

AMYITA WITTY UGAP

CONTACT INFO

Industrial Crops Research Centre (IC)
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EDUCATION

- **MSc., Seed Technology (2008)**
Universiti Putra Malaysia (UPM), Serdang, Selangor - Thesis Title: Determination of Hydration Window for Cryopreservation of Three Citrus Species
- **BSc. (Hons.), Molecular Biology (Microbiology) (2000)**
Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor - Thesis Title: Pengkomposan Tertutup Skala Makmal Ke Atas Tandan Kosong Kelapa Sawit (TKKS) oleh Chaetomium globusum MR414

WORK HISTORY

- **Senior Research Officer, Pest & Disease Management Programme (IC3), Industrial Crops Research Centre (IC), MARDI (17 Sept 2019 – recently)**
- **Senior Research Officer, Agronomy and Production System Programme (IC2), Industrial Crops Research Centre (IC), MARDI (22 Aug 2019 – 16 Sept 2019)**
- **Senior Research Officer, Seed Production and Quality Verification Programme (GB2), Genebank and Seed Centre (GB), MARDI (June 2015 – 21 Feb 2016)**
 - *Seed testing and inspection of planting material in the field (paddy, vegetables, cash crop, fruits and banana tissue culture) and research on seed science and technology*
- **Research Officer, Quality Control Section, Planting Material, Seed and Livestock Breed Production Unit (UBB), MARDI (Nov 2008 – May 2015)**
 - *Seed testing and inspection of planting material in the field (paddy, vegetables, cash crop, fruits and banana tissue culture) and research on seed science and technology*
- **Research Assistant, Department of Crop Science, UPM, Serdang, Selangor (Jan – June 2008)**
 - *Assisted Dr. Uma Rani Sinniah in a project entitled "The Effect of Moisture and Temperatures on Storability of Wild Bananas"- Works include initiation of embryogenic callus and multiplication of embryogenic callus of banana.*
 - *Assisted in Dr. Uma Rani Sinniah's laboratory class: AGR4102-Seed Technology and HRT3002-Botany and Physiology of Horticultural Crops.*
- **Research Assistant, Department of Crop Science, Universiti Putra Malaysia, Selangor, (July 2003 – June 2005)**
 - *Assisted in a second collaboration project between UPM (Dr. Uma Rani Sinniah), IRD (Dr. Stephane Dussert) and IPGRI. - Works include quantification of seed tolerance to desiccation in ten Citrus species and lipid extraction.*

- *Assisted Dr. Uma Rani Sinniah and other research assistant in conserving seeds of king palm, rattan and oil palm. - Works include conservation of seeds using different cryopreservation methods and observation of seed development and germination.*
- **Research Assistant (for Korean Visiting Scientist), International Plant Genetic Resources Institute, Regional Office for Asia, The Pacific and Oceania, Serdang, Selangor (October 2000 – June 2003)**
 - *Assisted Dr. Cho Eun-Gi (Oct. 2000-June 2001) in a collaboration project between UPM (Assoc. Prof. Dr. Hor Yue Luan) and UKM (Prof. Dr. Normah Mohd Noor) entitled "Conservation of Citrus Genetic Resources - Studies on seed tolerance to desiccation and freezing". - Works include development of cryopreservation techniques for long term conservation of seeds and embryos of *C. madurensis*.*
 - *Assisted Dr. Kim young-Jin (July 2001-June 2003) in a project entitled "Tissue Culture and Conservation of Pomelo". - Works include establishment of clean clonal materials from field grown mature trees, development of micropropagation and regeneration system, and development of cryopreservation technique for long term conservation of *C. grandis* genetic resources.*
 - *Involved in a collaboration project between UPM (Assoc. Prof. Dr. Hor Yue Luan), IRD, France (Dr. Stephane Dussert) and IPGRI (Dr. Kim Young-Jin) entitled "The Hydration Window for Cryopreservation of 8 Citrus Species as a Model Species". - Tasks include determination of high limit and low limit of moisture content of 8 citrus species seeds, to have better understanding on characteristics of intermediate lipid rich seeds, and development of general genetic conservation protocol for intermediate lipid rich seeds.*
 - *co-author to a journal published in Annals of Botany entitled "Optimal Hydration Window for Cryopreservation: Citrus as A Model Species"*
- **Research Assistant, Department of Biochemistry, Universiti Kebangsaan Malaysia, Bangi, Selangor (April – September 2000)**
 - *Assisted Dr. Nik Marzuki to developed recombinant DNA library of *Capsicum annum*. - Works include extraction of DNA using large scale methods and recombination of DNA.*

