



Oral Presentation กลุ่มที่ 1

สาขาวิชาชีววิทยาและการประยุกต์ วิทยาศาสตร์การประมง วิทยาศาสตร์สิ่งแวดล้อม
วิทยาศาสตร์การเกษตร วิทยาศาสตร์สุขภาพ จุลชีววิทยา วิทยาศาสตร์เทคโนโลยีชีวภาพ
วิทยาศาสตร์และเทคโนโลยีทางอาหาร



CERTIFICATE OF APPRECIATION

is awarded to

**Dunyawat Tahwiang, Pimsiri Suwannapat, Montri Sanwangsri,
Mana Panya, Ronald Macatangay, Titaporn Supasri and Kritchaya Issakul**

for participating in an oral presentation session and presenting a research entitled

THE STUDY ON GROWTH AND BIOMASS OF KHAO DAWK MALI 105 AND RD6 :
CASE STUDY OF NON-IRRIGATED PADDY FIELD, SAN KHONG SUB-DISTRICT,
DOK KHAM TAI DISTRICT, 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

Suriyasak Auntan and Bunyarit Sinkangam

for participating in an oral presentation session and presenting a research entitled

PRELIMINARY YIELD TRIAL EVALUATION OF WAXY CORN HYBRIDS IN 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

Jenjira Thamklang and Bunyarit Sinkangam

for participating in an oral presentation session and presenting a research entitled

ADVANCE YIELD TRIAL OF MAIZE HYBRIDS INTEGRATING OF PUBLIC INSTITUTES
IN PHAYAO AND LAMPANG

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

Yuong Vorn and Bunyarit Sinkangam

for participating in an oral presentation session and presenting a research entitled

PRELIMINARY YIELD TRIAL OF FIELD MAIZE HYBRIDS 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

**Jeerasak Meerod, Piengpim Chidburee, Siripun Sarin and
Aphichat Chidburee**

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF THE LIGHT TYPES ON GROWTH AND YIELD QUALITY OF CHERRY TOMATO CULTIVARS
SWEET GIRL

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

Chonticha Phromduang and Watanachai Lontom

for participating in an oral presentation session and presenting a research entitled

EVALUATION OF SALINITY-INDUCED PROGRESSIVE LEAF TEMPERATURE CHANGES IN RD6 AND SALT-TOLERANT RD6 RICE SEEDLINGS USING A SIMPLE THERMAL IMAGING 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

Supidcha Natee, Jirawat Sanitchon and Maysaya Thitisaksakul

for participating in an oral presentation session and presenting a research entitled

EVALUATING PHYSIOLOGICAL RESPONSES OF NEWLY IMPROVED RD6 RICE WITH INTROGRESSED
SALTOL QTL TO SALINITY STRESS

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

Wongsakorn Wongla and Watanachai Lontom

for participating in an oral presentation session and presenting a research entitled

EXOGENOUS SILICON ALLEVIATES SOME SALT STRESS DAMAGE IN KDML105 RICE 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

Pimmada Pattrapadit and Phasini Sakulmaeka

for participating in an oral presentation session and presenting a research entitled

A STUDY ON THE EFFECT OF DAILY LIGHT INTEGRAL ON GROWTH OF ASIATIC PENNEYWORT
(*CENTELLA ASIATICA* L.) GROWN IN CLOSED 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

**Krit Chaiwong, Chutiwat Phuengpakdee, Thanaphat Phra-Thaen,
Kritsana Krajabthong and Rungkan Klahan**

for participating in an oral presentation session and presenting a research entitled

THE PRODUCTION OF FLATHEAD LOBSTER (*THENUS ORIENTALIS* (LUND, 1793)) IN CLOSE SYSTEM
WITH SMART FARM

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

Donlaya Pinmuang, Phanupong Changtor and Nonglak Yimtragool

for participating in an oral presentation session and presenting a research entitled

EFFECT OF SUPPLEMENTATION OF *CENTELLA ASIATICA* CRUDE EXTRACT IN GIANT FRESHWATER PRAWN
DIETS ON GROWTH PERFORMANCE, IMMUNE SYSTEM AND GUT MICROBIOME

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

Kamolluk Deeudom, Benny K.K. Chan and Monthon Ganmanee

for participating in an oral presentation session and presenting a research entitled

EFFECT OF THERMAL STRESS ON PHYSIOLOGICAL RESPONSE OF BARNACLES IN SI CHANG ISLAND,
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

Jiraporn Tasonthia, Dumrongsak Pekthong and Sutin Kingtong

for participating in an oral presentation session and presenting a research entitled

CHRONIC EXPOSURE OF SIMVASTATIN DISRUPTS HISTOLOGY AND PROTEIN PROFILE OF
THE HOODED OYSTER (*SACCOSTREA CUCULLATA*)

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

**Phatchara Chaisena, Choawit Rakangtong, Chaipayoom Bunchasak
and Wiriya Loongyai**

for participating in an oral presentation session and presenting a research entitled

EFFECT OF YEAST AUTOLYSATE ON THE PRODUCTIVITY AND IMMUNE STATUS IN LACTATING SOWS

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 Ongsara, Khaem Longnapa and Arraya Jeanmas

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF CRUDE PALM OIL SUPPLEMENTATION ON EGG PRODUCTION PERFORMANCE, EGGS QUALITY,
AND BLOOD SERUM LIPID PROFILE IN LAYING HEN

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

**Kasama Sudtilak, Chaipayoom Bunchasak, Phongthorn Kongmun,
K.Teepalak Rangubhet, Sombat Prasongsuk and Theerawit Poeikhampa**

for participating in an oral presentation session and presenting a research entitled

THE EFFECT OF THE EMULSIFIER SUPPLEMENTATION IN DIETS ON PERFORMANCE, CARCASS QUALITY,
AND APPARENT METABOLIZABLE ENERGY (AME) OF BROILER CHICKENS

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

Pantaree Visessing, Chaiyapoom Bunchasak and Choawit Rakangthong

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF ORGANIC MINERAL SUPPLEMENTATION IN DIET ON GROWTH PERFORMANCE AND PRODUCTION
COST IN BROILER CHICKENS

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

**Thanathip Supcharoenkul, Nattharin Phisitaukara, Choawit Rakangtong,
Chaiyapoom Bunchasak, Komwit Surachat and Wiriya Loongyai**

for participating in an oral presentation session and presenting a research entitled

**EFFECT OF DIETARY SUPPLEMENTATION OF HABANERO PEPPER POWDER ON MEAT QUALITY AND GROWTH
PERFORMANCE OF BROILER CHICKENS**

**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

**Korapat Phukitirat, Jirapatch Choksirison, Non Pranuch
and Piyanoot Jaihan**

for participating in an oral presentation session and presenting a research entitled

COMPARISON OF *ACETOBACTER XYLINUM* CULTURE MEDIUM FROM FRUIT JUICE IN BIOPLASTIC PRODUCTION

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

Suttaon Trongtokit, Keeratiyada Sanyos and Pongsanat Pongcharoen

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF STRESS FACTORS ON CELL SURVIVAL AND ANTIOXIDANT PRODUCTION
BY THERMOTOLERANT YEAST

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

Pimchanok Wongnakharin, Supatsorn Mungmai and Thapanee Sitalapruerk

for participating in an oral presentation session and presenting a research entitled

COMPARISON OF OPTIMAL CONDITIONS FOR DECOMPOSITION OF POLYSTYRENE FOAM
WITH *PSEUDOMONAS* 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

Nattanitcha Ngaowkakhaw, Phongthorn Kongmun and K.Teepalak Rangubhet

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF USING SPENT MUSHROOM SUBSTRATE ENSILED WITH WHOLE-CROP CORN
ON RUMEN DIGESTIBILITY BY *IN VITRO* 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

Pacharapon Inaoy, Phongthorn Kongmun and K. Teepalak Rangubhet

for participating in an oral presentation session and presenting a research entitled

NUTRITIONAL VALUE AND DIGESTIBILITY EVALUATION OF NAPIER GRASS ENSILED WITH
SPENT MUSHROOM SUBSTRATE BY *IN VITRO* 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

**Nongnapas Puttasaraphan, Phongthorn Kongmun
and K.Teepalak Rangubhet**

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF RICE STRAW QUALITY IMPROVEMENT BY LEGUMES ON RUMEN FERMENTATION AND METHANE
EMISSION BY *IN VITRO* TECHNIQUE USING THE DAISY^{II} 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





