

## 8. PUBLICATIONS:

### 8.1 THESES:

**Asemota, H.N.** (1990). Biochemical and genetic studies on carbohydrate metabolism in stored yam (*Dioscorea sp.*) tubers. **Ph. D. Thesis**. University of Benin. 322 pp.

**Obasuyi, H.N.** (1981). Purification and characterization of o-Diphenolase from white yam (*Dioscorea rotundata*) tuber. **M.Sc. Thesis**. Ahmadu Bello University, Zaria. 182 pp.

**Obasuyi, H.N.** (1978). Studies on trypsin inhibitors in millet (*Pennisetum typhoides*). **B. Sc. Thesis**. Biochemistry Dept., University of Benin. 32 pp.

### 8.2 REFERREED (PEER-REVIEWED) JOURNAL PUBLICATIONS:

1. Riley, C.K., Adebayo, S.A., Wheatley, A.O., Ahmad, M.H. and **Asemota, H.N.** (2006) Fundamental and Derived Properties of Yam (*Dioscorea spp.*) Starch Powders and Implications in Tablet and Capsule Formulation. *Starch/Starke* 58: 000-000 (In press).
2. Bahado-Singh, P.S.; Wheatley, A.O.; Ahmad, M.H.; Morrison, E. Y. St. A. and **Asemota, H.N.** (2006) Food processing methods influence the Glycaemic Indices of some commonly eaten West Indian carbohydrate-rich foods. *British Journal of Nutrition* (accepted 28<sup>th</sup> February, 2006 – *BJN-2005-010571R* - In Press).
3. Green, C., Wheatley, A.O., Osagie, A.U., Morrison, E.Y.St.A and **Asemota, H.N.** (2006) Determination of polymethoxylated flavones in peels of selected Jamaican and Mexican Citrus (*Citrus spp.*) cultivars by High Performance Liquid Chromatography (HPLC). *Biomedical Chromatography* (accepted - In press – Proof print, ID: BMC-06-0197).
4. Lowell L. Dilworth, Felix O. Omoruyi, Helen N. Asemota, (2006). *In vitro* availability of some essential minerals in commonly eaten processed and unprocessed Caribbean tuber crops, *BioMetals*, (Online) 2006, Pages 1 - 6, DOI 10.1007/s10534-006-9012-4, URL <http://dx.doi.org/10.1007/s10534-006-9012-4>
5. Dilworth, L., Omoruyi, F.O. and **Asemota, H.N.** (2005). Digestive and transport enzymes in rats fed Phytic acid extract from sweet potato (*Ipomoea batatas*) *Diabetologia Croatica* 34 (2):59-65
6. McAnuff, M.A., Harding, W.W., Omoruyi, F. O., Jacobs, H., Morrison, E.Y., **Asemota, H.N.**, (2005) Hypoglycemic effects of steroidal saponins isolated from Jamaican Bitter yam (*Dioscorea polygonoides*). *Food and Chemical Toxicology* 43, 1667-1672.
7. McAnuff, M.A., Omoruyi, E.O., Morrison, E.Y. and **Asemota, H.N.** (2005). Changes in some liver enzymes in streptozotocin-induced diabetes rats fed saponin extract from bitter yam (*Dioscorea polygonoides*) or commercial diosgenin. *West Indian Medical Journal*, 54 (2) 97-101
8. Dilworth, L.L., Omoruyi, F.O., Simon, O., Morrison, E.Y. and Asemota, H.N. (2005) The effect of Phytic Acid on the levels of blood glucose and some enzymes of carbohydrate and lipid metabolism. *West Indian Medical Journal* 54 (2), 102-106.
9. McAnuff, M.A., Omoruyi, F.O., Sotelo-Lopez, A. and **Asemota, H.N.** (2005). Proximate Analysis and Some Antinutritional Factor Constituents in Selected Varieties of Jamaican Yams (*Dioscorea* and *Rajana* spp.) *Plant Foods for Human Nutrition* 60, 1–6.
10. Omoruyi, F.O., Dilworth, L., **Asemota, H.N.**, Jacobs, H. and Morrison, E.Y. (2004) An evaluation of cyanoglucoside, total phenol, protease inhibitors, phytic acid and zinc contents in some Caribbean food crops. *Bioscience Research Communications*, 15 (3), 000-000 (In press).
11. Omoruyi, F., McAnuff, M., Dilworth, L., Morrison, E. and **Asemota, H.** (2004) Exploitation of Jamaican tuber crops for natural products utilization. *Science, Technology and Innovation*, University of the West Indies, 33-36.
12. Dilworth, L.L., Omoruyi, F.O., Simon, O., Morrison, E.Y. and **Asemota, H.N.** (2004) Hypoglycaemia and faecal minerals in phytate fed rats. *Nutrition and food science*, 34

