



Poster Presentation กลุ่มที่ 1

สาขาวิชาชีววิทยาและการประยุกต์ วิทยาศาสตร์การประมง วิทยาศาสตร์สิ่งแวดล้อม
วิทยาศาสตร์การเกษตร วิทยาศาสตร์สุขภาพ จุลชีววิทยา วิทยาศาสตร์เทคโนโลยีชีวภาพ
วิทยาศาสตร์และเทคโนโลยีทางอาหาร



CERTIFICATE OF APPRECIATION

is awarded to

**Sarawut Kumphune, Pornnthanate Sinak, Worawat Songjang,
Arunya Jiraviriyakul, Noppadon Jumroon, Panyupa Pankhong,
Sittiruk Roytrakul and Nitirut Nernpermpisooth**

for participating in a poster presentation session and presenting a research entitled

DIFFERENCES OF ISCHEMIC AND ISCHEMIA/REPERFUSION INJURY RELATED
PROTEIN DAMAGE-ASSOCIATED MOLECULAR PATTERN (DAMPS) IN CARDIAC CELL
SUBJECTED TO AN IN VITRO SIMULATED ISCHEMIA/REPERFUSION INJURY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao





CERTIFICATE OF APPRECIATION

is awarded to

**Paweena Mukda, Hathaichanoke Boonyarit and
Kunlaya Somboonwiwat**

for participating in a poster presentation session and presenting a research entitled

EXPRESSION OF AGE-RELATED MICRO-RNAs IN VENOUS BLOOD

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Panyupa Pankhong, Worawat Songjang, Noppadon Jumroon,
Arunya Jiraviriyakul, Nitirut Nernpermpisooth, Pornnthanate Sinak,
Sarawut Kumphune and Sittiruk Roytrakul**

for participating in a poster presentation session and presenting a research entitled

LPS-STIMULATED VASCULAR ENDOTHELIAL CELL INJURY RELATED
DAMAGE-ASSOCIATED MOLECULAR PATTERN (DAMPS) EXPRESSION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sarawut Kumphune, Porrnthanate Sinak, Worawat Songjang,
Noppadon Jumroon, Panyupa Pankhong, Sittiruk Roytrakul,
Arunya Jiraviriyakul and Nitirut Nernpermpisooth**

for participating in a poster presentation session and presenting a research entitled

CARDIAC MICROVASCULAR ENDOTHELIAL-ASSOCIATED PROTEIN
DAMAGE-ASSOCIATED MOLECULAR PATTERN (DAMPS) EXPRESSION
IN ISCHEMIA AND ISCHEMIA/REPERFUSION INJURY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Aunyamon Srichaimongkol, Poorichaya Somparn,
Marut Tangwattanachuleeporn, Bunsita Wanthong and Suwaphit Jungjing**

for participating in a poster presentation session and presenting a research entitled

CHANGE OF EXOSOMAL MIR-146A EXPRESSION IN BLOOD AFFECTS TO
INFLAMMATORY CYTOKINES PRODUCTION BY REGULATING VIA TRAF6 AND
IRAK1 OF PEDIATRIC SLE FOLLOWING TREATMENT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Teerut Umprecha, Aussama Soontrunnrudsri and
Siwaporn O'Charoen**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF TEXTURE-MODIFIED BARBECUED RED PORK IN SAUCE WITH
RICE FOR POST-STROKE PATIENTS WITH DYSPHAGIA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Natnicha Rangsiyanon, Phosathorn Mutapat,
Jisnuson Svasti and Voraratt Champattanachai**

for participating in a poster presentation session and presenting a research entitled

CHARACTERIZATION OF BREAST CANCER STEM-LIKE CELLS DERIVED
FROM MDA-MB-231, A TRIPLE-NEGATIVE BREAST CANCER CELL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Phattarin Pothipan, Juthamard Chantaraamporn, Lalita Lumkul,
Titipatima Sakulterdkiat, Burana Khiankaew, Jisnuson Svasti and
Voraratt Champattanachai**

for participating in a poster presentation session and presenting a research entitled

EXPRESSION PROFILES OF CLUSTER OF DIFFERENTIATION 47 AND
CALRETICULIN IN BREAST CANCER TISSUES AND CELL LINES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Lukana Ngiwsara, Phannee Swangareetakul, Somporn Liammongkolkul,
Pisanu Ratanarak, Chantragan Srisomsap, Voraratt Champattanachai,
James Ketudat-Cairns, Pornswan Wasant, Jisnuson Svasti and
Nithiwat Vatanavicharn**

for participating in a poster presentation session and presenting a research entitled

GENETIC VARIANTS OF THE PHENYLALANINE HYDROXYLASE GENE
IN THAI PATIENTS WITH PHENYLKETONURIA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Phimphaka Saengbun, Yueiji Tanaka and Pattawan Lapo

for participating in a poster presentation session and presenting a research entitled

EFFECT OF HEALTH-RELATED FITNESS AND ARTERIAL STIFFNESS ON SMOKERS:
COMPARISON OF EXERCISE AND NON-EXERCISE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kamonrut Kongpha Sutas Suttiprapa and Marut Laohaviroj

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF ANTI-BACTERIAL AND ANTI-CANCER PEPTIDES FROM
THE HELMINTH DEFENSE MOLECULE OF THE LIVER FLUKE *OPISTHORCHIS*
VIVERRINI

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Sokuntheary Oeurn, Sutas Suttiprapa, Banchob Sripa and Prasert Saichua

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF CHICKEN IGY-BASED INDIRECT ELISA FOR
DETECT *OPISTHORCHIS VIVERRINI* ANTIGEN IN FECES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Sunheng Kaing, Sujitra Chaiyadet, Prasert Saichua and Sutas Suttiprapa

for participating in a poster presentation session and presenting a research entitled

MOLECULAR CHARACTERIZATION AND FUNCTIONAL ANALYSIS OF
THE *OPISTHORCHIS VIVERRINI* CALPAIN

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Theetat Ruangjaroon, Phichamon Phetchahwang, Daranee Chokchaichamnankit,
Chantragan Srisomsap, Sombat Singhakaew, Puey Ounjai, Kriengsak Lirdprapamongkol,
Jisnuson Svasti and N. Monique Paricharttanakul**

for participating in a poster presentation session and presenting a research entitled

ELUCIDATING THE HEPATOTOXIC MECHANISM OF THE INSECTICIDE FIPRONIL IN HUMAN
HEPATOCELLULAR CARCINOMA CELLS USING THE PROTEOMIC APPROACH

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Pornthanate Seenak, Nitirut Nernpermpisooth, Sarawut Kumphune,
Worawat Songjang, Noppadon Jumroon, Panyupa Pankhong,
Arunya Jiraviriyakul and Sittiruk Roytrakul**

for participating in a poster presentation session and presenting a research entitled

CIGARETTE SMOKE EXTRACTS INDUCES LUNG EPITHELIAL CELL DEATH AND
ALTERS LUNG SECRETOMES EXPRESSION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Theetat Ruangjaroon, Kriengsak Lirdprapamongkol,
Daranee Chokchaichamnankit, Chantragan Srisomsap,
Phichamon Phetchahwang, Jisnuson Svasti and N. Monique Paricharttanakul**

for participating in a poster presentation session and presenting a research entitled

PROTEOMIC-BASED STUDY OF THE NEUROTOXIC MECHANISM OF
THE INSECTICIDE FIPRONIL IN A HUMAN NEUROBLASTOMA CELL LINE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Siriporn Keeratichamroen, Thiwaree Sornprachum and Jisnuson Svasti

for participating in a poster presentation session and presenting a research entitled

SEMI-SOLID AND 3D CULTURES RENDER THE CHEMORESISTANCE
IN A549 HUMAN LUNG CANCER CELLS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kanyapak Changkhaochai, Chutamas Maneewong,
Pairote Wongputtisin and Ekawit Threenet**

for participating in a poster presentation session and presenting a research entitled

CELLO – OLIGOSACCHARIDE PRODUCTION BY
ENZYMATIC HYDROLYSIS OF YOUNG LONGAN

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pratsanee Kongwong, Orathai Bunthawong and Chanya Piyatassi

for participating in a poster presentation session and presenting a research entitled