CERTIFICATE OF APPRECIATION

is awarded to

Jaruwan Thepsiri, Sasiporn Audtarat and Thananchai Dasri

for participating in an oral presentation session and presenting a research entitled

SYNTHESIS OF SILVER NANOWIRES USING HYDROTHERMAL METHOD
AND THEIR ANTIMICROBIAL APPLICATIONS

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

**Peeraya Punpeng, Panida Thanyasrisung, Prompong pienpinijtham
and Nattanan Govitvattana**

for participating in an oral presentation session and presenting a research entitled

REMINEALIZING EFFECTS OF NANO-SILVER FLUORIDE ON ARTIFICIAL DENTINE CARIES
IN A BIOFILM-CHALLENGED ENVIRONMENT (PILOT STUDY: *IN-VITRO* STUDY)

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

**Natsiri Prommanon, Panuwit Nein, Nannapat Tajak
and Wipasiri Soonthornchai**

for participating in an oral presentation session and presenting a research entitled

ANTIBACTERIAL ACTIVITY OF GIANT AFRICAN SNAILS' MUCUS AGAINST *STAPHYLOCOCCUS AUREUS*
AND *STAPHYLOCOCCUS EPIDERMIDIS*

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

**Peerada Yookon, Montida Chuekham, Rungnapha Yodkaew
and Wipasiri Soonthornchai**

for participating in an oral presentation session and presenting a research entitled

ANTIBACTERIAL ACTIVITY OF MUCUS ISOLATED FROM DIFFERENT SIZES
OF THE GIANT AFRICAN SNAIL (*LISSACHATINA FULICA*)

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

**Long Chhovin, Supaporn Passorn, Khanchai Danmek
and Rawisara Ruenwai**

for participating in an oral presentation session and presenting a research entitled

PHYSICOCHEMICAL PROPERTIES OF PROTEIN ISOLATE FROM SOY SAUCE RESIDUE
AND ANTIOXIDANT POTENTIAL OF PINEAPPLE PEEL EXTRACT

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

**Kantida Chaiyo, Komsak Pintha, Payungsak Tantipaiboonwong,
Warunya Phukham and Wipasiri Soonthornchai**

for participating in an oral presentation session and presenting a research entitled

ANTIOXIDANT ACTIVITIES AND POLYPHENOL CONTENTS OF
BIDENS PILOSA L. LEAF EXTRACTS

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

**Chanapat Maneeted, Theeraphol Senphan, Natthaphong Mungmuang
and Ratchanee Puttha**

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF DRINKING JAPANESE SWEET CORN SUPPLEMENTED WITH INULIN
TO ADD VALUE OF LOW-GRADE CORN

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

Piyada Limpitireungkit and Siwaporn O'Chareon

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF SUGAR-REDUCED SPREAD FROM POMELO

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

Jongkonnee Padungkasem, Ekaruth Srisook and Klaokwan Srisook

for participating in an oral presentation session and presenting a research entitled

IMPACT OF EXTRACTION METHODS AND SOLVENTS ON ANTIOXIDANT AND ANTI-INFLAMMATORY ACTIVITIES OF *ETLINGERA PAVIEANA* RHIZOMES

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

**Lakkana Meesang, Kornkamon Wongchu, Pimnara Thulathan
and Piyanoot Jaihan**

for participating in an oral presentation session and presenting a research entitled

EFFICIENCY OF ANTIBACTERIAL ACTIVITY FROM CRUDE EXTRACT OF
CANNABIS SATIVA SUBSP. *SATIVA*

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

Praewa Chanthanapodi, Thatpong Poonsawat and Yordhathai Thongsri

for participating in an oral presentation session and presenting a research entitled

SCREENING FOR ANTIFUNGAL ACTIVITY OF PURIFIED COMPOUNDS FROM *CLAUSENA HARMANDIANA*
ON HUMAN PATHOGENIC FUNGI

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

**Palida Buresree, Thanchanok Chitnarong, Nattakarn Daengmanee
and Preuttiporn Supaphon**

for participating in an oral presentation session and presenting a research entitled

ANTIOXIDANT AND ANTIMICROBIAL ACTIVITIES OF SANGYOD RICE SPROUT EXTRACT AND UTILIZATION IN
JELLY

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

Nuttarachai Wanput and Supravee Karvichar

for participating in an oral presentation session and presenting a research entitled

VASCULAR EFFECT OF LOTUS SEED EXTRACT

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

Nunticha Rajitpruksa, Wachiraya Kanbuayaeng and Sophit Khanthawong

for participating in an oral presentation session and presenting a research entitled

ANTIFUNGAL ACTIVITY OF MEDICINAL PLANTS AGAINST DERMATOPHYTES

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

Thammanoon Temchai

for participating in an oral presentation session and presenting a research entitled

ECOLOGICAL SERVICES OF WATER YIELD AND WATER FLOW CONTROL OF
THE KAENG KRACHAN FOREST COMPLEX

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

**Raekkhwan Polthanya, Nipada Ruankaew Disyatat
and Pongchai Dumrongrojwatthana**

for participating in an oral presentation session and presenting a research entitled

BIRD DIVERSITY AND COMMUNITY COMPOSITION IN PLANTED FORESTS, NAN 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

**Nada Yimatsa, Sasitorn Pongparn, Suthathip Umnouysin
and Chadtip Rodtassana**

for participating in an oral presentation session and presenting a research entitled

PRELIMINARY FIELD APPLICATION OF TEA BAG METHOD FOR ROOT DECOMPOSITION
STUDY IN AN ESTUARINE MANGROVE FOREST AT 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

**Khwanruan Naksuwankul, Ajjima Thongbor, Chuleeporn Chantharasena,
Weeranuch Khottawong, Chotika Ong-ardnarong, Sittiporn Parnmen,
Nattakarn Nooron and Sujitra Sikaphan**

for participating in an oral presentation session and presenting a research entitled

A DEVELOPMENT AI APPLICATION FOR IDENTIFICATION OF WILD MUSHROOM SPECIES
ON IOS OPERATING 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

Ason Meenapha and Vipoosit Mantrachitra

for participating in an oral presentation session and presenting a research entitled

THE SPECIES COMPOSITION AND ABUNDANCE OF MARINE FISH ON ARTIFICIAL REEF
(FISH DOME) AT SAMAE SARN ISLAND, CHON BURI 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

Phitsanuphakhin Chaimongkhon and Kewalin Sukkad

for participating in an oral presentation session and presenting a research entitled

DIVERSITY OF PHOTOTROPHIC EUGLENOID PROTOZOA (EUGLENOZOA) RELATED TO
WATER QUALITY DURING THE RAINY SEASON TIME PERIOD IN MAE MOEI RESERVOIR,
MAE THA DISTRICT, LAMPHUN 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

Vichaya Gunbua and Apisak Chairojwattana

for participating in an oral presentation session and presenting a research entitled

THE PREDICTION OF EUTROPHICATION WITH FACTORS OF WATER QUALITY AND PHYTOPLANKTON

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

**Thanyaporn Tianubol, Pakornwan Luangkasemnit, Pakwan Thawon
and Anukul Buranapratheprat**

for participating in an oral presentation session and presenting a research entitled

THE APPLICATION OF AN ECHO SOUNDER TO INVESTIGATE THE SHOAL OF FISH IN THE FISH SHELTERS
AT SAMAE SAN ISLAND, 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

Nut Boongon, Penchan Laongmanee and Wirote Laongmanee

for participating in an oral presentation session and presenting a research entitled

COASTAL BOTTOM TOPOGRAPHY MAPPING USING MARKET GRADE SIDE SCAN SONAR

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

Rujira Chandaeng and Tipwan Suppasat

for participating in an oral presentation session and presenting a research entitled

DNA BARCODES DIVERSITY OF *APIS CERANA FABRICIUS*, 1758 FROM APICULTURAL
AND NATURAL BREEDING AREA

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

Poorit Pootanon, Chalita Kongrit and Ekgachai Jeratthitikul

for participating in an oral presentation session and presenting a research entitled

GENETIC ANALYSIS OF *CORBICULA FLUMINEA* (MÜLLER, 1774) (BIVALVIA, CORBICULIDAE)
IN NATIVE SOUTHEAST ASIAN RANGE

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

Pitchaphon Athitphokinchok and Chatmongkon Suwannapoom

for participating in an oral presentation session and presenting a research entitled

ECOLOGY AND BIODIVERSITY STUDIES OF THE BIG-HEADED TURTLE
(*PLATYSTERNON MEGACEPHALUM* GRAY, 1831) USING MOLECULAR TECHNIQUE FOR RECOVERY PLAN AND
REINTRODUCTION POPULATION IN PHU SANG NATIONAL PARK, 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