- (2), 60-64.
13. Riley, C.K., Wheatley, A.O., Hassan, I., Ahmad, M.H., Morrison, Errol Y. St. A. and **Asemota, H.N.** (2004) *In vitro* digestibility of raw starches extracted from five Yam (*Dioscorea* sp.) grown in Jamaica. *Starch/Starcke* 56 (2): 69-73.
  14. Omoruyi, F., McAnuff, M., Dilworth, L., Morrison, E. and **Asemota, H.** (2004) Exploitation of Jamaican tuber crops for natural products utilization. *Science, Technology and Innovation*, University of the West Indies, 33-36.
  15. Dilworth, L., Omoruyi, F.O., Simon, O. Morrison, E.Y. and **Asemota, H.N.** (2004) Effects of Sweet Potato (*Ipomea Batatas*) Phytic Acid Extract on Blood Glucose, liver function enzymes and faecal mineral Loss: A case Study with Rat Model. *West Indian Medical Journal*. 53: (Suppl. 1): 45-46.
  16. Riley, C.K., Wheatley, A.O., Adebayo, A.S., Ahmad, M.H., Morrison, E. Y. St.A. and **Asemota, H.N.** (2004) Implications of amylose content and *In vitro* digestibility of native Jamaican yam (*Dioscorea* sp.) starches in the formulation of tablets and capsules for diabetics. *West Indian Medical Journal*. 53 (Suppl. 1): 43.
  17. Bahado-Singh, P.S., Wheatley, A.O., Morrison, E.Y.St.A., Ahmad, M.H. and **Asemota, H.N.** (2004) Investigation of the effect of food processing on the glycemic indices of some Jamaican foods: A proactive approach to the management of Type II Diabetes Mellitus. *West Indian Medical Journal*. 53 (Suppl. 1): 45.
  18. McKoy, M., Omoruyi, F., Simon, O. and **Asemota, H.** (2003) Investigation of the effects of a sapogenin rich preparation from a Jamaica yam (*Dioscorea* sp.) on blood cholesterol levels in rats. *Proceedings of the Western Pharmacology Society* 46: 156-159.
  19. **Asemota, H.**, Omoruyi, F., McAnuff, M., Dilworth, L., Harding, W., Jacobs, H., Anderson, N., Ahmad, M. and Morrison, E. (2003) Analyses of Natural Products in Jamaican Tuber Crops: The need for Biotechnological Exploitation. *Jamaica Journal on Science and Technology*, 14, 3-8.
  20. McAnuff, M.A., Omoruyi, F.O., Gardner, M., **Asemota, H.N** and Morrison, E.Y. (2003) Alterations in intestinal morphology of streptozotocin-induced diabetic rats fed Jamaican bitter yam (*Dioscorea polygonoides*) sapogenin extract. *Nutrition Research*, 23 (11), 1569-1577.
  21. Wheatley, A.O, Ahmad, M.H. and **Asemota, H.N.** (2003) Development of salt adaptation in *in vitro* greater yam (*Dioscorea alata*) plantlets. *In Vitro Cell. Dev. Biol. – Plant* 39 (3): 346-353.
  22. Wheatley, A.O., Ahmad, M.H. and **Asemota, H.N.** (2003) A comparison of the storageability of *in vitro* derived and traditionally produced yam (*Dioscorea cayenensis*) tubers. *Jamaican Journal of Science and Technology* 14: 40-45.
  23. Wheatley, A.O., Osuji, G., Ahmad, M.H. and **Asemota, H.N.** (2003) Maximizing the use of challenged environments: Development of salt tolerant *in vitro* yam (*Dioscorea alata*) plantlets. *Jamaican Journal of Science and Technology* 14: 46-57.
  24. McAnuff, M.A., Omoruyi, F.O. Morrison E.Y. and **Asemota, H.N** (2003) Hepatic function enzymes and lipid peroxidation in streptozotocin-induced diabetic rats fed Bitter yam (*Dioscorea polygonoides*) steroidal sapogenin extract. *Diabetologia Croatica*, 32 (1), 17-23.
  25. Brown, V.M.D., **Asemota, H.N.**, Thangavelu, M. and Mantell, S.H. (2003) Genetic Variation among Dasheen (*Colocasia* sp.) and Cocoyam (*Xanthosoma* sp.) grown in Jamaica by PCR-based analyses. *Jamaican Journal of Science and Technology* 14: 67-78.
  26. Riley, C.K., Wheatley, A.O., Hassan, I., Ahmad, M.H., Morrison, E.Y.St.A. and **Asemota, H.N.** (2003) X-ray crystallographic and scanning electron microscopic analysis of starches from five yam (*Dioscorea* spp.) grown in Jamaica. *Molecular and Cellular Proteomics* 2(9): 981.
  27. Earle-Barrett, S., Wheatley, A.O., **Asemota, H.N.** and Lobban, K. (2003) Study of biodiversity within Jamaican yam (*Dioscorea* spp.) using Random Amplified Polymorphic DNA (RAPD) and Amplified Fragment Length Polymorphism (ALFP). *Molecular and Cellular Proteomics* 2(9): 900.
  28. Powell, M., Wheatley, A.O., Tennant, P., Omoruyi, F., **Asemota, H.N.**, Gonsalves, D. and Ahmad, M.H. (2003) Rat intestinal transport enzymes: Effect of the consumption of transgenic papaya (*Carica papaya* L.). *Molecular and Cellular Proteomics* 2(9): 881.

29. Lobban, K.S., Wheatley, A.O., Golden, K. and **Asemota, H.N.** (2003) Investigation of the biochemical changes associated with *ex vivo* and *in vitro* developmental processes in *Dioscorea* spp. *Molecular and Cellular Proteomics* 2(9): 773.
30. Omoruyi, F.O., McAnuff, M.A., Morrison, E.Y., **Asemota, H.N.** (2003) Exploitable potentials of sapogenin extract from Jamaica bitter yam (*D. polygonoides*) in the management of diabetes mellitus. *West Indian Medical Journal.*, 52 (Suppl. 2): 38-39.
31. Grindley, P. B.; Omoruyi, F. O.; **Asemota, H. N.** and Morrison, E., Y (2002) Carbohydrate digestion and intestinal ATPases in streptozotocin-induced diabetic Rats fed extract of yam (*Dioscorea cayenensis*) or dasheen (*Colocasia esculenta*). *Nutrition Research* 22 (3), 333-341.
32. Wheatley, A.O., Iyare, O.A. and **Asemota, H.N.** (2002) Effect of the section of yam tuber (*Dioscorea cayenensis*) used in minisett on the biochemical properties of the resultant tuber. *Journal of the Science of Food and Agriculture* 82(13), 1579-1583.
33. McAnuff, M.A.; Omoruyi, F.O.; Morrison, E.Y. and **Asemota, H.N.** (2002) Plasma and liver lipid distributions in streptozotocin-induced diabetic rats fed sapogenin extract of bitter yam (*Dioscorea polygonoides*). *Nutrition Research* 22(12), 1427-1434.
34. Omoregie, S. N., **Asemota, H. N.**, Prasad, P.D. and Osagie, A.U. (2002). Analysis of intraspecific genetic variability among *in vitro* grown *Dioscorea alata* cultivars using arbitrarily primed PCR techniques. *Bioscience Research Communications* 14, 555-565.
35. Omoruyi, F.O., Grindley, P.B., **Asemota, H.N.** and Morrison, E.Y. (2001) Increased plasma and liver lipids in streptozotocin-induced diabetic rats: Effects of yam (*Dioscorea cayenensis*) or dasheen (*Colocassia esculenta*) extract supplements. *Diabetologia Croatica*, 30(3), 87-92.
36. Grindley, P. B.; Omoruyi, F. O.; **Asemota, H. N.** and Morrison, E., Y. (2001) Effect of yam (*Dioscorea cayenensis*) and dasheen (*Colocassia esculenta*) extracts on the kidney of streptozotocin-induced diabetic rats. *International Journal of Food Sciences and Nutrition* 52 (5): 429-433.
37. Grindley, P.B., Omoruyi, F.O., **Asemota, H.N.** and Morrison, E.Y.St. A. (2000). Hyperglycemia, hyperlipidemia and liver lipid metabolism in streptozotocin-induced diabetic rats fed organic extracts of yam (*Dioscorea cayenensis*) or dasheen (*Colocassia esculenta*). *Medical Science Research*, 28(2) 127-130.
38. **Asemota, H.N.** (1999). Biotechnology for yam (*Dioscorea* sp.) production improvement: A challenge for women scientists. In: *Women, Science and Technology for Sustainable Development (Cape Town, South Africa February 1999)*. *Third World Organisation for Women in Science (TWOWS)* pp 113-119.
39. **Asemota, H.N.**, Gorz, A., Kahl, G and Osagie, A.U. (1999). A simple and efficient protocol for the isolation of yam (*Dioscorea specie*) RNA. *Nigerian Journal of Biochemistry and Molecular Biology* 14, 63-69.
40. Omoregie, S.N., **Asemota, H.N.**, Osagie, A.U., Mantell, S. and Ahmad, M.H. (1999). Occurrence of free-living plasmid-containing bacteria in yam (*Dioscorea* spp.) tubers. *Tropical Agriculture* 76(4), 250-255.
41. **Asemota, H.N.**, Iyare, A.O., Wheatley, A. and Ahmad, M.H. (1997). Acclimatization of *in vitro* grown yam (*Dioscorea* spp.) plantlets and some enzyme changes. *Tropical Agriculture* 74(3), 243-247.
42. Kahl, G., Ramser, J., Terauchi, R., Lopez-Peralta, C., **Asemota, H.N.** and Weising, K. (1997). Combined amplification and hybridization techniques for genome scanning in vegetatively propagated crops. In: Use of novel DNA fingerprinting techniques for the detection and characterization of genetic variation in vegetatively propagated crops. *International Atomic Energy Agency (IAEA) IAEA-TECDOC-1047*, 21-34pp.
43. **Asemota, H. N.**, Ramser, J. Lopez-Peralta, C., Weising, K. and Kahl, G. (1996). Genetic variation and cultivar identification of Jamaican yam germplasm by random amplified polymorphic DNA analysis. *EUPHYTICA* 92, 341-351.
44. Mitchell, S. A.; **Asemota, H.N.**; Ahmad, M. H. (1996). *In vitro* growth patterns of Jamaican yams (*Dioscorea cayenensis* and *D. trifida*) initiated from axillary nodal segments. *Journal of the Science of Food and Agriculture* 68: 243-248.
45. Bharaj, B.S., Reid, H., **Asemota, H.N.** and Morrison, E.Y.St.A. (1995) Erythrocyte acetylcholinesterase, Glucose 6-phosphate dehydrogenase and plasma butyrylcholinesterase activities in Diabetes mellitus. *Jamaican Journal of Science and Technology* 6, 1-5.

