and Communication, who were members of Batch 2019 and Batch 2020 to contribute to village development.

This thematic KKN program was held from July 18 to August 21, 2022, or about 5 weeks. The purpose of this activity is to help and build underdeveloped or developing villages through work programs that have been planned with a view to assist the development of the potential possessed by the village, such as tourism potential, human resources and so on.

This activity is the first program for Swiss German University students to contribute in developing villages, especially in the Banten area. Participants from KKN were not only SGU students, but students from other universities/colleges in West Java & Banten also joined in this activity. In addition, the professors also took part in providing counseling at thematic KKN locations.

SGU students who took part in the Thematic Real Work Lecture (KKN) program were divided into two locations, namely 5 students on duty in Bojong Koneng Village, Babakan,

Madang, Sentul, and 5 more students placed in Karang Tengah Village, Babakan, Madang, Sentul. In addition, SGU assigned two lecturers who would oversee the Thematic KKN activity process. The first is the Academic Advisory Lecturer (DPA), namely Robert La Are, M.Par as well as the Field Supervisor (DPL) Anthon S. Tondo, SE, M.BA

There are several program activities that will be carried out by students in developing the village, namely participating in the development, utilization and maintenance of infrastructure and the village environment. Participate in the implementation of village programs. Participate in the development and empowerment of rural communities. Social Service and participate in programs in the community. Seminars and outreach to the public. Teaching and assisting programs in rural schools. Assistance to families related to hygiene and health issues. Participate in entrepreneurship programs in the village.

Later, the students will provide an output in the form of publications via YouTube and social media. Report on student activities every week per group. Final activity reports per individual. And also journal publications in the form of scientific articles. With this activity, students are able to collaborate cross-scientifically in a solid team with other fellow students and can practice and apply the knowledge that has been gained in college.

## STUDENTS OF SWISS GERMAN UNIVERSITY JOIN THE THEMATIC COMMUNITY SERVICE PROGRAM TO BUILD VILLAGES



Providing debriefing for students who take part in the Thematic Community Service Program



Participants who take part in the Thematic Community Service Program



## A ROUND TABLE DISCUSSION

## DOOM & GLOOM OF GLOBAL INFLATIONARY PRESSURE ON INDONESIA ECONOMY



The situation and conditions in the first quarter of 2022 were quite challenging for Indonesia's economic recovery performance. From the domestic side, health problems are still a challenge, especially when Indonesia is faced with a situation where the Omicron variant is rampant at the beginning of the year. However, Indonesia's readiness to face the Omicron is much better than when facing the Delta variant. Meanwhile, from an international perspective, the increasing geopolitical pressure between Russia and Ukraine has also become a challenge for the performance of the national economic recovery.

On the other hand, it shows that, according to a report from the World Bank's June 2022 edition of Indonesia's Economic Prospects, the Indonesian economy is expected to grow by 5.1 percent in 2022 and 5.3 percent in 2023 as a result of deteriorating global economic conditions, increased inflation, and tightening. External funding is starting to weigh. Forecasts are more prone to negative risks.

Therefore, discussions to examine the economic growth that will occur from 2022 to 2023 are needed at this time. The Round Table Discussion held by the SGU Master of Business Administration program has become a means of discussion. This time-round table discussion with the theme "Doom & Gloom of Global Inflationary Pressure on Indonesia Economy", and participants have the same right to submit opinions and arguments about all the problems they face.

This Round Table Discussion (RTD) was held on Saturday, August 13, 2022, at SGU Campus, Lt. 3 Prominence Tower, Alam Sutera. This RTD was attended by several speakers, namely Dr. Ir. Yosman Bustaman, MBuss, and Dr. Anthony TP. Siahaan, SE., Akt., MM., CA, Dr. Ir. Nurdayadi, MSc, Leroy Samy Uguy, PhD., as well as several SGU master students.

Leroy Samy Uguy, Ph.D. said that "The 2022 growth projection for Indonesia reflects strong domestic and export demand. Economic activities continue to normal and COVID-19 infections persist. Increases in employment, income, and self-confidence fuel private consumption. Meanwhile, healthy demand and increasing credit stimulate private investment."



Students and lecturers involved in the discussion

But the fiscal policy has become less supportive due to pandemic-related spending. Higher prices for key commodity exports, such as coal, palm oil, and nickel, generate unexpected export earnings and fiscal revenues, more than offset higher fiscal subsidies for fuel, electricity, and food.

Leroy Samy Uguy, Ph.D. added that energy prices continue to increase, resulting in inflation will also continue increase.

The results of the Bloomberg survey also said that the current world condition is not good. Because there are 15 countries surveyed affected by the recession. We are in the second lowest position, with a 3 percent probability. The IMF has now revised the outlook for the global economy this year from 3.6 percent to 3.2 percent. Meanwhile, next year's figure will be lowered from 3.6 percent to 2.9 percent.

Some of Indonesia's trading partners have experienced a slowdown, and even the United States and China experienced contractions. However, Indonesia has received a blessing or windfall from rising commodity prices in the global market. Thus, Indonesia's trade balance in the second quarter of this year was a surplus of up to 15.5 billion US dollars. Or up 148 percent compared to the first quarter of 2022.

Apart from being supported by good trade performance, the Indonesian economy is also supported by improving domestic conditions. As people's mobility increases, while improving the handling of Covid-19. People's purchasing power is also maintained, in tune with the acceleration of consumption and production activities.