Wasin Panich, Thanawan Tejangkura and Thapana Chontanarth

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF A BIOSENSOR ASSAY FOR *ASCARIDIA GALLI* DETECTION IN CHICKEN FAECES
USING LAMP COUPLED WITH LATERAL FLOW TECHNOLOGY

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

Sirapat Nak-on and Thapana Chontanarth

for participating in an oral presentation session and presenting a research entitled

EPIDEMIOLOGICAL EVALUATION FOR GASTROINTESTINAL HELMINTH INFECTION IN CATTLE
FROM SURAT THANI AND KHON KAEN PROVINCES USING MICROSCOPIC AND MOLECULAR BASED
COPROLOGICAL EXAMINATIONS

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

**Benchaphan Charoenying, Ratchaneegorn Mapanao
and Arpakorn Sakulsathaporn**

for participating in an oral presentation session and presenting a research entitled

GENETIC VARIATION OF *CYCLOCHEILICHTHYS ENOPLUS* IN THE MEKONG RIVER,
NONG KHAI PROVINCE, 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

Chakrit Somkhayan and Kanya Anukulthanakorn

for participating in an oral presentation session and presenting a research entitled

CYTOGENETICS OF EXOTIC FISH SPECIES RED-BELLIED PACU *PIARACTUS BRACHYPOMUS*
(CUVIER, 1818) 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

**Nadthida wannarod, Thitiwattana Chunawat, Wipasiri Soonthornchai
and Kriengkrai Seetapan**

for participating in an oral presentation session and presenting a research entitled

CONSTRUCTED WETLAND WITH WATER HYACINTHS (*EICHHORNIA CRASSIPES*) REDUCES
THE CHROMOSOMAL ABERRATION IN THE SWAMP EEL (*MONOPTERUS ALBUS*)

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 Cheukaw, Suphaporn Paenkeaw and Kittisak Buddhachat

for participating in an oral presentation session and presenting a research entitled

RAPID DNA EXTRACTION FROM CANINE BLOOD SAMPLES BY POLYMERASE CHAIN
REACTION AND RECOMBINASE POLYMERASE AMPLIFICATION 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

Ravipa Ukritatsadorn, Jitapa Sunjareun and Supachai Nitipan

for participating in an oral presentation session and presenting a research entitled

CLONING AND SEQUENCE ANALYSIS OF A NOVEL LEUCINE RICH REPEAT (LRR) GENE
FROM *STREPTOCOCCUS AGALACTIAE*

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

**Kanokkarn Choosong, Suphada Kiriratnikom, Akkanee Pewhom and
Supachai Nitipan**

for participating in an oral presentation session and presenting a research entitled

DIETARY SUPPLEMENTATION WITH *CORDYCEPS MILITARIS* SPENT MUSHROOM SUBSTRATE EXTRACT AND
PEDIOCOCCUS ACIDILACTICI TISTR 783 ENHANCING IMMUNE RESPONSE AND CYTOKINE EXPRESSION
IN NILE TILAPIA (*OREOCHROMIS NILOTICUS*)

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

**Chitra Ear, Korntip Kannika, Sontaya Sookying,
Chatmongkon Suwannapoom and Paiboon Panase**

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF *ANDROGRAPHIS PANICULATE* EXTRACT ON HEMATOLOGICAL INDICES, LYSOZYME ACTIVITY
AND CUMULATIVE MORTALITY OF HYBRID CATFISH (*CLARIAS MACROCEPHALUS* × *C. GARIEPINUS*)
AFTER *AEROMONAS HYDROPHILA* INJECTION

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

**Tassapon Kertsook, Sukhontha Siri, Suwanna Chaorattanakawee,
Wanarit Jitsamai and Varakorn Kosaisavee**

for participating in an oral presentation session and presenting a research entitled

EFFICACY OF COFFEE GROUNDS FOR THE ELIMINATION OF *ASCARIS SUUM* EGG IN SLUDGE

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

Nanthawat Jinasan and Sumana Leangthitikanchana

for participating in an oral presentation session and presenting a research entitled

EFFECT OF SOLVENTS ON ANTHOCYANIN EXTRACTION FROM THE SEED AND SEEDLING
OF KHAO KUM PHAYAO (*ORYZA SATIVA* VAR. *GLUTINOSA*)

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

Wichuda Klawech

for participating in an oral presentation session and presenting a research entitled

EFFECT OF NITROGEN SOURCES OF CORDYCEPIN PRODUCTION FROM *CORDYCEPS MILITALIS*

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

Sukanya Noramat, Chanitsara Thongmee and Klaokwan Srisook

for participating in an oral presentation session and presenting a research entitled

COMPARATIVE BIOLOGICAL ACTIVITIES OF ZINGIBERACEAE PLANTS HARVESTED IN EASTERN 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

Utumporn Sathapanaseth, Benny K.K. Chan and Monthon Ganmanee

for participating in an oral presentation session and presenting a research entitled

STUDY ON MICROPLASTIC IN *AMPHIBALANUS* SP., *CHTHAMALUS* SP. AND *TETRACLITA* SP.
IN CHONBURI PROVINCE, 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

**Ponrujee Yongsiri, Toemthip Poolpak, Somsak Panha,
Maleeya Kruatrachue and Ekgachai Jeratthitikul**

for participating in an oral presentation session and presenting a research entitled

MICROPLASTIC CONTAMINATION IN COMMERCIAL BIVALVES FROM A SEAFOOD MARKET
IN EASTERN 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

**Mirantee Deecharern, Jantana Panpran, Noppawan Srasaengta,
Chanchai Kahapana, Suttida Kongjay and Anchana Pattanasupong**

for participating in an oral presentation session and presenting a research entitled

STUDY ON PROPERTIES OF NATURAL WATER FOR READY BIODEGRADABILITY TEST ACCORDING OECD 301F

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

M. Natthapitch, Y. Winitchaya, P. Kulwarin, L. Hathairat and T. Thanyaporn

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF PACLOBUTRAZOL ON THE GROWTH OF (*THRIXSPERMUM SP.*) *IN VITRO*

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

Airada Khinghom and Wittaya Pakum

for participating in an oral presentation session and presenting a research entitled

THE EFFECT OF 6-BENZYLAMINOPURINE AND THIDIAZURON ON *IN VITRO* PROPAGATION OF
KALANCHOE BEHARENSIS DRAKE

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

**Chutima Hongcharoenthai, Satachanakamon Sankhaphong
and Sarassawadee Pookorn**

for participating in an oral presentation session and presenting a research entitled

STUDY ON SUITABLE TREATMENT CONTAINING 2,4-DICHLOROPHENOXYACETIC ACID ON CALLUS INDUCTION
FROM PSL-92147-1-2-4 AND LEUM PUA GLUTINOUS RICE

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

**Nirunrut Pomoim, Supattra Limpiyaprapan, Natthakiat Phadungkamol,
Thanakorn Kheunsen and Khuansupa Srisombat**

for participating in an oral presentation session and presenting a research entitled

ECOLOGY DISTRIBUTION AND CONSERVATION STATUS OF WILD ORCHID OF *PLEIONE* GENUS 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

Thanaporn Wongkham, Juthamas Chaiwanon and Sira Sriswasdi

for participating in an oral presentation session and presenting a research entitled

ANALYSIS OF EXPRESSION PATTERNS OF BRASSINOSTEROID-RESPONSIVE GENES IN *ARABIDOPSIS* ROOT
USING SINGLE-CELL RNA SEQUENCING DATASET

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

**Diomerl Edward Baldo, Phichamon Phetchahwang, Photsathorn Mutapat,
Jisnuson Svasti and Voraratt Champattanachai**

for participating in an oral presentation session and presenting a research entitled

SIRNA-MEDIATED KNOCKDOWN AGAINST PD-L1 SUPPRESSES CELL PROLIFERATION
AND INFLUENCES APOPTOSIS IN MDA-MB-231 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

**Areerat Tatongjai, Sattragorn Sudhanyaratana, Thitirat Paisart,
Pismai Malila and Punnee Peungsuwan**

for participating in an oral presentation session and presenting a research entitled

CONTENT VALIDITY OF THE BRIEF INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY
AND HEALTH (ICF) CORE SET FOR CHILDREN AND YOUTH WITH CEREBRAL PALSY (THAI VERSION)

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

**Fartima Yeemard, Wisit Chaveepojnkamjorn, Sukhontha Siri
and Tawatchai Apidechkul**

for participating in an oral presentation session and presenting a research entitled

