PROGRAM BOOK

ICMP | INTERNATIONAL CONFERENCE ON MEDICINAL PLANTS

THE 1st INTERNATIONAL CONFERENCE ON MEDICINAL PLANTS 2022

TECHNICAL PROGRAM

Friday, 21st October 2022

Time (GMT+7)	Event
07.30-08.00	Participant Registration **1. Opening Ceremony** **2. Keynote Speech:** on behalf of Ministry of Health, Indonesia Dr. Dra. apt. Agusdini Banun Saptaningsih, MARS Director of Pharmaceutical Production and Distribution Directorate General of Pharmaceutical and Medical Devices
09.10-11.00	**Plenary Session 1:** 1. Prof. Mikio Nishizawa, M.D., Ph.D. (College of Life Sciences, Ritsumeikan University, Japan) "Traditional Japanese medicine (Kampo drugs)" 2. Prof. Dr. Ir. Yuli Widiyastuti, M.P. (National Research and Innovation Agency, Indonesia) "Botany, phytochemistry, and pharmacology of mahkota dewa (*Phaleria macrocarpa*): an endemic medicinal plant from Papua" Moderator: Prof. Dr. Irmanida Batubara, M.Si. (IPB University, Indonesia)
11.00-13.00	Break & Poster Presentation 1
13.00-14.50	**Plenary Session 2:** 1. Prof. Dr. Antje Labes (Flensburg University of Applied Sciences, Germany) "Drugs from the sea? Marine natural products with special focus to marine photosynthetic organisms" 2. Dr. Khalid Hamid Musa (Qassim University, Kingdom of Saudi Arabia) "Antioxidant of *Phoenix dactylifera*" Moderator: Assoc. Prof. apt. Ari Satia Nugraha, Ph.D. (University of Jember, Indonesia)
14.50-15.00	Break
15.00-17.00	**Invited Speech & Parallel Oral Presentation 1**

Saturday, 22nd October 2022

Time (GMT+7)	Event
07.45-08.10	Participant Registration
08.10-10.00	**Plenary Session 3:** 1. Dr. Phurpa Wangchuk (James Cook University, Australia) "Bioprospecting antioxidant plants for combating metabolic diseases" 2. Dr. Faizul Helmi Addnan (Universiti of Sains Islam Malaysia, Malaysia) "Medicinal plants & their potential roles on diabetes" Moderator: Dr. apt. Agung Eru Wibowo, M.Si. (National Research and Innovation Agency, Indonesia)
10.00-12.00	**Invited Speech & Parallel Oral Presentation 2**
12.00-13.00	Break & Poster Presentation 2
13.00-15.00	**Invited Speech & Parallel Oral Presentation 3**
15.00-15.10	Break
15.10-17.00	**Plenary Session 4:** 1. Sri Astutik M.Sc. (PhD candidate Technische Universität Dresden, Germany) "Re(conciliation) of medicinal plants production systems and forest conservation towards rural livelihood improvement in Java, Indonesia: options or challenges?" 2. Dr. apt. Moch. Amrun Hidayat, M.Farm. (Faculty of Pharmacy University of Jember, Indonesia) "Application of paper based-sensor on food, beverage, and medicinal plant extract determination" Moderator: apt. Afifah Machlaurin., S.Farm., M. Sc. (University of Jember, Indonesia)
17.00-17.15	**Closing ceremony** Best Oral & Poster Presenter

Invited Speech & Parallel Oral Presentation 1

Friday, 21st October 2022, 15.00-17.00 (GMT+7)
Class name: Marsilea
Zoom link https://unej.id/Marsilea

No	Participant	Abstract Code	Presentation Title
1	Gea Abigail U. Ecoy, R.Ph., M.Sc	**Invited Speaker**	Exploration of marine drugs for metastatis suppression
2	Noveri Rahmawati, Nor Hadiani Ismail, Fatma Sri Wahyuni, Dachriyanus*	**OP-05**	Cytotoxic effects of *Uncaria nervosa* leaves extract and fraction on breast cancer cells MCF-7
3	Anuar Sani*, Wan Omar Abdullah	**OP-11**	Treatment of psoriasis using sweet potato (*Ipomoea batatas*) Leaf extracts on mouse model
4	Irene Puspa Dewi, Fatma Sri Wahyuni, Yufri Aldi, Dira Hefni, Dachriyanus*	**OP-16**	Cytotoxicity of several indonesian medicinal plants extracts on Raw 264.7 macrophages
5	Rofiatun Solekha*, Putri Ayu Ika Setiyowati, Ni Nyoman Tri Puspaningsih, Hery Purnobasuki	**OP-17**	The effectiveness of flavonoids in citronella grass extract (*Cymbopogon nardus* L.) as angiotengsin converting enzyme (ACE) inhibitors in reducing hypertension
6	Olivia Zora, Felita Rajifa Pemela	**OP-22**	Provision of Sinom drinks for the muscular strength of PORDES FC KALISAT football athletes
7	Endah Puspitasari*, Nuri, Siti Muslichah, Bawon Triatmoko, Dewi Dianasari	**OP-27**	Revealing anti-inflammatory mechanism of *Tithonia diversifolia* leaves extract and fractions as cancer chemopreventive agent: an *in vitro* study
8	Nuralifah, Fadhliyah Malik, Parawansah, Nur Ramadhani A.Sida, dan Waode Marianti	**OP-28**	Acute toxicity test using BSLT (brine shrimp lethality test) method and antioxidant activity using FRAP (ferric reducing antioxidant power) method from teak leaves ethanolic extracts (*Tectona grandis* L.)
9	Teguh Hafiz Ambar	**OP-46**	Synthesis of [^{131}i]i-apigenin labeled compound: applications for pharmacokinetic studies

Invited Speech & Parallel Oral Presentation 1

Friday, 21st October 2022, 15.00-17.00 (GMT+7)
Class name: Garcinia
Zoom link https://unej.id/Garcinia

No	Participant	Abstract Code	Presentation Title
1	Assoc. Prof. apt. Ari Satia Nugraha, Ph.D.	**Invited Spekaer**	National Park: biodiversity and bioprospecting
2	Richa Kusuma Wati	**OP-01**	Medicinal orchids and their conservation in Bogor Botanic Gardens
3	Imam Taufik, Kresyan Penthury , Hilkatul Ilmi , Irfan Rayi Pamungkas, Adita Ayu Permanasari , Lidya Tumewu, Achmad Fuad Hafid Mochammad Yuwono, Aty Widyawaruyanti *	**OP-03**	Inhibitory activity of ethanol extract of *Artocarpus altilis* (Parkinson) Fosberg leaves from Bali Island, Indonesia against *Plasmodium falciparum* and *Plasmodium berghei*
4	Octafiani Vira, Nurul Jadid, Iska Desmawati	**OP-13**	Phytocemical profile of epiphytic plant *Pothos scandens* Linn from different hosts in the Sumber Pawon Forest, Kediri
5	Lusi Kristiana	**OP-18**	Medicinal plants used by traditional healers as main ingredients for herbs to overcome diarrhea-related diseases
6	Ni Luh Putu Indah Suryani, Ni Putu Ariantari*	**OP-30**	Bioprospecting fungal natural products in the search for new antimycobacterial agents
7	Nuruli Fifi	**OP-50**	Isolation ligninolytic bacteria from rainbow forest Ijen Geopark, Bondowoso
8	Fuad Bahrul	**OP-63**	Antimicrobial activities and GC-MS analysis of *Bulbophyllum odoratum* (Blume) Lindl from Mount Gumitir Jember, Indonesia
9	Noviita Kartika Indah	**OP-70**	The plant diversity for the body treatment of candidate bride of Ethnic Madura, East Java

Invited Speech & Parallel Oral Presentation 1

Friday, 21st October 2022, 15.00-17.00 (GMT+7)
Class name: Curcuma
Zoom link https://unej.id/Curcuma