46. **Asemota, H.N.**, Gorz, A., Kahl, G and Osagie, A.U. (1995). The probing of yam (*Dioscorea sp*) DNA with a heterologous yeast phosphofructokinase gene. *Bioscience Research Communications* 7(1), 35-40.
47. Mitchell, S., **Asemota, H.N.** and Ahmad, M.H. (1995). Factors affecting the *in vitro* establishment of Jamaican yams (*Dioscorea spp.*) from nodal pieces. *Journal of the Science of Food and Agriculture* 67, 541-550.
48. Mitchell, S., **Asemota, H.N.** and Ahmad, M.H. (1995) Effect of explant source, culture medium strength and growth regulators on the *in vitro* propagation of three Jamaican yams (*Dioscorea cayenensis*, *D. trifida* and *D. rotundata*) *Journal of the Science of Food and Agriculture* 67, 173-180.
49. **Asemota, H.N.** (1995). A fast, simple and efficient miniscale method for the preparation of DNA from yam (*Dioscorea spp.*) tissues. *Plant Molecular Biology Reporter* 13, 214-218.
50. **Asemota, H.N.** (1994). Biotechnological advances towards improved yam production and storage. In: *Advances in Tissue Culture Technology for improved planting material*. Scientific Research Council, Kingston, Jamaica (Ed. K. Wood), 106-130.
51. Muzac-Tucker, I., **Asemota, H.N.** and Ahmad, M.H. (1993) Biochemical Composition and Storage of Jamaican Yam (*Dioscorea sp.*). *Journal of the Science of Food and Agriculture* 62, 219-224.
52. Bharaj, B. and **Asemota, H.N.** (1993). Liver and serum butyryl cholin-esterase activity in scorbutic guinea pigs. *Journal of Nutritional Biochemistry* 4(2), 77-79.
53. Bharaj, B. and **Asemota, H.N.** (1993). Ascorbic acid deficiency and Hepatic drug metabolism in guinea pigs. *Jamaican Journal of Science and Technology* 4, 27-31.
54. **Asemota, H.N.** and Osagie, A.U. (1993). Carbohydrate metabolism in stored yam tubers: contribution of starch breakdown, glycolysis pentose phosphate pathway. *Advances in Yam Research*, (Osuji, G.O., ed.), Prairie View A&M University, Texas, USA, Vol. II, 135-144.
55. **Asemota, H.N.**, Gorz, A., Kahl, G and Osagie, A.U. (1993). A preliminary report on the probing of yam DNA with a heterologous yeast probe. *Proceedings of the 3rd Caribbean Biotechnology Network Conference UNDP/UNESCO/RLA/87/024*, 41-51.
56. **Asemota, H. N.** and Osagie, A. U. (1993). The postharvest storage of yam (*Dioscorea sp.*) tubers: A biochemical perspective. *Proceedings of the 3rd Caribbean Biotechnology Network Conference UNDP/UNESCO/RLA/87/024*, 24-32.
57. Muzac-Tucker, I., **Asemota, H.N.** and Ahmad, M. H. (1993). Diversity in biochemical parameters and the relationship to storage of yam (*Dioscorea sp.*) tubers grown in Jamaica. *Proceedings of the 3rd Caribbean Biotechnology Network Conference UNDP/UNESCO/RLA/87/024*, 1-9.
58. Odotuga, A. A., **Asemota, H.N.**, Muzac, I., Golden, K. D., and Kean, E. A. (1992) Fatty acid composition of ackee (*Blighia sapida* L.) fruit. *Jamaican Journal of Science and Technology* 3, 30-32.
59. **Asemota, H.N.**, Wellington, M.A., Odotuga A.A. and Ahmad, M.H (1992). Effect of short-term storage on phenolic content, o-dipenolase and peroxidase activities of cut yam tubers (*Dioscorea sp*). *Journal of the Science of Food and Agriculture* 60(3), 309-312.
60. Akenzua, G.I., Ihongbe, J.C. and **Asemota, H.N.** (1992) Alpha-hydroxybutyrate dehydrogenase and the diagnosis of painful crisis in sickle cell anaemia. *African Journal of Medicine and Medical Sciences* 21(2), 13-17.
61. Obidairo, T.K. and **Obasuyi, H.N.** (1991) Characterization of Trypsin inhibitors from millet (*Pennisetum typhoideum*) *Pakistan Journal of Science and Industrial Research* 34(4), 127-130.

62. Reid, H.L., Bharaj, B., **Asemota, H.N.** and Morrison, E.Y. St. A (1991) Increased erythrocyte glucose-6-phosphate dehydrogenase, 2, 3 diphosphoglycerate and whole blood reduced glutathione levels in black diabetics. *Medical Science Research* 19, 419-420.
63. **Asemota, H.N.** and Osagie, A.U. (1988). Phosphofructokinase and glucose 6-phosphate dehydrogenase activities and total reducing sugar levels in yams: Comparison of fresh and stored tubers. *Nigerian Journal of Biochemistry* 5, 44-49.
64. Ikediobi, C.O. and **Asemota, H.N.** (1986). Subunit nature of o - diphenolase from white yam (*Dioscorea rotundata* Poir) tubers. *Nigerian Journal of Biochemistry* 3, 55-59.
65. Ikediobi, C.O. and **Obasuyi, H.N.** (1982). Purification and some properties of o-diphenolase from white yam (*Dioscorea rotundata*) tuber. *Phytochemistry* 21, 2815-2822.