Teachers from various high schools who participated in the teachers gathering

# TEACHER'S GATHERING 2022:

## AMAZING AND CREATIVE TEACHER, AMAZING SCHOOL

Prior to the new academic year 2022/2023, Swiss German University (SGU) held a Teacher's Gathering event entitled "Amazing and Creative Teacher, Amazing School" at Grand Sahid Jaya Hotel: Candi Singosari Lt. 2, Central Jakarta on Thursday, July 28, 2022.

The Teacher's Gathering activity is one of the events in a series of annual events held by Swiss German University (SGU) aiming to increase the closeness between teachers and SGU. In addition, SGU as a strategic partner in the field of education also helps to develop the quality of teachers, especially high school teachers through various activities that will be held.

The role of the teacher in the world of education is very influential as a determinant of the success or failure of the education in the future. In formal education in schools, for example, teachers have full control over their students. Therefore, SGU as an educational institution provides teachers with valuable training and workshops so that they can provide excellent education and service to their students.

This Teacher's Gathering was attended by BK teachers from SGU school partners and 2 speakers namely the Rector of Swiss German University, Dr. rer. nat. Filiana Santoso and Roslina Verauli, M.Psi, Psi. as a clinical psychologist, specializing in children, adolescents & family. The event began with remarks from the Vice Rector for Academic Affairs, Dr. Irvan S. Kartawiria, S.T., M.Sc and ended with remarks by Dr. Nila Krisnawati Hidayat, SE., MM. as Vice Rector for non-Academic Affairs.

Dr. rer. nat. Filiana Santoso explained that in the teaching process, every teacher has their own challenges or problems that are sometimes difficult to deal with. Various ways must be done to always foster creativity, including following technological developments.

"Since the pandemic, learning activities in schools have been replaced with distance learning (PJJ) that utilizes networks or online systems. With this online system, there have been many significant changes. In this case, teachers are required to be able to provide learning models that are as creative as possible while still being able to improve the abilities of each student," he added.

To increase the effectiveness of learning activities, teachers must be more creative and innovative and have good competence. To improve competence, teachers can continue to learn and attend training. One of them is the training program conducted by SGU.

Roslina Verauli, M. Psi, Psi. added that it is important for teachers to be able to identify the profiles of their students such as motivation in learning, passion also explore each student's creativity. In addition, building strong relationships with students is one effective way to become an amazing teacher.

The Teacher's Gathering event was also filled with discussions and question and answer sessions from participants with keynote speakers, exciting games and also sessions for giving prizes and dooprize to the participants.





## IMPROVING ATHLETES' ACADEMIC COMPETENCE, SWISS GERMAN UNIVERSITY GIVES SCHOLARSHIPS TO TWO ATHLETES FROM PERSITA AND HAWKS

Evan Kanter - Board of Patronage SGU, Dr. rer. nat. Filiana Santoso - Rektor SGU, Dr. Nila Krisnawati Hidayat, SE., MM. - Vice-Rector for Non-Academic Affairs SGU, Evelyn Cathy - Director of Persita, Rama Datau - Director Hawks, Rully Zulfikar - Presiden Klub Persita.



Justin Jaya Wiyanto - Tangerang Hawks Basketball Athlete, Surya Budi Prasetyo - Persita Football Athlete

Swiss German University signed a collaboration with professional basketball clubs in Indonesia, namely the Tangerang Hawks (PT Pusaka Tugu Adiwangsa) and also the professional football club Persita Tangerang (PT Persita Tangerang Raya).

This collaboration was taken to improve and develop the academic competence of outstanding athletes. The collaboration, marked by the signing of a Memorandum of Understanding, was stated in a Memorandum of Understanding (MoU) on Friday, September 30, 2022, at the Expindo Center, Hawks Basketball Court.

The signing was attended by Evan Kanter as the Board of Patronage Swiss German University, Dr. rer. nat. Filiana Santoso as Chancellor of Swiss German University, Dr. Irvan Setiadi Kartawiria, S.T., M.Sc. as Vice Chancellor for Academic Affairs, and Dr. Nila Krisnawati Hidayat, SE., MM. as vice rector for non-academic affairs at Swiss German University and the Deans and Directors of SGU. Also present were Ahmed Rully Zulfikar the President of the Tangerang Persita Club, Evelyn Cathy the Director of Persita, and also Rama Datau the Director of the Hawks.

This collaboration between SGU and Hawks and Persita is one of the implementations of the Tri Dharma College program which consists of Education and Teaching, Research, and Community Service. In addition, the provision of scholarships for outstanding athletes is also an implementation with Academics, Government, Business, and Society in realizing a wide network and education development.

Dr. rer. nat. Filiana Santoso as Chancellor of Swiss German University said, "As a form of Swiss German University's commitment to supporting outstanding athletes, this scholarship program is given to improve the quality of education and academic potential of Indonesian athletes. Athletes are the

nation's capital, which is expected in addition to having good achievements, also getting a good education. With this scholarship, SGU can continue to contribute to improving the quality of education in Indonesia."

Swiss German University awarded scholarships to one of the Persita Tangerang players, Surya Budi Prasetyo, and also a Tangerang Hawks player, Justin Jaya Wiyanto. Both are faces of the nation's successors who are struggling to make Indonesia proud with academic and non-academic achievements.

Rama Datau as Director of Hawks said: "Tangerang Hawks really appreciates the collaboration of the scholarship program with SGU. This shows the commitment of SGU to advancing the level of education for athletes in Indonesia. We from the Hawks team are very aware that education is the main capital for all professions including athletes.

