



NATURAL PRODUCTS INSTITUTE

Prof. Rupika Delgoda Director

D.Phil. (Oxon), B.Sc. (Hons.)

OVERVIEW

NPI was very pleased to welcome a new academic member of staff, Dr. Ina Vandebroek, who had been a long standing collaborator based at the New York Botanical Gardens. As a highly respected ethnobotanist, Dr. Vandebroek continues her research on Caribbean biodiversity at NPI, while overseeing the herbarium and teaching commitments at the Department of Life Sciences.

This academic year also saw UWI hosting the joint international conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE). This hybrid conference hosted 200 participants with 130 visitors face to face from over 30 countries. The conference organizing committee was chaired by Dr. David Picking with extensive support from Dr. Ina Vandebroek and other academic and administrative colleagues from the Faculty (see more details below). Drs. Picking and Vandebroek were the recipients of the President's Award from the SEB for their outstanding service. Other awards during the year included the Anthony N Sabga award for Science and Technology (R. Delgoda).

Strengthened by two new technical staff members (Mr. T Babumon and Ms. L. Wilson), staff and students at NPI engaged in several new projects while also continuing existing research projects. Publication output, grants attracted, conference participation, particularly as keynote speakers, as well as outreach through academic and public fora increased this year.

ACCESS

STUDENTS

Two PhD candidates, **Foster K, Morrison I**, successfully defended their

PhD thesis during this academic year, with the latter receiving a PhD with high commendation (see details below). MPhil thesis submitted by **Wauchope S** has been examined and is expected to be finalized by the end of this academic year. Two others, **Stewart K and Frank C**, are continuing research, while one other, **Richards R**, terminated his newly initiated MPhil for a scholarship offer to commence an MBBS program. Multiple undergraduate researchers and overseas graduate students were supervised by staff over the year.

-Foster K, "Assessing the use of local medicinal plants in the treatment of cancer and the cytotoxic value of *Annona muricata*", December, 2021 (supervised by **R. Delgoda**).

-Morrison I, "Assessment of chemopreventive and anti-cancer value of *Artocarpus heterophyllus* Lam, in colorectal cancer", June 2022 (supervised by **R. Delgoda**)

PUBLICATIONS-(9 total: 7 journal articles, 1 book chapter, 1 edited volume; 10 abstracts)

Peer reviewed journal articles

1. Ahmed O, Attallah K, **Delgoda R**, Benkeblia N "Profiling of Primary Metabolites of Governor's Plum *Flacourtia indica* (Burm.f.) Merr. at Two Different Ripe Stages," *Journal of Tropical Agricultural Science*. (2022) IF = 0.086
2. Moghayedi A, Kapanji-Kakoma KK, Owoade FM, Richter I, Kaliyadasa E, **Francis S**, Ekpo C. Effects of Urban Smart Farming on Local Economy and Food Production in Urban Areas in African Cities. *Sustainability* 2022,14, 10836, doi.org/10.3390/su141710836, IF = 3.89
3. Wooten J, Mavingire N, Araújo CA, Aja J, **Wauchope S, Delgoda R**, Brantley E., "Dibenzyl trisulfide induces caspase-independent death and lysosomal membrane permeabilization of triple-negative breast cancer cells," *Fitoterapia* 2022, Jul;160:105203, doi.org/10.1016/j.fitote.2022.105203, IF = 2.88
4. Vardeman E, **I. Vandebroek**. Caribbean Women's Health and Transnational Ethnobotany. *Economic Botany* 2022;76(2):205-226. doi.org/10.1007/s12231-021-09526-3, IF = 1.73
5. Khattar J, Calvo P, **I. Vandebroek**, Pandolfi C, Dahdouh-Guebas F. Understanding interdisciplinary perspectives of plant intelligence: Is it a

matter of science, language, or subjectivity? *Journal of Ethnobiology and Ethnomedicine* 2022, 18: 41, <https://doi.org/10.1186/s13002-022-00539-3>, IF = 3.007

- Clarke N. & Irvine W. (May 2022). In silico design and SAR study of dibenzyl trisulfide analogues for improved CYP1A1 inhibition. *ChemistryOpen*, 11(5). <https://doi.org/10.1002/open.202200016>, IF = 2.63.
- Albuquerque UP, Ferreira Júnior WS, Vandebroek I, Bussmann RW, Paniagua-Zambrana NY, Ladio AH, Voeks R, Melo F, Jacob MCM, Gonçalves-Souza T, Lopes AV, Soldati GT. A Reply to Pierotti's (2018) Review of "Evolutionary Ethnobiology": Decolonizing Latin American Science. *Ethnobiology Letters* 2021, 12: 79-81, <https://doi.org/10.14237/ebl.12.1.2021.1763>.