No	Participant	Abstract Code	Presentation Title
1	Dr. apt. Dian Agung Pangaribowo, S. Farm., M.Farm.	**Invited Speaker**	Cinnamic acid hybrids and their biological activity
2	Amalia Khairunnisa*, Samsul Hadi, Sefa Nur Khalifah	**OP-26**	Antioxidant activity of ethanol extract of The ceguk plant (*Combretum indicum* L.) rounded type leaves in South Kalimantan
3	Samsul Hadi	**OP-32**	DPPH radical scavenging activity at various levels of the stem kaik-kaik (*Uruparia multiflora*) fraction
4	Hanifan Mutiara Pinangkaan	**OP-40**	Potential plant for antioxidant sources: kenikir (*C. caudatus* K.), beluntas (*Pluchea indica* L.), and purple corn (*Zea mays* L.)
5	Himalaya	**OP-43**	Effect of drying method variation on avocado (*Persea americana* Mill.) and mango leaves (*Mangifera indica* L.) on the strength of antioxidant activity in the combination of 96% ethanol extract of avocado and mango leaves
6	Binar Asrining	**OP-48**	Antioxidant and antimicrobial activities of subfractions derived from ethyl acetate fraction of jeruju (*Acanthus ilicifolius*) leaves
7	Boy Arie	**OP-55**	Ultrasound-assisted extraction of fucoxanthin from *Sargassum* sp: effect of extraction variables to antioxidant activity
8	Fadlilatulrahmah	**OP-56**	Test of antioxidant activity of the n-butanol fraction of sungkai leaves (*P. anescens* jJack.) using the DPPH method
9	Erna Tri Wulandari	**OP-61**	Effect of different extraction methods on the antioxidant activity of sidaguri leaf extract

Invited Speech & Parallel Oral Presentation 2

Saturday, 22nd October 2022, 10.00-12.00 (GMT+7)
Class Name: Centella
Zoom link https://unej.id/Centella

No	Participant	Abstract Code	Presentation Title
1	Dr. apt. Burhan Ma'arif, M.Farm.	**Invited Speaker**	Effects of *Marsilea crenata* C. Presl. in inhibiting the development of estrogen deficiency-induced degenerative diseases
2	Yuswan A1, Yuliani T*, Tjandrawati2, Hilmi IL, Sholih MG	**OP-10**	Simple methods for bone density measurement in ovariectomy-induced osteoporosis rat model
3	Angga Dwi Kusuma, Maria Caecilia N. Setiawati H	**OP-19**	The effect of ethanol extract of butterfly pea flower (*Clitoria ternatea* L) on reducing blood glucose levels in Wistar strain mice with fructose induction
4	Soraya riyanti	**OP-33**	Evaluation of alpha-glucosidase inhibitory activity of forest honje (*Etlingera hemisphaerica* (Blume) R.M. Sm.)
5	Mutia hardiyuna	**OP-68**	*Curcuma xanthorrhiza* aqueous extract enhances pro-inflammatory cytokines (TNF-a and IL-6) gene expression in RAW 264.7 macrophage cells
6	Maris kurniawati	**OP-45**	Characterization of the acidophilic-alkaliphilic 1,3-β-glucanase enzyme from the metagenomic library of the digestive gland of *Achatina fulica*
7	Yelfi	**OP-49**	The chemical compounds and antidiabetic activity of vetiver essential oil (*Vetiveria zizainoides* L.) in Wistar rats
8	Zuraida	**OP-52**	Role of flavonoid fraction of pulai (*Alstonia scholaris* R.Br) stem bark on LDL oxidation at *Macaca fascicularis* macrophage cells
9	Evi Umayah Ulfa, Mei Syafriadi, Ratih Kusuma Wardhani, Iski Weni Pebriarti	**OP-53**	Evaluation of anticancer activity of *Thyponium flagelliforme* extract on fibrosarcoma mice

Invited Speech & Parallel Oral Presentation 2

Saturday, 22nd October 2022, 10.00-12.00 (GMT+7)
Class Name: Hibiscus
Zoom link https://unej.id/Hibiscus

No	Participant	Abstract Code	Presentation Title
1	Prof. Dr. apt. Abdul Rohman, M.Si.	**Invited Speaker**	Quality control of *Garcinia mangostana* L. using fingerprinting and metabolomic approaches in combination with chemometrics
2	Dr. apt. Yuni Retnaningtyas., S. Farm., M.Si	**Invited Speaker**	A new colorimetric hydrogen peroxide (H_2O_2) sensor based on silver nanoparticles (AgNPs) synthesized using *Coffea canephora* L.
3	Vita Meylani*, Rinaldi Rizal Putra, Muhammad Miftahussurur, Sukardiman Sukardiman	**OP-02**	Chemical composition analysis and GC/MS profile of *Cinnamomum zeylanicum* bark extract as antifungal candidates
4	B. Kuswandi* , D Lantika, R.F. Reza , and I. Y. Ningsih	**OP-06**	Paper-microzones biosensor for screening of anti-hyperuricemia activity in herbal extracts
5	Pramudita Riwanti*, Filicia Regya Primadini, Ravy Irsyad Ramadhan, Erika Nur Maulidiah, Burhan Ma'arif	**OP-08**	Standardization of 96% ethanol extract of beluntas (*Pluchea indica* L.), kenikir (*Cosmos caudatus* Kunth.) leaves and purple corn (*Zea mays* L.)
6	Nuralifah, Fadhliyah Malik, Parawansah, Nur Ramadhani A.Sida, dan Waode Marianti	**OP-41**	Analysis of omega-3 levels on fatty acid and the qualities of purslane (*Portulaca oleraceae* L.) herbs from Southeast Sulawesi as a raw material for herbal preparations
7	Rifan Nurfalah	**OP-65**	Growth, productivity of phenolics and flavonoids in *Adenostemma madurense* based on different fertilizer applications
8	Dona Octavia	**OP-66**	The secondary metabolites content of phenolic and starch content of arrowroot tuber in agroforestry systems
9	Siti Nur Assyifa	**OP-67**	Multi-level screening of essential oil compounds as anti-aging with ensemble virtual screening method
10	Arista Wahyu Ningsih*,Sukardiman , Achmad Syahrani , Edo Pratama , Ivan Charles S. Klau , Dewi Rahmawati	**OP-72**	Identifying metabolite profiling and phenolic content in unripe fruits of kayu banana (*Musa paradisiaca* L. var.kayu) by using LCMS instruments in different extraction methods

Invited Speech & Parallel Oral Presentation 2

Saturday, 22nd October 2022, 10.00-12.00 (GMT+7)
Class Name: Camellia
Zoom link https://unej.id/Camellia