"Tangerang Hawks has a great commitment to the advancement of its players, especially in the field of education. We encourage all athletes who join the Tangerang hawks to complete their education at least up to the undergraduate level. Because we all know that a career as an athlete will end with increasing age and after retirement, they will definitely enter another career life and of course, educational capital is very necessary."

The same thing was also expressed by the Commercial Director of Persita, Evelyn Cathy, who very positively welcomed the collaboration between SGU and Hawks, and also Persita.

"We are very happy and enthusiastic about this collaboration. Of course, education has always been the main asset for athletes in the future. In the future, we hope that with this collaboration we can create strong characters from athletes together with SGU. With this synergy, we are very confident that we can advance sports and education in Indonesia."





## SGU GOES TO CENTRAL PARK MALL: EXHIBITION FROM 18-24 JULY 2022

The new school year has arrived. Swiss German University held an education exhibition for prospective students who are still confused about choosing a destination campus. This event was held at Central Park Mall, West Jakarta from 18 to 24 July 2022.

For prospective students, even students who are still in class XI and XII can also attend the event. There was exciting content every day from study programs at Swiss German University.

In addition, this exhibition also makes it easier for prospective students to ask directly about the majors they are interested in.

For those who wanted to visit, they could receive detailed information about lecture activities, curriculum, and other things related to lecture activities held in each study program. In addition, they could also ask questions or consult regarding the study program, so the communication can be two-way.

In addition to the education exhibition, there were various other interesting and informative activities such as educational consultations, talk shows, presentations of student activity units, and entertainment. There were many themes in the talk show which were certainly interesting to follow.

The themes discussed were closely related to everyday life, needs, and challenges faced by millennials, including entrepreneurship, food and beverage, and inspiring talks.

Lots of discounts and free shopping vouchers were offered for those of you stopped by at the Swiss German University booth. For more detailed information, keep an eye on Swiss German University's social media @swissgermanuniv



Meet potential clients to present SGU





Kholis A. Audah M.Sc, Ph.D while at the Technical University of Liberec (TUL), Czech Republic.

## SWISS GERMAN UNIVERSITY RECEIVED A FUNDING PROGRAM FROM THE TECHNICAL UNIVERSITY OF LIBERIC (TUL) FOR HARNESSING INDONESIAN NATURAL PRODUCTS FOR DRUG DISCOVERY RESEARCH

The Academic Research and Community Service Team, Department of Biomedical Engineering, Swiss German University received a funding program from the Technical University of Liberec (TUL). This funding was marked by the signing of a collaboration some time ago, represented by Mr. Kholis A. Audah M.Sc, Ph.D as Head of Academic Research and Community Service & Lecturer Of Biomedical Engineering and a team from the Technical University of Liberec (TUL).

The research entitled "Nanoencapsulation of Natural Products for Efficient Drug Delivery" discusses the use of Indonesian natural products for drug discovery. It should be noted that Indonesia is known as the second mega biodiversity country and the center of the highest biodiversity in the world. Traditional medicine and the natural wealth of Indonesia's very diverse lands and seas have the potential to produce drugs that are very beneficial for health.

In developing countries, most of the population still uses traditional medicine, including in Indonesia which is very abundant but its use is still limited.

In line with his research, Kholis A. Audah M.Sc, Ph.D focuses on drug discovery from natural materials such as mangroves. He said that mangroves have many benefits that are directly related to human life on land, ranging from ecological benefits to being a source of food and medicine.

"It's a shame if we don't explore the potential of mangroves and use them to the fullest for the common good. Many universities and research institutes have explored various plants as sources

of medicine, but have not looked at the benefits of mangroves," he said.

Most parts of the mangrove plant are useful as medicinal ingredients. Extracts and raw materials from mangroves have been widely used by coastal communities for natural medicines. A mixture of natural chemical compounds by chemists is known as pharmacopoeia. A number of mangrove plants and associated plants are also used as traditional ingredients for insecticides and pesticides.

Several recent metabolites with chemical structures and belonging to one of the diversity of 'chemical classes' have been characterized from mangroves and associated plants.

Among the most recently discovered are a group of substances from gums and adhesives to alkaloids and saponins and several other compounds related to the pharmaceutical industry, such as: benzoquinone derivatives, naphthoquinone, naphthopyrans, flavonoids, polyphenols, rotenone, flavoglycans, sesquiterpenes, di- and triterpenes, limonoids, essential oils, sterols, carbohydrates, o-methyl inositol, sugars, iridoid glycosides, alkaloids and free amino acids, pheromones, gibberellins, forbol esters, heterocyclic oxygen, sulfur compounds, fats and hydrocarbons, long chain aliphatic alcohols and saturated fat, free fatty acids including PUFAs (polyunsaturated fatty acids).



Eurem 2022 training participants

## EUROPEAN ENERGY MANAGEMENT (EUREM), CORPORATE TRAINING 2022

European Energy Management (EUREM) training is an advanced international standard training that aims to improve professional skills in various industrial fields related to energy management and efficiency. This training covers energy-related issues that may arise in the industrial world and has been implemented in 30 countries.

This training activity is expected to produce graduates who can develop management and energy efficiency in their respective companies. Therefore, graduates will greatly contribute to the company in terms of reducing costs, especially costs related to energy use. In addition, it can also encourage the creation of company policies that are energy efficient, environmentally friendly and sustainable.

