

## Curriculum Vitae

**Name:** Patcharee Umroong  
**Position:** Scientist Professional Level  
**Tel:** 029-428-740 ext. 109,104  
**E-mail:** rdipru@ku.ac.th

### EDUCATION

1997 B.Sc (Agriculture) Chandrakasem Rajabhat University, Thailand

### TRAINING

2023 Training of EM Ultramicrotomy comprising of introduction to TEM sample preparation and Ultramicrotome operation, in the Electron Microscopy Unit, on June 7<sup>th</sup>- 9<sup>th</sup>, 2023 from National University of Singapore.

2014 Training of Scanning Electron Microscope and Sample preparation on March 11-13, 2014 from Research and Development Institute Kasetsart University

2014 Training courses technical Chemical, biological sample preparation for Scanning Electron Microscopic on March 27-29, 2014 from Research and Development Inst. Kasetsart University

2013 Training of Operation and Application trainings on HT7700, Transmission Electron Microscope on January 9-19, 2013 from Japan.

2013 Training of In recognition of completion of *Genesis And Apollo Operation and Certification Training* conducted on 22<sup>nd</sup> and 23<sup>rd</sup> May 2013 from EDAX Trainer

2013 Training courses technical preparation sample plant permanent slides preparation for teaching learning and research on May 29 - 31, 2013

from the Research and Development Institute. Kasetsart University

## PROFESSIONAL EXPERIENCE

1994 - present      Scientific Equipment and Research Division, Kasetsart University,  
Thailand

## AREA OF EXPERTISE

- Transmission Electron Microscope
- Specimen Preparation Techniques for Transmission Electron Microscope and Light Microscopy to study the morphology and anatomy of plants, animals, and microorganisms.

## RESEARCH GRANT

*As Head of Project*

2019      Biodiversity of mushrooms in Thailand by microscopy technique

*As Co-Researcher*

2022-2023      Structure and Bioactive Compounds of *Ulva rigida*, Fundamental Fund, Kasetsart University Research and Development Institute, Kasetsart University Grant

2021-2022      Attitude, Readiness and Feasibility Study on Farmer Career Promoting as an Opportunity to Solve the Unemployed Problem Affected by

- Covid-19 Crisis : a Case Study of Nong Mamong district, Chainat Province
- 2019 morphological Changes of Sea Grape on Postharvest (preliminary), Kasetsart University Research and Development Institute, Kasetsart University Grant
- 2011 Anatomy and Ultra structural Changes in Cell Wall of Mangosteen Fruit with The Incidence of Translucent/Gamboges disorders, Center for Agricultural Biotechnology, Kasetsart University
- 2010 Toxicological Effects of Zearalenone to Immunological and Histological Changes of Vannamei Shrimp, Research and Development Institute, Kasetsart University Grant
- 2010 Comparative Study on Pollen and Anatomy of *Amomum* some species for Thai Herbs Commercial interests, Research and Development Institute, Kasetsart University Grant
- 2010-2011 The Study on Pollens Morphology of Vetiver Grass to Support the preparation of Vetiver Grass Species Database, Office of the Royal Development Projects Boards Grant Comparative Study on Pollen and Anatomy of *Amomum* some species for Thai Herbs Commercial interests, Research and Development Institute, Kasetsart University Grant