Book chapters

- Spence D, Grant D, Brown K, Picking, D, Smith S (2022) "Jamaican Cultural and Spiritual Guidance in Caring for Cancer Patients" in "Global Perspectives in Cancer Care: Religion, Spirituality, and Cultural Diversity in Health and Healing," Silbermann, M. and Berger, A. (Eds.), Oxford University Press, Oxford. DOI: 10.1093/med/9780197551349.003.0045

Edited volumes

- Pieroni A, Fontefrancesco MF, I. Vandebroek (Eds.) (2021). Traditional Food Knowledge: New Wine Into Old Wineskins? Edited volume for *Frontiers in Sustainable Food Systems, Section Institutions, Social Movements and Governance*. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88971-831-3, IF = 4.49

Abstracts

- Frank C, Delgoda R, Francis S. Investigating the use of natural extracts of Piperaceae in control of adult *Aedes aegypti* mosquitoes. Forecast 2022 Virtual Conference, Science & Technology, p38. UWI FST-UTECH, Jamaica. (10-12 August, 2022).
- Vardeman E, I. Vandebroek, Kennelly E. Ethnopharmacology of *Argemone mexicana* L. for Caribbean Women's Health. American Society of Pharmacognosy Conference abstract, Charleston, SC (23-28 July 2022).

3. **Foster K, Chen K and Delgoda R (2022)**. "Annona muricata extracts abrogate docetaxel induced cytotoxicity in normal prostate cancer cells", Abstract for the Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022).
4. **Foster K., Morrison I, Tyler M and Delgoda R (2022)**, "Investigating the impact of light on growth and tryptamine content of *Psilocybe cubensis* mushrooms", Abstract for the Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022)
5. Vardeman E, **I. Vandebroek**, Kennelly E (2022) Ethnopharmacology of medicinal plants for Caribbean women's health. Abstract for the Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022).
6. Abuali J, Vardeman E, **I. Vandebroek**, Kennelly E (2022) Ethnopharmacology of Bejuco de Indio (*Gouania lupuloides*), a Caribbean Medicinal Plant Used for Oral Health Throughout the Caribbean. Abstract for the Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022).
7. **Stewart K, Frank C, Lindo R, Francis S.** (2022). Therapeutic Botanicals Application in Reducing Dengue Transmission and Other Aedes-borne Diseases. Poster for the Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022).
8. Elmegeherhi S, Lian E, Ramirez G, McAlister D, Patlin B, Gary H, St. Clair L, Guenther C, **Delgoda R**, Tobet S, Podell B and Perera R. Innovative Platforms for Evaluating Therapeutic Interventions for viruses of pandemic potential – exploiting metabolic synergy, Positive Strand RNA virus meeting, Keystone, Colorado (18-22 July, 2022).
9. **Delgoda R, Elmegeherhi S, Irvine W, Picking D, Francis S** and Perera R, "Evaluating the potential of Jamaican ethnomedicine in combating infectious diseases", the 21st Annual Rocky Mountain Virology Meeting, Viruses, 2021 Nov 29;13(12):2392. Pingree Park, Colorado (Oct 1-3, 2021). Invited Keynote speaker.
10. Elmegeherhi S, Lian E, Ramirez G, McAllister C, St. Claire L, Guenther CS, **Delgoda R** and Perera R. Developing platforms to test antivirals against SARS-CoV-2", the 21st Annual Rocky Mountain Virology Meeting, Viruses, 2021 Nov 29;13(12):2392. Pingree Park, Colorado (Oct

1-3, 2021).