ANTIOXIDANT ACTIVITY OF OSMOTIC – DEHYDRATED OF
PINEAPPLE CONTAINING TEAS (*CAMELLIA SINENSIS*) AND HERBS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Preeyaporn Tubkaew and Pitak Sootanan

for participating in a poster presentation session and presenting a research entitled

DESIGN AND DEVELOPMENT DATABASE OF FOOD-DERIVED BIOACTIVE PEPTIDES
WITH ANTI-INFLAMMATORY ACTIVITY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Phennapha Pha-or, Sirirat Ketsri, Jiranan Intakoon, Wanichcha Thongdee,
Woragun Sriprasert and Tipwan Suppasat**

for participating in a poster presentation session and presenting a research entitled

TOTAL PROTEIN CONTENT OF COMMERCIAL BEE POLLEN FROM NORTHERN THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Panata lawsipo, Thanyalak Trihera and Jamorn Somana

for participating in a poster presentation session and presenting a research entitled

COMPARATIVE STUDY OF ANTIBACTERIAL ACTIVITY ON SKIN PATHOGENS OF EXTRACTS
FROM *STEVIA REBAUDIANA* BERTONI LEAVES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

**Panata lawsipo, Patcharapa Suriyawong,
Patcharin Klinpet and Jamorn Somana**

for participating in a poster presentation session and presenting a research entitled

ANTIMICROBIAL ACTIVITY ON SKIN PATHOGENS OF ETHANOLIC EXTRACT
FROM SPENT LEAVES OF *STEVIA REBAUDIANA* BERTONI

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kittiya Khongkool, Benyapa Prakit, Rungravee Chiyod,
Wankuson Chanasit, and Monthon Lertworapreecha**

for participating in a poster presentation session and presenting a research entitled

ANTIPATHOGENIC BACTERIA ACTIVITY OF *LACTOBACILLUS* ISOLATED FROM NATIVE SWINE FECES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Areerat Saisong, Nadtiraporn Poni and Khwanyuruan Nakswankul

for participating in a poster presentation session and presenting a research entitled

THE EVALUATION OF POTENTIALS OF LICHENS *PARMOTREMA TINCTORUM* (DESPR. EX NYL.)
HALE CRUDE EXTRACT AGAINST BIOFILM FORMATION IN SOME SPECIES OF PATHOGENIC
BACTERIA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Aphiwat Malar and Wipawan Nunto

for participating in a poster presentation session and presenting a research entitled

EFFICACY OF *MIMOSA PUDICA* L. AND *ASYSTASIA GANGETICA* (L.) T. ANDERSON. EXTRACTS
ON INHIBITION TO *FUSARIUM* SP. ISOLATED FROM LONGAN LEAVES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Siriporn Kampan, Pichamon Limcharoenchat,
Chutamas Maneewong and Piyanuch Niamsup**

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF ORGANIC ACIDS FOR INACTIVATING *ESCHERICHIA COLI* O157:H7 AND
STAPHYLOCOCCUS AUREUS ON TILE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Orathai Sertsri, Saranya Khoksiamnuai and Khwanyuruan Naksuwankul

for participating in a poster presentation session and presenting a research entitled

STUDY ON EFFICIENCY OF *PELLINUS GILVUS* (SCHWEIN.) PAT FROM FRUITING BODY
WITH ETHANOLIC AND AQUEOUS CRUDE EXTRACTS TO INHIBIT
STAPHYLOCOCCUS EPIDERMIDIS AND *ESCHERICHIA COLI*

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Apithip Suksai and Duangjai Ochaikul

for participating in a poster presentation session and presenting a research entitled

EFFECT OF CO-CULTURE OF *ACETOBACTER PASTEURIANUS* AJ 605 AND
SACCHAROMYCES CEREVISIAE VAR. *BOULARDII* ON CHEMICAL QUALITIES
AND ANTIOXIDANT ACTIVITIES OF KOMBUCHA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Naiyana Thatwisai, Pathimaporn Lunka, Papon Ganjanasiripong,
Pimnapar Neesanant and Thanaporn Chuen-Im**

for participating in a poster presentation session and presenting a research entitled

ANTIBIOTIC RESISTANT BACTERIA IN MANGROVE FORESTS
IN THE EASTERN THAILAND DURING YEARS 2020-2022

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Tappagorn Leelatam, Sunti Phewphong and Wuttichai Roschat

for participating in a poster presentation session and presenting a research entitled

STUDY OF FERMENTED CASSAVA PULP WITH *SACCHAROMYCES CEREVISIAE* TO
INCREASE THE AMOUNT OF PROTEIN IN CONCENTRATED FOOD FOR CATTLE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Waraporn Kaewkhon, Sopida Manopattarakul, Thanet Thmmawong,
Teerapat Chaiyong, Thodsaporn kawirachai and Nikhom Naksupan**

for participating in a poster presentation session and presenting a research entitled

EFFECT OF SPENT COFFEE GROUNDS WITH RUBBER WOOD SAWDUST SUBSTRATES ON
THE MYCELIAL GROWTH AND PRIMORDIAL FORMATION OF *AGROCYBE CYLINDRACEA* MAIRE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kannika Bunkaew, Areeya Thongpradit, Akkaneew Pewhom,
Monthon Lertworapreecha and Wankuson Chanasit**

for participating in a poster presentation session and presenting a research entitled

ISOLATION AND CHARACTERIZATION OF EXOPOLYSACCHARIDE PRODUCED
FROM BACTERIA IN FRESHWATER FISH INTESTINE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Jirapa Donsrithum, Junthana Donmapri, Nuchanat Phopphet,
Kanokwan Pipitthong, Sakunthip Kumkuan and Kodchakorn Lapmak**

for participating in a poster presentation session and presenting a research entitled

DIVERSITY OF FUNGI ISOLATED FROM *NELUMBO NUCIFERA*,
BUNG TUNG KA-LO, UTTARADIT PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pimprapa Chaijak

for participating in a poster presentation session and presenting a research entitled

ISOLATION OF HIGH LEAD-TOLERANT FUNGI FROM THE PUBLIC DUMPING SITE AND
IMMOBILIZATION ON BIOCHAR FOR BIOSORPTION CAPACITY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Thanyalak Pimsalee, Chutamas Maneewong,
Nissara Kitcharoen and Pairote Wongputtisin**

for participating in a poster presentation session and presenting a research entitled

ISOLATION AND IDENTIFICATION OF AMMONIA AND NITRITE REMOVING BACTERIA
FROM NILE TILAPIA POND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Waraporn Keawkorn, Saowani Khattamart, Tanat Pinyo,
Sasivimon Wongpradit, Nikom Naksupan and Somboon Kamtaeja**

for participating in a poster presentation session and presenting a research entitled

ISOLATION OF *TRICHODERMA* FROM SOIL SAMPLE OF THE ARABICA COFFEE PLANTATION
AT DOI PANG KHON, CHIANG RAI PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sumaiyah Yaprajan, Benyapa Prakit,
Wiyakan Sittiprakan and Monthon Lertworapreecha**

for participating in a poster presentation session and presenting a research entitled

SCREENING OF CELLULASE, PECTINASE AND PHYTASE PRODUCING BACTERIA
FROM HONEY AND STINGLESS BEE HONEY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Benyapa Prakit, Patthira Jansiri, Kittiya Khongkool,
Wankuson Chanasit and Monthon Lertworapreecha**

for participating in a poster presentation session and presenting a research entitled

SCREENING OF GAMMA AMINOBUTYRIC ACID (GABA) AND ANTI-OXIDANT PRODUCING
BACILLUS ISOLATED FROM THE HONEY OF BEES AND STINGLESS BEES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Panupong Chommee, Pichamon Wuttiwong, Papon Ganchanasiripong,
Thongchai Taechowisan and Thanaporn Chuen-im**

for participating in a poster presentation session and presenting a research entitled

A SURVEY OF ACTINOMYCETES IN MANGROVE FORESTS IN THE UPPER GULF OF THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nittaya Chaivanate and Narumon Udom

for participating in a poster presentation session and presenting a research entitled

EFFECT OF SODIUM NITRATE REDUCTION ON SUNSCREEN FORMATION
IN CYANOBACTERIUM *LYGNBYA* SP.