HONORS AND AWARDS

- Malaysian Agriculture Innovation Challenge. 2015. (Knowledge Category - Bronze Medal). *Development of Seed Keys for Varietal Identification in Current Malaysian Rice Variety Using Chemical Test: Easy, Quick and Reliable (as a Collaborator).*
- MARDI Science and Technology Exhibition. 2015. (Knowledge Category - Bronze Medal). *Development of Seed Keys for Varietal Identification in Current Malaysian Rice Variety Using Chemical Test: Easy, Quick and Reliable (as a Collaborator).*
- MARDI Science and Technology Exhibition. 2015. (Knowledge Category - Bronze Medal). *Seed Mass and Anatomy - Key Indicators for Seed Viability of Eksotika II Papaya Uncovered (as a collaborator)*
- MARDI Science and Technology Exhibition. 2015. (Knowledge Category - Silver Medal) *(as a collaborator)*
- Malaysian Agricultural Innovation Challenge (MAGIC), 6-8 November 2014, MAEPS, Serdang, Selangor. (Knowledge Category - Bronze Medal). *Q2 Analysis: A Rapid Determination of Seed Quality.*
- MARDI Science and Technology Exhibition (MSTE), 17-19 December 2013, Hall D, MAEPS Serdang, Selangor. (Knowledge Category - Bronze Medal). *Enhancement of Seed Quality and Traceability Using Coating Technology.*

PUBLICATIONS

Journals

- Nur Azura, M.S., Zamri, I., Rashid, M.R., Mohd Shahrin, G., Rafidah, A.R., Mohammad Rejab, I., Azima, A., Suria, M.S. and **Amyita, W.U.** 2017. Evaluation of nanoparticles for promoting seed germination and growth rate in MR263 and MR269 paddy seeds. *Journal of Tropical Agriculture and Food Science* 45(1): 13–24.
- Hor Yue Luan, Kim Young-Jin, **Amyita Witty Ugap**, Nathalie Chabrilange, Uma Rani Sinniah, Florent Engelmann and Stephane Dussert. 2005. Optimal Hydration Status for Cryopreservation of Intermediate Oily Seeds: Citrus as a Case Study. *Annals of Botany* 95(7): 1153–1161.