Non technical publications

Compiled and edited a 75-page abstract book for the joint congress of the Society for Economic Botany and the International Society of Ethnobiology held at The UWI Mona, 31 May-2 June 2022 (I. Vandebroek, D. Picking)

ALIGNMENT

ACADEMIC AND PUBLIC PRESENTATIONS (International and local)

1. **Delgoda R, Elmegeghi S, Irvine W, Picking D, Francis S** and Perera R, "Evaluating the potential of Jamaican ethnomedicine in combating infectious diseases", the 21st Annual Rocky Mountain Virology Meeting, Viruses, 2021 Nov 29;13(12):2392. Pingree Park, Colorado (Oct 1-3, 2021). Invited Keynote speaker.
2. Elmegeghi S, Lian E, Ramirez G, McAlister D, Patlin B, Gary H, St. Clair L, Guenther C, **Delgoda R**, Tobet S, Podell B and Perera R. Innovative Platforms for Evaluating Therapeutic Interventions for viruses of pandemic potential – exploiting metabolic synergy, Positive Strand RNA virus meeting, Keystone, Colorado (18-22 July, 2022).
3. **R. Delgoda**. Probing Jamaica's medicine chest. Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica (31 May - 2 June 2022). Invited Keynote speaker.
4. Presentation at NAJASO and SUNY-UWI Health Research Consortium (**W. Irvine**)
5. Power 106 FM - Farm Talk. Discussing Guinea Hen Weed, its uses and research. July 4, 2022 (**D. Picking**)
6. On Campus Radio interview about the joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE) at The UWI Mona, May 2022 (**I. Vandebroek, D. Picking**)
7. Invited Panellist Speaker, 1st Pan-American Congress of Medicinal Plants and Integrative Health. Title of presentation: "Medicinal plants in Public Health - Jamaica." Held online 4-7 April 2022 (<https://pan-plantasmedicinalis.com.br/>) (**D. Picking**)
8. Invited Panellist Speaker, 1st Pan-American Congress of Medicinal Plants and Integrative Health. Title of presentation: "Towards a Pan-American Pharmacopoeia of Native Plants." Held online 4-7 April

- 2022 (<https://panplantasmedicinais.com.br/>) (**D. Picking**)
9. Nation-wide radio interview, Jan 21, 2022 (**R. Delgoda**)
 10. TV program on Anthony N Sabga Laureates, Jan 20, 2022, TVJ (**R. Delgoda**)
 11. Official presentation of the Anthony N Sabga Award for 2021 laureates (King's House), Oct 28, 2021 (**R. Delgoda**)
 12. Invited Panelist Speaker, XV World Forestry Congress, Seoul, Republic of Korea. Title of presentation: "Forests for local and transnational health and cultural well-being: A Caribbean perspective," 2-6 May 2022 (**I. Vandebroek**)
 13. Introduced four keynote speakers and opened the Social Justice Working Group Discussion of ADIE, the Alliance for Diversity, Equity and Inclusion in Ethnobiology during the joint congress of the Society for Economic Botany and the International Society of Ethnobiology held at The UWI Mona, 31 May-2 June 2022 (**I. Vandebroek**)
 14. The Herbal Spot, a podcast interview with Dr. Sonia Peter from the Biocultural Education and Research Programme (Barbados), June 2022: https://youtu.be/G33iu_hGieo (**I. Vandebroek**)
 15. News Talk 93FM and RJR Radio interview on Jamaican Medicinal Plants & the TRAMIL Network, August 2021 (**D. Picking**)

Peer Review Activities

- Economic Botany (**I. Vandebroek**)
- Frontiers in Sustainable Food Systems (**I. Vandebroek**)
- Journal of Ethnobiology and Ethnomedicine (**I. Vandebroek**)
- UWI Press (**I. Vandebroek**)
- EcoHealth. (**S. Francis**)
- Journal of Medical Entomology. (**S. Francis**)
- PLOS ONE (**S. Francis, I. Vandebroek**)
- Journal of International Medical Research. (**S. Francis**)
- Asian Pacific Journal of Tropical Medicine. (**S. Francis**)
- Journal of Medical Entomology (**S. Francis**)
- Cancer causes and control. (**R. Delgoda**)
- UNESCO - Encyclopedia of Life Support Systems (EOLSS) (**D. Picking**)
- Journal of Ethnopharmacology (**D. Picking**)