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pitchaya Sriuthaisiriwong and Siriorn Vanapongsakul

for participating in a poster presentation session and presenting a research entitled

THE STUDY OF WASTE OIL ABSORPTION USING CHITOSAN MIXED WITH COCONUT HUSKS SHEET

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kedsirin Ruttajorn, Panisa Michu, Junjira Thipraksa and Pimprapa Chaijak

for participating in a poster presentation session and presenting a research entitled

BIOREMEDIATION OF CONTAMINATED DIESEL AND BIOELECTRICITY GENERATION USING
A MARINE BACTERIAL CONSORTIUM INTEGRATED WITH A MICROBIAL FUEL CELL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Thanet Yoeso, Phatcharaphon Kaewkaen, Pensri Malithong,
Sutti Malithong and Krittawit Suk-ueng**

for participating in a poster presentation session and presenting a research entitled

ABOVE-GROUND BIOMASS OF THE COMMUNITY FOREST IN CHIANG RAI PROVINCE:
A CASE STUDY OF BAN RONG KHUE COMMUNITY FOREST

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Anatta Nunthatraithip , Jutharat Sunprasert, Kantasit Kongthip,
Sukontee Suracharoenchai and Tas Yusoontorn**

for participating in a poster presentation session and presenting a research entitled

STUDY AND DESIGN OF APPROPRIATE SEWAGE METHODS IN KMUTT BANG KHUN THIAN

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Jariyavadee Suriyaphan, Thanasak Thawichai, Watcharabhorn
Sungkaphan, Kedsaraporn Motakul and Jittra Teeramaethee**

for participating in a poster presentation session and presenting a research entitled

ORGANIC CARBON CONTENT IN SEAGRASSES BED, KOH KOOD, TRAT PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pattinee Kongpradit and Anukul Buranapratheprat

for participating in a poster presentation session and presenting a research entitled

THE SIMULATION OF CIRCULATION AND CONTAMINANT DISTRIBUTION IN SEAWATER IN
THE OFFSHORE SHELLFISH CULTURE AREAS IN SRIRACHA DISTRICT, CHONBURI PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Khanittha Thoyalo, Sasithon Weiyae, Takdanai Kawinja,
Chisanupong Jitjom and Krittawit Suk-ueng**

for participating in a poster presentation session and presenting a research entitled

STUDY OF NUTRIENT CONTENTS IN VERMICOMPOSTS PRODUCED BY THE AFRICAN
NIGHTCRAWLER (*EUDRILUS EUGENIAE*)

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Jutharat Thongbai, Dunyawat Tahwiang,
Pimsiri Suwannapat and Montri Sanwangsri**

for participating in a poster presentation session and presenting a research entitled

ANALYSIS OF RICE GROWTH FROM PHYSIOLOGICAL MONITORING AND
GREEN EXCESS INDEX USING DIGITAL PHOTOGRAPHS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Pitak Sootanan, Pitchayakorn Thomwong,
Kriangsak Anekpong and Benchawon Chwapreecha**

for participating in a poster presentation session and presenting a research entitled

DATABASE OF LOCAL PLANTS IN EASTERN FLORISTIC REGION IN RSPG-BURAPHA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Thiwapakot Panbow, Tueanta Ramarn and Akkanee Pewhom

for participating in a poster presentation session and presenting a research entitled

FISH DIVERSITY AND FEEDING HABITS OF *CHANNA GACHUA* (HAMILTON, 1822) IN HEADWATER
STREAM IN PAK PANANG BASIN OF KHAO PU - KHAO YA NATIONAL PARK

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kanyapak Moyadee and Pongrat Dumrongrojwattana

for participating in a poster presentation session and presenting a research entitled

DIVERSITY OF CAVE-DWELLER SNAIL OF THE GENUS *ACMELLA* BLANFORD, 1869 IN THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wachirintra Chouwchob, Bang-on Changlom, and Pongrat Dumrongrojwattana

for participating in a poster presentation session and presenting a research entitled

PUPILLID LAND SNAILS (PUPILLIDAE) DIVERSITY OF SATUN PROVINCE, SOUTHERN THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kunya Seedee and Pongrat Dumrongrojwattana

for participating in a poster presentation session and presenting a research entitled

DIVERSITY OF HYPSELOSTOMAID MICRONAILS IN THE WESTERN REGION OF THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Supaksorn Pradasuk, Bangon Changlom, and Pongrat Dumrongrojwattana

for participating in a poster presentation session and presenting a research entitled

SPECIES DIVERSITY OF FAMILY DIPLOMMATINIDAE IN SATUN PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Akkanee Pewhom

for participating in a poster presentation session and presenting a research entitled

MICROANATOMY OF THE KIDNEYS AND SEXUAL SEGMENT OF THE KIDNEY OF
MALE BANDED KRAIT *BUNGARUS FASCIATUS* (SCHNEIDER, 1801)

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kesaraporn Janprasert, Kanokwan Poondee and Duangta Julsirikul

for participating in a poster presentation session and presenting a research entitled

A COMPARISON OF LIFE CYCLE AND NUTRITIONAL CONTENT
IN BLACK SOLDIER FLY LARVAE REARED ON DIFFERENT DIETS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Natnicha Ruenthoy, Tripatchara Atiratana,
Montree Maneepark and Nalena Praphairaksit**

for participating in a poster presentation session and presenting a research entitled

A NOVEL PREPARATION OF AN ANESTHETIC DERIVED FROM JASMINE ESSENTIAL OILS
JASMINUM OFFICINALE L. FOR USE IN ZEBRAFISH *DANIO RERIO* (HAMILTON, 1822)

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Danaporn Saraprug, Nuntaporn Phonsuwan, Porntida Petsuwan,
Jakkrawarn Chomposri and Archawin Rojanawiwat**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF LARVICIDE PRODUCT FROM BACTERIA FOR CONTROLLING OF
INSECTICIDE RESISTANT *Aedes Aegypti* LARVAE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Natnirin Boornasakawee, Nowwapan Donrung, and Panida Banjongsinsiri

for participating in a poster presentation session and presenting a research entitled

DEFATTING PROCESSES AFFECTED ON PHYSICAL AND FUNCTIONAL PROPERTIES OF
SELECTED CRICKET POWDER IN THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sujira Nontitabut, Bunnada Sadsee,
Suphichaya Prangcharoen and Boonchuang Boonsuk**

for participating in a poster presentation session and presenting a research entitled

COMPARATIVE STEM ANATOMY OF SOME AQUATIC PLANTS IN PHAYAO PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kwanchanok Virasiri, Natthawut Triyutthachai and Sakuntala Ninkaew

for participating in a poster presentation session and presenting a research entitled

A COMPARATIVE STUDY ON THREE THAI CASSIA L. (FABACEAE) SPECIES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Woraporn Laojinda and Piyanut Khanema

for participating in a poster presentation session and presenting a research entitled

STUDY ON LEAF EPIDERMAL ANATOMY, LIFE CYCLE, AND PHYTOCHEMICAL SCREENINGS OF
KRATAI CHAM (*ADENOSMA INDIANUM* (LOUR.) MERR.) IN SALINITY AREAS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

**Onrut Inmano, Phanmai Yousuksawat,
Thanakorn Wongsa and Anupan Kongbangkerd**

for participating in a poster presentation session and presenting a research entitled

EFFECT OF MEDIUM AND ORGANIC COMPONENTS ON GROWTH AND DEVELOPMENT
OF *BULBOPHYLLUM CAULIFLORUM* HOOK.F. IN VITRO SEEDLINGS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

**Boworn Kunakhonnuruk, Nareerat Rattananurak,
Thanakorn Wongsa and Anupan Kongbangkerd**

for participating in a poster presentation session and presenting a research entitled

THE EFFECT OF VARIOUS CULTURE MEDIA ON THE GROWTH AND DEVELOPMENT OF
BULBOPHYLLUM DAYANUM RCHB.F. SEEDLINGS IN IN VITRO CULTURE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

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CERTIFICATE OF APPRECIATION

is awarded to

M. Suwannachat, N. Charintip, S. Thayawat and T. Thanyaporn

for participating in a poster presentation session and presenting a research entitled

THE EFFECT OF MEDIA ON THE GROWTH OF *RHYNCHOSTYLIS GIGANTEA* IN VITRO

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

**Wittaya Pakum, Onrut Inmano, Sirapapha Tirachai, Anupan Kongbangkerd,
Nuengruethai Jucksri and Thanakorn Wongsa**

for participating in a poster presentation session and presenting a research entitled