## PUBLICATIONS

1. **Patcharee Umroong**, Juthamanees Sangsawang, Suriyapong Chaemsai, Morphological Observation of Lime (*Citrus aurantifolia* (Christm.) Swingle) Fruit with Disease Symptoms by Microscopic Techniques, *Microscopy and Microanalysis Research*, Volume 36, Issues 1, June - December 2023, Pages 17-22
2. Y. Papuan, P. Thanomchat, C. Roopkham, **P. Umroong**, W. Pan-utai, P. Satmalee, P. Kosawatpat, B. Thongdang, M. Tamtin. 2023. Structural Development of Marine Green Alga (*Ulva rigida* C. Agardh, 1823) during Cultivation. in *Trends in Sciences*, Volume 20, Issues 8, August 2023, Pages 1-10
3. Juthamanees Sangsawang, **Patcharee Amroong(Umroong)**, Sarunya Puakpong; Chitsanuphong Pratum, Kulapramote Prathumchai, Sutithep Siripipattanakul, Orathai Sawatdichaikul. Community Supported Agriculture (CSA) The Selective Way of Life for Unemployed Persons Affected by the Pandemic of COVID-19. *Journal of Community Development Research (Humanities and Social Sciences)*. 2023. (16) 4, 103-116. published 15 December 2023.
4. Juthamanees Sangsawang, **Patcharee Umroong**, Chitsanuphong Pratum, Sarunya Puakpong, CONCENTRATION OF  $\alpha$ -AMYRIN AND ANTIBACTERIAL ACTIVITY AGAINST *PROPIONIBACTERIUM ACNES* OF ETHANOLIC EXTRACTS FROM SIAM WEED (*CHROMOLAENA ODORATA* L.) LEAVES, *วารสารวิทยาศาสตร์และเทคโนโลยี มหาวิทยาลัยราชภัฏอุดรธานี*, Volume 10, Issues 2, May - August 2022, Pages 91-105
5. **Patcharee Umroong**, Dararat Changjan, Juthamanees Sangsawang, Comparative of the morphology and ultrastructure of Kaffir lime (*Citrus hystrix* DC.) leaves attacked by Citrus canker symptoms with microscopic techniques, *Microscopy and Microanalysis Research*, Volume 35, Issues 1, January - June 2022, Pages 21-25
6. Surapit Tabting, **Patcharee Umroong**, Somchart Soponronnarit, Comparative study of the effects of thermal blanching pretreatments and puffing temperature levels on the microstructure and qualities of crisp banana slices, *Journal of Food Process Engineering*, Volume 45, Issues 1, January 2022, Pages e13931-1-14

7. Dararat Changjan, Donruedee Toyen., **Patcharee Umroong**, Effect of UV-C Radiation on Seed Germination and Some Ultrastructure in Water Convolvulus (*Ipomoea aquatica* Forssk. 'Reptan'), *Microscopy and Microanalysis Research*, Volume 35, Issues 1, January - June 2022, Pages 33-37
8. Paopun Y., Piyanan Thanomchat, **Patcharee Umrung (Umroong)**, Supapan Seraphin, Calcium Oxalate Crystals in Thai *Peperomia pellucida* (L.) Kunth Stems and Leaves, *Microscopy and Microanalysis Research-The Journal of the Microscopy Society of Thailand*, Volume 35, Issues 1, January - June 2022, Pages 26-32
9. **Patcharee Umroong**, Yupadee Paopun, Yaovapa Aramsirujijwet. 2021. Ultrastructural Studies of *Ganoderma* cf. *Lucidum* cell by microscopic technique, *Microsc. Microanal Res.* 34(1) pp. 13-18. Published 30 June 2021
10. Dararat Changjan, **Patcharee Umroong**. 2021. Double Staining Technique for Identifying Ultrastructure of *Citrus hystrix* DC Leaves. *Microsc. Microanal Res.* 34(1) pp.19-22. Published 30 June 2021
11. **Patcharee Umroong**, Yupadee Paopun, Yaovapa Aramsirujijwet and Juthamanee Sangsawang.2020. Techniques for Preparing Spores and Hyphae of *Schizophyllum commune* for Morphological Observation. *Microscopy and Microanalysis Research The Journal of The Microscopy Society of Thailand Res.* 2020 33(1) pp. 22-27. Published 30 June 2020.
12. **Patcharee Umroong** and Panumas Kotepong. 2019. Ultrastructure studies of fungus *Colletotrichum gloeosporioides* cause of Anthracnose disease of mango by microscope technique. *Microscopy and Microanalysis Research The Journal of The Microscopy Society of Thailand Res.* 2019, 32(2) pp. 1-5. Published 30 October 2020.
13. **Patcharee Umroong**. 2018. Leaf Anatomy and Minimal Structure in Leaves of *Hydrocotyle umbellata* L., Obtained from Water Stress, were Examined under Electron Microscope and Light Microscope. *The Journal of The Microscopy Society of Thailand*. January-June 2018.Vol31(1). pp 29-33. (แหล่งทุน: สวพ.มก.)