No	Participant	Abstract Code	Presentation Title
1	Dr. Sami Althwab and Dr. Essam Hamad	**Invited Speaker**	Garden cress (*Lepidium sativum* Linn.) seeds: nutritional value and nutraceutical characteristics
2	Tri Wiyono *, Khoirun Nisa, Sri Handayani, Anjar Windarsih, Septi Nur Hayati, Martha Purnami Wulanjati, Eti Nurwening Sholikhah, Woro Rukmi Pratiwi	**OP-07**	Ameliorative effect of quercetin against pancreatic damage in rat: a meta-analysis
3	Indah Solihah*, Herlina, Miksusanti, Syafrina Lamin, Virgiawan Leo Putra, Taufiqurrahman, Hadi Kurniawan Putra, Ari Putra Utama, Febby Primananda, Elvara Alvionita, Zahrani Anggita Putri, Peggy Yulianda	**OP-12**	The antioxidant and hepatoprotective effect of *Artocarpus champedens*
4	Sahidin I*, Nohong, Marianti A. Manggau, Adryan Fristiohady, Wahyuni, Nur Syifa Rahmatika, Agung W. M. Yodha, Nur Upik En Masrika, Abdulkadir Kamaluddin, Andini Sundowo8, Sofa Fajriah	**OP-15**	Biological activities and phytochemical profile of ethyl acetate extract of *Arachis hypogaea* L. stems from Southeast Sulawesi: a potential source for nutraceuticals
5	Deni setiawan	**OP-36**	Phytochemical screening and antioxidant activity ethanol extract of tandui (*Mangifera rufocostata* Kosterm.)
6	Devanus lahardo	**OP-47**	Influence of *Saccharomyces cereviceae* variation on content of betasianin, betaxantin and antocyanin and antioxidant activities on beetroot alcoholic fermentation by DPPH method
7	Arnida Arnida	**OP-58**	Phytochemical screening and antioxidant detection using TLC method of *n*-hexane fraction of bajakah tampala (*Spatholobus littoralis* Hassk.) stem from Central Kalimantan
8	Dewi Pertiwi	**OP-69**	Antioxidant activity of *Artocarpus lacucha* by DPPH and CUPRAC methods
9	Septi Nur Hayati	**OP-71**	Antioxidant activities of cocoa (*Theobroma cacao*) pod extract

Invited Speech & Parallel Oral Presentation 3

Saturday, 22nd October 2022, 13.00-15.00 (GMT+7)
Class Name: Phaleria
Zoom link https://unej.id/Phaleria

No	Participant	Abstract Code	Presentation Title
1	Dr. apt. Ayik Rosita P., S. Farm., M. Farm	**Invited Speaker**	Cytotoxic activity of *Erechtites valeranifolia* fraction against MCF-7 cell line.
2	Lucie Widowati	**OP-09**	Pharmacology study for *Phaleria macrocarpa* fruit to be developed as an antidiabetic drug
3	Aditya Faradina Salsabilla	**OP-21**	Antiplatelet activity of methanol extract from stem bark of *Artocarpus champeden* Spreng
4	Frismandani, E., Umayah, E. U., Arimurti., S.	**OP-29**	Anticoagulant and thrombolitic activities of ethanol extract from cayenne pepper (*Capsicum frutescens*) *in vitro*
5	Pratika Viogenta	**OP-34**	Analysis of the metabolite profile of the endophytic fungus *Phytophthora capsici* extract form *Luvunga sarmentosa* (Blume) Kurz
6	Uswatun Khasanah	**OP-39**	*In silico* study of antimalarial activity from phytoconstituents of *Alstonia scholaris* against *Plasmodium falciparum* protein targets
7	Noorfadzilah	**OP-44**	*Phoenix dactylifera* improves haematological parameters and body iron status in iron deficient rats
8	Yuswan A, Yuliani T*, Tjandrawati, Hilmi IL, Sholih MG	**OP-57**	Screening of multi-drug resistant bacteria growth inhibition and the cytotoxic activity on HEPG2 cell line by Meliaceae plant extracts
9	Blanche Marie	**OP-64**	Antiurolithiatic activity of *Annona muricata* Linn (1753) methanol leaf extract in chemically-induced calcium oxalate urolithiasis in male Sprague Dawley rats

Invited Speech & Parallel Oral Presentation 3

Saturday, 22nd October 2022, 13.00-15.00 (GMT+7)
Class Name: Tithonia
Zoom link https://unej.id/Thithonia

No	Participant	Abstract Code	Presentation Title
1	Dr. apt Budipratiwi Wisudyaningsih, S. Farm., M. Sc	**Invited Speaker**	Crystal engineering of quercetin: physicochemical and stability properties of quercetin co-crystals
2	Syalza Mumpuni Kusuma Dewi, Nikmatul Ikhrom Eka Jayani, Karina Citra Rani*	**OP-04**	Study effect of storage temperature and packaging methods on physical characteristics of gelatin-based moringa leaf extract chewable gummy
3	Yanabila Wahyu Ilahi*, Diah Novita Anggraini, Budipratiwi Wisudyaningsih, Yudi Wicaksono	**OP-20**	Preparation of resveratrol-2,5-dihydroxybenzoic acid multicomponent solids to improve solubility properties
4	Wa Ode Sitti Zubaydah*, Astrid Indalifiany, La Ode Baytul Abidin	**OP-25**	Formulation and characterization of self-nanoemulsifying drug delivery system (SNEDDS) ethanol extract sponge *Xestospongia* sp. using Tween 80 as surfactant
5	Dina Rahmawati	**OP-35**	Shallot skin: turning a food waste into a sunscreen cream
6	Lina Winarti	**OP-37**	Effect of bitter gourd seed oil combination with oxybenzone and octyl methoxy cinnamate on the effectiveness of sunscreen cream
7	Lidya Ameliana	**OP-42**	Optimization of xanthan gum and carbopol in preparation of peel-off gel masks secang wood extract (*Caesalpinia sappan* L.) as topical antioxidants
8	Destria Indah	**OP-54**	Physical characteristic and antioxidant properties of *Aquilaria macrocarpa* leaves extract gel after storage

Invited Speech & Parallel Oral Presentation 3

Saturday, 22nd October 2022, 13.00-15.00 (GMT+7)
Class Name: Zingiber
Zoom link https://unej.id/Zingiber

No	Participant	Abstract Code	Presentation Title
1	Assoc. Prof. Hari Sulistyawati, Ph.D.	**Invited Speaker**	Potential value of medicinal plants for health and conservation-lesson learned from University Jember
2	apt. Afifah Machlaurin., S.Farm., M. Sc	**Invited Speaker**	Scaling-up BCG vaccination coverage in outreach high-incidence regions through a no-restriction open vial policy combined with home visits: a cost-effectiveness study
3	Fatimah Siti, Iska Desmawati, dan Indah Trisnawati Dwi Tjahjaningrum	**OP-14**	Species diversity of the Smilax genus as medicinal plants in the source forest of Pawon, Wates, Kediri
4	Afifah K. Vardhani, Mahdi Jufri, Erni Purwaningsih, Hidayah Sunar Perdanastuti, Nadia Bunga Anggraini	**OP-23**	Total phenolic content in black rice (*Oryza sativa* L. indica) bran ethanolic extract from two different regions in Java, Indonesia
5	Nahdiya Rahmah, Aditya Maulana Putra Perdana,Okta Muthia Sari*, Yusrinie Wasiaturrahmah	**OP-24**	Potential drug-drug interactions in covid-19 patients in Hospital X Banjarmasin period January-March 2021
6	Sofia*	**OP-31**	The use of houseyard for cultivating javanese chili (*Piper retrofractum* Vahl) to increase the farmer's income.
7	Husnawati	**OP-51**	Antibreast cancer activity of endophytic fungi *Phomopsis* sp from Indonesian isolate *Annona muricata* leaves: from production to preclinical study – a review
8	Fadlul Azim Fauzi Mansur	**OP-59**	Consumption of date palm fruit (*Phoenix dactylifera* var. ajwa) reduce *Trichuris trichiura* egg count in infected school children.
9	Oeke Yunita	**OP-60**	Preparation of database on suppliers and distributors of traditional medicine products in East Java, Indonesia
10	Arry Y Nurhayati	**OP-62**	Mung bean waste fertilizer for organic tomato growth: a prospect for a bio-circulatory model for household community tomato growing