EFFECT OF LIGHT AND MEDIUM COMPONENTS ON GROWTH AND DEVELOPMENT OF
DENDROBIUM DRACONIS RCHB.F. *IN VITRO* SEEDLINGS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

Somruthai Tunma and Wathana Panyamaneesorn

for participating in a poster presentation session and presenting a research entitled

THE EFFECT OF SOIL SUBSTRATES AND SEED TREATMENT
ON *COFFEA ARABICA* L. SEED GERMINATION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nannapat Ruthan and Phissanu Kaewtaphan

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF PLANT MEDIA LEONADITE ON GROWTH OF GREEN COS LETTUCE SEEDLING
(*LACTUCE SATIVA. LONGIFOLLA*)

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

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Dean of School of Science, University of Phayao





CERTIFICATE OF APPRECIATION

is awarded to

**Watcharinhonse Seesod, Plaifhon Chantasit,
Ratchaneegorn Mapanao and Arpakorn Sakulsathaporn**

for participating in a poster presentation session and presenting a research entitled

ASSESSMENT OF GENETIC RELATIONSHIPS AMONG *CRYPTOCORYNE SPECIES* USING SCOT
MARKERS IN THE MEKONG RIVER REGION OF LOEI AND NONG KHAI PROVINCES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Anuthep Pasura and Kanticha Nopparit

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF ADDITION OF *TRICHODERMA ASPERELLUM* POWDER IN POTTING SOIL CONTAINING ORGANIC FERTILIZER FOR GROWTH PROMOTION IN TOMATO SEEDLINGS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Aunchalee Sapaudom and Pitak Sootanan

for participating in a poster presentation session and presenting a research entitled

DESIGN AND DEVELOPMENT OF DATABASE OF ANTIOXIDANT-RICH
NATURAL FRUIT AND VEGETABLE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Wankuson Chanasit, Monthon Lertworapreecha, Nugul Intrasungkha,
Panadda Promjun, Chaisit Niyasom and Pumin Nutaratat**

for participating in a poster presentation session and presenting a research entitled

EXPLORING THE INDIGENOUS *TRICHODERMA* SP. AND ITS BIOCONTROL
POTENTIAL AGAINST PHYTOPATHOGENIC FUNGI

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Chitta Sarpech, Mayura Lanchai, Pimpisut Suetrong and Sopida Sriwilaiwan

for participating in a poster presentation session and presenting a research entitled

ASPARAGUS PRESERVATION METHOD FOR SMALL-SCALE FARMERS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wisanee Nuamekin and Pornteera Rattanarat

for participating in a poster presentation session and presenting a research entitled

THE EFFECT OF RETAIL PACKAGING ON QUALITY AND SHELF LIFE
OF CHINESE PORK SAUSAGE PRODUCT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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CERTIFICATE OF APPRECIATION

is awarded to

Orathai Bunthawong, Pratsanee Kongwong and Thanchanok Kiatkamjai

for participating in a poster presentation session and presenting a research entitled

EFFECT OF XANTHAN GUM ON THE QUALITIES OF BROWN RICE COOKIES
ADDITION WITH PINEAPPLE POMACE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pornteera Rattanarat and Wisanee Nuamekin

for participating in a poster presentation session and presenting a research entitled

THE STUDY OF QUALITY OF SET-TYPE YOGURT DURING STORAGE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao





CERTIFICATE OF APPRECIATION

is awarded to

Supanee Saewa, Siriluk Chonlatesaiwiman and Patcharawarin Ruanto

for participating in a poster presentation session and presenting a research entitled

STUDY ON THE EFFICIENCIES OF GELLING AGENTS IN THE PRODUCTION OF COFFEE GUMMY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao





CERTIFICATE OF APPRECIATION

is awarded to

Charuporn Aupachin and Songklod Sarapusit

for participating in a poster presentation session and presenting a research entitled

STUDY ON THE EFFICACY OF KITCHEN MINT (*MENTHA × CORDIFOLIA* OPIZ EX FRESEN) AND LEMONGRASS (*CYMBOPOGON NARDUS* (L.) RENDLE) LEAF EXTRACTS AGAINST MEALYBUGS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kitiporn Sriwoy and Songklod Sarapusit

for participating in a poster presentation session and presenting a research entitled

STUDY ON THE BIOLOGICAL ACTIVITY OF EXTRACTS FROM *OCIMUM TENUIFLORUM* AND
COCCINIA GRANDIS (L.) VOIGT AS NATURAL INSECTICIDES AGAINST MEALYBUGS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Poster Presentation กลุ่มที่ 2

สาขาวิชาเคมี เคมีประยุกต์และเคมีอุตสาหกรรม



CERTIFICATE OF APPRECIATION

is awarded to

Pongsapak Fonmanee, Thanyarat Sriwana and Suttasinee Katunyoo

for participating in a poster presentation session and presenting a research entitled

SYNTHESIS OF CuO BY CYCLIC MICROWAVE AND APPLICATION AS PHOTOCATALYST

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Punika Intapan, Rawicha Lerdmeenai,
Siranyathorn Pongnuth and Sorachai Khamsan**

for participating in a poster presentation session and presenting a research entitled

GREEN SYNTHESIS OF 3,4-DIHYDROPYRIMIDINONE DERIVATIVES AND
BIOLOGICAL ACTIVITY STUDIES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Paradon Kaewsuwan, Asadhawut Hiranrat,
Netnapa Chana and Panita Kongsune**

for participating in a poster presentation session and presenting a research entitled

*α -GLUCOSIDASE INHIBITORY ACTIVITY OF ALKALOID EXTRACT
FROM LEAF OF MITRAGYNA SPECIOSA (KORTH.) HAVIL.*

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Supansa Dampat and Chakkrapong Chaiburi

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF $\text{AgMn}_x\text{O}_y/\text{C}$ AND MnO_x/C AS CATHODE CATALYSTS
FOR GLUCOSE ALKALINE FUEL CELL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pintira Chayboonchoo and Chakkrapong Chaiburi

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF AgVO_x/C , AgMnO_x/C AS CATHODE AND PdCeO_x/C AS ANODE CATALYSTS
FOR SORBITOL ALKALINE FUEL CELL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.

Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao





CERTIFICATE OF APPRECIATION

is awarded to

Wannasa Somchai and Ruttayapon Potai

for participating in a poster presentation session and presenting a research entitled

SYNTHESIS OF REVERSIBLE THERMOCHROMISM OF POLYDIACETYLENE/ZINC(II) ION/ZINC OXIDE
NANOCOMPOSITES IN MIXED WATER/PROPANOL: EFFECT OF SOLVENT RATIOS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pansachon Intamalee, Patcharee Arsakhant and Rungnapha Saeeng

for participating in a poster presentation session and presenting a research entitled

SYNTHESIS OF TRITYL DITHIOCARBAMATE EPOXY-ANDROGRAPHOLIDE ANALOGUES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Prapakorn Sombunmak, Warapong senapak, and Ekaruth Srisook

for participating in a poster presentation session and presenting a research entitled

SYNTHESIS OF ALKYL CINNAMATE ANALOGUES VIA ESTERIFICATION
USING ACIDIC IONIC LIQUID AS A CATALYST

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wilailak Saetae and Jaray Jaratjaroonpong

for participating in a poster presentation session and presenting a research entitled

SHORT TOTAL SYNTHESIS OF COLLETOTRYPTINS A AND B

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Akkradach Chotnitisuwan, Akapong Suwattanamala, and Karaked Tedsree

for participating in a poster presentation session and presenting a research entitled

PHOTOCATALYTIC REDUCTION OF CO₂ TO METHANOL BY Cu/ZnO-CeO₂ NANOPATE CATALYST

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Noppharat Khotsuno, Sunti Phewphong, and Wuttichai Roschat

for participating in a poster presentation session and presenting a research entitled

THE DEVELOPMENT QUALITY OF BIODIESEL OIL FROM BLENDING WASTE COOKING OIL
WITH ANIMAL FAT AND CASTER SEED OIL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kunlanid Intaraphet, Soraida Bosoy, Parichat Thepthong,
Wankuson Chanasit and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