#### **Full-length Papers submitted for Peer Review Journal Publication:**

66. Cliff. K. Riley, Percival. S. Bahado-Singh, Andrew. O. Wheatley, Mohammed H. Ahmad, Errol St.Y. Morrison and Helen. N. Asemota. Relationship between the physiochemical properties of starches and the glycemic index of some Jamaican yams (*Dioscorea spp.*). *J. Nutrition* (under review)

#### **8.3 FULL LENGTH PUBLICATIONS in Newsletters:**

67. **Asemota, H. N.** (1999). Biotechnology of yams (*Dioscorea sp.*), dasheens (*Colocassia esculenta*) and cocoyams (*Xanthosoma sp.*) for sustainable development. *Faculty of Pure and Applied Sciences, Mona Newsletter* 12(3), 27-32.
68. **Asemota, H.N.** (1990). Yam Research brings foreign female Genetic Engineer to UNIBEN. *Nigerian Association of Women in Science, Technology and Mathematics (UNIBEN) Newsletter* (Eds. F. Ogbe and V. Wabgatsoma), 2, 8-9.

#### **8.4 TECHNICAL REPORTS:**

##### **8.4.1 REPORTS TO UN-FAO**

69. **Asemota, H. N.** (2005). Second Mission Report of Chief Technical Advisor/International Consultant for Biotechnology re "Establishment of Disease-free Seed Potato Production in Tajikistan to increase and sustain Food Availability" Project OSRO/TAJ/401/CAN. Submitted October 2005 to UN-FAO along with a Proposal draft for \$1.5M to continue to Phase 2 of seed production project.
70. **Asemota, H.N.** (2005). Operations Manual for Potato Micropropagation and Seed potato production in Tajikistan. Submitted to the UN-FAO in October 2005.
71. **Asemota, H. N.** (2004). First Mission Report of International Consultant for Biotechnology and CTA on the "Establishment of Disease-free Seed Potato Production in Tajikistan to increase and sustain Food Availability" Project OSRO/TAJ/401/CAN. Submitted June 2004 to UN-FAO.
72. **Asemota, H.N.** (2003). Mission Report of International Consultant for Biotechnology on the "Assistance to Potato Seed Fund" Project OSRO/TAJ/102/IRE. Submitted Mar. 2003 to UN-FAO along with Draft Proposal for disease-free Seed Potato Production in Tajikistan and draft of "Operations Manual for Seed Potato Production".
73. **Asemota, H. N.** (2001). First Mission Report of TCDC Consultant on "Seed Potato and Date Palm Seedlings Production through Tissue Culture - Project # TCP/SYR/8926", *Food and Agriculture Organisation of the United Nations (FAO)*. pp 1-50.
74. **Asemota, H.**, Albiski, F., Ismail, I., Sawas, B., Helali, O., Abdul-Massih, A., Sermani, A. and Shekhouni, R. Workshop Manual. FAO/GOSM National Training Workshop on Potato Seed Production through Tissue Culture, November 2001, Aleppo. pp. 1-37.

#### 8.4.2 REPORTS TO EUROPEAN UNION

75. **Asemota, H.N.** (1994). First Progress Report on Bioengineering Caribbean Yams. European Development Fund (EDF) Project No. 6100.51.94.160 Lome III Regional: Submitted to the European Union and UWI. January 1994. pp 1-13.
76. **Asemota, H.N.** (1994). Chief Investigator's Technical Report for Year 1 of Project. EDF Project No. 6100.51.94.160 Lome III – Regional. In: UWI/EDF Yam Project Scientific Reports Series I-IV. Submitted to the European Union and UWI, Mona. November 1994. pp 2-19.
77. **Asemota, H.N.** (1994). Second Progress Report on Bioengineering Caribbean Yams. EDF Project No. 6100.51.94.160 Lome III - Regional: Submitted to the European Union and UWI. November 1994. pp 1-76.
78. **Asemota, H.N.** (1995). Third Progress Report on Bioengineering Caribbean Yams. EDF Project No. 6ACP RPR 160 - Lome III Regional: Submitted to the European Union and UWI. August 1995. pp 1-118.
79. **Asemota, H.N.**, Devi Prasad, P.V., Morrison, E.Y. Kahl, G. and Ahmad, M.H. (1995). Using RAPD for the evaluation of genetic relationships among cultivars of *Dioscorea alata* from Jamaica and Nigeria. In: *Bioengineering Caribbean Yams Scientific Reports European Development Fund (EDF) Project No. 6ACP RPR 160 - Lome III Regional. Series 5.* pp. 1-13.
80. **Asemota, H.N.** and Kahl, G. (1995). Molecular genetic characterisation and study of relationships of cultivated yams (*Dioscorea* spp.) in Jamaica by Arbitrary-Primed PCR technique. In: *Bioengineering Caribbean Yams Scientific Reports EDF Project No. 6ACP RPR 160 - Lome III Regional. Series 6.* pp. 14-29.
81. Omoregie, S.N. and **Asemota, H.N.** (1995). Factors affecting intact and viable protoplasts release from Jamaican yams. In: *Bioengineering Caribbean Yams Scientific Reports EDF Project No. 6ACP RPR 160 - Lome III Regional. Series 7.* pp. 30-41.
82. **Asemota, H.N.**, Iyare, O.A. and Wheatley, A.O. (1995). Hardening of yam plantlets: Biochemical and physiological changes involved. In: *Bioengineering Caribbean Yams Scientific Reports EDF Project No. 6ACP RPR 160 - Lome III Regional. Series 8.* pp. 42-58.
83. Grindley, P., **Asemota, H.N.** and Morrison, E.Y. (1995). Postharvest evaluation of protein, mineral and cyanoglucoside level in some edible Jamaican yams. In: *Bioengineering Caribbean Yams Scientific Reports EDF Project No. 6ACP RPR 160- Lome III Regional. Series 10.* pp.75-87.
84. Mitchell, S., Omoregie, S.N. and **Asemota, H.N.** (1995). Studies on callus induction from yam tissues. In: *Bioengineering Caribbean Yams Scientific Reports EDF Project No. 6ACP RPR 160 - Lome III Regional. Series 12.* 94-105.
85. **Asemota, H.N.** (1996). Fourth Progress Report on Bioengineering Caribbean Yams. EDF Project No. 6ACP RPR 160 - Lome III Regional: Submitted to the European Union and UWI. June 1996. pp 1-67.

#### 8.4.3 Other Scientific Reports:

86. **Asemota, H.N.** and Morrison, E. Y. St. A. (2002). Research Fellowship Report for the Anti-nutritional factors Project entitled "Screening, assessment and identification of anti-nutritional factors in selected Caribbean food crops and spices and the study of the effects of their consumption in normal and disease states" to the Research Fellowship Committee, UWI, Mona, pp 1-7.
87. **Asemota, H. N.**, (1999). Report on the IV Meeting of the Jamaica-Mexico Binational Commission, held in Mexico City, August 26-27, 1999. Submitted to the Permanent Secretary, Ministry of Foreign Affairs and Foreign Trade, Jamaica and the Dean of Pure and Applied Sciences, UWI, Mona. Sept. 1999. pp. 1-4.
88. **Asemota, H.N.**, (1998). Biotechnology strategies for yam production and quality improvement: Workshop for Jamaican farmers. Project Report submitted to the Environmental Foundation of Jamaica (EFJ). November 1998. pp. 1-13.