Poster Presentation List

Abstract Code	Participant	Title
PP-1	Lindawati Setyaningrum	Validation and development of TLC-densitometry method for standardization in antioxidant compound of *Vernonia amygdalina* leaves fraction
PP-2	Sri Wahyuningsih	Antihyperurisemic activity of fraction of red betel leaf ethanol extract (*Piper crocatum* Ruiz & Pav) on male Wistar rats
PP-3	Shinta Mayasari	Antihypercholesterol activity of bay leaf (*Syzygium polyanthum*) [Wight] Walp and pandan Leaf (*Pandanus amaryllifolius Roxb*) ethanol extract combination in Wistar rats with diabetes mellitus.
PP-4	Elsa Mutiara Santi	The effectivity of bay leaf ethanol extract (*Syzygium polyanthum*) as a photoprotective agent in avobenzone and octyl methoxycinnamate sunscreen creams
PP-5	Ferdianti Ayu	Development of paper-based sensors for determination of caffeine levels in tea
PP-6	Qorina Mumtazah Isnaini	Optimization of pragelatinized corn starch and guar gum in ibuprofen orally disintegrating tablets
PP-7	Ayu Indah Noor Safitri	Optimization of pragelatinized corn starch and chitosan in ibuprofen orally disintegrating tablet
PP-8	Yudi Purnomo	Antioxidant activity of pulutan (*Urena lobata*) leaf fractions and analysis of their total phenol content
PP-9	Raden Lucky Rachmawan	Activity test of 50% ethanol extract of javanese ginseng root (*Talinum paniculatum* Jacq. (Gaertn)) as an inhibitor of oxidative stress
PP-10	Sofindra Miftakhuddin	Alpha-glucosidase inhibitory activity of ethanolic extracts of gambas *(Luffa acutangula)*, winged bean *(Psophocarpus tetragonolobus)*, and moringa *(Moringa oleifera)*
PP-11	Nisa' Nur Laily Asyrofiyah	Phytochemical screening and *in vitro* antihyperglychemic test of dichloromethane fraction of merbau pantai (*Intsia bijuga*) stem bark
PP-12	Atiq Fashihatun Nadhiroh	Phytochemical screening and *in vitro* antituberculosis test of eboni (*Diospyros celebica* Bakh.) stem bark extract
PP-13	Muftinatul Hasanah	Phytochemical screening and *o*antihyperglychemic test of hexane fraction of merbau pantai (*Intsia bijuga*) stem bark
PP-14	Ridho Syifa' Annafi	Anthelmintic activity of mondokaki (*Tabernaemontana divaricata*) root methanol extract against *Caenorhabditis elegans*
PP-15	Novitasari Puspita Dewi	Synthesis of silver nanoparticle with eggplant (*Solanum melongena* L.) peel extract and their antioxidant activity
PP-16	Fathur Rahman	Systematic mapping review: use of natural ingredients in traditional treatment for non-communicable diseases in Austronesian countries
PP-17	Vina Amalia Damayanti	Potency of methanol extract of *Dianella ensifolia* (L.) Dc. herbs as anthelmintic agent toward *Caenorhabditis elegans*
PP-18	Yuni Mumpuni	Anthelmintic activity of methanol extract of jaha leaves (*Terminalia bellirica*) against *Caenorhabditis elegans*
PP-19	Erna Putri Iliyin	Determination of sodium benzoate content in syrup using NIR (*near infra-red*) spectroscopy and chemometric methods
PP-20	Zunia Miftakhurrohmah	Green synthesis of silver nanoparticle with robusta coffee (*Coffea canephora* L.) leaf extract and their antifungal activity
PP-21	Ella Aurelya	Antibacterial activity test of silver nanoparticles (AgNPs) robusta coffee leaf extract (*Coffea canephora* L.) against *Staphylococcus Aureus* and *Escherichia Coli*

Abstract Code	Participant	Title
PP-22	Dimas Aloisius	Potential anthelmintic activity of *Artemisia cina Berg* (mungsi Arab) leaves
PP-23	Rizka Adjeng Wulandari	Determination of salicylic acid levels in face toner solution using NIR (near infrared) and chemometric spectroscopy methods
PP-24	Karima Pratiwi	Determination of diclofenac diethylamine levels in emulgel preparations using NIR spectroscopy combined with chemometrics
PP-25	Wulan Fitria Dewi	Optimization of hydroxypropyl methylceluulose (HPMC) and carboxymethylcellulose sodium (CMC-Na) in peel-off gel mask cashew leaf (*Anacardium occidentale* L.)
PP-26	Lakshyta Alifia Bimassya	Optimization of carboxymethylcellulose *s*odium and Carbopol® in peel-off gel mask cashew leaf (*Anacardium occidentale* L.)
PP-27	Hasnia Pratiwi	Optimization of Carbopol® and hydroxypropyl methylcellulose (HPMC) in peel-off gel mask cashew leaf (*Anacardium occidentale* L.) extract
PP-28	Erwi Putri Setyaningsih	Antibacterial activity of ethanol, ethyl acetat, and n-hexane extracts of bidara laut lignum (*Strychnos lucida* R.Br.) against *Staphylococcus aureus a*nd *Escherichia coli*
PP-29	Nadia Khorunnisa	Anthelmintic activity of *Tinospora crispa* (Brotowali) stem methanol extract againts *Caenorhabditis elegans*
PP-30	Dedi Irawanto	Evaluation of drug use in hypertensive patients with complications of chronic kidney failure at RSUD Ibnu Sina Gresik
PP-31	Yasiroh Azmil Fausiana Nasution	Validity and reliability of self-efficacy for appropriate medication use in scale (SEAMS) questionnaire in Madura language version for stroke patient
PP-32	Zenna Adella	The use of natural products in traditional medicine of infectious disease and injuries in Austronesia: a systematic mapping review
PP-33	Farah Yumna Salsabila	Profile of adverse events following immunization of COVID-19 in Jember Regency
PP-34	Reynaldi Edo Mahendra	phytochemical screening and anthelmintic assay of methanol extracts of aerial *Indigofera linnaei* against *Caenorhabditis elegans*
PP-35	Ollive Filsa Hawa	Potential study of silver nanoparticles (AgNPs) using bioreduction of *Theobroma cacao L*. leaf extract as antioxidant activity and hydrogen peroxide (H_2o_2) sensing ability
PP-36	I Gusti Agung Ayu Kartika	Phytochemical profile and bodhi tree leaf extract (*Ficus religiosa* L.) on nitrite oxide and catalase as a natural antioxidant
PP-37	Nuri	Antilipase activity of kemuning (*Murraya paniculata*) leaves extract and its fractions
PP-38	Anisya Widiastuti	Phytochemical screening and *in vitro* Antihyperglychemic test of ethyl acetate fraction of merbau pantai (*Intsia bijuga*) stem bark
PP-39	Devintasari Rahma Wardani	Green synthesis AgNPs with cocoa leaf extract bioreductor *(Theobroma cacao.* L*)* and their antifungal activity
PP-40	Ovalina Sylvia Ginting	Development of ginger and lemongrass plants as family medicinal plant products (TOGA) integrated in improving health self-medication
PP-41	Diana Holidah	Antidiabetes activity of arabica coffee leaves extract on diabetic mice
PP-42	Dewi Sekar Arum	Determination of total flavonoid levels and classification model of *Moringa oleifera* L. leaf powder in different altitude of planting area by NIR spectroscopy-chemometric method