14. **Patcharee Umroong.** 2017. Anatomical study of *Hydrocotyle umbellata* L. using technique Transmission Electron Microscopy and Light Microscopy. The Proceeding of the 34<sup>th</sup> Annual Conference the Microscopy Society of Thailand 31st May – 2<sup>nd</sup> 27 June, Bangkok, Thailand. pp. 196 –202. (Full paper) (แหล่งทุน: สวพ.มก.)
15. N. Kunagorn, C. Roopkam, **P. umroong** and N. Anukul. 2017. Meristem tip culture of Dendrobium orchid for boosting efficiency of hygienic large scale micropropagation. International Society for Horticultural Science. Acta Hortic. 1155. ISHS 2017. DOI 10.17660/ActaHortic.2017.1155.62 Proc. VI Int. Symp. On Production and Establishment of Micropropagated Plants Eds.: M. Beruto and E.A. Ozudogru. pp.419-424. (แหล่งทุน: สวพ.มก.)
16. **Patcharee Umrung(Umroong).** 2016. The structure of *Pandanus amaryllifolius* Roxb. by optical Microscopy and transmission electron microscopy. The Proceeding of the 11<sup>th</sup> Asia-pacific Microscopy Conference and 33<sup>rd</sup> MST / 39<sup>th</sup> Anatomy Association –of Thailand Annual Conference 23-27 May, Phuket, Thailand.
17. **Patcharee Umrung(Umroong).** 2015. Pericarp of Fruit, *Citrus aurantifolia*, observed using optimal microscopy and transmission electron microscopy. The Proceeding of the 8<sup>th</sup> AMC and 32<sup>nd</sup> MST Annual Conference 28-30 January, Nakhon Pathom, Thailand.
18. Wipada Siri-anusornsak, **Patcharee Umrung(Umroong).** 2015. Microscopic Study of *Chromolaena odorata* L. The Proceeding of the 8<sup>th</sup> AMC and 32<sup>nd</sup> MST Annual Conference 28-30 January, Nakhon Pathom, Thailand.
19. **Patcharee Umrung(Umroong).** 2014. Microscopic Study of Internal Anatomy of *Ruellia tuberosa* L. under Microscopic. Journal of Microscopy Society of Thailand. Vol. 28 (1) pp.33-35.

20. Krittaya Petchpoung, Khamjut Ruenreungdee, Siriwan Soiklom, Thanapoom Maneeboon, **Patcharee Umrung(Umroong)**, Win Surachetpong and Warapa Mahakarnchanakul. Toxicological Effects of Zearalenone to Immunological And Histological Changes of Vannamei Shrimp. The Proceeding of 51<sup>th</sup> Kasetsart University Annual Conference. Subject: Fisheries. P. 389-395. Kasetsart University. February 5-7, 2013.
21. Yupadee Paopun, **Patcharee Umrung(Umroong)** and Piyanan Thanomchat. 2012. Cell Wall Structure of Translucent Cells of Mangosteen Fruit. Proceedings of The 7<sup>th</sup> International Symposium on Mineral Nutrition of Fruit Crops. 19-25 May, pp.421-425. Chanthaburi, Thailand.
22. Yupadee Paopun, **Patcharee Umrung(Umroong)**, Piyanan Thanomchat and Chaimongkol Kongpakdee. 2011. Epidermal Surface and Leaf Anatomy of *Thunbergialaurifolia* Lindl. Journal of Microscopy Society of Thailand. Vol. 4 (2) pp.61-64.
23. Chirapart A. and **(Umroong)Umrung P.** 2009. Abelparasitic and Endophytic Microbes in *Gracilaria salicornia* (C. Agardh) Dawson from Thailand. PHYCOLOGIA 48(4):19- 19 Suppl. S Meeting Abstract: 53.
24. Paisai O. Manoch L. Dethoup T. Kokaew J. Eamvijan A. Piriya-pin S. Paopun, Y. Poochinya P. and **(Umroong)Umrung P.** 2009. Morphological studies of slime mold *Sordariaceae* and Synnemata fungi. Journal of Microscopy Society of Thailand. 23: 25-29.
25. Yupadee Paopun, **Patcharee Umrung(Umroong)**, Chimongkol Kongpakdee and Pachongchit Poochinya. 2008. Morphological Identification of *Gomphrena* Pollen Using SEM Technique. In International Proceeding of 9<sup>th</sup> International Congress on Cell Biology. 7-10 October. pp.31-35.
26. Pachongchit P, Navikul O, Paopun Y, and **Umrung(Umroong) P.** 2008. Morphological changes of rice starch during grain development. Journal of Microscopy Society of Thailand. 22:76-79.