PREPARATION OF *PIPER BETLE* LINN. EXTRACT AND MgFe-LAYERED DOUBLE
HYDROXIDE COMPOSITE BY SOLID-SOLID REACTION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Natnida Nakkliang, Soraida Bosoy, Parichat Thepthong,
Wankuson Chanasit and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF COMPOSITE MATERIAL BASED ON *GLYCYRRHIZA GLABRA* EXTRACT AND MgFe-LAYERED DOUBLE OXIDE BY SOLID-STATE REACTION AND ANTIOXIDANT PROPERTY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Panida Budsri, Woramon Phloiysorn, and Sorachai Khamsan

for participating in a poster presentation session and presenting a research entitled

GREEN ONE-POT SYNTHESIS OF 3,4-DIHYDROPYRIMIDINONE ANALOGUES
USING CELITE CATALYST

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Theerasak Rojanarata, Kanong Ruttanakorn, and Thana Thanayutsiri

for participating in a poster presentation session and presenting a research entitled

RGB-BASED QUANTITATION METHOD OF ETHAMBUTOL DIHYDROCHLORIDE
FOR THE QUALITY CONTROL OF TABLETS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



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Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Sarayut Watchasit and Chomchai Suksai

for participating in a poster presentation session and presenting a research entitled

SPECIATION AND QUANTIFICATION OF INORGANIC PHOSPHATE ADDITIVE
IN FROZEN SHRIMP BY ^{31}P -NMR

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Satane Phunamung, Anchisa Hankate, and Thammason Prapatham

for participating in a poster presentation session and presenting a research entitled

EFFECT OF ALGinate AMOUNT ON PROPERTIES OF EDIBLE FILM FROM RADISH

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pichamon Masnguluem and Uthaiwan Sirion

for participating in a poster presentation session and presenting a research entitled

DESIGN AND SYNTHESIS OF BENZIMIDAZOLE - TRIAZOLE DERIVATIVES
VIA SEQUENTIAL ONE-POT THREE STEP REACTION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Narumol Petcharat, Jiraporn Sriprajan, Suwicha Patnin,
Arthit Makarasen and Apinya Buranaprapuk**

for participating in a poster presentation session and presenting a research entitled

MOLECULAR DOCKING STUDY OF QUINOLINE DERIVATIVES WITH LYSOZYME *IN SILICO*

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Apisit Intachai, Patcharathorn Onta,
Preeyaporn Luerueang and Boontharika Thapsukhon**

for participating in a poster presentation session and presenting a research entitled

LINEAR AND NONLINEAR REGRESSION METHODS FOR OPTIMUM METHYLENE
BLUE ADSORPTION ISOTHERM ONTO SYNTHESIZED ACTIVATED CARBON
FROM COFFEE GROUNDS IMPREGNATED WITH CALCIUM ALGINATE BEAD

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Thanit Metheenukul, Pornphimon Metheenukul,
Anucha Rikakorn and Jukkrin Srivilai**

for participating in a poster presentation session and presenting a research entitled

PULSE ELECTRIC ASSISTED EXTRACTION OF PINOSTROBIN-ENRICHED EXTRACT
FROM FINGER ROOT RHIZOME (*BOESENBERGIA ROTUNDA* (L.))

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Thanit Metheenukul, Jukkrint Srivilai,
Nattanan Sangngew and Sirilak Duangsuwan**

for participating in a poster presentation session and presenting a research entitled

STUDY OF THE RATIO BETWEEN VIRGIN COCONUT OIL AND SHEA BUTTER
ON THE PROPERTIES OF SKIN CARE LOTION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Soraida Bosoy, Nureeya bintuan,
Panita Sumanatrakul and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

SIMPLIFIED REMOVAL OF HEAVY METAL WASTEWATER: MgFe-LAYERED
DOUBLE HYDROXIDE APPROACH FOR Cr⁶⁺ TREATMENT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sunti Phewphong, Aonuma Wonam, Thapanapong Kaisri,
Patsorn Duangpakdee, Tappagorn Leelatam and Wuttichai Roschat**

for participating in a poster presentation session and presenting a research entitled

THE INVESTIGATION OF PHYSICOCHEMICAL PROPERTIES OF
THE ROSELLE (*HIBISCUS SABDARIFFA* LINN.) SEED OIL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kanlayanee Kajsanthia, Natthanicha Khuabphimai,
Chatrachatchaya Chotichayapong, Pusita Kuchaiyaphum,
Nikorn Saengsuwan and Worapong Baugnern**

for participating in a poster presentation session and presenting a research entitled

REMOVAL OF METHYLENE BLUE DYE USING ADSORBENT PREPARED FROM SUGARCANE BAGASSE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Chutikarn Inchan, Kongphop Lersakthanakorn, and Supachai Wanprakhon

for participating in a poster presentation session and presenting a research entitled

ACTIVATED CARBON FROM JARUL FRUIT (*LAGERSTROEMIA SPECIOSA PERS.*)
BY CHEMICAL ACTIVATION WITH H_3PO_4

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Achiraya Kanta, Phetsiri Phuangkham, and Supachai Wanprakhon

for participating in a poster presentation session and presenting a research entitled

EFFECT OF TEMPERATURE ON PROPERTIES OF ACTIVATED CARBON FROM WASTE BAMBOO
CHOPSTICKS PREPARED FROM PHOSPHORIC ACID

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Surassawadee Paliphot and Chammalieng Choawthum

for participating in a poster presentation session and presenting a research entitled

DEVELOP OF ETHYLENE ABSORBENT PAPER FROM BANANA LEAF SHEAF CONTAINING
ACTIVATED CARBON COATED WITH TITANIUM DIOXIDE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Surarat Siri-in, Tantika Charoenlap and Niramol Juntarachat

for participating in a poster presentation session and presenting a research entitled

ADSORPTION OF HYDROGEN SULFIDE IN BIOGAS USING ALKALINE-IMPREGNATED
ECHINODORUS CORDIFOLIUS BIOCHAR AS AN ADSORBENT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nattiya Khongkuea and Niramol Juntarachat

for participating in a poster presentation session and presenting a research entitled

ADSORPTION EFFICIENCY OF DECANter CAKE AND DECANter CAKE BIOCHAR
FOR REMOVING HYDROGEN SULFIDE FROM BIOGAS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Jariya Lemmard, Suaedah Mamahyamung,
Netnapid Ongsuwan and Saowapa Chotisuwan**

for participating in a poster presentation session and presenting a research entitled

ZnO PHOTOCATALYST SUPPORTED ON CELLULOSE EXTRACTED FROM SUGARCANE BAGASSE FOR
METHYLENE BLUE REMOVAL BY FILTRATION UNDER VISIBLE LIGHT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sineerat Amatsakul, Busaya Phramnun, Rotjana Chotrungrot,
Panita Sumanatrakul and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

DEVELOPING NiFe-LAYERED DOUBLE OXIDE@ACTIVATED CARBON MATERIAL
BY SOLID-SOLID METHOD

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Vachiraya Tipros, Panita Sumanatrakul,
Nureeya Bintuan, and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

UTILIZATION OF ZnAl-LAYERED DOUBLE HYDROXIDE AND ZnAl-LAYERED DOUBLE OXIDE
AS AN ADSORBENT FOR REMEDIATING DYE-WASTEWATER

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Panut Saelee, Saowaluk Inpaeng and Karaked Tedsree

for participating in a poster presentation session and presenting a research entitled

NANOCELLULOSE AS A GREEN TEMPLATE IN THE PREPARATION OF AI-DOPED
MESOPOROUS SILICA CATALYSTS FOR GLUCOSE CONVERSION TO 5-HYDROXYMETHYL FURFURAL

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Krongnet Sangthong, Phitchayaphak Saenplee, Sutida Boonkaew,
Chanutnad Chaikaew, Panita Sumanatrakul and Sonchai Intachai**

for participating in a poster presentation session and presenting a research entitled

MAGNETIC MgFe-LAYERED DOUBLE OXIDE AS THE ABSORBENT
FOR REMOVING CONGO RED AND ERIOCHROME BLACK T DYES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Rungravee Chaiyod, Kittiya Khongkool, Nattharika Sinualin,
Wankuson Chanasit, and Monthon Lertworapreecha**

for participating in a poster presentation session and presenting a research entitled