FACTORS ASSOCIATED WITH POOR GLYCEMIC CONTROL AMONG AKHA PATIENTS WITH TYPE 2 DIABETES
MELLITUS, CHIANG RAI, THAILAND: A HOSPITAL-BASED CASE-CONTROL STUDY

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

Patcharin Klatpan, Wisit Chavepojnkamjorn and Natnaree Aimyong

for participating in an oral presentation session and presenting a research entitled

FACTORS ASSOCIATED WITH TYPE 2 DIABETES MELLITUS AMONG NEW CASES
IN DAMNOEN SADUAK HOSPITAL, RATCHABURI 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

**Pimpisut Thampipattanakul, Wisit Chaveepojnkamjorn
and Natnaree Aimyong**

for participating in an oral presentation session and presenting a research entitled

FACTORS ASSOCIATED WITH HYPERTENSION AMONG CLIENTS AT DAMNOEN SADUAK HOSPITAL,
RATCHABURI 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

**Manoonya Autchariyaphun, Wacharasak Tumrasvin
and Nareudee Limpuangthip**

for participating in an oral presentation session and presenting a research entitled

DENTIST'S ASSESSMENT OF ORAL STATUS, DENTURE QUALITY, ORAL HEALTH RELATED QUALITY OF LIFE,
AND THEIR ASSOCIATIONS: A CROSS-SECTIONAL STUDY IN TOOTH-SUPPORTED REMOVABLE
PARTIAL DENTURE WEARERS

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

Tam Ho, Sirichai Adisakwattana, Charoonsri Chusak and Nguyen Thuy Linh

for participating in an oral presentation session and presenting a research entitled

COMPARATIVE ANALYSIS OF LIFESTYLE AND PHYSICAL ACTIVITY AMONG MEDICAL AND HEALTH SCIENCES
STUDENTS IN VIETNAM DURING AND AFTER THE COVID-19 PANDEMIC

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

**Suphanida Kaewkamchai, Waleerat Sukarawan, Panida Thanyasrisung
and Siriporn Songsiripraduboon**

for participating in an oral presentation session and presenting a research entitled

ANTIMICROBIAL EFFECT OF LOCALLY PRODUCED SILVER DIAMINE FLUORIDE

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

Junijira Thipraksa, Panisa Michu and Pimprapa Chaijak

for participating in an oral presentation session and presenting a research entitled

ENHANCING BIO-ELECTRICITY GENERATION FROM THE PALM OIL MILL EFFLUENT IN MICROBIAL FUEL CELL
COUPLED WITH BILIRUBIN OXIDASE PRODUCING BACTERIA

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

Aphichaya Sangkaew, Tantara Treesuttacheep and Juangjun Jumpathong

for participating in an oral presentation session and presenting a research entitled

SCREENING OF PHYLLOPLANE BACTERIA FOR CONTROLLING *XANTHOMONAS ORYZAE* PV. *ORYZAE*

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

Napath Pakdeewong and Sirijit Janpon

for participating in an oral presentation session and presenting a research entitled

THE GROWTH RATE OF THERMOTOLERANT YEAST UNDER MULTI-STRESS FACTORS

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

Manassanun Kanthatsakul, Rawisara Ruenwai and Supaporn Passorn

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF NITROGEN AND CARBON SOURCES ON THE INULINASE PRODUCTION FROM STRAIN
PENICILLIUM CITRINUM IS13

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

**Thongchai Taechowisan, Thanaporn Chuen-Im
and Waya S. Phutdhawong**

for participating in an oral presentation session and presenting a research entitled

ANTIBACTERIAL AND ANTICANCER ACTIVITIES OF 3,4-DIHYDROLACTUCIN ISOLATED FROM
MICROBISPORA SP. AL22

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

**Peeraya Nimnuan, Pakjira Tongsut, Ajima Muangchuen
and Jirasit Inthorn**

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF ANTI-AGING SERUM FROM CORN EXTRACT

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

Nichikarn Diewsurin, Paepilai Panyatipsakul and Manupat Lohitnavy

for participating in an oral presentation session and presenting a research entitled

PHYSIOLOGICALLY BASED PHARMACOKINETIC / PHARMACODYNAMIC MODELING
OF KETAMINE IN HUMANS

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

**Voraratt Champattanachai, Chris Verathamjamras, Juthamard Chantaraamporn,
Thiwaree Sornprachum, Photsathorn Mutapat, Daranee Chokchaichamnankit,
Somchai Chutipongtanate, Chantragan Srisomsap and Jisnuson Svasti**

for participating in an oral presentation session and presenting a research entitled

APPLICATION OF ADVANCED MASS SPECTROMETRY-BASED PROTEOMICS TO IDENTIFY
AND QUANTIFY PLASMA PROTEINS OF PATIENTS WITH COLORECTAL CANCER

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

Natdanai Pan-in, Pranee Nangngam and Charun Maknoi

for participating in an oral presentation session and presenting a research entitled

CARBON ACCUMULATION IN ABOVE GROUND BIOMASS OF TREE IN NATURAL FOREST AT BAN ROMKLAO BOTANICAL
GARDEN PHITSANULOK UNDER THE ROYAL INITIATIVE

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

พัชรีย์ ชัดศิริ, วิลาวัณย์ ภมรสวรรณ และวนิดา ชูอักษร

for participating in an oral presentation session and presenting a research entitled

THE STUDY OF THE CARBON FOOTPRINT OF AN SCHOOL CASE STUDY OF
PHRA PARIYATTIDHAMMA SCHOOL, NAN 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

Chonlada Kajai and Sukthai Pongpathanasiri

for participating in an oral presentation session and presenting a research entitled

ASSESSING THE CARBON FOOTPRINT AND CREATING GUIDELINES TO REDUCE GREENHOUSE GAS EMISSIONS OF
HALAL FOOD PRODUCTS. CASE STUDY: SALTED GU LAO FISH PRODUCTS KULAO THONG MAE PAN TAK BAI

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

**Potsanon Khankaew, Thanamas Srichaijaroenwong
and Suchada Ukaew**

for participating in an oral presentation session and presenting a research entitled

THE VALUE-ADDED PRODUCTS AND THE ASSESSMENT OF CARBON FOOTPRINT
AND COST OF PRODUCTION FROM GINGER RESIDUE

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

Pattarawadee Wangsang and Sukthai Pongpattanasiri

for participating in an oral presentation session and presenting a research entitled

A STUDY ON WAYS TO REDUCE GREENHOUSE GAS EMISSIONS FROM THE PRODUCTION OF
HALAL FOOD PRODUCTS IN PATTANI PROVINCE WITH THE LOW EMISSION SUPPORT SCHEME (LESS)

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





Oral Presentation กลุ่มที่ 2

สาขาวิชาเคมี เคมีประยุกต์และเคมีอุตสาหกรรม



CERTIFICATE OF APPRECIATION

is awarded to

Pittaya Songchom and Karaked Tedsree

for participating in an oral presentation session and presenting a research entitled

HIGH STABILITY NANOCELLULOSE PICKERING EMULSION IN CONTROL THE RELEASE OF EUCALYPTUS OILS

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

Chitsanupong Somsriwattana, Thanachot Phophon and Sorachai Khamsan

for participating in an oral presentation session and presenting a research entitled

CHEMICAL CONSTITUENTS AND BIOLOGICAL ACTIVITIES OF ESSENTIAL OIL
FROM *MANSOA ALLIACEA* L. FLOWERS

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

Anek Khunphol, Lappamong Pattum and Sonchai Intachai

for participating in an oral presentation session and presenting a research entitled

DEVELOPING COMPOSITE ADSORBENT OF ACTIVATED CARBON AND CuAl-BASED MATERIAL
FOR REMOVING KRAJOOD DYES IN WATER

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

Sawarat Raksa and Kanyapatch Prommuak

for participating in an oral presentation session and presenting a research entitled

SAGO PALM FIBER NANOCELLULOSE AS A SUSTAINABLE ADSORBENT FOR MALACHITE GREEN
DYE REMOVAL AND ITS APPLICATION IN ENVIRONMENTAL REMEDIATION

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 Karuehas, Kemissara Sudsom, Jitrayut Jitonnorn and Wijitra Meelua

for participating in an oral presentation session and presenting a research entitled

CONFORMATIONAL ITINERARY OF MELIBIOSE DURING TRANSGLYCOSYLATION
BY α -GALACTOSIDASE

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

**Thamonwan Pattanapradit, Donlacha Chompooming,
Wijitra Meelua and Jitrayut Jitonnom**

for participating in an oral presentation session and presenting a research entitled