27. Y. Paopun, B. Chiwapreecha, P. Pachongchit, P. Umrung(Umroong) and C. Kongpakdee. 2008. Pollen Of *Marcania grandiflora* Imlay, Thai Endemic Plant. In Korean Journal of Microscopy Vol.38, No. 4 Supplement. pp.1176-1177 (ISSN: 1225-6773)
28. L. Manoch, O. Jeamjitt, A. Eamvijarn, T. Dethoup, J. Kokeaw, Y. Paopun, P. Poochinya and **P. Umrung(Umroong)**. 2008. Light and SEM Studies on Leaf Litter Fungi. Journal of Microscopy Society of Thailand. Vol. 22. pp. 56- 59.
29. Pachongchit P, Navikul O, Paopun Y, and **(Umroong)Umrung P**, 2007. microscopy techniques in germinated rice structure analysis. Journal of Microscopy Society of Thailand. 21:36-40.
30. P. Poochinya, O. Naivikul, Y. Paopun and **P. Umrung(Umroong)**. 2007. Microscopy Techniques in Germinated Rice Structure Analysis. Journal of Microscopy society of Thailand. Vol. 21(1) pp. 36-40.
31. Y. Paopun, P. Poochinya, **P. Umrung (Umroong)** and C. Kongpakdee. 2006. Electron Microscopic Techniques for Pollen Ornamentation of *Oryza sativa* L. In J. E. M.S. T. Vol. 20 No.1, pp. 233-234.

## CONFERENCE PRESENTATIONS

1. **Patcharee Umroong**, Dararat Changjan and Juthamanee Sangsawang. 2022. Comparative of the morphology and ultrastructure of Kaffir lime (*Citrus hystrix* DC.) leaves attacked by Citrus canker symptoms with microscopic techniques. pp.87-88. The Proceeding of the 39<sup>th</sup> International Conference of the Microscopy Society of Thailand, 29<sup>th</sup>- 31<sup>st</sup> March.
2. **Patcharee Umroong**, Yupadee Paopun, Yaovapa Aramsirujiwet. 2021. Ultrastructural Studies of *Ganoderma* cf. *Lucidum* cell by microscopic technique, pp. 90-91. The Proceeding of the 38<sup>th</sup> International Conference of the Microscopy Society of Thailand, 23<sup>rd</sup>- 26<sup>th</sup> March.



3. Dararat Changjan, **Patcharee Umroong.**, 2021, Double Staining Technique for Identifying Ultrastructure of *Citrus hystrix* DC Leaves, pp. 92-93, The Proceeding of the 38<sup>th</sup> International Conference of the Microscopy Society of Thailand, 23<sup>rd</sup>- 26<sup>th</sup> March.
4. **Patcharee Umroong**, Yupadee Paopun, Yaovapa Aramsirujiwet and Juthamane Sangsawang.2020. Techniques for Preparing Spores and Hyphae of *Schizophyllum commune* for Morphological Observation. The Proceeding of the 37<sup>th</sup> International Conference of the Microscopy Society of Thailand (MST37) February 26-28,2020, Kantary Hotel Korat, Nakhon Ratchasima,Thailand.pp 242-243. (Abstract)
5. **Patcharee Umroong** and Panumas Kotepong . 2019. Ultrastructure Studies of fungus *Colletotrichum gloeosporioides* cause of Anthracnose disease of mango by Microscope Technique. The Proceeding of the 36<sup>th</sup> International Conference of the Microscopy Society of Thailand, Bangkok, Thailand. pp 178 – 179. (Abstract)
6. **Patcharee Umroong.** 2018. Leaf Anatomy and Minimal Structure in Leaves of *Hydrocotyle umbellata* L., Obtained from Water Stress, were Examined under Electron Microscope and Light Microscope. The Journal of the Microscopy Society of Thailand. January-June 2018. (แหล่งทุน: สวพ.มก.)
7. **Patcharee Umroong.** 2017. Anatomical study of *Hydrocotyle umbellata* L. using technique Transmission Electron Microscopy and Light Microscopy. The Proceeding of the 34<sup>th</sup> Annual Conference the Microscopy Society of Thailand 31<sup>st</sup> May – 2<sup>nd</sup> 27 June, Bangkok, Thailand. pp. 196 –202. (Full paper) (แหล่งทุน: สวพ.มก.)
8. N. Kunagorn, C. Roopkam, **P. umroong** and N. Anukul. 2017. Meristem tip culture of Dendrobium orchid for boosting efficiency of hygienic large scale micropropagation. International Society for Horticultural Science. Acta Hortic. 1155. ISHS 2017. DOI 10.17660/ActaHortic.2017.1155.62 Proc. VI Int. Symp. On Production and Establishment of Micropropagated Plants Eds.: M. Beruto and E.A. Ozudogru. pp.419-424. (แหล่งทุน: สวพ.มก.)