Graduates will get a certificate of management expertise and energy efficiency of international standards. This training is a free program that is fully supported by EUREM and managed by the Indonesian-German Economic Association (EKONID). For EUREM training 2022, Swiss German University (SGU) is trusted by EKONID as the implementing partner.

The Rector of Swiss German University, Dr. rer. nat. Filiana Santoso, said, "I feel very proud, Swiss German University (SGU) is trusted by EKONID as the implementing partner of EUREM Training 2022. Hopefully with the contribution from SGU can produce the expected training."

EUREM Training 2022 participants are professionals in various important positions in a company at supervisor level or above, such as: Plant Manager, Process Engineer, Utility Manager, lecturer or other positions from various fields of industry and higher education. The EUREM Training 2022, which was held from March 18, 2022 to June 25, 2022 was attended by 15 participants from various industrial fields, such as: food and beverage (PT. Bali Hai Brewery Indonesia, Wings Corporation), PT. Bumi Products Partners, and PT. Sewu Sentral Primatama (Rejuve)), petrochemical industry (PT. Kaltim Methanol Industri), textile industry (Stretchline Holdings Ltd.), aroma and food ingredients industry (PT. Indesso Aroma), electricity provider, energy industry and infrastructure (PT. Dian Swastatika Sentosa Tbk.), national scale construction services (PT. Pusat Andalan

Sukses), cable and switch management system (PT. Trias Indra Saputra), higher education (Swiss German University), and herbal medicine industry (PT. Deltomed Laboratories). Multinational conglomerate companies, such as: PT. Astra International Tbk. also participated in this training.

EUREM Training 2022 involves professional trainers in the field of energy management and efficiency, such as Dr.-Ing. Evita H. Legowo (professional in oil and gas and renewable energy) and Rudi Irawan, Ph.D. (certified energy auditor). Both are also SGU lecturers in the Department of Chemical Engineering, Energy Concentration and Sustainable Environment. Also involved were Surya Dharma, Ph.D., Dipl. Geotherm.Tech. (Chairman of the Indonesian Renewable Energy Society (METI); assessor for professional certification of renewable energy and geothermal (BSNP), Dicky Edwin Hindarto (Advisor Indonesia-Japan Joint Crediting Mechanism (JCM); expert on carbon trading and climate change negotiations), Totok Sulistiyanto (Director PT Narama Mandiri; Green Building expert), and Dr. Eng. Handri Santoso (graduate lecturer at Pradita University; Green IT, industrial automation, and robotics expert). In addition, Dena Hendriana, Sc.D, Dr. Hery Sutanto, and Dipl.-Ing. Horst Kruse who is a professional in the field of renewable energy as well as a lecturer at SGU contribute to this training.

In addition to being guided by a theoretical trainer, training participants are also asked to present and report on energy efficiency and management projects from several representatives of participating companies. These projects include projects that will be proposed, ongoing projects, or projects that have been carried out. In this case, a project can be assessed as a potential project, a project to be completed, or a project to be evaluated. These projects include: implementation of renewable energy such as photovoltaic (PV) or geothermal solar panels, and comparative analysis of the use of conventional energy with renewable energy sourced from solar energy.

Hardy Hoffman as Head of Training & Education Department of Ekonid, said, "The EUREM training curriculum is prepared in order to produce the expected training outcomes."



# PARENTS GATHERING 2022

CREATING A CULTURE OF COLLABORATIVE FAMILY AND UNIVERSITY ENGAGEMENT FOR SUCCESSFUL STUDYING

Saturday, June 18, 2022 (09.00 AM)  
Hotel Santika BSD, Tangerang

## SHARING SESSION

STUDENT, ALUMNI, PARENT AND UNIVERSITY

**STUDENT**  
Rosa Belinda and Father  
(Alumni Swiss German University)

**ALUMNI**  
Tatik Nurhayatiningsih  
(Production Manager  
PT Mercedes-Benz  
Indonesia)

**STUDENT**  
Angelica Aurelle  
(Production Manager  
PT Mercedes-Benz  
Indonesia)

**MODERATOR**  
James Purnama, M.Sc.  
(Graduate of SPGA,  
Swiss German University)

## PARENTS GATHERING 2022:

## CREATING COLLABORATION CULTURE FOR SUCCESSFUL LEARNING

From left to right: Father of Rosa Belinda, Rosa Belinda - SGU alumni, James Purnama, M.Sc - Moderator, Tatik Nurhayatiningsih - Production Manager of PT Mercedes Benz Indonesia, Angelica Aurelle, SGU student from the Hotel and Tourism Management.

Prior to entering the new academic year 2022/2023, Swiss German University (SGU) held a Parents Gathering entitled "Creating a Culture of Collaborative Family and University Engagement for Successful Studying". This event was held at the Lengkong 1-3 Hotel Santika BSD Ballroom, 18 June 2022.

The parents gathering activity was attended by parents of students and prospective students, speakers namely Rosa Belinda, SGU alumni and her father, Tatik Nurhayatiningsih as Production Manager of PT Mercedes Benz Indonesia, Angelica Aurelle, SGU active student from the Department of Hotel and Tourism Management Batch 2020, with James Purnama, M.Sc as moderator.

In line with the theme raised, namely engagement and collaboration in order to create a student's success in learning, it is determined by various elements, one of which is the role of parents and educational institutions. The influence of student learning success is largely determined by effective collaboration or cooperation between the university and parents so that reciprocal relationships are fostered in order to shape the character of students in accordance with shared expectations, namely creating a generation of character, especially the character of discipline and responsibility.