MAPPING THE CONFORMATIONAL ITINERARY OF GALACTOMANNAN HYDROLYSIS
IN α -GALACTOSIDASE BY CREMER-POPLE 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

Pattraporn Phuwadolpaisarn

for participating in an oral presentation session and presenting a research entitled

COMPARISON IN BETA-GLUCAN EXTRACTION FROM MIXED DEFATTED RICE BRAN AND KHAO DAWK
MALI DEFATTED RICE BRAN CULTIVARS USING TAGUCHI METHOD OF EXPERIMENTAL DESIGN

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

**Wuttichai Roschat, Sunti Phewphong, Chonlapha Hachai,
Kittisak Inthikhot, Kanthida Kiinti and Tappagorn Leelatam**

for participating in an oral presentation session and presenting a research entitled

SYNTHESIS OF THE FATTY ACID ETHYL ESTERS (FAEE) FROM KRABOK (*IRVINGIA MALAYANA*) SEED OIL
FOR USE AS THE MAIN INGREDIENT IN THE PRODUCTION OF HERBAL MASSAGE 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

**Siwakorn Thongduang, Teetawat Meekhai,
Jamjun Pechsiri and Kanokphorn Sangkharak**

for participating in an oral presentation session and presenting a research entitled

CHEMICAL PROPERTIES OF NOVEL POLYHYDROXYALKANOATE FROM *ENTEROBACTER* SP.
USING WASTE COOKING OIL AS THE SUBSTRATE

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

**Supitcha Tanyaros, Supinya Tanyaros, Kosin Teeparuksapun,
Nicha Prasongchan and Wichulada Thavaroj**

for participating in an oral presentation session and presenting a research entitled

EFFECT OF MITRAGYNINE EXTRACTED FROM KRATOM LEAVES (*MITRAGYNA SPECIOSA*)
ON INHIBITION OF *ESCHERICHIA COLI* AND *STAPHYLOCOCCUS EPIDERMIDIS*

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

Gingkarn Senatip, Pattarawadee Khunthep and Panita Kongsune

for participating in an oral presentation session and presenting a research entitled

AIR FILTER PAPER COATED WITH SILVER NANOPARTICLES SUPPORTED
ON ACTIVATED CARBON FOR ANTIBACTERIAL ACTIVITY

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

**Chiraphat Takpho, Jiraporn Panchompoo,
Aphidech Sangdee, and Prapairat Seephonkai**

for participating in an oral presentation session and presenting a research entitled

THE SEARCH FOR BIOACTIVE COMPOUNDS FROM A MUSHROOM MSUCC 032 COLLECTED
FROM NAKHON PHANOM

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

**Natchaphon Ngueanggam, Benchawan Jityuti, Suwicha Patnin,
Pornthip Boonsri, Arthit Makarasen and pinya Buranaprapuk**

for participating in an oral presentation session and presenting a research entitled

INTERMOLECULAR INTERACTIONS OF QUINOLINE DERIVATIVES TO HUMAN SERUM ALBUMIN USING
FLUORESCENCE-SPECTROSCOPY, MOLECULAR DOCKING, AND MOLECULAR DYNAMICS SIMULATIONS

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

**Patchon Panjam, Jutarat Songsuwan, Nanthaphat Jarewsak,
Weerawut Naebpetch and Panita Sumanatrakul**

for participating in an oral presentation session and presenting a research entitled

ENHANCING SKIN-LIKE FOAM WITH PLASTICIZERS IN LATEX RUBBER COMPOUND

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

Kasama Kansorn, Natalie Mitware and Sarisa Phantham

for participating in an oral presentation session and presenting a research entitled

QUICK AND EASY CHLORIDE DETERMINATION TEST KIT ANALYZED BY WEB APPLICATION
FOR GROUNDWATER SAMPLES

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

Phattharaphon Wichaidit, Kanyawat Tipsong and Chakrapong Chaiburi

for participating in an oral presentation session and presenting a research entitled

THE DEVELOPMENT OF ELECTROCATALYSTS FOR XYLITOL FUEL CELLS

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

Ratchadaporn Seedad, Pornpimol Prayongpan and Kriangsak Songsrirote

for participating in an oral presentation session and presenting a research entitled

SYNTHESIS OF SILVER NANOPARTICLES CAPPED CARBON DOTS AS FLUORESCENT PROBE
FOR CHROMIUM(III) ION DETECTION

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



Oral Presentation กลุ่มที่ 3

สาขาวิชาคณิตศาสตร์ คณิตศาสตร์ ประยุกต์ สาขาวิชาสถิติ



CERTIFICATE OF APPRECIATION

is awarded to

Natthanan Deenin and Nares Sawatraksa

for participating in an oral presentation session and presenting a research entitled

ON A PROBLEM OF PARTITIONS OF \mathbb{Z}_m WITH THE SAME REPRESENTATION FUNCTIONS

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

Ekkachai Laysirikul and Natthawarun Pinin

for participating in an oral presentation session and presenting a research entitled

THE NUMBERS OF NUMERICAL SEMIGROUPS $\{0\} \cup [\alpha, b] \cup [c, d] \cup [e, \infty)$
WITH THE SAME FROBENIUS NUMBER

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

Thanapa Phothiphon and Nares Sawatraksa

for participating in an oral presentation session and presenting a research entitled

REVERSE ORDER LAWS FOR THE (b, c) - INVERSE IN Γ -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

Phonthip Kanalak and Nares Sawatraksa

for participating in an oral presentation session and presenting a research entitled

ABSORPTION LAWS FOR THE (b, c) - INVERSE IN T-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

**Thanapon Plaiduang, Pattadon Keawpeai,
Nalinthip Nadsapat and Siripong Sirisuk**

for participating in an oral presentation session and presenting a research entitled

ON ISOMORPHISMS BETWEEN GENERALIZED QUATERNION RINGS AND
MATRIX RINGS OVER CERTAIN FINITE FIELDS

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

Supphachai Sonwai and Chakkrid Klin-eam

for participating in an oral presentation session and presenting a research entitled

$(1 + u)$ CONSTACYCLIC AND CYCLIC CODES OVER $\mathbb{F}_2[u]/\langle u^4 \rangle$

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

Attaphol Pumila and Pongpun Julta

for participating in an oral presentation session and presenting a research entitled

ON ABSORB BE-ALGEBRAS

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

**Kamonwan Chawong, Panaphan Suksawat,
Supuk Seepeakaew and Yanisa Chaia**

for participating in an oral presentation session and presenting a research entitled

UPPER BOUNDS FOR THE TOTAL DOMINATION NUMBERS OF
CARTESIAN PRODUCTS OF DIRECTED CYCLES

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

Prangthong Singkaew and Supalak Srinin

for participating in an oral presentation session and presenting a research entitled

THE k -DOMINATION NUMBER AND CONNECTED k -DOMINATION NUMBER IN WHEEL RELATED GRAPHS

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

Usanee Janthasuwan, Suparat Niwitpong and Sa-Aat Niwitpong

for participating in an oral presentation session and presenting a research entitled

STATISTICAL ESTIMATION FOR THE MEDIAN OF THE DELTA-LOGNORMAL DISTRIBUTION

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

Natchaya Ratasukharon, Sa-Aat Niwitpong and Suparat Niwitpong

for participating in an oral presentation session and presenting a research entitled

CONFIDENCE INTERVALS FOR THE MEAN OF BIRNBAUM-SAUNDERS DISTRIBUTION

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

Wararit Panichkitkosolkul

for participating in an oral presentation session and presenting a research entitled

NON-PARAMETRIC BOOTSTRAP CONFIDENCE INTERVALS FOR THE POPULATION MEAN OF
THE ZERO-TRUNCATED POISSON-ARADHANA DISTRIBUTION

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

Tippaporn Wangkeeree and Thipwan Kate-in

for participating in an oral presentation session and presenting a research entitled

THE SARIMA-ANN MODELS STUDY FOR FORECASTING THE NUMBER OF
DENGUE PATIENTS IN PHITSANULOK 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

Pongsakorn Molsin and Orawich Kumphon

for participating in an oral presentation session and presenting a research entitled

FLOOD FORECASTING MODEL AT M.5 RASRI SALAI STATION

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

Kodchapon Deenin and Kanyanat Buabang

for participating in an oral presentation session and presenting a research entitled