9. **Patcharee Umrung (Umroong)**. 2016. The structure of *Pandanus amaryllifolius* Roxb. by optical Microscopy and transmission electron microscopy. The Proceeding of the 11<sup>th</sup> Asia-pacific Microscopy Conference and 33<sup>rd</sup> MST / 39<sup>th</sup> Anatomy Association –of Thailand Annual Conference 23-27 May, Phuket, Thailand.
10. **Patcharee Umrung (Umroong)** . 2015. Pericarp of Fruit, *Citrus aurantifolia*, observed using optimal microscopy and transmission electron microscopy. The Proceeding of the 8<sup>th</sup> AMC and 32<sup>nd</sup> MST Annual Conference 28-30 January, Nakhon Pathom,Thailand.
11. Wipada Siri-anusornsak, **Patcharee Umrung (Umroong)**.2015. Microscopic Study of *Chromolaena odorata* L. The Proceeding of the 8<sup>th</sup> AMC and 32<sup>nd</sup> MST Annual Conference 28-30 January, Nakhon Pathom,Thailand.
12. **Patcharee Umrung (Umroong)**. 2014. **Microscopic Study of Internal Anatomy of *Ruellia tuberosa* L. under Microscopic.** Journal of Microscopy Society of Thailand. Vol. 28(1) pp.33-35.
13. Krittaya Petchpoung,Khamjut Ruenreungdee,Siriwan Soiklom,Thanapoom Maneeboon, **Patcharee Umrung (Umroong)**, Win Surachetpong and Warapa Mahakarnchanakul.Toxicological Effects of Zearalenone to Immunological and Histological Changes of Vannamei Shrimp. The Proceeding of 51<sup>th</sup> Kasetsart University Annual Conference. Subject: Fisheries. P. 389-395. Kasetsart University. February 5-7, 2013.
14. Yupadee Paopun, **Patcharee Umrung (Umroong)**, PiyananThanomchat and SumitraPoovarodom. 2012. Cell Wall Structure of Translucent Cells of *Mangosteen* Fruit. Poster presentation delivered In Proceedings of the 7<sup>th</sup> International Symposium on Mineral Nutrition of Fruit Crops. 19-25 May, Chanthaburi, Thailand.
15. Yupadee Paopun, Piyanan Thanomchat and **Patcharee Umrung (Umroong)**. 2012. **Anatomical Studies of *Amomum villosum*Lour.** Poster presentation delivered In Proceedings of the 29<sup>th</sup> Annual conference Microscopy Society of Thailand. 30 January-1 February, Cha-am, Phetchaburi, Thailand.