Articles

- Mohd Aziz R., Haryati M., Fauzi J., **Amyita Witty U.** and Eddy Herman S. 2016. The effects of Biovit on plant growth parameters and leaf physiological characteristics of rice (*Oryza sativa* L.). Technical Report 2015 - Crop & Soil Science Research Centre. Pp. 238-242
- Nur Azura Mohd Said, Rafidah Abd Rahman, Rashid Mat Rani, Mohd Shahrin Ghazali, Zamri Ishak & **Amyita, W.U.** 2016. Effects of Selected Nanoparticles towards Germination and Growth Rate in Tomato Seeds. *9th National Seed Symposium*.
- Nur Azura Mohd said, Zamri Ishak, Rashid Mat Rani, Muhammad Shahrin Ghazali, Mohammad Rejab Ismail, Rafidah Abd Rahman, Azima Azmi, Suria Mohd Saad and **Amyita Witty Ugap**. 2015. RNA Extraction Optimization in Paddy Seeds: Overcoming the Starch Problems. *40th Annual Conference of the Malaysian Society for Biochemistry & Molecular Biology*.
- **Amyita Witty Ugap**. Effects of Polymer Coating on Rice Seed germination. 2016. *Trans. Malaysian Society of Plant Physiology* 23: 88-.
- Mohd Shaib Jaafar, **Amyita Witty Ugap** and Mohd Nizam Zubir. 2016. Study on Attributes of Carica papaya cv Eksotika2 for Quality Improvement. *Trans. Malaysian Society of Plant Physiology* 23: 83-87.
- Mohd. Nizam Zubir, **Amyita Witty Ugap** and Mohd Shaib Jaafar. 2016. Effects of Hormonal and Halo Priming Treatments on papaya (*Carica papaya* cv. Eksotika) Seed Germination. *Trans. Malaysian Society of Plant Physiology* 23: 74-79.
- **Amyita Witty Ugap**, Mohd Shaib, J., Zaitialia, M. and Mohammed Selamat, M. 2015. Improvement of *Arachis hypogaea* var Margenta Seed Vigour by Hydropriming. *Trans. Malaysian Society of Plant Physiology* (Vol. 22)
- Zamri Ishak, Nur Azura Mohd Said, Rashid Mat Rani, Muhammad Shahrin Ghazali, Azima Azmi, Suria Mohd Saad, Zamri Ishak, Azami Adam dan **Amyita Witty Ugap**. 2015. Use of Nano Materials as a Possible Technology for Improvement of Seeds Quality. *Trans. Malaysian Society of Plant Physiology* (Vol. 22)
- **Amyita Witty Ugap**, Mohd Shaib Jaafar and Zaitialia Mohlisun. 2015. Kawalan Kualiti Biji Benih Bagi Peningkatan Hasil Tanaman. *Persidangan Kebangsaan Pemindahan Teknologi (Confertech)*.
- Rafidah Abd Rahman Nur Azura Mohd Said, Rashid Mat Rani, Muhammad Shahrin Ghazali, Azima Azmi, Suria Mohd Saad, Zamri Ishak, Azami Adam dan **Amyita Witty Ugap**. 2015. Nanosalutan biji benih: Teknologi, impak dan cabaran terhadap industri pertanian negara. *Buletin Teknologi MARDI* 8: 51–55.
- Zaitialia Mohlisun, **Amyita Witty Ugap**, Mohd Shaib Jaafar, Khairun Hisan N., Mohd. Nuradha P. and Mohammed Selamat M. 2014. Effect of Microgravity Exposure on MC11 Chilli Seed. *8th National Seed Symposium*

- **Amyita Witty Ugap**, Mohd Shaib Jaafar, Zaitialia Mohlisun, Mohammed Selamat Madom and Uma Rani Sinniah. 2014. Effects of Drying Methods on Groundnut (*Arachis hypogaea* var. Margenta) Seed Longevity. *Agrobiodiversity in Asia*.
- **Amyita Witty Ugap** and Uma Rani Sinniah. 2014. Conservation of Three Citrus Species Seeds in Liquid Nitrogen After Drying. *Agrobiodiversity and Agroenvironment Symposium (A-BES)*.
- Mohd Shaib Jaafar, Zaitialia Mohlisun, **Amyita Witty Ugap**, Mohd Najib Mohd Yusof dan Zulkefli Malik. 2013. Kajian kualiti biji benih organik padi MRQ 74. *Prosiding Persidangan Padi Kebangsaan*
- **Amyita Witty Ugap**, Mohd Shaib Jaafar, Zaitialia Mohlisun, Mohammed Selamat Madom and Uma Rani Sinniah. 2012. The Effects of Drying Methods on Groundnut (*Arachis hypogaea* Var. Margenta) Seed Longevity. *1st Regional Conference on Agrobiodiversity Conservation and Sustainable Utilization (RAC-1)*
- **Amyita Witty Ugap**, Mohd Shaib Jaafar, Mohammed Selamat Madom and Johan Van Asbrouck. 2012. 'Drying Beads'- A New Technology for Seed Drying. *Agromedia*
- **Amyita Witty Ugap** and Uma Rani Sinniah. 2010. The safe water content range for cryopreservation of *Citrus madurensis* seed. *2nd National Conference on Agrobiodiversity and Sustainable Utilization*.
- **Amyita Witty Ugap**, Uma Rani Sinniah, Maheran Abdul Aziz and Nashatul Zaimah Noor Azman. 2008. The Freezing Characteristics of *Citrus madurensis* Seeds: Effectiveness of Two Thermal Analyses to Determine the Unfreezable Water Content. *5th National Seed Symposium: Current Trend toward Quality Planting Materials*.
- **Amyita Witty Ugap** and Uma Rani Sinniah. 2004. Effect of Different Desiccation Methods on The Survival of *C. grandis* and *C. madurensis* Seeds in Liquid Nitrogen. *Agriculture Congress: "Innovation towards Modernized Agriculture"*.
- Hor Yue Luan, Wilhelmin Gunsalam, Ken Tze Hui and **Amyita Witty Ugap**. 2003. Potential for Cryopreservation of Three Rattan Species in Liquid Nitrogen. *3rd National Seed Symposium: "Prospects and Opportunities"*.