Abstract Code	Participant	Title
PP-43	Naurah Fiehaya	NIR-chemometric classification model and determination of total phenolic content of basil leaf powder (*Ocimum basillicum* l.) in different altitude
PP-44	Lintang Nurani Aisyah Seen	Classification model and determination of total phenolic content of green betel leaf powder (*Piper betle* L.) in different altitude
PP-45	Maqinun Amin	Determination of total phenolic content and classification model of papaya leaf powder (*Carica papaya*) at different altitude
PP-46	Nora Safira	Determination of total flavonoid content and classification model of cassava leaf powder (*Manihot esculenta* Crantz) in different altitudes
PP-47	Erna Maya Febriana	Determination of total flavonoid content and classification model for pegagan leaf powder (*Centella asiatica* L.) in different altitude
PP-48	Fransiska Maria Christianty	Acute and sub-chronic toxicity of green coffee extract based on rat kidney function
PP-49	Arde Toga	Ethnomedicine studies: Looking at the relationship heritage and religion with traditional medicine used
PP-50	Puspa Sari Dewi Sholihah	Red ginger ethanol extract has the best antioxidant activity than turmeric or garlic ethanol extract
PP-51	Farauk	The effect of heating time on rosmarinic acid level of cat whiskers (*Orthosiphon aristatus* (Blume) Miq.) of purple variety
PP-52	Siti Mudaliana	An *in silico* study of the associations of *Curcuma xanthorrhiza* to prevent stunting in children
PP-53	Tanfidz Al Islah	The study of safety and skin lightening efficacy of mulberry (*Morus alba*) roots lotion
PP-54	Sukmahwati	Determination of curcumin levels and antiinflammatory test of extract and fraction temu giring rhizome using membrane stability and protein denaturation methods *in vitro*
PP-55	Heni	Antioxidant and antihyperalgesia activity of ethanolic extract of cocoa pod husk in neuropathy diabetic model
PP-56	Dewi Dianasari	The effect of the extraction method of apu-apu (*Pistia stratiotes*) on antioxidant activities and identification of their active compounds
PP-57	Siti Muslichah	Phytochemical composition and ethnomedicinal study of *Kaempferia galanga* L. and *Kaempferia rotunda* L. in Madura Indonesia
PP-58	Lestyo Wulandari	Determination of total citronelal levels and development of FTIR-chemometric classification model *Cymbopogon winterianus* Jowitt oil from different altitude of planting areas
PP-59	Indah Purnamasari	NIR spectroscopy to determine total phenolic content of powdered dried rhizomes
PP-60	Fifteen Aprila Fajrin	Antioxidant and antihyperalgesia activity of ethanol extract and fraction from red ginger (*Zingiber officinale* var. rubrum) in early painful diabetic neuropathy mice
PP-61	Fuad Bahrul Ulum	Metabolite profile of *Dumortiera hirsuta* (Sw.) Nees from Mount Gumitir, Indonesia and two antimicrobial compounds detected from GC-MS
PP-62	Indah Solihah	The antioxidant potential of kecombrang (*Etlingera elatior*)
PP-63	Bungawati Zaing	Antifertility effects of some mangrove root extracts (*Sonneratia alba* S., *Rhizophopra mucronata* L., and *Achantus ilicifolius* L.) in feed against spermatozoa mice (Mus musculus L.) quality
PP-64	Tri Candra Setiawati	Application of ameliorant and plant growth promotion Rhizobacteria on some soil nutrient, uptake and secondary metabolite of rice in acid soil

CERTIFICATE OF APPRECIATION

This certificate is proudly awarded to:

Dr. apt. Oeke Yunita, S.Si., M.Si.

for the invaluable contribution as
Oral Presenter
in
The 1st International Conference on Medicinal Plants (The 1st ICMP):
62nd Meeting of Working Group on Medicinal Plant and Traditional Medicine (POKJA TOOT)
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OP - 60

Preparation of Database on Suppliers and Distributors of Traditional Medicine Products in East Java, Indonesia

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ABSTRACT

The availability and selection of herbal raw material suppliers and herbal product distributors is a critical factor in the production and marketing activities of small traditional medicine businesses (UKOT) in Indonesia. An internal information system containing a database of East Java suppliers and distributors can support the guarantee of completeness and ease of access to supplier and distributor data at UKOT PT X in Surabaya, East Java. An interview with the Responsible Pharmacist (APJ) and documentation on PT X's documents were used to collect data. Following this, the final output of the data from the selected documentation is fed into the database that has been built as part of PT X's internal information system. The study was conducted on the internal database of PT X, and it focused on the database's completeness, accuracy, and accessibility. Users of UKOT PT X's internal database were asked to participate in the evaluation as respondents. The responses to the questionnaire indicated that PT X's database system was very complete in information about distributors of finished products and suppliers of raw materials (including herbal raw materials, excipients, and packaging). This conclusion was reached by eighty percent of the data completeness assessment intervals. All respondents correctly answered questions about data on suppliers and distributors of finished products, which are presented in PT X's internal information system database. In terms of data presentation, language, and search feature functions, 93.33% of respondents agree that the database in PT X's information system is very easy to access.

Keywords: *Database, supplier, distributor, herbal, UKOT*

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I. INTRODUCTION

Indonesia is known as a country that has a diversity of herbal plants that have efficacy and can be used as traditional medicine (Pawarta, 2017; Sumayyah and Salsabila, 2017). This advantage is utilized by several traditional medicine manufacturers, one of which is the Small Traditional Medicine Business (UKOT) for producing herbal medicines. In carrying out UKOT, one of the critical aspects is the supply chain of herbal products consisting of raw materials suppliers and distributors of finished products (Chamid, Surarso, and Farikhin, 2015).

Through suppliers, manufacturers of herbal products can obtain appropriate raw materials. Raw materials from suppliers can come from farmers directly or from collectors. Raw materials can be directly used for production or first processed by specific factories so that they are completely ready to be used for the production process. Therefore, one herbal product can contain several herbal plant raw materials which come from 1 or more suppliers. Moreover, more than one product is produced, requiring many suppliers to ensure the availability of raw materials. Herbal products that have been produced can be delivered to consumers through direct sales by producers or distributors. Distributors can also distribute directly to consumers or through outlets such as pharmacies or supermarkets (Booker, Johnston, and Heinrich, 2012; Novita *et al*., 2020).

The availability and selection of suppliers of herbal raw materials and distributors of herbal products are important factors in the production and marketing activities of small traditional medicine businesses (UKOT) in Indonesia. Manual recording or documentation can be one of the factors that can cause errors caused by human errors, so automation is needed to avoid these errors (Chamid, Surarso, and Farikhin, 2015; Santika, and Mahmudy, 2015; Septianur and Nurcahyati, 2017; Nisa, Subiyanto, and Sukamta, 2019). An internal information system containing a database of East Java suppliers and distributors can support the assurance of completeness and ease of access to supplier and distributor data at UKOT PT X in Surabaya, East Java.

II. METHODOLOGY

Data collection activities are illustrated in Figure 1 below. Figure 1 below represents the flow of activities carried out to obtain data related to suppliers and distributors for information system purposes at the UKOT company, namely PT X.