Conferences/Workshops attended

- CARIFORUM Webinar. Protecting Plant Genetic Resources, TK & Folk-

- lore. Online attendance. September 20, 2022 (**D. Picking**)
- American Botanical Council (ABC) Sustainable Herbs Program Webinar. "Partnerships in Supporting Botanical Supply Networks." Online attendance. September 15, 2022 (**D. Picking**)
 - Forecast 2022 Virtual Conference, UWI FST-UTECH. Online attendance August 10-12, 2022 (**Picking, D; Frank, C; Delgoda, R; Stewart, K; Francis, S**)
 - Jamaican Organic Agricultural Movement (JOAM) - Inaugural 'Farming as a Business Conference,' UTECH, Kingston, Jamaica. Attended July 4, 2022 (**D. Picking**).
 - Joint conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), The UWI Mona, Jamaica. 31 May - 2 June 2022 (**R. Delgoda; K. Foster; S. Francis; C. Frank; W. Irvine; I. Morrison; D. Picking; K. Stewart; I. Vandebroek**)
 - Hosted a special seminar entitled, "Evolution of chemical diversity in Fungi" by Professor Jason Slot, Ohio State University at the Faculty and online, March 1, 2022 (**R. Delgoda**).
 - Bioneers Conference, online attendance. November, 11-13, 2021. (**D. Picking**)
 - FairWild Supply Chain Webinar, online attendance, November 10, 2021. (**D. Picking**)
 - American Botanical Council (ABC) - Botanical Supply Chain Quality Control Webinar, online attendance. November 4, 2021. (**D. Picking**)
 - Psychedelic Society, Psilocybin London Symposium,, online attendance. October 15, 2021. (**D. Picking**)
 - American Type Culture Collection (ATCC). "Cell Culture Fundamentals" – presenter Steve Budd. October 14, 2021. (**R. Smith**)
 - Kew Gardens & University of Kent Distinguished Ethnobotanist Lecture, , online attendance. October 12, 2021. (**D. Picking, I. Vandebroek.**)
 - Climate Change and Health in Small Island Developing States: Focus on the Caribbean. Online attendance. October 5 - 8, 2021. (**S. Francis**)
 - Workshop and training on virology (Chik-V, Dengue Viruses) at the Department of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, Colorado, October 4-7, 2021 (**R. Delgoda**)
 - The 21st Annual Rocky Mountain Virology Meeting, Oct 1-3, 2021, Pingree Park, Colorado. Invited Guest speaker (**R. Delgoda**)

Teaching commitments

- Economic Botany (BOT3404): Department of Life Sciences (**D. Picking**)

- Pharmacognosy (PHAR3031): Department of Basic Medical Sciences (**D. Picking**)
- Coordination and Control in Animals (ZOOL2404): Department of Life Sciences (**S. Francis**)
- Advanced Biochemistry (BC34B): Department of Basic Medical Sciences (**R. Delgoda**)
- Principles of Ecology (BIOL2403): Department of Life Sciences (**I. Vandebroek**)
- Traditional Knowledge and Agrobiodiversity in the Caribbean (MOGW-FCM): Master of Gastronomy - World Food Cultures and Mobility, University of Gastronomic Sciences, Bra, Italy. Module taught in English to international students (June 2022) (**I. Vandebroek**)

PUBLIC SERVICE

Rupika Delgoda

- Deputy Chair, Natural History Museum of Jamaica
- Member, Steering Committee, National Nutraceutical Industry, Jamaica
- Trustee, Jamaica Conservation Partners
- Member African Caribbean Cancer Consortium
- Member American Society for Pharmacognosy
- Member, International Society for the Study of Xenobiotics
- Coordinator, Field Trip Natural Products, Jamaica

Sheena Francis

- Member Rearing and Evaluation of *Aedes aegypti* for Sterile Insect Technique Jamaica
- Member of the International Membership Committee (ICM) of ASTMH 2021
- Member, American Society of Tropical Medicine and Health
- Board Member, Caribbean Diaspora for Science, Technology and Innovation (CADSTI)
- Organiser for Sagikor Visionaries Competition Member, Caribbean Academy of Sciences
- Member, Jamaica Organic Agriculture Movement
- Jamaican Young Scientist Forum

Vandebroek (monthly/quarterly duties)