The Rector of Swiss German University, Dr. rer. nat. Filiana Santoso, said in her speech, "Various studies have been carried out, and the results show that collaboration between the school or university together with parents greatly determines the success of a student in the learning period."

This parents' gathering also introduced and provided information about lectures, learning methods used at Swiss German University, and introducing the internship process

which is carried out twice in Indonesia and abroad.

Also present was Dr. Nila Krisnawati Hidayat, SE., MM. as Vice Rector 2 of Swiss German University. In her speech she said, "This year SGU has a new program called 'Amazing You'. This program is designed for students so that they are ready to enter college and be better prepared for a career in industry."

The difficulty of competition to enter the world of work in Indonesia has been proven through research conducted by the Ministry of Research, Technology and Higher Education which noted that around 8.8% of the total 7 million unemployed in Indonesia are undergraduates. However, Swiss German University (SGU) answers this challenge with a learning method that is more prepared for a career not only at home, but also ready for a career abroad. It is proven by the many SGU alumni who have careers in various countries such as Germany, Australia, Switzerland, and Singapore.

"I feel there is a difference between SGU students and other campus students who take internships at our company. I see that SGU students are much more prepared to enter the work industry. Therefore, every year our company must have a quota to provide opportunities for SGU students for internships in our company" said Tatik Nurhayatiningsih, Production Manager of PT Mercedes Benz Indonesia.

The last session in the parents gathering event was closed by a question and answer session conducted by parents with Swiss German University (SGU). During the question and answer session, many parents took this opportunity to ask questions about education, the learning process, internship programs abroad, to the scholarship program held by Swiss German University.



## FORUM GROUP DISCUSSION

Participants who attended the event

# GEN Z TALKS ABOUT ACCOUNTING

From antiquity to the present, accounting is very important in the economic system. It can be said that accounting is the “language of business” for measuring the results of economic activities in organizations and conveying information to various parties, including investors, creditors, management, and regulators.

The number of jobs available in the accounting field is one of the factors why many people choose this major. An accountant is needed in various fields, one example is an auditor. They can work in various well-known companies in Indonesia or work in foreign companies.

Swiss German University (SGU) as an international private university has a flagship program, namely the Accounting and Data Analysis study program which is designed to broaden and enrich students’ understanding in all areas of accounting and the financial sector.

The Rector of Swiss German University, Dr. rer. nat. Filiana Santoso, said, “We provide quality and international standard accounting and management study programs. Our curriculum is evaluated every five years to suit the development of knowledge and market needs.”

In addition, SGU also opened a Group Discussion Forum entitled “Gen Z Talks Accounting” on June 11, 2022, which was held at Warung Upnormal, Alam Sutera. This forum is open to anyone who is pursuing a career in accounting, a teacher, accounting student, and even students who are interested in accounting.

Dr. Nila Krisnawati Hidayat, SE., MM. as Vice Chancellor 2 of Swiss German University said, “This discussion forum was held to see the increasingly rapid development of accounting from time to time, especially for Gen Z who has entered the extraordinary fast development of information technology. This development has sparked an increasing interest in the accounting field. Therefore, SGU provides a platform to become a very important provision for the accounting profession.”

In this digital era, companies will look for the best candidates to work for their companies. Employees are sought after not only those who have advantages, but also those who are responsive and sensitive to dynamic changes. There are many great challenges to be faced, starting from the concept of general understanding, changes in standards or regulations, and also the use of technology.

Swiss German University (SGU) offers a future combination of data literacy and accounting skills. In Accounting and Data Analysis, students learn from basic discipline material to more specialized applications of advanced disciplines and data literacy such as Financial Accounting, Management Accounting, Corporate Finance, Business Analytics, Taxation, Auditing, and Data Science & Information Technology. This will enable our students to blend conceptual frameworks with “real world” practical applications.





## EMPOWERING COMMUNITY DEVELOPMENT PROGRAMS THROUGH COLLABORATION WITH GERAJ LINGKONG

Swiss German University (SGU) collaborates with Lengkong Outlets regarding the Synergy for Micro, Small, and Medium Enterprises Development. The collaboration was stated in a memorandum of understanding which was signed directly by Dr. rer. grout. Filiana Santoso as Chancellor Rector of the Swiss German University and Hj. Lista Hurustiati, S.H., M.H., as the Chairperson of the Lengkong Bakti Negara Cooperative on Wednesday, June 8, 2022 at the Merdeka Ballroom Swiss-bellhotel Intermark BSD.

The growth of MSMEs in Indonesia which continues to grow from year to year has made Lengkong Outlets as a provider of souvenir products for South Tangerang MSMEs continue to expand their network from offline to digital-based. Swiss German University (SGU) as a private university engaged in education under the auspices of the Merdeka Campus – Merdeka Learn, and will provide technical guidance in the form of training programs, and seminars in the form of research and community service.

The event, entitled “Knitting Asa and Juang” Book Review, was in commemoration of the 2nd Anniversary of the Lengkong Outlet. To date, MSME/IKM actors who are incorporated as suppliers have reached more than 140 MSMEs/IKM and marketed more than 250 food, beverage and handicraft products. In addition, Swiss German University (SGU) also helps MSME players who are members of the Lengkong Outlet to improve their performance digitally.

Chancellor The Rector of Swiss German University, Dr. rer. grout. Filiana Santoso, said, “This collaboration is expected to be a learning tool for SGU students to obtain information, data, and learning related to knowledge and technology, especially in the business field.”