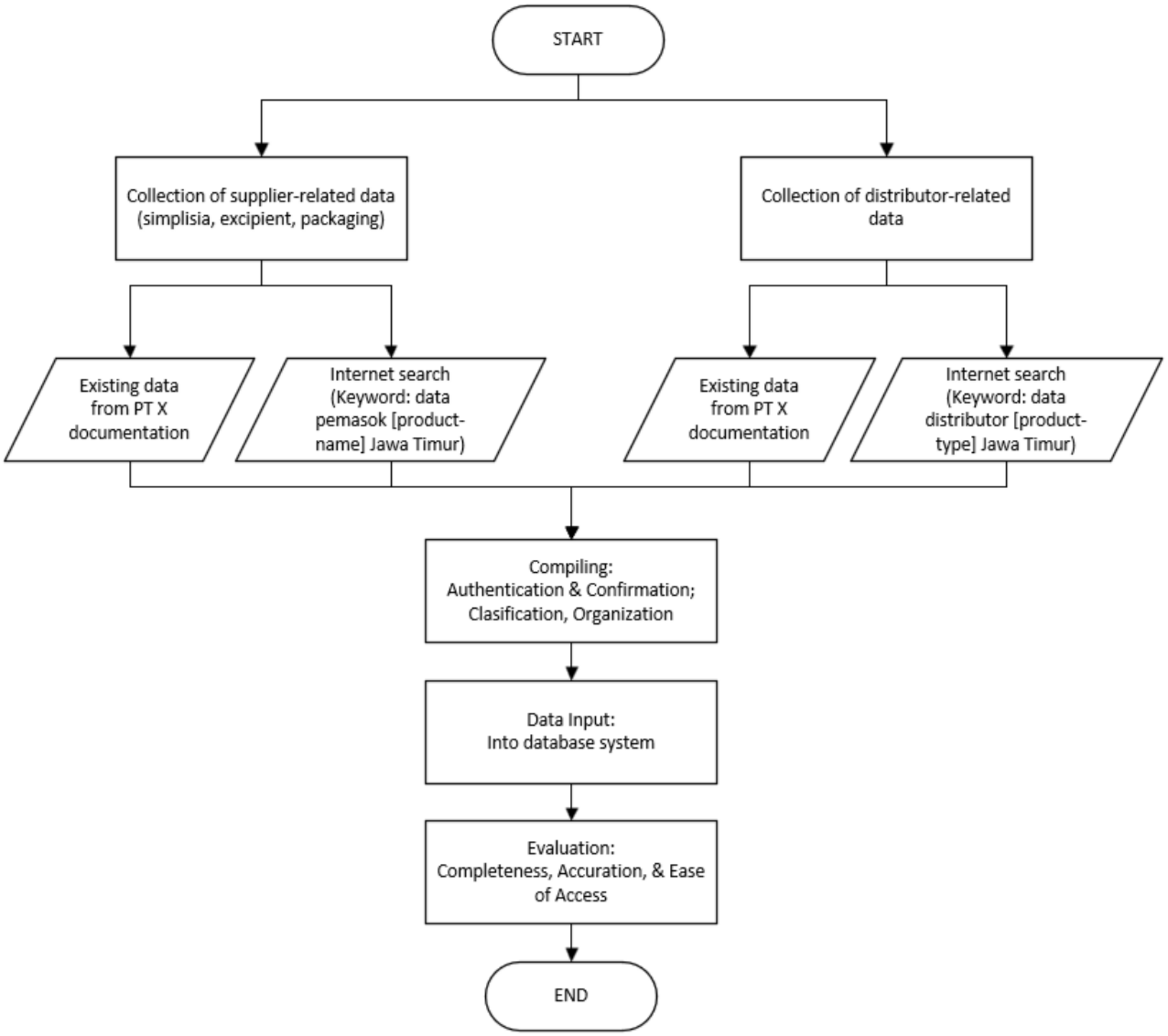

Figure 1. Methodology of Data Collecting

There are two different types of data that must be searched: supplier data and distributor data. Each piece of data is derived from two sources, notably documents held by UKOT PT X. The paperwork possessed by UKOT PT X consists of data on suppliers and distributors who have collaborated in the past. However, more data searches are conducted using the Internet to expand the reach of new suppliers and distributors. Therefore, before being loaded into the previously constructed database system, every acquired information will undergo further processing.

III. RESULT AND DISCUSSION

Internet search results for supplier data are shown in Table 1 below. Meanwhile, distributor data acquired from Internet search results is included in Table 2 below.

Table 1. Search Result of Supplier Data

Raw Material Supplier							
No.	Category of Raw Material	Supplier which supply raw material for PT X	Raw Data of Suppliers from internet	Suppliers located outside East Java	Supplier who do not supply raw material for PT X	Total suppliers from the internet	Final Result
1	Simplisia	4	48	-4	-5	39	43
2	Excipient	7	40	-13	-3	24	31
3	Packaging	6	23	-12	-4	7	13

Internet-based searches for supplier data are required to expand PT X's chances of acquiring raw material suppliers. The addition of supplier data is to prevent enterprises from relying on a single source for specific raw materials. One of the most essential aspects of meeting the needs of the firm consistently and at an acceptable cost is the selection of suppliers (Chamid, Surarso, and Farikhin, 2015). A decision support system is used to select suppliers by selecting suppliers with the greatest potential. However, not all suppliers might be used as raw material sources since the raw material used for the manufacturing process must fulfill the set quality criteria. Consequently, the selection of providers must also include delivery distance. Therefore, providers outside the province of East Java will be omitted from the list. Golonko *et al*. (2021) show that the level of integration in the supply chain in the herbal business at Polland was discovered to be low, which was influenced by the restricted relationships and types of dependencies between the chain's members. The enormous fragmentation and collecting of herbs from natural places by hundreds of independent collectors contributed to the low level of integration. On the recipient side, the degree of integration was in the middle range, which was slightly better.

PT X is a manufacturer of custom-made herbal medications. Small and medium-sized firms (often abbreviated as SME) make up a significant portion of Make-to-order (MTO) businesses. Make-to-order is a word that refers to businesses that make customized and personalized products to specific customer specifications, however these products are not repeated on a regular basis or in a manner that is predictable. In the manufacturing-to-order (MTO) industry, some or all of the production does not begin until after the customer order has been received. MTO enterprises tend to have a limited selection of typical products and demand that is highly unpredictable (Saniuk and Waszkowski, 2016). Consequently, this organization lacks a concrete manufacturing timetable. If the distributor places an order, the actual production process will commence. Therefore, the organization must be able to extend the market by collecting new distributor data in addition to the existing data.

Table 2. Search Result of Distributor Data

List of Pharmaceutical Wholesalers (PBF)*								
Distributor for PT X.	Number of PBF data search results on the website	PBF is located outside East Java	PBF license revoked	Not registered on the BPOM website	Not distributing traditional medicine	Duplication	Total distributors from the internet	Final Result
2	286	-1	-36	-67	-103	-1	78	80

The results of an Internet search for new distributor candidate data yielded 286 distributor data. However, the data must be processed beforehand, which includes determining whether or not it is legally registered on the BPOM website. The outcomes of this new distributor's data processing yielded a total of 80 prospective data.

All acquired information is stored in a database system that was previously established. This data is recorded as a repository required by the system as a source of input in order to generate company-beneficial information. The recorded supplier information includes the provider's name, location, contact information, and the type of raw material delivered. For this reason, raw material data must be loaded into the system first, as seen in Figure 2. Figure 3 shows the outcome of entering supplier data into the system, whereas Figure 4 is the outcome of entering distributor data.

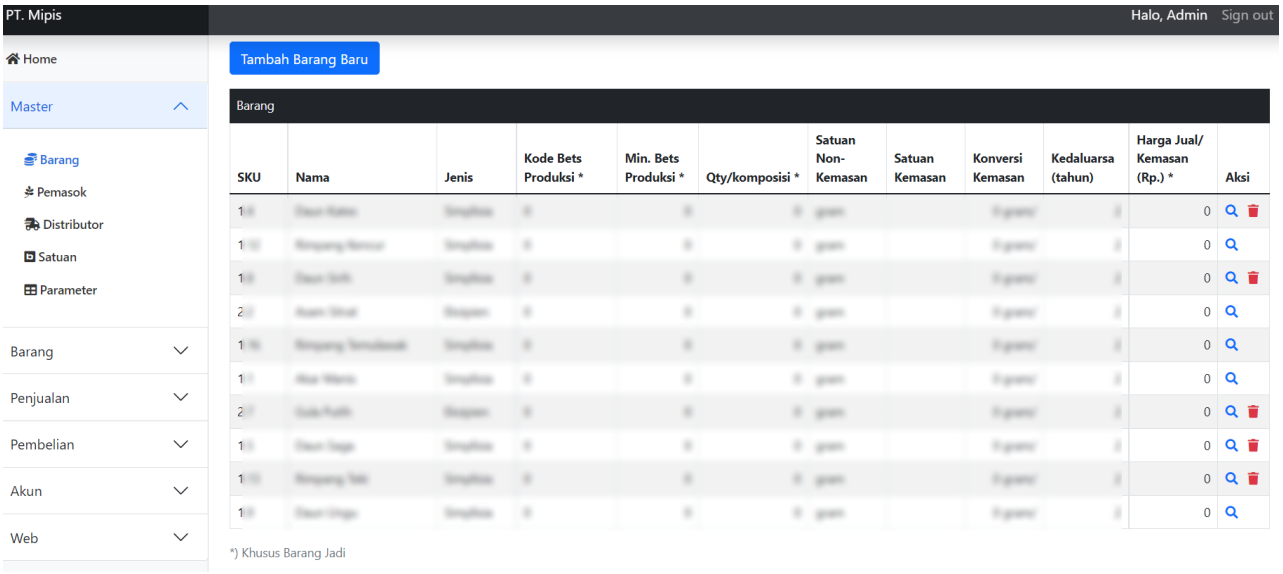

Figure 2. Result Of Input Data Of Products/Raw Materials at PT X's Database System