- Editor-in-Chief, Economic Botany
- Guest Associate Editor, *Frontiers in Sustainable Food Systems*, Section Social Movements, Governance and Institutions. Topic Editor, *Traditional Knowledge in Food Activism and Governance*
- Deputy Editor, *Journal of Ethnobiology and Ethnomedicine*
- Editorial Board Member, *Checklist in Ethnobiology*
- Editorial Board Member, *Ethnobiology and Conservation*
- Member, Alliance for Diversity and Inclusion in Ethnobiology (ADIE)
- Member, Grounds and Garden Committee, DLS
- Member, Beautification Project, FST
- Member, Senior Management Committee, DLS
- Member, Biocultural Collection Managers Group (USA)
- Council Member, Society for Economic Botany (USA)
- Academic sub-chair, organizing committee, joint conference of the Society for Economic Botany (SEB) and International Society of Ethnobiology (ISE) held at The UWI, Mona, 31 May-2 June 2022

David Picking

- Chair, organizing committee, joint conference of the Society for Economic Botany (SEB) and International Society of Ethnobiology (ISE) held at The UWI, Mona, 31 May-2 June 2022 (<http://www.econbot.org/home/meetings/economic-botany-2022.html>)
- Member, organizing committee, 1st Pan-American Congress of Medicinal Plants and Integrative Health, Online, held 4-7 April 2022, (PAHO/WHO/CABSIN) (TRAMIL representative) (<https://panplantasmedicinalis.com.br/>)
- Chair, FST Cannabis Research Group
- Member FST Research Ethics Committee
- Member of the campus wide working group (TWG) for Diversity, Equity and Inclusion
- Contributing Member, Steering Committee, National Nutraceutical Industry, Jamaica
- Member, Society for Economic Botany
- Member, American Botanical Council
- Member, TRAMIL network (www.tramil.net)
- Board of Directors, Perishables Jamaica, manufacturer of Jamaican indigenous herbal teas
- Board of Directors, GWG Conservancy Ltd, St Thomas (375 acre organic research station and agricultural business incubator)
- Board member, UJIMA Natural Farmers Market

Trevor H. Yee (Retired, honorary member)

- Executive Committee, the Natural History Society of Jamaica (NHSJ).

AGILITY

INCOME GENERATION

- **National Geographic Society:** Tracing the plant diversity and origins of Jamaican root tonics, a symbol of biocultural heritage (**Grant # HJ-161R-17**) (**I. Vandebroek**)
- **Mohamed bin Zayed Species Conservation Fund:** Reassessing the conservation status of *Cinnamodendron corticosum* (Canellaceae): A wild and popularly used spice tree in Jamaica (**Grant # 172517028**) (**I. Vandebroek**)
- **NNSF - CSBR (Collections in Support of Biological Research - Natural History):** Securing and Sharing Biocultural Diversity Collections at The New York Botanical Garden (**I. Vandebroek**)
- **NSF - LEAPS (LEAding culture change through Professional Societies):** "From the Ground Up: Amplifying Culture Change in Ethnobiology via Three Key Professional Societies", grant proposal submitted (**I. Vandebroek**)
- **Global Engagement Partnership Fund,** King's College London, UK. Collaboration between King's College (Prof. Andrew Webb and Kennedy Kruickshank et al), CAIHR (Prof. Trevor Ferguson et al) and NPI (**R. Delgoda** et al). "Fruit And Vegetable bioactive from Jamaican plant foods for Optimising Unisal Reduction In Hypertension: FAVOURITE Trial" for equipment support for NPI (€5000).
- **CEPF:** A novel approach to conservation: Leveraging community engagement and biochemical diversity profiles of under-studied Jamaican endemic plant species to uncover novel uses, grant proposal submitted (**R Delgoda, I. Vandebroek, K Campbell, T. Commock**)
- **US Cultural Ambassador Fund, AFCP 2022 Grants Program:** Securing and Sharing Biocultural Collections at Jamaica's Main Herbaria to Preserve the Island's Biocultural Heritage, grant proposal submitted (**I. Vandebroek**)

Collaborations and entrepreneurial activities

- Psilocybin quantification methodology optimised. Ready as a service for provision to the industry (**R. Delgoda**)
- Compiled data with Binghamton University undergraduate student