The Lengkong outlet was established on April 19, 2020, as one of the marketing solutions for MSMEs/IKM South Tangerang. The name Lengkong itself is taken from the name of a village in Serpong District which has a historical value of struggle,



Signing of cooperation between SGU and GeraJ LINGKONG



Dr. rer. nat. Filiana Santoso – SGU’s Rector and Hj. Lista Hurustiati, S.H., M.H., - Chairperson of the Lengkong Bakti Negara

with the hope that MSME/IKM actors will still have the spirit to struggle to run their business during the COVID-19 pandemic. Lengkong outlets continue to take concrete actions in helping South Tangerang SMEs/IKM actors to develop their businesses and expand their network and marketing.

This event will be as attended by the Mayor of South Tangerang as well as the ranks of the heads of services such as the Head of the Cooperative Service, Head of the Industry and Trade Office, Head of the Tourism Office, Head of the Youth and Sports Office, Head of the Health Office, as well as the Head of the Manpower Office. In addition, KEMENKOP, KEMENKRAFT, and INKOP also attended the celebration of the 2nd Anniversary of the Lengkong Outlet.

One of the collaborations in this MOU is improving the performance of MSMEs through digitization through PKM SGU activities for MSME actors who are members of GL





**Juan "Quinn" Osbert, Jason Jo Suhadi, Andrew Richmond Thezo, and Nazree Nadhir** Introduce Batik and Indomie Abroad Through the IISMA Scholarship 2022



**Gizelle Tasmara**-HTM Student Batch 2020 awarded as "Best Presenter" in **World Tourism Day International Conference Indonesia Unilever Future Leaders League 2022**



**Jane Angeline** (Food Technology class of 2021) successfully became **one of the winners** representing LLDIKTI 4 region competing in the **ONMIPA (National Olympiad of Mathematics and Natural Sciences)** at the National Level for the Biology Category.

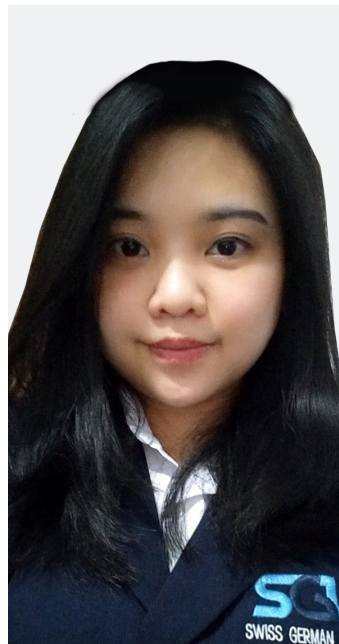


**Nadya Natalia Hendrawan** (Global Strategic Communications Batch 2019) **Winner of Unilever Future Leaders League 2022**





**Britney Lumentut** (Pharmaceutical Engineering) and **Niklas Simorangkir** (Industrial Engineering) have succeeded in becoming one of the winners of the LLDIKTI 4 representatives at the National University Debating Championship Competing (NUDC 2022).



**Britney Lumentut** and **Shania Youngky** being nominated for **Baden-Württemberg-Stiftung** and **DAAD/STIBET Scholarship**



**Jennifer Jessie Valerie** and **Elvira Austine Karissa** have received a DAAD/STIBET scholarship

The lecturers who have received the **Matching Fund** through the **Kedaireka** scheme from the **Ministry of Education, Culture, Research and Technology Republic of Indonesia**.

- Tabligh Permana
- Maria Dewi Puspitasari Tirtaningtyas Gunawan Puteri S.Tp, M.Sc., Ph.D
- Rano Abryanto, S.Tr.Par., M.Par.
- Aulia Arif Iskandar
- Kholis Abdurachim Audah, Ph.D
- Heru Purnomo Ipung
- Yosman Bustaman
- Esa Theodore Mbouw



# FOOD THAT BOOSTS YOUR IMMUNE SYSTEM DURING THE PANDEMIC!

Writer: Contributor PR Team

Covid – 19 or Coronavirus was declared as a global pandemic by the World Health Organization. And Indonesia seems to be on the brink of a COVID-19 surge with a substantial increase in daily cases this week and with more regions now given the undesirable “red zone” tag. The surge in cases in Indonesia has been a cause for great national concern.

So, it is important that individuals can take part to fight this pandemic. For example, maintaining hygiene standards like washing hands frequently. Use an alcohol sanitizer, and of course, wear a mask and avoid touching your hand or mouth.

There is also one easiest way to fight the virus, which is boosting the immune system by eating healthy food because there isn't any supplement that will cure or prevent disease. The key is to boost your immune system so it's ready to fight the virus.

These are the list of superfoods that surely will boost your immune system:

## Spinach

Not just it is rich in vitamin C – it's also packed with numerous antioxidants and beta carotene, which may both increase the infection-fighting ability of our immune systems.

Spinach is healthiest when it's cooked as little as possible so that it retains its nutrients. However, light cooking makes it easier to absorb vitamin A and allows other nutrients to be released from oxalic acid, an antinutrient. Check out some spinach recipes here.

Garlic is found in almost every cuisine in the world. It adds a little zing to food and it's a must-have for your health.

## Garlic

Early civilizations recognized its value in fighting infections. Garlic may also slow down the hardening of the arteries, and there's weak evidence that it helps lower blood pressure.

Garlic's immune-boosting properties seem to come from a heavy concentration of sulfur-containing compounds, such as allicin.