PHYSICAL AND CHEMICAL PROPERTIES OF CELLULOSE FROM *NOVACETIMONAS POMACETI*
ISOLATED FROM KOMBUCHA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Chakkramong Chaiburi and Panadda Pannim

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF AIR CATHODE ELECTRODE FOR A MEMBRANELESS ALKALINE FUEL CELL
PROTOTYPE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Siwat Thungprasert, Jennarong Jaikaung, Theeraporn Promanan,
Samroeng Narakaew and Aphiruk Chaisenaand**

for participating in a poster presentation session and presenting a research entitled

SILVER AND SILVER ALLOY ON CARBON-SUPPORTED CATALYSTS FOR CATHODES
IN PEMFC AND DEFC

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Pongthep Jansanthea, Nattha Inyai, Kittipos Dokbua,
Putthadee Ubolsook and Aimon Wanaek**

for participating in a poster presentation session and presenting a research entitled

PHOTOCATALYTIC ACTIVITY OF MIXED METAL OXIDE OF CUPRIC OXIDE/
FERRIC OXIDE/ ZINC OXIDE SYNTHESIZED BY MICROWAVE METHOD

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 3

สาขาวิชาคณิตศาสตร์ คณิตศาสตร์ ประยุกต์ สาขาวิชาสถิติ



CERTIFICATE OF APPRECIATION

is awarded to

Anucha Nuisman and Atid Kangtunyakarn

for participating in a poster presentation session and presenting a research entitled

THE METHOD FOR SOLVING VARIATIONAL INEQUALITY PROBLEM AND APPLYING
TO FIXED-POINT PROBLEM OF NONEXPANSIVE MAPPING

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pimpawee Khumsup and Atid Kangtunyakarn

for participating in a poster presentation session and presenting a research entitled

APPROXIMATION THEOREM FOR FIXED POINT PROBLEM AND MODIFICATION OF
VARIATIONAL INEQUALITY PROBLEM

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Phatpasu Rungchat, Chayapat Wiangnaksansuk and Peeranut Tapsukon

for participating in a poster presentation session and presenting a research entitled

PROVING THAT THE POTENTIAL INFINITE SERIES CANNOT BE THE VARIABLES BY DETERMINING
THE AMOUNT OF ODD AND EVEN TERMS IN THE POTENTIAL INFINITE SERIES AND
SUBSTITUTE INTO THE EQUATION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Supicha Vongkomalasai, Phattanaphorn Satakhet and
Tirawat Chareonwattanamaneechai**

for participating in a poster presentation session and presenting a research entitled

THE DEVELOPMENT OF A WEB APPLICATION BASED ON A MATHEMATICAL MODEL DESCRIBING
THE PROPAGATION OF COVID-19 IN THAILAND: A CASE STUDY FOR THE 5th WAVE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Arisa Aunruean and Sineenart Srimongkol

for participating in a poster presentation session and presenting a research entitled

A PREDATOR – PREY MODEL: A CASE STUDY OF LADY BEETLES AND MEALYBUGS IN AGRICULTURE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Naphasorn Khuanarj and Apisak Chairojwattana

for participating in a poster presentation session and presenting a research entitled

THE CORRELATION BETWEEN FINANCIAL RATIOS AND STOCK PRICE OF CHAROEN POKPHAND
GROUP COMPANIES LISTED ON THE STOCK EXCHANGE OF THAILAND

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kultida Kumsuk, Jeeraphat Chaingkaew,
Panida Suriyamanee and Suebkul Kanchanasuk**

for participating in a poster presentation session and presenting a research entitled

ALTERNATIVE SELECTING THE DEMONSTRATING SCHOOLS OF SCHOOL OF EDUCATION STUDENT,
UNIVERSITY OF PHAYAO USING DECISION MAKING PROBLEMS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 4

สาขาวิชาวิทยาศาสตร์ศึกษา และคณิตศาสตร์ศึกษา



CERTIFICATE OF APPRECIATION

is awarded to

Thawanrat Kanthorn, Tanatchaporn jaijumpa and Kritsada Tampradit

for participating in a poster presentation session and presenting a research entitled

THE EFFECT OF SAQ TRAINING ON THE AGILITY OF EXERCISE SCIENCE AND
SPORTS STUDENTS IN THE FUTSAL COURSE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Apiradee Pansing and Chanyah Dahsah

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF RESEARCH BASED LEARNING WITH FLIPPED CLASSROOM ON CRITICAL THINKING AND
LEARNING ACHIEVEMENT IN CHEMISTRY OF GRADE 12

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Suchanun Dangjanta, Saitharn Khamainlao and Duangjan Kaewkongpan

for participating in a poster presentation session and presenting a research entitled

ADMINISTRATION OF STEAM EDUCATION LEARNING THROUGH CREATIVITY-BASED LEARNING FOR ENCOURAGING TO COMPETENCY & SKILLS IN THE 21ST CENTURY FOR SECONDARY 1 STUDENTS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kittin Chanchotsathian, Tawanrath Chumsri, Nutwarin Mansilp,
Janjarus Watanachote and Piyanoote Jaihan**

for participating in a poster presentation session and presenting a research entitled

DETECTION OF *VIBRIOSPP.* IN A CLOSED SYSTEM SALTWATER FISHTANK FROM THE INSTITUTE OF
MARINE SCIENCE, BURAPHA UNIVERSITY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Phatcharapa Khongman, Yuttana Chaijalearn, and
Phitsanuphakhin Chaimongkhon**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF SCIENCE PROCESS SKILLS BY USING INQUIRY-BASED LEARNING (5E) TOGETHER
WITH QUESTIONING TECHNIQUES IN PHOTOSYNTHESIS STUDY UNIT FOR JUNIOR HIGH SCHOOL
STUDENTS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Piyapong Sithison

for participating in a poster presentation session and presenting a research entitled

INTEGRATING AUTOMATIC ITEM GENERATION TECHNIQUES WITH PYTHON AND LATEX TO
CREATE DYNAMIC ANIMATION WORKSHEETS FOCUSING ON A PROJECTILE MOTION

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Anodar Ratchawet, Patcharaporn Pun-ake,
Chonlasith Lodekaew and Yuttana Chaijalearn**

for participating in a poster presentation session and presenting a research entitled

THE DEVELOPMENT OF SKILLS DRILLS IN COOPERATION WITH INQUIRY-BASED LEARNING
MANAGEMENT TO PROMOTE THE ABILITY TO SOLVE CHEMICAL PROBLEMS ON TITLE "FACTORS
AFFECTING CHEMICAL EQUILIBRIUM" OF THE FIFTH GRADE OF SECONDARY LEVEL STUDENTS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 5

สาขาวิชาคอมพิวเตอร์ เทคโนโลยีสารสนเทศ วิทยาการข้อมูล



CERTIFICATE OF APPRECIATION

is awarded to

Phet Phongshei

for participating in a poster presentation session and presenting a research entitled

MANAGEMENT ONLINE EXAMINATION SYSTEM (QLMS SERVER) CASE STUDY MIDTERM AND FINAL EXAMINATIONS ONLINE IN THE COVID-19 PANDEMIC SITUATION, UNIVERSITY OF PHAYAO

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Ekboonya Srisook, Watcharin Yodmuang,
Somrit Unai and Kridsada Luangthongkham**

for participating in a poster presentation session and presenting a research entitled

THE SOLUTION-SAMPLE MANIPULATION USES PROGRAMMABLE LINEAR ACTUATOR
FOR THE WELL-PLATE COLORIMETER ANALYSIS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Chaisiri Sanitphonklang, Sirithip Wasinrat,
Teerasakand Khoployklang and Kobthong Ladkhum**

for participating in a poster presentation session and presenting a research entitled

THE REXPERT: A SYSTEM FOR CLUSTERING THE RESEARCH RESULTS OF COMPUTER RESEARCHERS
WITH DATA MINING TECHNIQUES FOR RECOMMENDING SIMILAR RESEARCH RESULTS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Wittaya Pulsawad, Komkrich Kaewpanus, Anusorn Tong-on,
Meechai Thepnurat and Parinya Saphet**

for participating in a poster presentation session and presenting a research entitled

CONSTRUCTION OF AN AI ELECTRONIC NOSE SYSTEM FOR CHARACTERIZATION OF
A COFFEE AROMA MAP IN CHIANG RAI PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Arisa Worathongchai and Pitak Sootanan

for participating in a poster presentation session and presenting a research entitled