16. Yupadee Paopun, **Patcharee Umrung(Umroong)** , PiyananThunomchat and Chimongkal Kongpakdee. 2011. **Epidermal Surface and Leaf Anatomy of *Thunbergia Laurifolia* Lindl. in Thailand.** In Proceedings of the 28<sup>th</sup> Annual Conference of the Microscopy Society of Thailand. 5-7 January. pp. 95-96. (Poster Presentation)
17. Yupadee Paopun, **Patcharee Umrung (Umroong)**, PiyananThunomchat. 2011. **Morphological Identification of *Thunbergia* Pollen Using SEM Technique.** In Thailand. In Proceedings of the 28th Annual Conference of the Microscopy Society of Thailand. 5-7 January. pp. 97-98. (Poster Presentation)
18. Yupadee Paopun, Pachongchit Poochinya and **Patcharee Umrung(Umroong)**. 2010. Pollen Morphology of *Turnera* in Thailand. In Proceeding of the 27<sup>th</sup> Annual Conference of The Microscopy Society of Thailand. 20 – 22 January.pp.65-66.
19. Pachongchit Poochinya, Yupadee Paopun, **Patcharee Umrung(Umroong)** Chimongkal Kongpakdee. 2010. Structure of Rice Starch Granules in Nanometer Scale as Revealed by Atomic Force Microscopy. In Proceedings of the 27<sup>th</sup> Annual Conference of The Microscopy Society of Thailand. 20-22 January.pp.67-68.
20. Nual-anong Narkkong, **Patcharee Umrung(Umroong)** and Yupadee Paopun. 2010. Ultrastructure of the Lingulid Spermatozoa: Comparison within Three Species in Gulf of Thailand. In Proceedings of the 27<sup>th</sup> Annual Conference of The Microscopy Society of Thailand. 20-22 January.pp.38-39.
21. Laka Manoch , Onuma Piasai , Tida Dethoup , Jitra Kokacw , Amnat Eamvijarn ,Sinngieaw Piriyaarin, Yupadee Paopun, Pachongchit Poochinya and **Patcharee Umrung(Umroong)**. 2009. Morphological studies of Slime Mold, Some Noteworthy *Sordariaceous* and *Synnemata* Fungi. In Proceedings of the 26<sup>th</sup> Annual Conference of The Microscopy Society of Thailand. 28-30 January.pp.125-126.
22. Anong. Chirapart and **Patcharee Umrung(Umroong)**. Adelphoparasitic and endophytic microbes in *Gracilaria salicornia* (C.Agardh) Dawson from Thailand. In Journal of 9<sup>th</sup> International Phycological Society. Tokyo, Japan 2-8 August 2009.pp.19.

23. Yupadee Paopun, Pachongchit Poochinya and **Patcharee Umrung(Umroong)**. 2009. **Application of Scanning Electron Microscope to study *Ruellia tuberosa* L. Pollen Morphology.** In Proceeding of the 26<sup>th</sup> Annual Conference of The Microscopy Society of Thailand.28 – 30 January.pp.57-58.
- 24.Pachongchit Poochinya, Onanong Naivikul,Yupadee Paopun , **Patcharee Umrung(Umroong)** and Chimongkal Kongpakdee. 2009. **Scanning Electron Microscope observation on Thai Glutinous Rice and Microwawe Cooking.** In Proceedings of the 26<sup>th</sup> Annual Conference of The Microscopy Society of Thailand. 28-30 January.pp.87-88.
25. Yupadee Paopun, **Patcharee Umrung(Umroong)**,Chimongkal Kongpakdee and Pachongchit Poochinya.2008. **Morphological Identification of *Gomphrena* Pollen Using SEM Technique.**In International Proceeding of 9<sup>th</sup> International Congress on Cell Biology. 7-10 October.pp.31-35. Korea
26. Yupadee Paopun, Pachongchit Poochinya, Patcharee Umrung(Umroong).2009.Application of Scanning Electron Microscope to Study *Ruellia tuberosa* L.Pollen Morphology. In Proceed.
27. Yupadee Paopun, Benchawon Chiwapreecha, Pachongchit Poochinya, **Patcharee Umrung(Umroong)** and Chimongkal Kongpakdee . 2008. Pollen of *Macania grandiflora* lmlay, Thai Endemic Plant. In Korean Journal of MicroscopyVol.38, No. 4 Supplement. pp. 176-177.
- 28.Yupadee Paopun, **Patcharee Umrung(Umroong)** , Chimongkal Kongpakdee and Pachongchit Poochinya 2008. Morphological Identification of *Gomphrena* Pollen Using SEM Technique. In International Proceeding of 9<sup>th</sup> International Congress on Cell Biology. 7-10 October. pp. 31-35.
- 29.Paopun Y., P.Poochinya, **P.Umrung(Umroong)** and C.Kongpukdee.2008. Pollen Morphology of *Gromphrena* in Thailand. In Confernece of Microscopy Society of Thailand. pp.65-66.
30. Manocch, L., A.Emvij,O.Jeamjitt,T.Dethoup,J.Kokaew,Y.Paopun, P.Poochinya, **P.Umrung(Umroong)**. 2008. SEM Study on some Noteworthy Leaf Litter Fungi. In Confernece of Microscopy Society of Thailand. pp. 22-23
31. Poochinya, P., O.Naivikul, Y. Paopun and **P.Umrung (Umroong)** 2008. Changes in Morpholoical of Rice Starch During Grain Development. In Confernece of Microscopy Society of Thailand. pp. 63-64

32. ผจจจิต ภูจิจญญณัณ ฎุพดี ฝ่ฝ่าพันธุ์ **พัชรี อ่ำรุง** และ ชัยมจกคค คคกักดี.2550. โฟกัสไซปริศนา. บนเส้ันทางงานวิจัย มหาวิตทยาลัยเกษตรศาสตรปี 2550. ในงานเกษตรแพร์์ ประจ่าปี 2550 ระหว่างวันที่ 26 มกราคม -3 กุมภาพันธ์ 2550. 2 หน้า.