Posters

- **Amyita Witty Ugap**, Johan Van Asbrouck, Selvan s/o Selvakumaran and Zaitialia Mohlisun. Q2 Analysis: A Rapid Determination of Seed Quality. Malaysian Agricultural Innovation Challenge (MAGIC), 6-8 November 2014, MAEPS, Serdang, Selangor.
- **Amyita Witty Ugap**, Mohd Shaib Jaafar, Zaitialia Mohlisun, Mohammed Selamat Madom, Mohd Rashid Rani, Selvan s/o Selvakumaran and Johan Van Asbrouck. Enhancement of Seed Quality and Traceability Using Coating Technology. *MARDI Science and Technology Exhibition (MSTE)*, 17-19 December 2013, Hall D, MAEPS Serdang, Selangor.
- Kawalan Kualiti Pengeluaran Biji Benih Bagi Peningkatan Produktiviti Tanaman. Hari Peladang, Penternak dan Nelayan Kebangsaan (HPPNK), 7-16 November 2013, Kuantan, Pahang.
- Potensi Teknologi Penyalutan Dalam Pengeluaran Biji Benih Berkualiti. Hari Peladang, Penternak dan Nelayan Kebangsaan (HPPNK), 7-16 November 2013, Kuantan, Pahang.
- Teknologi Drying Beads untuk Pengeringan dan Penyimpanan Biji Benih. Hari Peladang, Penternak dan Nelayan Kebangsaan (HPPNK), 7-16 November 2013, Kuantan, Pahang.
- Zaitialia Mohlisun, **Amyita Witty Ugap**, Mohd Shaib Jaafar, Khairun Hisan N., Mohd. Nuradha P. and Mohammed Selamat M. Effects of Microgravity Exposure on Seed Germination and Growth in MC11 Chilli Plants. ASIAN Pacific Regional Space Agency Forum Malaysia, 11-14TH December 2012, Berjaya Times Square Hotel, Kuala Lumpur.
- **Amyita Witty Ugap** and Uma Rani Sinniah. 2007. Survival of *Citrus grandis* and *Citrus madurensis* Seeds in Liquid Nitrogen after Desiccation Using Different Methods. *ISSAAS International Congress*.

- Uma Rani Sinniah, Sreeramanaan Subramaniam, **Amyita Witty Ugap** and Zaitialia Mohlisun. 2007. The Effect of Preculture on Survival of Cryopreserved Zygotic Embryonic Axes of King Palm (*Archonthonpoenix alexandrea* L.). *ISSAAS International Congress*.

CONFERENCES AND SEMINARS

- ❖ Kursus Pengeluaran dan Pengesahan Benih Padi (Brunei), 23 Feb - 1 Mac 2015, Seberang Perai, Pulau Pinang. (**Oral presenter and demonstrator**).
- ❖ Kursus Pengenalan dan Peluang Industri Pengeluaran Biji Benih Tanaman, 20 Mei 2014, SAIP, Kimanis, Papar, Sabah. (**Oral presenter and demonstrator**).
- ❖ Seminar Teknologi Biji Benih. (**Participant**).
- ❖ ITPGRFA Seminar. (**Participant**).
- ❖ 8th National Seed Symposium, 29-30 April 2014, Palm Garden Hotel, IOI Resort Putrajaya. (**Poster presenter**).
- ❖ 5th National Seed Symposium: Current Trend toward Quality Planting Materials, 11-12th March 2008, Renaissance Palm Garden Hotel, Putrajaya. (**Poster presenter**).
- ❖ ISSAAS International Congress, 12-14th December 2007, Melaka. (**Poster presenter**).
- ❖ Agriculture Congress: "Innovation towards Modernized Agriculture", 4-7th October 2004, Malaysia International Exhibition and Convention Centre (MIECC), Seri Kembangan, Selangor. (**Poster presenter**).
- ❖ 3rd National Seed Symposium, 8- 9th April 2003, Renaissance Palm Garden Hotel, Putrajaya. (**Participant**).