THE EXPECTED LOTTERY PRIZE AND THE ACCURACY OF TWO DIGITS LOTTERY NUMBER

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

Punnaphat Siangchin, Suphanat Phuttharak and Praphaporn Sanganusat

for participating in an oral presentation session and presenting a research entitled

ESTIMATING THE EXPECTED RETURN FROM INVESTING IN STOCKS

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

Mallika Chanaphai and Thipwan Kate-intra

for participating in an oral presentation session and presenting a research entitled

THE PERFORMANCE COMPARISON OF CLASSIFICATION BY STATE OF BUSINESS
ABOUT CONSTRUCTION AND REAL ESTATE 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

Jeerawan Patcharaprakiti, Rattikan Jakkawan and Nopporn Patcharaprakiti

for participating in an oral presentation session and presenting a research entitled

OPTIMIZATION OF BATIK PRODUCTION USING THE QUICK SIMPLEX 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

Chiraphon Aphirakmongkhon and Jeerawan Patcharaprakiti

for participating in an oral presentation session and presenting a research entitled

COMPARISON OF ALGORITHM PERFORMANCE FOR A FORECASTING INSURANCE PREMIUM PAYMENT
SUSPENSION DURING THE CONTRACT OF THE INSURED BY USING THE MACHINE LEARNING
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

**Chiraphon Aphirakmongkhon, Wanlaya Keawcha,
Grienggrai Rajchakit and Jeerawan Patcharaprakiti**

for participating in an oral presentation session and presenting a research entitled

A CLASSIFICATION OF BLACK MOLD IMAGE OF LONGAN LEAVES WITH DEEP LEARNING TECHNIQUES
BASED ON CONVOLUTION NEURAL NETWORK

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

Suwicha Dungfull, Tanakit Thianwan and Chonjaroen Chairatsiripong

for participating in an oral presentation session and presenting a research entitled

MODIFIED JUNGCK S-ITERATION TO GENERATE POLYNOMIOGRAPHS APPLICABLE
IN NONLINEAR COMPLEX FUNCTIONS

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

Chanita Ruksakul and Sineenart Srimongkol

for participating in an oral presentation session and presenting a research entitled

A MATHEMATICAL MODEL OF HAND, FOOT, AND MOUTH DISEASE WITH
THE INVESTIGATION OF THE LOCKDOWN EFFECT

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

Buddharak Sodtana, Nasha Narapinit and Chairat Modnak

for participating in an oral presentation session and presenting a research entitled

A MATHEMATICAL MODEL OF COVID-19 WITH CONTROL STRATEGIES AND ITS DYNAMICS

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

Pannathon Kreabkhontho

for participating in an oral presentation session and presenting a research entitled

STUDY OF THE 5th WAVE OF COVID-19 OUTBREAK IN THAILAND USING MATHEMATICAL MODEL

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

**Sippakorn Kuntan, Akarawin Rattanawong,
Konvika Kongkul and Preuttiporn Supaphon**

for participating in an oral presentation session and presenting a research entitled

MATHEMATICAL MODELS TO PREDICT THE INHIBITORY EFFECT OF *STAPHYLOCOCCUS AUREUS*
BY CLOVE EXTRACT

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



Oral Presentation กลุ่มที่ 4

สาขาวิชาวิทยาศาสตร์ศึกษา และคณิตศาสตร์ศึกษา



CERTIFICATE OF APPRECIATION

is awarded to

Thanajirawat Srisuthunyavong and Nutjira Busadee

for participating in an oral presentation session and presenting a research entitled

THE ORGANIZATION OF LEARNING ACTIVITIES ON THE FACTORIZATION OF
ONE VARIABLE TWO-DEGREE POLYNOMIAL USING GAMES BASE LEARNING TO
PROMOTE ALGEBRAIC THINKING OF GRADES 8 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

Phattraporn Thongkesorn and Chanyah Dahsah

for participating in an oral presentation session and presenting a research entitled

EFFECTS OF EDUCATION PROGRAMS IN SCIENCE MUSEUM USING INQUIRY AND
STORYLINE APPROACH ON SCIENCE LEARNING MOTIVATION

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

Thanarat Sabsom, Ratchanon Intakhun and Jatutip Kaya

for participating in an oral presentation session and presenting a research entitled

LEARNING MANAGEMENT BY USING MODEL-BASED INQUIRY AND SCIENTIFIC EXPERIMENTS
FOR DEVELOPING MENTAL MODEL FOR 7th GRADE 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

**Amphorn Aryiku, Phatcharapa Khongman, and Phitsanuphakhin
Chaimongkhon**

for participating in an oral presentation session and presenting a research entitled

MODEL-BASED LEARNING ACTIVITIES COMBINED WITH GAME-BASED TEACHING METHODS
PROMOTE CRITICAL THINKING SKILLS IN THE EARTH AND NATURAL RESOURCES
LEARNING 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

**Taweedit Panyayong, Methasit Jaengklang, Thanawat Kheedkhin,
Ratchaneewan Sangpanya and Phitchaon Fongda**

for participating in an oral presentation session and presenting a research entitled

MATHEMATICS LEARNING MANAGEMENT INNOVATION USING INFOGRAPHICS AND WORD WALLS
FOR SCHOOLS WITH TEACHER SHORTAGES

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

Thanyarat Suwannatrai and Theerapong Sangpradit

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF 8th GRADE STUDENTS' SCIENTIFIC ARGUMENTATION SKILLS THROUGH ARGUMENT-DRIVEN INQUIRY WITH HIGHER ORDER QUESTIONS IN ENERGY RESOURCES TOPIC

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

Jaruwat Nakwimol

for participating in an oral presentation session and presenting a research entitled

A STUDY ON THE EFFECT OF LEARNING MANAGEMENT OF INTRODUCTION TO DATA SCIENCE COURSE
WITH JARU MODEL FOR MATTHAYOMSUKSA 4 STUDENTS OF SATTHASAMUT SCHOOL

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

Jirayute Ruennakarn and Chaninan Pruekpramool

for participating in an oral presentation session and presenting a research entitled

INVESTIGATING THAI EIGHTH GRADE STUDENTS' SCIENTIFIC PROBLEM - SOLVING ABILITY
ON GLOBAL AND NATIONAL RESOURCE TOPICS

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

Nathakorn Sutthiwan, Monsit Tanasittikosol and Mayuree Hansupanusorn

for participating in an oral presentation session and presenting a research entitled

STUDYING A MODEL OF HUMAN EYES BY ADJUSTABLE LIQUID LENS

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

Chanwit Kamcharean and Kuanhathai Kuadnok

for participating in an oral presentation session and presenting a research entitled

THE USE OF PhET INTERACTIVE SIMULATION IN FUNDAMENTAL PHYSICS LABORATORY:
ELECTROMOTIVE FORCE AND INTERNAL RESISTANCE

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

Adisorn Buranawong and Nirun Witit-anun

for participating in an oral presentation session and presenting a research entitled

SIMPLE APPARATUS FOR MEASURING SPEED OF SOUND IN AIR AT VARIOUS TEMPERATURES
BY FREQUENCY DOMAIN RESONANCE TUBE

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

**Natdanai Nirutmeteeikul, Thodsaporn Thongyoo, Kannika Chanthaphim,
Kanchana Thongprachum and Suppamai Promkaew**

for participating in an oral presentation session and presenting a research entitled

CURRENT TRENDS TOWARD ENHANCING SCIENTIFIC LITERACY

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

Pranee U-siri, Kamonthip Inprom and Phatcharaporn Wongchai

for participating in an oral presentation session and presenting a research entitled

RELATIONSHIP BETWEEN BEHAVIOR AND FOOD CONSUMPTION KNOWLEDGE ACCORDING TO
NUTRITION PRINCIPLES OF EXERCISE SCIENCE AND SPORTS STUDENTS 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

Suriyon Luangtrongkit and K.Ravivuth Rangubhet

for participating in an oral presentation session and presenting a research entitled

OFFENSIVE PATTERNS ANALYSIS OF THAI NATION TEAM IN VOLLEYBALL WOMEN'S NATIONS LEAGUE
2022

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



Oral Presentation กลุ่มที่ 5

สาขาวิชาคอมพิวเตอร์ เทคโนโลยีสารสนเทศ วิทยาการข้อมูล



CERTIFICATE OF APPRECIATION

is awarded to

**Apichai Suesatsakulchai, Wanchana Choobanjong, and
Namida Suesatsakulchai**

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF DASHBOARD FOR THE SATISFACTION ASSESSMENT

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

Piyamas Kaewinta, Kaewarin Jandum and Sittidet Vachirasricirikul

for participating in an oral presentation session and presenting a research entitled