DATABASE OF NATURAL COMPOUNDS AND POTENTIAL BIOACTIVITY OF
DIETARY SUPPLEMENT PRODUCTS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 6

สาขาวิชาฟิสิกส์ พลังงาน ดาราศาสตร์ และวัสดุศาสตร์



CERTIFICATE OF APPRECIATION

is awarded to

**Chitipat Chanasuek, Mada Boonruanglue,
Nawarat Piromruk and Paveena Laokul**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF MELTBLOWN NONWOVEN FABRIC WITH ANTIBACTERIAL ACTIVITY
BY ZnO/AgBr NANOCOMPOSITES COATING

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nilobol Wongsaita and Morakot Piemjai

for participating in a poster presentation session and presenting a research entitled

COMPARISON OF SURFACE MICROHARDNESS OF RESTORATIVE RESIN COMPOSITE WITH
DIFFERENT TYPES OF FILLERS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Kotcharat Nantasen and Morakot Piemjai

for participating in a poster presentation session and presenting a research entitled

THE COLOR MASKING ABILITY OF RESIN COMPOSITE WITH DIFFERENT TYPES OF FILLERS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pathit Premwichit and Sasipohn Prasertpalichat

for participating in a poster presentation session and presenting a research entitled

DIELECTRIC AND IMPROVED ENERGY-STORAGE PROPERTIES IN COMPLEX PEROVSKITE
(1-x)NaNbO₃-xBi(Li_{1/3}, Sn_{2/3})O₃ LEAD-FREE CERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wanchaloem Maitreesittikorn, Pathit Premwicht and Sasipohn Prasertpalichat

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF NA EXCESS ON THE PHASE STRUCTURE AND ELECTRICAL PROPERTIES OF
(Bi_{0.487}Na_{0.487}K_{0.06}Ba_{0.026})TiO₃ LEAD-FREE PIEZOCERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Aumaparn Phlayrahan and Sudarat Khunmee

for participating in a poster presentation session and presenting a research entitled

IDENTIFICATION OF LOW-TEMPERATURE HEATED RUBY SAMPLES USING FTIR SPECTRA

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Kanisorn Kaewsritthong, Anucha Kaewpoonsuk, Pincha Torkittikul,
Chatdanai Boonruang and Thanongsak Nochaiya**

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF WATER-TO-CEMENT RATIO AND CURING TIME ON THE ELECTRICAL OUTPUT OF
CEMENT-BASED TRIBOELECTRIC NANOGENERATOR

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Thanongsak Nochaiya, Chanutta Jareanpon, Saowaluk Kamkum,
Panisara disuea and Pincha Torkittikul**

for participating in a poster presentation session and presenting a research entitled

MECHANICAL AND PHYSICAL PROPERTIES OF CELLULAR LIGHTWEIGHT
CONCRETE CONTAINING BOTTOM ASH

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Pathit Premwichit and Sasipohn Prasertpalichat

for participating in a poster presentation session and presenting a research entitled

STUDY ON STRUCTURAL, DIELECTRIC, AND ENERGY STORAGE PROPERTIES OF Ba²⁺ DOPED
LEAD-FREE NaNbO₃-BASED CERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Siwat Kamonkunanon, Pakorn Ket-in, Thanongsak Nochaiya,
Panisara Disuea and Phalitphat Khumfu**

for participating in a poster presentation session and presenting a research entitled

PHYSICAL PROPERTIES AND THERMAL PROPERTIES OF CONCRETE MIXED WITH CRUSHED STONE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sutthisa Konruang, Thawatchai Tepnual, Pornpana Buaphet,
Suwit Pethauylung and Narit Klompong**

for participating in a poster presentation session and presenting a research entitled

X-RAY SHIELDING AND MECHANICAL PROPERTIES OF
RUBBER COMPOUND/BARIUM SULFATE COMPOSITE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Nutkamon Sonchaopri, Rattiphorn Sumang, Supree Pinitsoontorn,
Aurawan Rittidech and Theerachai Bongkarn**

for participating in a poster presentation session and presenting a research entitled

EFFECT OF FIRING TEMPERATURES ON PHASE FORMATION, MICROSTRUCTURE, DIELECTRIC AND
MAGNETIC PROPERTIES OF $\text{Ni}_{0.6}\text{Zn}_{0.4}\text{Fe}_2\text{O}_4$ CERAMICS SYNTHESIZED
BY THE SOLID-STATE COMBUSTION TECHNIQUE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Metarsit Klinbanmor, Naratip Vittayakorn,
Aurawan Rittidech and Theerachai Bongkarn**

for participating in a poster presentation session and presenting a research entitled

FIRING TEMPERATURES EFFECT ON PHASE FORMATION, MICROSTRUCTURE AND ELECTRICAL PROPERTIES OF BNBKL CERAMICS FABRICATED VIA THE SOLID-STATE COMBUSTION TECHNIQUE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Widchaya Somsri, Naratip Vittayakorn and Theerachai Bongkarn

for participating in a poster presentation session and presenting a research entitled

EFFECT OF FIRING TEMPERATURES ON THE PHASE FORMATION, MICROSTRUCTURE,
AND ELECTRICAL PROPERTIES OF BCLTS CERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Suphornphun Chootin, Anupong Luangpangai,
Widchaya Somsri, Chanagon Menkun, Naratip Vittayakorn,
Supree Pinitsoontorn and Theerachai Bongkarn**

for participating in a poster presentation session and presenting a research entitled

EFFECT OF FIRING TEMPERATURES ON PHASE STRUCTURE, MICROSTRUCTURE, ELECTRICAL AND
MAGNETIC PROPERTIES OF $(\text{Bi}_{0.5}\text{Na}_{0.5})_{0.7}\text{La}_{0.3}(\text{Ti}_{0.7}\text{Fe}_{0.3})\text{O}_3$ CERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Witsarut Chongsatan, Naratip Vittayakorn and Theerachai Bongkarn

for participating in a poster presentation session and presenting a research entitled

EFFECT OF FIRING TEMPERATURES ON PHASE FORMATION, MICROSTRUCTURE, ELECTRICAL,
AND ENERGY STORAGE PROPERTIES OF BNT-BT-BCTZ CERAMICS PREPARE
VIA THE SOLID-STATE COMBUSTION TECHNIQUE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Nalinprapa Saranwong, Anuphong Suthatho, Kittiphol Rustanapong,
Rittichai Boontarsai, Kantarat Lekkaew and Kanta Sangwijit**

for participating in a poster presentation session and presenting a research entitled

ENHANCEMENT OF WATER RESISTANCE OF COTTON GAUZE BY Ar- AND He- COLD PLASMA TREATMENT

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Pincha Torkittikul, Thanongsak Nochaiya, Thachon Kaosomboon,
Sarayut Malai, Watthana Makararotrit, Apiwat Sripuman
and Warakhom Wongchai**

for participating in a poster presentation session and presenting a research entitled

THE USE OF WASTE TIRE RUBBER AS SAND REPLACEMENT IN MORTAR: EFFECT ON DENSITY,
COMPRESSIVE STRENGTH AND TENSILE STRENGTH OF MORTAR

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Wiwat Pattanakasem, Nipaphat Charoenthai, Naratip Vittayakorn,
Nateporn Thongyong, Prasit Thongbai and Theerachai Bongkarn**

for participating in a poster presentation session and presenting a research entitled

PHASE FORMATION, MICROSTRUCTURE AND ELECTRIC PROPERTIES OF
 La^{3+} SUBSTITUTION IN B-SITE OF LEAD-FREE $\text{BaTi}_{0.91}\text{Sn}_{0.09}\text{O}_3$ CERAMICS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nattawat Radjaroendee, Thammatorn Jamraschai and Ekapong Hirunsirisawat

for participating in a poster presentation session and presenting a research entitled

ORBITS OF PHOTON AROUND THE BLACK HOLE WITH A LIGHT SOURCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wittaya Thipaksorn

for participating in a poster presentation session and presenting a research entitled

EVOLUTION OF THE BACKGROUND UNIVERSE IN DHOST THEORY WITH SHIFT-SYMMETRY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Chatuporn Nisaisue

for participating in a poster presentation session and presenting a research entitled