## Broccoli

Broccoli is supercharged with vitamins and minerals. Packed with vitamins A, C, and E, as well as fiber and many other antioxidants, broccoli is one of the healthiest vegetables you can put on your plate.

The key to keeping its power intact is to cook it as little as possible – or better yet, not at all. Research has shown that steaming is the best way to keep more nutrients in the food.

## Almonds

When it comes to preventing and fighting off colds, vitamin E tends to take a backseat to vitamin C. However, this powerful antioxidant is key to a healthy immune system.

It's a fat-soluble vitamin, which means it requires the presence of fat to be absorbed properly. Nuts, such as almonds, are packed with vitamins and also have healthy fats.

Adults only need about 15 mg of vitamin E each day. A half-cup serving of almonds, which is about 46 whole, shelled almonds, provides around 100 percent of the recommended daily amount.

## Green tea

Both green and black teas are packed with flavonoids, a type of antioxidant. Where green tea really excels is in its levels of epigallocatechin gallate (EGCG), another powerful antioxidant.

Green tea is also a good source of the amino acid L-theanine. L-theanine may aid in the production of germ-fighting compounds in your T cells.

## Papaya

Papaya is another fruit loaded with vitamin C. The daily recommended amount of vitamin C in a single medium fruit. Papayas also have a digestive enzyme called papain that has anti-inflammatory effects. Papayas have decent amounts of potassium, magnesium, and folate, all of which are beneficial to your overall health.





## DON'T SHARE PERSONAL INFORMATION IN THE DIGITAL WORLD

Writer: Loina Lalolo Krina Perangin-angin

The digital world is no different from the real world. Each individual must have to sort out the information and data that is shared in digital media. Because the digital track record is permanent.

"Just like in the real world. We have to be selective about the information that is shared with whom, where, and when," said the Head of SGU Communication Studies Study Program, Loina Lalolo Krina Perangin-angin in Kediri, East Java, on Tuesday (26/7).

Digital footprints are electronic traces that we leave when we move digitally, both when using or not using the internet. Personal information entered when registering for a service, comments left on social media, to photos uploaded to social media.

This data is left behind by digital media users intentionally or unintentionally. The digital footprints left behind gradually accumulate so that criminals can unwittingly use them to deceive users, both online and offline.

Moreover, the data is easy to duplicate and disseminate. "Don't spread too much personal information. Digital information can reflect who we are in the real world," said Loina.

## THE RIGHT KNIFE FOR THE RIGHT JOB:

### TYPES OF KNIFE YOU NEED TO KNOW

Writer: Contributor PR Team

When you start choosing for that perfect chef's knife—one that will make slicing, dicing, chopping, and mincing more pleasurable, precise, and effortless—it's important to identify your personal preferences.

With so many knives to choose from, it can be difficult to know where to start with creating your personal knife collection. So, whether you're starting in catering and want to know which knives to invest in, or simply want to kit out your kitchen at home, this guide will tell you everything you need to know. These are the most essential and frequently used types of kitchen knife:

#### Chef knife

The chef's knife is a must-have all-rounder in any kitchen; it chops, slices, crushes and carves! It's designed to perform well at a range of tasks. A chef knife — sometimes called a chef's or cook's knife — has a long, broad blade with a straight edge.

#### Carving knife

This knife has a long, slim knife, tapering to a sharp point. This knife also known as slicing knife; a carving knife is one of the longest kitchen knives in the kitchen. Its narrow width means that it produces less drag as it cuts through food, allowing it to create cleaner, more uniform slices.



#### Filleting knife

A filleting knife is a long, slim knife with a flexible blade. The slim, flexible blade is perfect for removing bones without damaging the delicate flesh of the fish. They differ from other knives in that they're often used to cut through food horizontally, rather than vertically — this allows chefs to cut around the backbone of whole fish to create perfect fillets.

#### Pastry knife

These look a bit like bread knives but they're usually longer and have a rounded end. They are used to cleanly cut through sponge and trim cakes in preparation for icing.

#### Cleaver or butcher knife

They come in a variety of sizes, depending on their intended use. A cleaver is the only kitchen knife that cuts through bone, and is primarily used for preparing meat. The blade doesn't need to be particularly sharp as it's the weight of the cleaver and the way it's swung (like a hammer) that make it cut right through.

These are just a few examples, there are still more different knives you need to know. Besides types of knives, if you want to be serious about working in the kitchen you need to have broad knowledge about management in the kitchen; it includes all aspects, from operational, and cost-control to human resources. They must work together.

## Dr. Charles Lim

### Deputy Head Master of Information Technology Swiss German University

The APNIC Foundation has awarded Dr. Charles Lim at ISIF Asia 2022 Award during the Foundation session at APNIC54 in Singapore on Tuesday, 13 September 2022 for Honeynet's cybersecurity project.

#### ABOUT DR. CHARLES LIM

Dr. Charles Lim enjoys spending his spare time doing various community work including building cyber security communities to realize the Academic Business Government and Community (ABGC) collaboration becomes a reality. He graduated with a Bachelor of Electrical Engineering from the University of Wisconsin-Madison, Madison, WI, USA. Then continued postgrad study and obtained a Master of Science in Electrical Engineering from the University of Hawaii-Manoa, Honolulu, HI, USA, and a Doctoral in Electrical Engineering from the University of Indonesia.