TRAINING AND COURSES

- Pengujian Pengguna FAT Sistem Agrobis, Bilik Latihan ICT, MARDI HQ, Serdang, 7 Jan 2016
- MARDI-Suriana Botanic Conservation Garden Intellectual Discourse, Dewan Kuliah Utama, Pusat Latihan MARDI, MARDI HQ, Serdang, 4 Sept 2015
- Seed Testing Course (Kursus Pengujian Biji Benih), Bilik Mesyuarat, MyGenebank & Makmal Kawalan Kualiti, MARDI HQ, Serdang, 10 – 13 Aug 2015
- Strengthening Malaysia-FAO Partnership Workshop, Auditorium, MARDI HQ, Serdang, Selangor, 18 Mac 2015
- Bengkel Pengujian FAT MyGenebank, Bilik Latihan ICT, MARDI HQ, Serdang, 21 Nov 2014
- Bengkel Pengujian (UAT) Sistem MyGenebank, Bilik Latihan ICT, MARDI HQ, Serdang, 21 Oct 2014
- Kursus Pengenalan Dan Pengendalian Alat Videometerlab, UBB MARDI, Serdang, Selangor, 29 – 30 Sept 2014
- Kursus Pengendalian Racun Perosak bagi Tanaman Terpilih, UBB MARDI, Serdang, Selangor, 25 Sept 2014
- Basic Maintenance and Analytical Analysis of Q2 System Course, UBB MARDI, Serdang, Selangor, 19 – 20 June 2014
- Bengkel Latihan Kefahaman Asas Kumpulan Kreatif Dan Inovatif (KIK) MARDI, Pusat Latihan FAMA, Port Dickson, Negeri Sembilan, 16 – 18 April 2014
- Latihan Pengguna Untuk Portal MyGeneBank, Bilik Latihan ICT, MARDI HQ, Serdang, Selangor, 10 Mac 2014
- Bengkel Refresher Sistem PROPER MARDI, MARDI HQ, Serdang, Selangor, 25 Feb 2014
- Seed Handling Course (Kursus Pengendalian Biji Benih), Shah Alam, Selangor, 8 July 2013
- Seed Treatment & Coating Technology Course, UBB MARDI, Serdang, Selangor, 1 – 2 July 2013

- Fungi Identification Through Molecular Technique Workshop (Bengkel Pengecaman Kulat Melalui Teknik Molekular, Makmal Mikrobiologi, Blok G), MARDI HQ, Serdang, Selangor, 26 – 27 June 2013
- Writing Workshop (Bengkel Penulisan Pegawai Penyelidik Unit Pengeluaran Bahan Tanaman, Biji Benih dan Baka Ternakan), MARDI Station, Cameron Highlands, Pahang, 23 – 24 June 2013
- Plant Breeding and Seed Production Training Course (Phase 2), Kandy, Sri Lanka, 12 – 23 Mac 2012
- Kursus Rundingan Berkesan dan Pengurusan Strategik Dasar Awam, The Regency Hotel, Kuala Lumpur, 13 – 15 July 2012
- Plant Breeding and Seed Production Training Course, SLU, Alnarp, Sweden, 5 – 30 Sept 2011
- Seed Captain Program Training (Modul 2: Seed Drying and Storage), Palm Garden Hotel IOI Resort, Putrajaya, 22 – 26 Nov 2010
- Seed Captain Program Training, Kasetsart University, Bangkok, Thailand, 28 June – 2 July 2010

SKILLS

Skills	Years practiced	Proficiency
☞ Microsoft Office, Windows and Internet	9	Advanced
☞ SAS	2	Intermediate
☞ SPSS	1	Beginner
☞ Statistica	2	Beginner
☞ Differential Scanning Calorimetry (DSC)	2	Intermediate
☞ Differential Thermal Analysis (DTA)	2	Intermediate
☞ Cryopreservation	6	Advanced
☞ Tissue Culture	3	Intermediate
☞ Lipid Extraction	1	Beginner

MEMBERSHIPS / AFFILIATIONS

National Seeds Association Malaysia (NSAM)
 Malaysian Society of Plant Physiology (MSPP)
 UPM Alumni

REFERENCES

References available upon request.