QUANTIZE FLUXOID PROTECTION IN AN S-WAVE SUPERCONDUCTING RING

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Nichtima Uapoonphol, Sasiwimon Naksuriyawong,
Kanokporn Boonsirichai, Chakrit Saengkorakot, Jeelawat Esor,
Ratchai Funklin and Vorapot Permnamtip**

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF SUGAR ADULTERATION DETECTION IN FRUIT JUICE
USING CAVITY-RINGDOWN SPECTROSCOPY TECHNIQUE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Songsak Saeyang, Sirikamon Saengmee-anupharb,
Somrit Unai and Sakda Koenrobket**

for participating in a poster presentation session and presenting a research entitled

EXPERIMENTAL STUDY OF HEAT CAPACITY TO MINIMIZE ERROR IN
THE FIRST-YEAR STUDENT PHYSICS LABORATORY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wasin tasroi, Rattanaporn Rueangrot and Kriangsak Prompak

for participating in a poster presentation session and presenting a research entitled

THE FREE FALL EXPERIMENT USING IMAGE PROCESSING TECHNIQUES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Yuttana Sriudom, Zinner Ratipat, Anurat Tewata,
Chainarong Sanpao and Wisit Khudsai**

for participating in a poster presentation session and presenting a research entitled

BIOGAS TECHNOLOGY TRANSFER FROM LIVESTOCK MANURE IN BAN NONGBAN,
MUEANG TAK DISTRICT, TAK PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Jedsada Visedmanee and Sangkom Subphaso

for participating in a poster presentation session and presenting a research entitled

EFFECTS OF DRYING AIR TEMPERATURE AND DRYING AIR VELOCITY ON DRYING KINETICS PEPPER
USING FLUIDIZED BED TECHNIQUE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Tanapol Chimchour, Nalintip Tontan,
Pantip Tue-Ngeun and Kotcharat Phookung**

for participating in a poster presentation session and presenting a research entitled

BIOMASS BRIQUETTES FROM EXPIRED MUSHROOM SPAWN WITH RICE-STRAW

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Natsacha Inchoorun, Weerayuth Promjan, Rewadee Meesat, Sriwichai susuk,
Wannee Suttivattanavet, Kusol Iamsub and Soravit Jamjumroon**

for participating in a poster presentation session and presenting a research entitled

DRYING HERBS WITH VERTICAL CYLINDRICAL SOLAR INCUBATOR

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 7

สาขาวิชาวิทยาศาสตร์ นวัตกรรมเชิงพาณิชย์



CERTIFICATE OF APPRECIATION

is awarded to

**Phairoach Chunkaew, Anurat Tevata, Aphirak Khadwilard,
Sumroum Kosalanun, and Chakkraphan Thawonngamyingsakul**

for participating in a poster presentation session and presenting a research entitled

ENERGY CONSERVATION INDUCTION MOTOR FOR RICE MILL BUCKET 2.2 KW

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Phichaya Ratchaphon, Norawit Mahaprom and Sarit Promthep

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF SMART FARMING FOR ORGANIC CROPS MANAGEMENT SYSTEM

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**ChakkraphanThawonngamyingsakul, Phairoach Chunkaew,
Apirak Khadwilard, and Kanyaphorn Chaiwong**

for participating in a poster presentation session and presenting a research entitled

APPLICATION OF THERMOELECTRIC IN CHICKEN EGG INCUBATOR BY CONTROLLED INTERNET OF
THING

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Aphirak Khadwilard, Phairoach Chunkaew, Chakkraphan
Thawongamyingsakul, and Niwat Pratoomchai**

for participating in a poster presentation session and presenting a research entitled

DETERMINATION OF OPTIMUM PARAMETERS FOR DRYING BANANA SLICES
USING INFRARED RADIATION CERAMIC PLATES BY RESPONSE SURFACE METHODOLOGY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Narudee Worasarn, Ailada Tipseerad, Watsaphon Tasoonthon and Akeapot Srifa

for participating in a poster presentation session and presenting a research entitled

EFFICIENCY OF TITANIUM DIOXIDE AND COMMERCIAL COATING ON THE INHIBITION OF
ALGAL GROWTH ON CONCRETE SURFACE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Wisit Mangthas, Rattitikarn Boonpeaw and Waipot Ngamsaad

for participating in a poster presentation session and presenting a research entitled

NAVIGATION FOR MOBILE ROBOTS USING MILLIMETER-WAVE RADAR

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Ratchaneewan Kulchan and Pattharaporn Reangpirom

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF METHODOLOGY FOR INDICATE EFFICIENCY OF OXYGEN SCAVENGER

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Ratchaneewan Kulchan and Pattharaporn Reangpirom

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF DYES FOR INDICATE FRESHNESS OF SEAFOODS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

**Sakoolrud Raunmoon, Supakid Sachak, Waranya Thong-in,
Boonyakorn Sonkhayan, Warintorn Bangwiset,
Chatnutda Konwimon, and Widsanusan Chartarrayawadee**

for participating in a poster presentation session and presenting a research entitled

“BOTANICAL BOMB INNOVATION” PHYTOCOSMETIC INNOVATIVE PRODUCT FOR HAIR CARE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Nittalin Phunapai, Teerapath Limboonruang, Jantana Panburana, Sudaruch Rarkyai, Sittinun Tawkaew, and Parkpoom Sriromreun

for participating in a poster presentation session and presenting a research entitled

AN INNOVATIVE SAFETY HOLDER OF THE ENDOTRACHEAL TUBE
FOR NEONATES WITH SEVERE RESPIRATORY ILLNESSES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



Poster Presentation กลุ่มที่ 8

Routine to Research (R2R)



CERTIFICATE OF APPRECIATION

is awarded to

Suchanat Potikul, Nawawee Tohyeng, and Natthaphon Khiankhan

for participating in a poster presentation session and presenting a research entitled

ADAPTATION OF RICE FARMERS IN AGRICULTURE 4.0 ERA : CASE STUDY OF RICE FARMERS IN
PADO SUB-DISTRICT, MAYO DISTRICT, PATTANI PROVINCE

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Piyawan Nuntaboon

for participating in a poster presentation session and presenting a research entitled

ESPR_eL EVALUATION OF CHEMICAL RISK ASSESSMENT IN THE BIOCHEMICAL LABORATORY,
SCHOOL OF MEDICAL SCIENCES, UNIVERSITY OF PHAYAO

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Konkanok Chaisen and Wittaya Suwonnachot

for participating in a poster presentation session and presenting a research entitled

MORPHOLOGY AND MEIOTIC CHROMOSOME BEHAVIOR OF OYSTER PLANT
(*TRADESCANTIA SPATHACEAE* SW.)

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Teppagone Pittayapinune and Lateepah Domae

for participating in a poster presentation session and presenting a research entitled

COMMUNITY INNOVATION TO INCREASE THE CAPACITY FOR SUSTAINABLE SELF-MANAGEMENT ON
RESOURCE BASE IN SOUTHERN BORDER PROVINCES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Theerasak Thongyan

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF AN UNDERGRADUATE STUDENT ADMISSIONS SYSTEM,
FACULTY OF SCIENCE, MAHASARAKHAM UNIVERSITY

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Panisara Disuea and Thanongsak Nochaiya

for participating in a poster presentation session and presenting a research entitled

DEVELOPMENT OF YOUNG'S MODULUS APPARATUS OF METAL WIRES
FOR INTRODUCTION PHYSICS LABORATORY CLASS

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Panuwat Lomakul

for participating in a poster presentation session and presenting a research entitled

THE DEVELOPMENT OF QR CODE TECHNOLOGY TO SUPPORT AUDIOVISUAL WORK SCHOOL OF
INFORMATION AND COMMUNICATION TECHNOLOGY UNIVERSITY OF PHAYAO

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao



CERTIFICATE OF APPRECIATION

is awarded to

Phannarai Pibalpakdee and Tosapon Somboon

for participating in a poster presentation session and presenting a research entitled

THE DEVELOPMENT OF LABORATORY EQUIPMENT CIRCULATION SYSTEM USING STORESTOCK PROGRAM IN MICROBIOLOGY LABORATORY OF SCHOOL OF MEDICAL SCIENCES

in 14th Science Research Conference held on 25-26 May 2023
at the School of Science, University of Phayao.



Associate Prof.Dr.Chayan Boonyarak
Dean of School of Science, University of Phayao