## 8.5 PUBLISHED ABSTRACTS/CONFERENCE PAPERS:

89. **Asemota, H. N.** (2006) Shaw University embraces Nanobiotechnology. North Carolina Biotechnology Conference 2006 held at the NC Biotechnology Center, Research Triangle Park, North Carolina, USA, January 20, 2006. Conference Proceedings Pg. 6.
90. Bahado-Singh, P.S., Wheatley, A.O., Osagie, A.U., Boyne, M., Morrison, E.Y.St.A, Ahmad, M.H. and **Asemota, H.N.** (2006) Glycemic Indices of some commonly eaten Caribbean foods and dietary intervention using low glycaemic index foods to achieve normoglycaemia in type 2 Diabetics. Proceedings from the Morgan State University 2<sup>nd</sup> International Complimentary and Alternative Medicine Conference, Baltimore, U.S.A. – May 26 – 27, 2006. Pg 4
91. P. S. Bahado-Singh, A. O. Wheatley, A. U. Osagie, M. Boyne, E. Choo-Kan, E. Y. St. A. Morrison, M. H. Ahmad and **H. N. Asemota** (2006) Effect of low glycemic index foods in the management of type 2 diabetes in the Caribbean. Proceedings from the UWI Diabetes Outreach Project (UDOP) 12<sup>th</sup> International Conference, Ocho Rios, Jamaica – March 2-5, 2006. *Poster Presentation – First Place Award Winning Poster*
92. C. K. Riley, A.O. Wheatley, A. S. Adebayo, H. Ahmad, E.Y.St. A. Morrison, and **H. N. Asemota** (2006) Effect of micrometric properties on the *in vitro* digestibility of starches extracted from yams (*Dioscorea spp.*) grown in Jamaica. Proceedings from the UWI Diabetes Outreach Project (UDOP) 12<sup>th</sup> International Conference, Ocho Rios, Jamaica – March 2-5, 2006. *Poster Presentation*
93. Bahado-Singh, P.S., Wheatley, A.O., Osagie, A.U., Boyne, M., Choo-Kan, E., Morrison, E.Y.St.A, Ahmad, M.H. and **Asemota, H.N.** (2006) Effect of low glycaemic index dietary advice on glycaemic control and inflammatory markers in adult type 2 diabetics in Jamaica. Proceedings of the Northern Caribbean University 7<sup>th</sup> Science Symposium, Mandeville, Jamaica. Pg. 21.
94. **Asemota, H.N.** and Williams, E. (2005) New Dimensions for women’s research in Nanoscience and Nanotechnology research: Strategies for sustainable development and utilization in emerging scenario. Third World Organization for Women in Science (TWOWS) 3<sup>rd</sup> General Assembly and International Conference on “Women’s Impact on Science and Technology in the New Millennium”, Bangalore, **India**. Nov. 21-25, 2005. ABSTRACTS, 4PAP9
95. **Asemota, H. N.** (2005) Overview of biotechnology and its application in crop improvement. Keynote Address. UN-FAO National Training Workshop for farmers’ on “Disease-free production of seed potato through Biotechnology” - FAO Project OSRO/TAJ/401/CAN, Faizabad, **Tajikistan**. July 28-30.
96. Bahado-Singh, P. S., Wheatley, A. O., Ahmad, M. H., Morrison, E. Y. St. A. and **Asemota, H. N.** (2005) Glycemic Index: Distinction between “Good” and “Bad” Carbohydrates for Effective Diabetes Management. University of the West Indies, Mona Faculty of Pure and Applied Sciences 7<sup>th</sup> Biannual Scientific Conference, **Jamaica**. May 17 – 19, 2005.
97. L. Dilworth, F.O. Omoruyi and **H.N. Asemota** (2005). Overview of the *in vitro* availability of some essential minerals in commonly eaten processed and unprocessed food crops. Proceedings of the seventh conference, Faculty of Pure and Applied Sciences University of the West Indies Mona, May 17-19. Jamaica 73-74.
98. P. S. Bahado-Singh, A. O. Wheatley, M. H. Ahmad, E. Y. St. A. Morrison and H. N. Asemota (2005) Glycemic Index: Distinction between “Good” and “Bad” Carbohydrates for Effective Diabetes Management. Proceedings from the UWI, Mona Faculty of Pure and Applied Sciences 7<sup>th</sup> Biannual Scientific Conference, Kingston, Jamaica - May 17 – 19, 2005.
99. C.K. Riley, A.S. Adebayo, A.O. Wheatley, M.H. Ahmad and **H.N. Asemota**. (2005) Micromeritics of some Jamaican yam (*Dioscorea Spp.*) starch powders and implications in tablet and capsule formulation. Proceedings from the 7<sup>th</sup> Biennial Conference of the Faculty of Pure and Applied Sciences, University of the West Indies, Mona, Jamaica, 57 May 15-17, 2005.
100. Powell, M., Wheatley, A.O., Williams, N., Omoruyi, F., **Asemota, H.N.** and Tennant, P.F. (2005) Safety assessment of transgenic papaya (*Carica papaya*) in rat models: Histopathology studies. Proceedings of the 7<sup>th</sup> Biannual Scientific Conference of the Faculty of Pure and Applied Sciences, UWI, Mona, Kingston, Jamaica, May 17 –