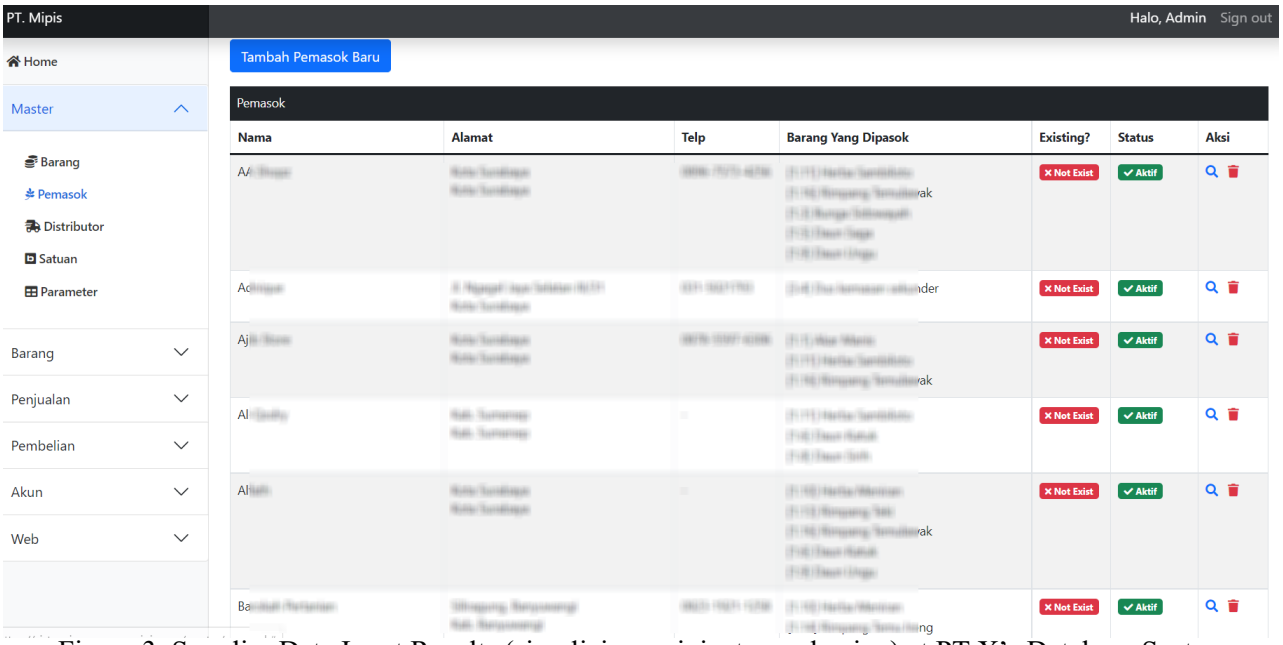

Figure 3. Supplier Data Input Results (simplicia, excipients, packaging) at PT X's Database System

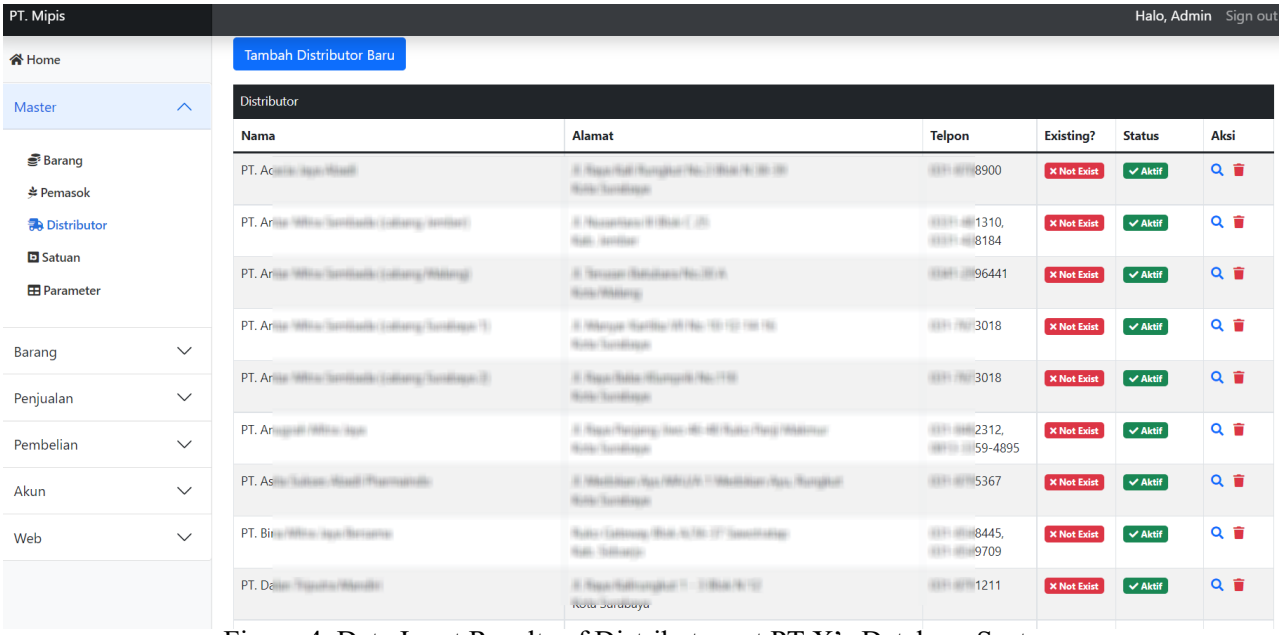

Figure 4. Data Input Results of Distributors at PT X's Database System

In order to validate the data that has been entered into the database system, ten system users were requested to complete the questionnaire. The findings of this questionnaire are crucial for determining if the results of prior data collection have satisfied the demands of users in terms of data completeness and accessibility. We asked four questions evaluating the completeness of the data in the initial survey. These questions are:

Q1 = How complete is the information on simplicia supplier data in East Java in the system?
Q2 = How complete is the information on the excipient supplier data in East Java in the system?
Q3 = How is the completeness of information on packaging supplier data in East Java in the system?
Q4 = How is the completeness of the data information on the finished product distributor in East Java on the system?

In the second questionnaire, we posed three questions to obtain user feedback on the system's data accessibility. The three concerns are:

Q1 = Is the presentation of data on the system easy to understand?
Q2 = Is the language used in the system easy to understand?
Q3 = Can the search for suppliers and distributors of finished products in the system be used properly?

Figure 5 illustrates the findings of the initial questionnaire. For each question item, the proportion of respondents who agreed that the gathered data was comprehensive and slightly incomplete was proportional. This is logical given that the collected data is sourced from internet search results. Not all suppliers and distributors provide comprehensive information about themselves. Some providers, for instance, do not supply a phone number. There are also individuals who do not mention the delivered items.