## AWARD

1. 2020 Outstanding Personnel Award for Academic Support and Assistance of the Kasetsart University Research and Development Institute.
2. 2020 **Popular votes Award** 2020, Transmission Electron Microscope (TEM ): Smile Moon **Patcharee Umroomg** The 37<sup>th</sup> International Conference of the Microscopy Society of Thailand (MST37) February 26-28,2020, Kantary Hotel Korat, Nakhon Ratchasima,Thailand.
3. 2014 **1<sup>st</sup> Prize** Micrograph Contest Award 2014, Transmission Electron Microscopy in Biological Science: Ultrastructure of Lemon Leave. **Patcharee Umrung(Umroong)** The 31<sup>st</sup> Annual Conference of the Microscopy Society of Thailand January 29-31, 2014, Khao Yai, NaKhon Ratchasima.
4. 2013 **Honorable Prize** TEM Micrograph Contest Award Materials Science Rose soil **Patcharee Umrung(Umroong)** The 30<sup>th</sup> Annual Conference on Microscopy, January 23-25, 2013 Maneechan Resort,Chanthaburi, Thailand.
5. 2011 **3<sup>rd</sup> Prize** Poster Presentation Award: Bioscience Yupadee Paopun, **Patcharee Umrung (Umroong)** and Piyanan Thanomchat. 2011. Morphological Identification of *Thunbergia* Pollen Using SEM Technique. The 28<sup>th</sup> Annual Conference on Microscopy. 5-7 January, 2011.Chiang Rai, Thailand.
6. 2010 **1<sup>st</sup> Prize** Photo Contest Award 2010 Optical Micrograph in Biological Science: Pollen Germination **P. Umrung(Umroong)**. The 27<sup>th</sup> Annual Conference of the Microscopy Society of Thailand 20-22 January 2010, Surat Thani, Thailand.

7. 2009 **1<sup>st</sup> Prize** Micrograph Contest Award, Biological Science: SEM Fungi Spore Y. Paopun, P. Poochinya and **P. Umrung(Umroong)**. The 26<sup>th</sup> Annual Conference on Microscopy January 28-30, 2009 Chiang Mai, Thailand.
8. 2009 **2<sup>nd</sup> Prize** Micrograph Contest Award, Biological Science: SEM *Neosartorya* Species L. Manoch, A. Eamvijarn, O. Priasai, Y. Paopun, P. Poochinya and **P. Umrung(Umroong)**. The 26<sup>th</sup> Annual Conference on Microscopy January 28-30, 2009 Chiang Mai, Thailand
9. 2009 **Honorable Prize** Micrograph Contest Award Biological Science: TEM Bacteria **P. Umrung (Umroong)** The 6<sup>th</sup> Annual Conference on Microscopy, January 28-30, 2009 Chiang Mai, Thailand.
10. 2008 **Honorable Prize** Bioscience Poster Presentation Award 2008 Morphological Changes of Rice Starch During Grain Development P. Poochinya ,O. Naivikul, Y. Paopun and **P. Umrung (Umroong)** The 25<sup>th</sup> Annual Conference on Microscopy January 9-11, 2008 Phitsanulok , Thailand.
11. 2008 **3<sup>rd</sup> Prize** Micrograph Award 2008 SEM: Bioscience Rice Starch Pachongchit Poochinya, Yupadee Poapun, **Patcharee Umrung(Umroong)** and Chaimongkol Kongpukdee The 25<sup>th</sup> Annual Conference on Microscopy January 9-11, 2008 Phitsanulok , Thailand.
12. 2008 **Honorable Prize** Micrograph Award 2008 SEM: Bioscience Gromphrema Pollen Chaimongkol Kongpukdee, Yupadee Poapun, **Patcharee Umrung(Umroong)**, and Pachongchit Poochinya. The 25<sup>th</sup> Annual Conference on Microscopy. January 9-11, 2008. Phitsanulok, Thailand.