- 19, 2005. Pg. 53.
101. Earle-Barrett, S.T., Wheatley, A.O. and **Asemota, H.N.** (2005) RAPD fingerprinting of twenty-five Jamaican *Dioscorea* cultivars. Proceedings of the 7<sup>th</sup> Biannual Scientific Conference of the Faculty of Pure and Applied Sciences, UWI, Mona, Kingston, Jamaica, May 17 – 19, 2005. Pg. 55.
  102. **Asemota, H. N.** (2005). Global Issues in Science. Invited Paper. NASA Administrative Fellowship Program (NAFP) Program. Benedict's College, Greensboro, NC, **USA**. March 23-25, 2005.
  103. Dilworth, L.L., Omoruyi, F.O. and **Asemota, H.N.** (2004) Intestinal enzymes and bone minerals in rats fed Phytic acid extract from Sweet Potato (*Ipomea batatas*). *The FASEB Journal*, 18 (8); C44. Abstracts, 1.1-147.3.
  104. C.K Riley, A.O. Wheatley, A.S Adebayo, M. Ahmad, and **H.N. Asemota.** (2004) Industrial exploitation potential of native Jamaican yam (*Dioscorea sp.*) starches in tablet formulation for diabetics: Effect of amylose content and digestibility. *The FASEB Journal*, 18 (8); ppC45. Abstracts, 1.1-147.3.
  105. McKoy, M.G., Omoruyi, F.O., **Asemota, H.N.** and Simon, O. R. (2004) Evaluation of Toxicological Effects of a Sapogenin-Rich Yam (*Dioscorea sp.*) Preparation with Potential for Treating Hypercholesterolemia. *The FASEB Journal*, 18 (5); A999. Abstracts Part II, 480.1-860.14.
  106. Bahado-Singh, P.S., Wheatley, A.O., Morrison, E. Y. St. A., Ahmad, H., and **Asemota, H. N.** The effect of different food processing methods on the total sugar content and the Glycemic Response of some West Indian foods. BioScience2004 Annual Conference, Scotland Exhibition Conference Center, Glasgow, 18-22 July, 2004. United Kingdom.
  107. **P. S. Bahado-Singh**, A. O. Wheatley, M. H. Ahmad, E. Y. St. A. Morrison and H. N. Asemota (2004) Determination of the Glycemic Indices of Roots and Tuber Crops of the Caribbean: Implications for Diabetes Mellitus. Proceedings from the Northern Caribbean University Scientific Conference, Mandeville, Jamaica - April, 2004
  108. Riley, C.K., Wheatley, A.O., Adebayo, A.S., Ahmad, M.H. and **Asemota, H.N.** Industrial exploitation potential of native Jamaican yam (*Dioscorea sp.*) starches in tablet formulation for diabetics: Effect of amylose content and digestibility. ASBMB Annual Meeting and 8<sup>th</sup> IUBMB Conference. June 12-16, 2004. Boston, Massachusetts, USA.
  109. Dilworth, L.L., Omoruyi, F.O. and **Asemota, H.N.** (2004) Intestinal enzymes and bone minerals in rats fed Phytic acid extract from Sweet Potato (*Ipomea batatas*). *The FASEB Journal*, 18 (8); C44. Abstracts, 1.1-147.3. ASBMB Annual Meeting and 8<sup>th</sup> IUBMB Conference. June 12-16, 2004. Boston, Massachusetts, USA.
  110. Omoregie, S., Devi-Prasad, P., Osagie, A. and **Asemota, H.N.** Intraspecific genetic diversity in yam expressed through DNA fingerprinting random primed PCR analysis. ASMB Meeting and 8<sup>th</sup> IUBMB Conference. June 12-16, 2004. Boston, Massachusetts, USA.
  111. Dilworth, L.L., Omoruyi, F. O., Simon, O., Morrison, E.Y. and Asemota, H.N. Hepatic carbohydrate and lipid metabolizing enzymes and the transaminases in rats fed phytic acid extract from Sweet Potato (*Ipomea batatas*). 49<sup>th</sup> Annual Caribbean Health Research Council. April 22-24, 2004. St. Georges, Grenada.
  112. Bahado-Singh, P.S., Wheatley, A.O., Morrison, E. Y. St. A., Ahmad, H., and **Asemota, H. N.** Investigation of the effect of food processing on the Glycemic Indices of some Jamaican foods: A proactive approach o management of Type II Diabetes Mellitus. The 10<sup>th</sup> Annual International Diabetes Conference, March 4-7, 2004. Jamaica Grand, Ocho Rios.
  113. Dilworth, L., Omoruyi, F.O. Morrison E.Y. and **Asemota, H.N.** Hepatic carbohydrate and lipid metabolizing enzymes and the transaminases in rats fed phytic acid extract from Sweet Potato (*Ipomea batatas*). The 10<sup>th</sup> Annual International Diabetes Conference, March 4-7, 2004. Jamaica Grand, Ocho Rios.
  114. C.K Riley, A.O. Wheatley, M. Ahmad, and **H.N. Asemota.** The Relationship between Amylose Content and Some Rheological Properties of Starches from Five Jamaican Yams (*Dioscorea sp.*). The 10<sup>th</sup> Annual International Diabetes Conference, March 4-7, 2004. Jamaica Grand, Ocho Rios.

115. Riley, C.K., Wheatley, A.O., Ahmad, M.H. and **Asemota, H.N.** The relationship between amylose content and some rheological properties of starches from five Jamaican yams (*Dioscorea* spp.). 17<sup>th</sup> Annual National Conference on Science and Technology. Science and Technology for Economic Development: Technology Driven Agriculture and Agro-processing. November 19-22, 2003. Knutsford Court Hotel, Kingston, Jamaica.
116. Lobban, K.S., Wheatley, A.O., Golden, K. and **Asemota, H.N.** Investigation of polyphenol oxidase changes associated with the *in vitro* propagation of *Dioscorea alata* cv. sweet yam. 17<sup>th</sup> Annual National Conference on Science and Technology. Science and Technology for Economic Development: Technology Driven Agriculture and Agro-processing. November 19-22, 2003. Knutsford Court Hotel, Kingston, Jamaica.
117. Riley, C.K., Wheatley, A.O., Hassan, I., Ahmad, M.H., Morrison, E.Y.St.A. and **Asemota, H.N.** (2003) X-ray crystallographic and scanning electron microscopic analysis of starches from five yam (*Dioscorea* spp.) grown in Jamaica. HUPO 2<sup>nd</sup> Annual and IUBMB XIX Congress, October 8-11, 2003. Montreal, Canada.
118. Earle-Barrett, S., Wheatley, A.O., **Asemota, H.N.** and Lobban, K. (2003) Study of biodiversity within Jamaican yam (*Dioscorea* spp.) using Random Amplified Polymorphic DNA (RAPD) and Amplified Fragment Length Polymorphism (ALFP). HUPO 2<sup>nd</sup> Annual and IUBMB XIX Congress, October 8-11, 2003, Montreal, Canada.
119. Bahado-Singh, P.S., Wheatley, A.O., **Asemota, H.N.** and Morrison, E.Y.St. A. (2003) Glycemic indices of selected food crops of the Caribbean: Implications for the management of diabetes. HUPO 2<sup>nd</sup> Annual and IUBMB XIX Congress, October 8-11, 2003, Montreal, Canada.
120. A. O. Wheatley, C. K. Riley, P. S. Bahado-Singh, T. M. Smith, **H. N. Asemota** and E. Y. Morrison (2003) Relationship between amylose content and the *in vitro* digestibility and glycemic index of some Jamaican yam (*Dioscorea* spp.) starches. Proceedings from the International Diabetes Federation 18<sup>th</sup> Congress, page 2078 Paris, France – August 24-29.
121. Powell, M., Wheatley, A.O., Tennant, P., Omoruyi, F., **Asemota, H.N.**, Gonsalves, D. and Ahmad, M.H. (2003) Rat intestinal transport enzymes: Effect of the consumption of transgenic papaya (*Carica papaya* L.). HUPO 2<sup>nd</sup> Annual and IUBMB XIX Congress, October 8-11, 2003, Montreal, Canada.
122. Lobban, K.S., Wheatley, A.O., Golden, K. and **Asemota, H.N.** Investigation of the biochemical changes associated with *ex vivo* and *in vitro* developmental processes in *Dioscorea* spp. HUPO 2<sup>nd</sup> Annual and IUBMB XIX Congress, October 8-11, 2003, Montreal, Canada.
123. Bahado-Singh, P.S., Wheatley, A.O., **Asemota, H.N.** and Morrison, E.Y.St. A. (2003) Glycemic indices of selected food crops of the Caribbean: Implications for the management of diabetes *Molecular and Cellular Proteomics*, Vol. 2, No.9 pp. 881.
124. Powell, M., Wheatley, A.O., Tennant, P., Omoruyi, F., **Asemota, H.N.**, Gonsalves, D. and Ahmad, M.H. (2003) Rat intestinal transport enzymes: Effect of the consumption of transgenic papaya (*Carica papaya* L.). *Molecular and Cellular Proteomics*, Vol. 2, No.9 pp. 881.
125. Wheatley, A. O., Riley, C. K., Bahado-Singh, P. S., Smith, T. M., **Asemota, H. N.** and Morrison, E. Y. (2003) Relationship between amylose content and the *in vitro* digestibility and glycemic index of some Jamaican yam (*Dioscorea* spp.) starches. *Diabetes and Metabolism*, Vol. 29, 4S198.
126. Omoruyi, F.O., McAnuff, M.A., Morrison, E.Y., **Asemota, H.N.** (2003) Exploitable potentials of sapogenin extract from Jamaica bitter yam (*D. polygonoides*) in the management of diabetes mellitus. *West Indian Medical Journal.*, 52: (Suppl. 2): 38-39.
127. Riley, C.K., Bahado-Singh, P.S., Wheatley, A.O., **Asemota, H.N.** and Morrison, E.Y. St.A. (2003) Effect of Amylose content on the *in vitro* digestibility and Glycaemic Index of some Jamaican Yam (*Dioscorea* spp.) starches. *West Indian Medical Journal*, 52: (Suppl. 2):39.
128. Dilworth, L., Omoruyi, F.O., O. Simon, Morrison, E.Y. and **Asemota, H.N.** (2003) Effects of Phytic Acid Extract from Sweet Potato (*Ipomea Batatas*) on Blood Glucose and Loss of Zinc and Iron in the faeces of Rats. The 17<sup>th</sup> Annual Conference on Science and Technology. Science and Technology for Economic Development:

- Technology-Driven Agriculture and Agro-Processing. Held at Knutsford Court Hotel, New Kingston, Jamaica, November 19-22, 2003.
129. C.K Riley, A.O. Wheatley, M. Ahmad, and **H.N. Asemota**. The Relationship between Amylose Content and Some Rheological Properties of Starches from Five Jamaican Yams (*Dioscorea* sp.). The 17<sup>th</sup> Annual National Conference on Science and Technology, November 19-22, Kingston Jamaica. Proceedings from the Scientific Research Council Book of abstracts: 25.
  130. C.K Riley, A.O. Wheatley, M. Ahmad, and **H.N. Asemota**. Microscopic properties of Yam (*Dioscorea* sp.) starches and implications for industrial application. Northern Caribbean University Annual Science Symposium April 20<sup>th</sup> 2004, Mandeville Jamaica.
  131. Omoruyi, F., McAnuff, M., **Asemota, H.N.** and Morrison, E.Y. (2002) Jamaican wild yam as a source of cholesterol-reducing properties in the blood. Ethnopharmacology Seminar with the theme: *The role of Ethnopharmacology in the development of medicinal products from plants (Sponsored by Organization of America States through the National Commission on Science & Technology)*. Held January 10, 2002 at University of the West Indies, Mona, Kingston, Jamaica.
  132. Wheatley, A.O., **Asemota, H.N.** and Morrison, E.Y.St.A. (2002) Glycemic index: Not all carbohydrates are created equal. 8<sup>th</sup> International Diabetes Conference, March 7-10, 2002, Ocho Rios, Jamaica. *West Indian Medical Journal*, Vol 51: (Suppl. 1): 60.
  133. Omoruyi, F., Dilworth, L., **Asemota, H.**, Jacobs, H., and Morrison, E. (2001) Effect of cooking on phytic acid levels in some Caribbean tuber crops. *Proceedings of the fifth conference, Faculty of Pure and Applied Sciences, The University of the West Indies, Mona, Kingston 7, Jamaica.* pp. 61-62.
  134. McAnuff, M., Omoruyi, F., Harding, W., Wheatley, A., Anderson, N., Jacobs, H., Morrison, E., and **Asemota, H.** (2001) Jamaican Yams: Nature's Own Medicine. *Proceedings of the fifth conference, Faculty of Pure and Applied Sciences, The University of the West Indies, Mona, Kingston 7, Jamaica:* 28-29.
  135. Riley, C.K., Wheatley, A.O., **Asemota, H.N.** and Ahmad, M.H. (2001) Initiation of field-grown yam (*Dioscorea* sp.) vines into culture: Dealing with contamination. *Fifth Conference of the Faculty of Pure and applied Sciences. January 8-11, 2001, UWI, Mona, Kingston, Jamaica,* pg. 62.
  136. Wheatley, A.O., Ahmad, M.H. and Asemota, H.N. (2001) Postflask management of tissue culture plantlets: Biochemical and physiological considerations. *Fifth Conference of the Faculty of Pure and applied Sciences. January 8-11, 2001, UWI, Mona, Kingston, Jamaica,* pg. 65-66.
  137. Wheatley, A.O., Osuji, G. and Asemota, H.N. (2001) Differential gene expression and the development of salt tolerance in *in vitro* yam (*Dioscorea alata*) plantlets. *Fifth Conference of the Faculty of Pure and applied Sciences. January 8-11, 2001, UWI, Mona, Kingston, Jamaica,* pg. 66.
  138. Wheatley, A.O. and Asemota, H.N. (2001) Storage characteristics of yam (*Dioscorea* sp.) *in vitro* derived and traditional tubers. *Fifth Conference of the Faculty of Pure and applied Sciences. January 8-11, 2001, UWI, Mona, Kingston, Jamaica,* pg. 67.
  139. McAnuff, M., Omoruyi, F., Harding, W., Wheatley, A., Anderson, N., Jacobs, H., Morrison, E. and Asemota, H. (2001) Extraction and characterization of steroidal saponinins from the Jamaican bitter yam. *15<sup>th</sup> Annual National Conference on Science and Technology, Scientific Research Council, Hilton Kingston Hotel, Kingston Jamaica.* pg. 20.
  140. McAnuff, M., Omoruyi, F., Harding, W., Wheatley, A., Anderson, N., Jacobs, H., Morrison, E., and **Asemota, H.** (2001) Extraction and characterization of steroidal saponinins from the Jamaican bitter yam. *15<sup>th</sup> Annual National Conference on Science and Technology, Scientific Research Council, Held at Hilton Kingston Hotel, New Kingston, Jamaica. Book of Abstracts.* p 20.
  141. Wheatley, A.O., **Asemota, H.N.** and Osuji, G. (2000) Differential expression of yam (*Dioscorea alata*) genes during the development of salt tolerance. *14<sup>th</sup> Annual National Conference on Science and Technology: Genes and their Impact.* November