A DEVELOPMENT OF DVe-SAR SYSTEM TO REPORT SELF ASSESSMENT RESULTS
FOR DEPARTMENT LEVEL AT CHIANG RAI VOCATIONAL COLLEGE

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

Nguyen Hoang Anh and Duangduen Asavasuthirakul

for participating in an oral presentation session and presenting a research entitled

A TEAM-MEMBER RECOMMENDATION SYSTEM TO ASSIGNED TASKS
USING ANALYTIC HIERARCHY PROCESS

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

Chonnakarn Wongnim, Ratiwat Phitpatsart and Nithirat Sisarat

for participating in an oral presentation session and presenting a research entitled

INFORMATION SYSTEM FOR COVID-19 INFECTED STUDENTS IN NARESUAN UNIVERSITY
SECONDARY DEMONSTRATION SCHOOL

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

Sivapriya Prasertsung, Kaewarin Jandum and Sitthidet Vachirasricirikul

for participating in an oral presentation session and presenting a research entitled

INFORMATION SYSTEM DEVELOPMENT FOR MANAGEMENT OF
SMALL DISTILLED LIQUOR FACTORIES OF PHAYAO AREA EXCISE OFFICE

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

Chairoj Lorpaiboon and Wirat Jareevongpiboon

for participating in an oral presentation session and presenting a research entitled

HYBRID-DIMENSION ASSOCIATION RULE AND CUSTOMER CLUSTERING:
CASE STUDY IN CONSTRUCTION BUSINESS

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

Siriwan Ruenrom and Niti lamchuen

for participating in an oral presentation session and presenting a research entitled

MULTI-SCENARIO SATELLITE DROUGHT ASSESSMENT USING MOISTURE STRESS INDEX (MSI) IN
MAE SUK WATERSHED, MAE CHAI DISTRICT, 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

**Phanu Uthaisri, Jakkrit Suwanmongkol,
Chanon Porjai and Nuttanun Phromwan**

for participating in an oral presentation session and presenting a research entitled

A COMPARISON OF THE ACCURACY OF AERIAL IMAGERY MAPS OBTAINED
FROM SMALL UNMANNED AERIAL VEHICLES AT VARIOUS ALTITUDES

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

**Napat Menichai, Kanit Meaungsong, Grit Tongkhundam
and Naphat Keawpibal**

for participating in an oral presentation session and presenting a research entitled

DESIGN OF A CONTROLLED WHEELCHAIR WITH SMART WEARABLE DEVICE
USING GYROSCOPE SENSOR FOR ASSISTING PEOPLE WITH DISABILITIES

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

**Pannathat Kantangkul, Teerapat Vatpitak,
Grit Tongkhundam and Naphat Keawpibal**

for participating in an oral presentation session and presenting a research entitled

MEDICAL APPOINTMENT SCHEDULING SOFTWARE USING Q CARE APPLICATION FOR CLINICS

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

**Pongsarit Katekeaw, Thitirat Meesawat,
Noppamas Pukkhem and Naphat Keawpiba**

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF MOBILE APPLICATION FOR TRACKING MEDICATIONS OF ELDERLY PATIENTS

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

Siriwimon Mo-In, Patcharee Maneerat and Pisit Nakjai

for participating in an oral presentation session and presenting a research entitled

AUTOMATIC FLOWER DETECTION FOR SOME ORCHID IDENTIFICATION
USING CONVOLUTION NEURAL NETWORKS

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

Praifa Kosasirisin, Anamai Na-udom and Jaratsri Rungrattanaubol

for participating in an oral presentation session and presenting a research entitled

COMPARISON OF CLASSIFICATION MODELS PERFORMANCE WITH FINANCIAL DATA

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

Charewal Klomklom and Sutasinee Jitanan

for participating in an oral presentation session and presenting a research entitled

FACE EMOTION CLASSIFICATION OF HUMAN USING CONVOLUTIONAL NEURAL
NETWORK TECHNIQUE OF DEEP LEARNING

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

Jeerabhat Supapinit and Aukrit natkaeo

for participating in an oral presentation session and presenting a research entitled

AUTOMATIC ATTENDANCE SYSTEM WITH FACIAL RECOGNITION

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



Oral Presentation กลุ่มที่ 6

สาขาวิชาฟิสิกส์ พลังงาน ดาราศาสตร์ และวัสดุศาสตร์



CERTIFICATE OF APPRECIATION

is awarded to

Nanthapat Chanapai, Phitsanu Poolcharuansi, and Nopphon Saowiang

for participating in an oral presentation session and presenting a research entitled

EFFECT OF SOURCE-TO-SUBSTRATE DISTANCE ON RADIAL DISTRIBUTION OF TA-C FILMS IN
FILTERED CATHODIC ARC DISCHARGE

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

Tosapol Maluangnont

for participating in an oral presentation session and presenting a research entitled

TEMPERATURE DEPENDENCE OF AC ELECTRICAL PROPERTIES
IN GRAPHITIC CARBON NITRIDE COMPACT

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

Pimchanok Pitakassawakul and Pravej Serichetaphongse

for participating in an oral presentation session and presenting a research entitled

THE EFFECT OF DIFFERENT FUNCTIONAL MONOMER OF ZIRCONIA PRIMER AND UNIVERSAL ADHESIVE
ON SHEAR BOND STRENGTH OF ZIRCONIA TO COMPOSITE RESIN USING RESIN CEMENT

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

**Nisamon Thongham, Suwit Pethaulyung, Pornpana Buaphet,
Narit Klompong and Sutthisa Konruang**

for participating in an oral presentation session and presenting a research entitled

EFFECT OF POTASSIUM OLEATE ON X-RAY ATTENUATION PROPERTIES OF
NATURAL RUBBER/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

Nattawut Ariyajinno

for participating in an oral presentation session and presenting a research entitled

STUDY OF KINUTA GLAEZ IS RECYCLING SILICA FROM GLASS BEER BOTTLE

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

Saisunee Jitkla, Kanok Boonkerd and Sirilux Poompradub

for participating in an oral presentation session and presenting a research entitled

INFLUENCE OF FORMIC ACID CONCENTRATION ON PROPERTIES OF RUBBER RIBBED SMOKED SHEET

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

Dachaphon Kealkaew and Atthakorn Thongtha

for participating in an oral presentation session and presenting a research entitled

INTEGRATING PHASE CHANGE MATERIALS TO THE SHERA WOOD WALL
FOR IMPROVING THE EFFICIENCY OF HEAT TRANSMISSION REDUCTION

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

Nattapon Kongwattana, Kaokanya Sudprasert and Chakrit Tachaapaikoon

for participating in an oral presentation session and presenting a research entitled

STUDY OF PRODUCTION OF 5-HYDROXYMETHYLFURFURAL FROM CORN COBS
BY DEHYDRATION REACTION USING FORMIC ACID AND SODIUM HYDROXIDE AS REAGENTS

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

**Rapatpon Thakonprajak, Wachira nukaew,
Anupoom tatiwan and Aukrit natkaeo**

for participating in an oral presentation session and presenting a research entitled

INVESTIGATION OF FIRE RESISTANCE AND PHYSICAL PROPERTIES OF
REFRACTORY BRICK USING OIL PALM BUNCH

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

Sasiwimon Kaewthongsorn, Sutthisa Konruang and Pornpana Buaphet

for participating in an oral presentation session and presenting a research entitled

PREPARATION OF CELLULOSE SEPARATOR FOR LITHIUM-ION BATTERY
FROM RED WATER LILY AND WATER HYACINTH FIBERS

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, Tanyawan Rodpayung , Thawatchai Tepnual ,
Pornpana Buaphet and Narit Klompong**

for participating in an oral presentation session and presenting a research entitled

STUDY OF PHYSICAL PROPERTIES AND GAMMA-RAY SHIELDING PROPERTIES OF
NATURAL RUBBER /CALCIUM CARBONATE 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

**Piyanan Boonphayak, Thanakon Hleekasem,
Theeraphat Dachsombat and Sirikarn Khansumled**

for participating in an oral presentation session and presenting a research entitled

STUDY OF BIODEGRADABLE POLY(LACTIC ACID)/THERMOPLASTIC STARCH/BIO-SILICA COMPOSITES

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

Nirun Witit-anun and Adisorn Buranawong

for participating in an oral presentation session and presenting a research entitled