Kenneth Walker on the ethnobotany of Caribbean music (for a forthcoming paper) (**I. Vandebroek**)

- Discussed methodology and planning for survey administration about medicinal plants for Haitian women's health in New York City with graduate student Ella Vardeman (City University of New York, New York Botanical Garden) (**I. Vandebroek**)
- Supervised Dept. of Life Sciences undergraduate students Sashell Nelson and Mariah Mosquera to take stock of, secure, and safeguard the plant collections at the UWI herbarium, and to revitalise the Herbarium for future research and outreach activities (**I. Vandebroek**)
- Invitation to develop a paper for TREE (Trends in Ecology and Evolution) (**I. Vandebroek**)
- Collaborations with a team of researchers on a funded project, titled: Innovative Urban Farm 4 Everyone: enhance the sustainability of society in the postpandemic era. Funded by: Royal Academy of Engineering, follow-on grant from The Royal Society Commonwealth Science Conference (March 2022 – March 2024). Members: Alireza Moghayedi (University of Cape Town), Isabel Richter (Norwegian University of Science and Technology), **S. Francis (University of the West Indies)**, Abid Mehmood (Cardiff University), Prof Kathy Michell (University of Cape Town), Vasilena Vassilev (University of Reading), Amanda Mtya (University of Cape Town).

New Research Activities

- Successful hosting of the hybrid joint international conference of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE). This was the first conference to welcome delegates face to face, and online, since the beginning of the pandemic. The UWI welcomed 200 participants from over 30 countries, with 130 visitors in person (www.econbot.org/home/meetings/economic-botany-2022.html) (**D. Picking, I. Vandebroek**)
- Screening of a natural product database is being carried out for identification of potential inhibitors of CYP 1A1, 1A2, and 1B1 (**W. Irvine**)
- Jamaica and South Africa research collaboration - traditional healer training. visit and follow-up training in the Maroon community of Flagstaff (**D. Picking**).
- Guest editor for a Special Issue on Ethnobotany and Community Health in the MDPI journal Plants. Publication date 2022 (**I. Vandebroek, D. Picking, R. Delgoda**).

- Collaborations with a team of researchers to assess Innovative Urban Farm for Everyone. Alireza Moghayedi (University of Cape Town), Isabel Richter (Norwegian University of Science and Technology), **S. Francis (University of the West Indies)**, Abid Mehmood (Cardiff University), Prof Kathy Michell (University of Cape Town), Vasilena Vassilev (University of Reading), Amanda Mtya (University of Cape Town).
- Mentored graduate student Ella Vardeman (City University of New York, New York Botanical Garden) who will begin survey research with the Haitian community in New York City on medicinal plants for women's health (**I. Vandebroek**)
- Discussed research strategy for a paper on the ethnobotany of Caribbean music with Binghamton University graduate student Kenneth Walker (**I. Vandebroek**)
- Meeting with visiting academics from Tuskegee University, Alabama. Dr Bolden-Tiller, Dean, College of Agriculture, Environment and Nutrition Sciences (CAENS), Professor Mortley, Dr Robinson (DLS), and Mrs Nicola Shirley-Phillips, GWG Research Station (St Thomas) re. potential research collaborations. May 26, 2022 (**D. Picking**)
- Cinchona Gardens - possible restoration project. Visit to the Gardens with Andreas Oberli, Kennedy Cruickshank, Liz Andrew, Damany Calder, April 3, 2022 (**D. Picking**)
- Repurposing pharmaceuticals against prostate cancer, collaborations with K Foster, K. Cruickshank and King's College London (**R. Delgoda**)
- Establishment of analytical techniques for quantification of numerous natural products (**T. Babumon, R. Delgoda**)

Awards

- 2022 Society for Economic Botany President's Award. Awarded at the Joint Meeting of the Society for Economic Botany (SEB) and the International Society of Ethnobiology (ISE), held on May 29 - June 2, 2022, The UWI, Mona. "Awarded to exceptional individuals who have demonstrated outstanding service" (**D. Picking, I. Vandebroek**).
- 2021 Society for Economic Botany (SEB) President's award (**I. Vandebroek** and other members of the SEB's Ethics and DEI committees) (August 2021)
- Anthony N Sabga Award for Science and Technology (2021) Laureate (**R. Delgoda**)