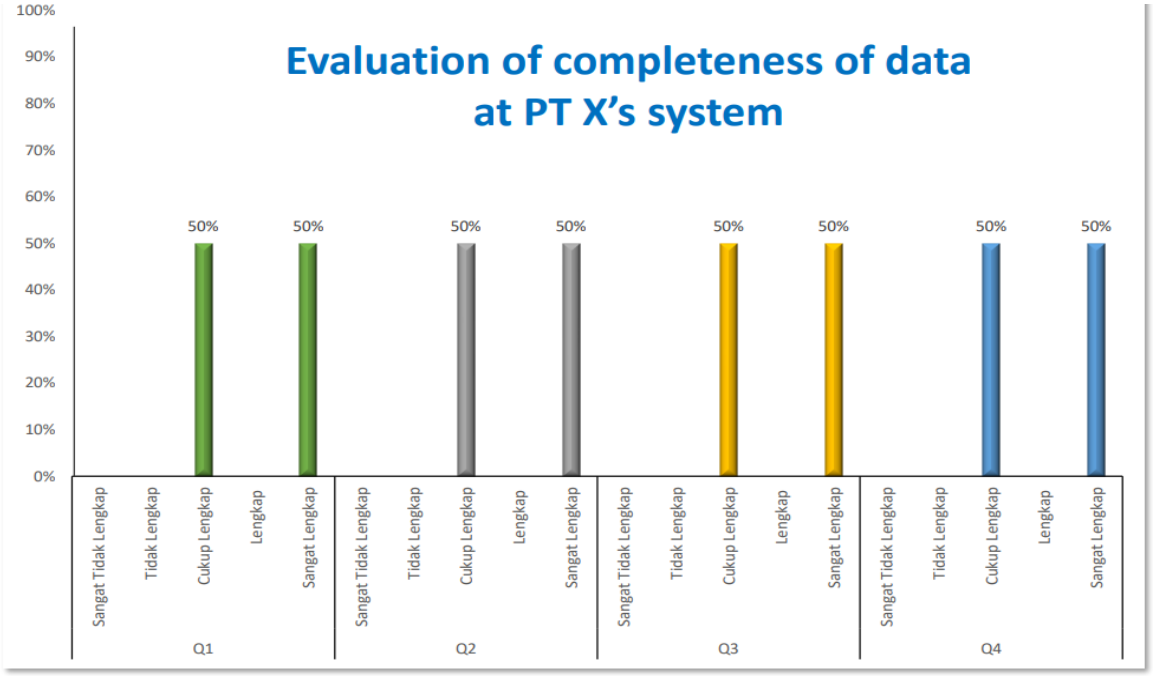

Figure 5. Evaluation of completeness of data at PT X's system

Weiskopf and Weng (2013) proposed three key characteristics of data quality, and our study solely measures data completeness. The term "completeness" refers to the total availability of data regarding a given context that the user is interested in. The models that are proposed in this research for computing the quality of websites taking into consideration the criterion "Completeness" is straightforward, open to expansion, and straightforward to put into practice (Bhanu *et al*., 2019). Based on the results of the evaluation survey on the completeness of information on the PT X database, it can be seen that in providing data on suppliers (simplicia, excipients, packaging) and distributors of finished products, a percentage of 50% is obtained for respondents who state that the data on the PT X database is very complete. Another percentage of 50% was obtained from respondents who stated that the data on the PT X database was quite complete. This difference of opinion could be due to a bias in the appearance of suppliers which are not separated by category. The percentage obtained from respondents from the results of the evaluation of the completeness of the data was then analyzed with assessment intervals. Calculations with assessment intervals obtained 80% results for the four questions. This shows that the data presented on the PT X database is very complete.

Figure 6 displays the findings of the second questionnaire, which relates to the convenience of data access in the database system. Based on the results of the evaluation survey on the ease of access to the PT X database, it was found that 50% of respondents strongly agreed that the presentation of data on the system was easy to understand. The percentage obtained from respondents from the results of the evaluation of the ease of access of the data was then analyzed with assessment intervals. The average of the three questions, the percentage result is 93.33%. From these results, it can be concluded that respondents strongly agree that the PT X database is easily accessible in terms of data presentation, language used, and search features. Singh et al. (2016) showed that when evaluating the quality of a website in terms of the "usability" element, it is necessary to take into account both how simple it is to use the website and how much one can learn by using the website. The term "usability" refers to the several ways in which website visitors can interact with the platform.

The designed information system is a website-based system (Jonathan and Lestari, 2015; Takalelumang, Rindengan, and Sambul, 2018; Nugroho and Rohimi, 2020) that is accessible through PC or smartphone. The system is also designed with a responsive display for smartphones with small screens. This is a distinguishing feature that provides consumers with flexible data access. Kalem *et al*. (2016) stated that using mobile internet-connected devices, such as smartphones and tablets, allows all parts of the supply chain to obtain real-time product information and respond rapidly to demand. However, supply chain management systems in businesses should handle the input-output data traffic of mobile internet-connected devices.

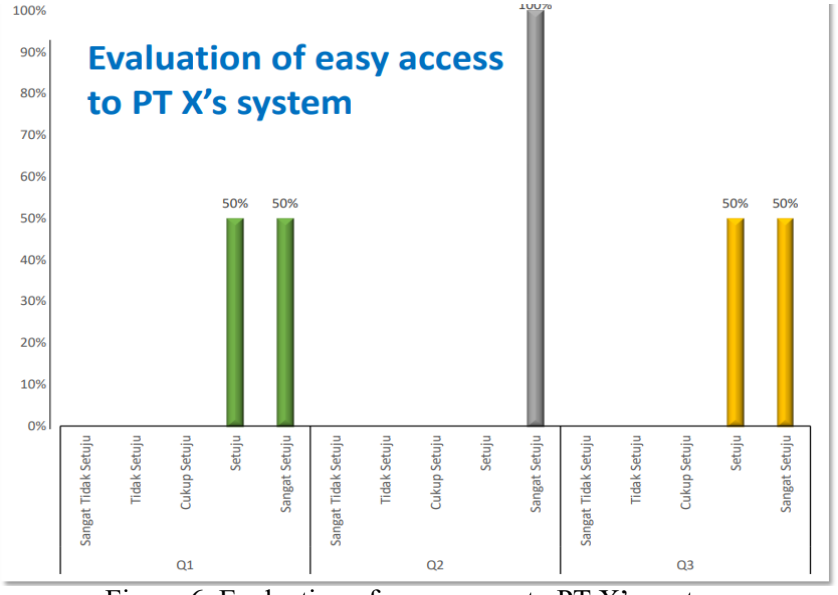

Figure 6. Evaluation of easy access to PT X's system

The requirement for PT X as UKOT for complete and easily accessible supplier and distributor data demonstrates the need for an integrated supply chain system, where these requirements frequently encounter roadblocks in the field. According to Golonko et al. (2021), for instance, each side is frequently hesitant to cooperate because there are no additional benefits or economic bonuses for combined effort. This was indicated in their research. At the neighborhood level, the industry resembles a monopoly since one processor has the power to dictate conditions to other market participants, most notably suppliers. Drying chambers and storage facilities are found on relatively few farms. Receivers are less likely to enter into formal agreements with suppliers when there is a dearth of competition in the local market. Other than oral arrangements, there are no written agreements, contracts, or other sorts of legal ties that are utilized in this situation. In most cases, the collection sites and direct delivery are the means by which the raw materials are acquired. As a consequence of this, the efforts that have been made to construct a database of suppliers and distributors for PT X are, in essence, an effort to begin the integration of various parties participating in the process from upstream to downstream by building an integrated database within a system.

IV. CONCLUSION

The results of the preparation of data on suppliers (simplicia, excipients, and packaging) and distributors of finished products in East Java for Small Traditional Medicines PT X indicate that 43 data on simplicia suppliers, 31 suppliers of excipients, 13 packaging suppliers, and 80 distributors of finished products have been entered into PT X's database.

At least 80% of respondents think that PT X's database system is extremely comprehensive in its coverage of suppliers (simplicia excipients, and packaging) and distributors (of completed goods). 93.33% of respondents are in agreement that PT X's database system is user-friendly in terms of data presentation, language, and search capabilities.

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