INFLUENCE OF ALUMINIUM CONTENTS ON THE STRUCTURE AND HARDNESS OF
CHROMIUM ALUMINIUM NITRIDE THIN FILMS

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

**Viruntachar Kruefu, Kata Jaruwongrungsee,
Narong Chanlek and Anurat Wisitsoraat**

for participating in an oral presentation session and presenting a research entitled

EFFICIENT DETECTION OF SO₂ GAS USING rGO/SnO₂ NANOCOMPOSITES-BASED SENSORS

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

**Chayapon Iemsonthi, Seksit Lorwilai, Panuwit Sankaokam
Orapin Riyaprao and Cherdsak Saelee**

for participating in an oral presentation session and presenting a research entitled

THE OFF-CARDINAL ALIGNMENT OF CHIANG MAI'S CITY PLAN IN RELATION TO THE ORION'S BELT

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

Araf Laerosa, Siriporn Pradit, Montri Luengchavanon and Prakrit Noppradit

for participating in an oral presentation session and presenting a research entitled

OPTICALLY STIMULATED LUMINESCENCE DATING REVEALED THE LATE QUATERNARY
COASTAL SEDIMENTS IN SONGKHLA COAST, 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

Pongsak Khokhuntod, Ratchanoo Katman and Attapon Amthong

for participating in an oral presentation session and presenting a research entitled

THE EFFECTS OF INITIAL NUMBERS OF DICE ON DECAY CONSTANT

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

Paradorn Pakdeevanich, Sittisak Jaiyindee and Kanok Hournkumnuard

for participating in an oral presentation session and presenting a research entitled

APPLYING OPTICAL TECHNIQUE TO DETERMINE VALUE OF YOUNG'S MODULUS

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

Phicharn Phommajak and Kridsanaphong Limtragool

for participating in an oral presentation session and presenting a research entitled

THEORETICAL STUDY OF ELECTRICAL PROPERTIES OF TWISTED BILAYER GRAPHENE

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

Anucha Kaewpoonsuk

for participating in an oral presentation session and presenting a research entitled

MOIRÉ FRINGES ANALYSIS OF PARALLEL GRATINGS BY ELIMINATING
THE EFFECT OF HIGH FREQUENCY COMPONENTS

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

**Kanticha Kankaew, Sataporn Tippayaruck, Jiraphat Phusamlee,
Natha Onintr, Nuttawut Kantham, Natthaphat Thongyoo,
Pornrad Srisawad and Phacharatouch Chaimongkon**

for participating in an oral presentation session and presenting a research entitled

ANISOTROPIC FLOW IN Au + Au COLLISION AT 1 A GeV
BY USING QUANTUM MOLECULAR DYNAMICS MODEL

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

**Wannapa Khamjeen, Panadda Sittiketkorn, Lalana Nunthagornpituk,
Sutaphat Phansuwan, Nutkamol Suwannasri, Oraorn Kaewchot,
Kristiya Tomuang, Natthaphat Thongyoo, Yaphakhakorn Chaimongkon,
Pornrad Srisawad and Phacharatouch Chaimongkon**

for participating in an oral presentation session and presenting a research entitled

COLLECTIVE EXPANSION OF K^+ MESONS IN HEAVY-ION COLLISIONS ON THE EFFECT OF
IN-MEDIUM KAON POTENTIAL AND THE NUCLEAR EQUATION OF STATE

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

Punyapat Inklab, Pichapak Tongsut and Morakot Sankul

for participating in an oral presentation session and presenting a research entitled

MOBILE PHOTOVOLTAIC POWER 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

Kanjarat Piamsuwongthong and Priyakorn Rachaprommin

for participating in an oral presentation session and presenting a research entitled

TRASH SEPARATOR

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

Patharacha Kongchana and Panupong Jaiban

for participating in an oral presentation session and presenting a research entitled

THE BIOFILM-BASED TRIBOELECTRIC GENERATOR FROM DURIAN PEEL

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

Prangwilai Phuttami and Panupong Jaiban

for participating in an oral presentation session and presenting a research entitled

TRIBOELECTRIC GENERATOR FROM THE NATURAL RUBBER

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

Nattapon Kongtaworn and Panupong Jaiban

for participating in an oral presentation session and presenting a research entitled

ELECTRIC ENERGY HARVESTING FROM MECHANICAL FORCE BY CASSAVA BIOPLASTIC FILMS

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

Passara Suwanasing, Kanoktip Boonkerd and Sirilux Poompradub

for participating in an oral presentation session and presenting a research entitled

PROCESS OPTIMIZATION OF RECLAIMED RUBBER PREPARATION FROM TIRE WASTE

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

Kanjarat Piamsuwongthong and Priyakorn Rachaprommin

for participating in an oral presentation session and presenting a research entitled

HEART RATE AND BLOOD OXYGEN SATURATION MONITOR BASED ON IoT

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

Pitichod Jitkaew, Waranthon Wanichnam and Pitak Pooljareansin

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF pH AND HUMIDITY MEASUREMENT AND CONTROL SYSTEMS IN HYDROPONIC PLANTS GREENHOUSES WITH IoT TECHNOLOGY BY BLYNK APPLICATION ON A SMARTPHONE

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

Chayapat Wiangnaksansuk, Tipwan Suppasat and Niyom Hongsith

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF A SENSOR SYSTEM FOR MEASURING SOUND FREQUENCY IN BEEHIVES TO ANALYZE THE BEHAVIOR OF BEES AFTER BEING IMPACTED BY EXTERNAL NOISE DISTURBANCE

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

**Nattapong Apirattanon, Sudarat Tokampang,
Noppadon Sisuk and Kreangsak Promphak**

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF AN APPLICATION TO MEASURE ARTERIAL OXYGEN SATURATION AND
MONITOR FALLS IN THE ELDERLY USING ML AND IoT

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

**Sudarat Tokampang, Nattapong Apirattanon,
Noppadon Sisuk and Kreangsak Promphak**

for participating in an oral presentation session and presenting a research entitled

MEASUREMENT AND CONTROL SYSTEM FOR WATER AND NUTRIENT SUPPLY

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

**Noppadon Sisuk, Pattanasak Sahavisit, Surat Buran,
Piyaphon Prakhongchai and Kreangsak Promphak**

for participating in an oral presentation session and presenting a research entitled

RECOGNITION OF SQUAT STRENGTH EXERCISES BASED ON MACHINE LEARNING 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

**Noppadon Sisuk, Tada Onkhong, Anucha Kaewpoonsuk,
Pramote Wardkien and Pott Pongpaopattanakul**

for participating in an oral presentation session and presenting a research entitled

WEARABLE ECG AND HEART RATE RECORDER FOR SMART HEALTHCARE SYSTEMS

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



Oral Presentation กลุ่มที่ 7

สาขาวิชาวิทยาศาสตร์ นวัตกรรมเชิงพาณิชย์



CERTIFICATE OF APPRECIATION

is awarded to

Thanpisit Peekaw, Nophakon Kantakad and Sarit Promthep

for participating in an oral presentation session and presenting a research entitled

AN AUTOMATED GUIDED VEHICLE ROBOT FOR TRANSPORT IN CONFINED PLACE

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

Waritsara Jongsomboonpoka and Jinjuta Tamruang-it

for participating in an oral presentation session and presenting a research entitled

LIFTING POSTURE MONITORING APPLICATION
FOR PREVENTING ERGONOMICS RISK FACTORS

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

**Natthaphong Thipphaha, Phongsakon Wongdoihwan
and Wuttisak Karnjanapa**

for participating in an oral presentation session and presenting a research entitled

SMART LOCK SYSTEM BY IOT

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

Wee Warasincahi and Boonsong Henngam

for participating in an oral presentation session and presenting a research entitled

PLASTIC BOTTLE RECYCLING MACHINE

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

Chunkamol Panyayong and Nattakan Sricharoen

for participating in an oral presentation session and presenting a research entitled

DEVELOPMENT OF TAMARIND SAUCE AND SPICY SAUCE FOR READY-TO-EAT
FRIED CHICKEN WITH CONSUMPTION CONVENIENCE

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



Oral Presentation กลุ่มที่ 8

Routine to Research (R2R)



CERTIFICATE OF APPRECIATION

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DEVELOPMENT OF INFORMATION SYSTEM FOR MANAGEMENT RESEARCH PROJECT FUND
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CERTIFICATE OF APPRECIATION

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CERTIFICATE OF APPRECIATION

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A STUDY OF MOTIVATION TO STUDY AT THE FACULTY OF SCIENCE,
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Associate Prof. Dr. Chayan Boonyarak
Dean of School of Science, University of Phayao