Dr. Charles Lim has Professional Certifications:

- EC-Council Certified Threat Intelligence Analyst (CTIA)
- EC-Council Certified Ethical Hacker (CEH)
- EC-Council Computer Hacking Forensic Investigator (CHFI)
- EC-Council Certified Security Analyst (ECSA)
- EC-Council Disaster Recovery Professional (EDRP)
- EC-Council Certified Incident Handling (ECIH)
- EC-Council Certified Secure Programmer (ECSP)





# SGU RESEARCHER FOUND POTENTIAL ANTICANCER DRUG FROM INDONESIAN MANGROVE; XYLOCARPUS GRANATUM LEAVES ETHYL ACETATE EXTRACT

Writer: Kholis A. Audah M.Sc, Ph.D

Mangroves are salt-tolerant plants that grow on brackish coasts and seawater systems. Considered to be a cornerstone species, mangroves produce secondary metabolites which helped them thrive in both freshwater and marine systems, as well as provide a habitat for many living beings. In Indonesia, mangroves are a very common sight, as the country hosts the largest area proportion for the mangrove forest ecosystem and 28.5% of the global mangrove population. As mangrove trees are considered to be crucial both culturally and environmentally for many coastal regions; some locals even utilize the plants as a staple food, for carpentry, and for traditional medicine. By conserving and performing reforestation on their ecosystem throughout Indonesia if not globally, species biodiversity in the surrounding mangrove ecosystems would thrive and locals benefited from the existence of the mangrove forest.

In terms of bioprospecting, mangrove forest conservations would open opportunities in various industrial sectors such as pharmaceuticals, cosmetics, and materials. From the conservations, naturally-procured materials such as barks and roots can be taken for carpentry, agriculture, and foodstuff; while phytochemicals found in the plants could be analyzed and synthesized in labs for cosmetics and medicinal usage. This would also elevate economic growth for regions containing these mangrove forests if not nationally.

Head of Academic Research and Community Service & Lecturer of Biomedical Engineering from the Department of Chemical Engineering, Kholis Abdurachim Audah from the Faculty of Life and Science has done a research project regarding to the Indonesian mangrove *Xylocarpus granatum* leaves ethyl acetate extract as a potential anticancer drug. This project has been financially supported by Swiss German University. This research has been published in Scientific Reports.

Studies have shown that several local mangrove species exhibited antimicrobial activities, as well as containing large traces of bioactive phytochemical compounds. A mangrove species called *Xylocarpus granatum* is commonly found throughout South Asia, Northwest Australia, Oceanic islands, and East Africa<sup>10</sup>; with the plant being reported to exhibit cytotoxicity against several carcinoma cells as well as antioxidant activity from its phytochemical content. Despite being widespread, studies have found that phytochemicals found in mangroves, especially *X. granatum* are different for each geographical site and that the metabolites produced are heavily influenced by



their surrounding environment. This study was done to examine the contents of Indonesian *X. granatum* species which were understudied phytochemically, with the leaves selected for extraction as there were meager studies conducted globally for *X. granatum* leaves extracts when compared to barks, seeds, and fruits as well as to ease extraction process. This study was also done to give some preview on the difference in phytochemical composition and biological activity of *X. Granatum* living in different environments and geographical backgrounds.

Local *Xylocarpus granatum* leaves were extracted by ethyl acetate solvent and characterized by TLC fingerprinting and 2D 1H NMR spectroscopy to contain phenolic compounds as well as several organic and amino acids as metabolic byproducts, such as succinic acid and acetic acid. Traces of flavonoids and other non-categorized phenolic compounds exhibited intermediate antioxidant activity (antioxidant IC5084.93 ppm) as well as anticancer activity against HeLa, T47D, and HT-29 celllines; the latter being most effective against HT-29 with Fraction 5 contained the strongest activity (anticancer IC5023.12 ppm). Extracts also behaved as a natural growth factor and nonlethal towards brine shrimps as well as human adipose-derived stem cell hADSC due to antioxidative properties. A stability test was performed to examine how storage conditions factored in bioactivity and phytochemical structure. Extracts were compared with several studies about *X. granatum* leaves extracts to evaluate how ethnogeography and ecosystem factored on biologically active compounds.



# GRADUATION CEREMONY AND THE 22<sup>nd</sup> DIES NATALIS 2022

"BRIGHT RESILIENT FUTURE  
LEADERS FOR GLOBAL  
RECOVERY"



Welcome Event Exchange Students



Culture and Creative Industries Trip for Exchange Students







SGU participates in National Health Day (HKN) Exhibition 2022



Strengthening Relationship with MGN Group at Media Academy's 2<sup>nd</sup> anniversary Event



BIT Training with Comsult AG



Open House Oktober 2022



Roundtable Discussion SGU Graduate School Of Business "Grit And Guts of Decision Making



Orientation Week Batch 2022



Kampus  
Merdeka  
INDONESIA JAYA

SWISS GERMAN UNIVERSITY

Insight

## SGU US

Editorial Director  
**Dr. Nila Krisnawati Hidayat, SE., MM.**

Editor-in-chief  
**Ryan Idriansyah**

Editorial Board/ Copyeditor  
**Vidia Eka Hapsari**

Editor  
**James Hunt**

Contributor  
**SGU Lectures**  
**PR Team**  
**SGU Brand Champion**

Layout Editors  
**Irzan Fahmi**

## LET'S GET SOCIAL

### CONTACT US

+62 21 2977 9596/9597

The Prominence Tower, Alam Sutera

[marketing@sgu.ac.id](mailto:marketing@sgu.ac.id)

Enjoy Our Podcast >>

Consultation with Us >>