- 23-24, 2000, *Le Meridian*, Kingston, Jamaica. pg 16.
142. **Asemota, H.N.**, Wheatley, A.O. and Brown, V.M. (2000). Biochemical and molecular studies on yams (*Dioscorea spp.*), dasheens (*Colocasia esculenta*) and cocoyams (*Xanthomonas sp.*) towards sustainable production in Jamaica. *Proceedings of the 18<sup>th</sup> International Conference of Biochemistry and Molecular Biology – “Beyond the Genome”*. Birmingham, UK, Pg. 228.
143. Wheatley, A.O., **Asemota, H.N.** and Osuji, G. (2000). *In vitro* studies on the effect of salinity stress on some molecular properties of yam (*Dioscorea alata*) plantlets. *Proceedings of the 18<sup>th</sup> International Conference of Biochemistry and Molecular Biology – “Beyond the Genome”*. Birmingham, UK, Pg. 140.
144. McAnuff, M., **Asemota, H.N.**, Anderson, N. Harding W. and Jacobs, H. (2000). Isolation and characterisation of some natural products from the Jamaican Bitter Yam (*Dioscorea dumetorum*). International Symposium on “Utilisation of Natural Products in Developing Countries: Trends and Needs” July 9-14, 2000, UWI, Mona, Kingston, Jamaica. Book of Abstracts Pg. 17.
145. **Asemota, H. N.** (1999). Biotechnology for Yam Production Improvement: a challenge for women scientists. Third World Organization for Women in Science (TWOWS) Second General Assembly and International Conference, Cape Town, South Africa, Feb. 8 - 11, 1999. Abstracts p. 72.
146. Brown, V.M.D., **Asemota, H.N.**, Thangavelu, M. and Mantel, S.H. (1999). Genetic Diversity in Dasheens (*Colocasia sp.*) and cocoyams (*Xanthosoma sp.*) grown in Jamaica. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 100.
147. Brown, V.M.D., **Asemota, H.N.**, Mansfield, J., Stevens, C.A. and Mantell, S.H. (1999) Molecular analyses of bacterial pathogenicity in dasheen (*Colocasia sp.*) and cocoyam (*Xanthosoma sp.*) in Jamaica. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 101.
148. Wheatley, A.O. and **Asemota, H.N.** (1999). Toward increasing yam production in challenged environments: *in vitro* studies of the effect of salinity stress on some biochemical parameters of yam (*Dioscorea alata*) plantlets. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 42.
149. Wheatley, A.O., Iyare, O.A., Glasgow, D.M., **Asemota, H.N.**, Grindley, P.B. and Ahmad, M.H. (1999). Sectional influence of yam (*Dioscorea cayenensis*) tubers used for minisett on some biochemical parameters of resultant tubers. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 102.
150. **Asemota, H.N.** and Osagie, A.U. (1999). Postharvest storage of yam tubers: A biochemical perspective. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 39.
151. Grindley, P.B., Omoruyi, F.O., **Asemota, H.N.** and Morrison, E.Y. (1999). Effect of yam and dasheen extracts on lipid metabolism in streptozotocin-induced diabetic rats. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 43.
152. Lobban, K., Wheatley, A. and **Asemota, H.** (1999). Biochemical changes associated with the cell wall of yam (*Dioscorea cayenensis*) tubers during short-term storage. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 103.
153. Knight, O.S., Hamilton, M.A.E., Omoruyi, F.O. and **Asemota, H.N.** (1999). Cell wall degrading enzymes in *in vitro* derived plantlets of round-leaf yellow yam (*Dioscorea cayenensis*) infected with *Xanthomonas campestris*. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences, UWI, Mona Jan. 12-14, 1999*. Abstracts of Presentations. Pg. 103.
154. Mullings, K. A., **Asemota, H. N.** and Morrison, Errol, E.Y. St. A. (1999). Quantification and identification of the cyanoglucosides in economically important yam varieties. *Proceedings of the Fourth Conference, Faculty of Pure and Applied Sciences,*

- UWI, Mona Jan. 12-14, 1999. Abstracts of Presentations. Pg. 104.*
155. Grindley, P., Omoruyi, F., **Asemota, H.**, and Morrison, E. Y. St. A. (1998). Blood lipids and lipid metabolism in the liver of streptozotocin-induced Diabetic rats fed organic extracts of yam (*D. cayenensis*, cv. Roundleaf) and dasheen (*C. esculenta*). The Fourth Annual Postgraduate Course and International Conference of the University Diabetic Outreach Project & The American Diabetic Association & The Caribbean Food and Nutrition Institute *West Indian Medical Journal* 47 (Suppl.), 31.
  156. Martin, D., **Asemota, H.N.**, Devi Prasad, P.V. and Ahmad, M.H. (1997). Study of the biochemical and molecular changes associated with *in vitro*-manipulations of three species of yam - *Dioscorea alata*, *D. cayenensis* and *D. rotundata*. *Proceedings of the 3rd Conference of Faculty of Natural Sciences, UWI, Mona, Jan. 14-17, 1997.* pp. 39-40.
  157. Omoregie, S.N., **Asemota, H.N.**, Osagie, A.U. and Ahmad, M.H. (1997). Biotechnological strategies to *Dioscorea* yam improvement. *Proceedings of the 3rd Conference of Faculty of Natural Sciences, UWI, Mona, Jan. 14-17, 1997.* p. 16.
  158. Wheatley, A.O. and **Asemota, H.N.** (1997). Survival and yield of *in vitro* derived yam (*Dioscorea* spp.) plantlets in the open field under various treatments. *Proceedings of the 3rd Conference of Faculty of Natural Sciences, UWI, Mona, Jan. 14-17, 1997.* p.40.
  159. Iyare, O.A., Wheatley, A.O. and **Asemota, H.N.** (1997). Biochemical changes associated with the long-term storage of yam (*Dioscorea* spp.). *Proceedings of the 3rd Conference of Faculty of Natural Sciences, UWI, Mona, Jan. 14-17, 1997.* p. 39.
  160. Wheatley, A.O., Iyare, O.A. and **Asemota, H.N.** (1997). The effect of "hardening" on selected enzyme activities of *in vitro*-derived yam plantlets. *Proceedings of the 3rd Conference of Faculty of Natural Sciences, UWI, Mona, Jan. 14-17, 1997.* pp. 17-18.
  161. Wheatley, A.O., Iyare, O.A., Glasgow, D.M., Grindley, P.B. and **Asemota, H.N.** (1997). The effect of section of yam tuber from which minisetts used in planting are derived on some biochemical properties of resultant harvested tubers. *Scientific Research Council (SRC) 11th Annual Conference on Science and Technology, Jamaica Conference Centre, Kingston, Nov. 18-20, 1997. Abstracts of Papers.* Pg.2.
  162. Wheatley, A. Iyare, O. and **Asemota, H.** (1996). Biochemical and physiological changes associated with post flask management of tissue culture derived yam plantlets. *7<sup>th</sup> Annual Conference of the Jamaica Society for Agricultural Sciences (JSAS). Abstracts. May 28-30, 1996.*
  163. **Asemota, H. N.** (1996). Genetic diversity and phylogeny of *Dioscorea* yams grown for food in Jamaica. *7<sup>th</sup> Annual Conference of the Jamaica Society for Agricultural Sciences (JSAS). Abstracts. May 28 - 30, 1996.*
  164. Omoregie, S. N., **Asemota, H.N.** and Ahmad, M. H. (1995). Factors affecting DNA isolation from yam tissues and protoplast. *Scientific Research Council (SRC) 9th Annual National Conference on Science and Technology, Jamaica Conference Centre, Nov. 21-23, 1995. Abstracts of Papers.* Pg.2.
  165. **Asemota, H.N.** and Kahl, G. (1995). Molecular characterisation of some Jamaican yams (*Dioscorea* spp.) using arbitrary-primed PCR technique. *SRC 9th Annual National Conference on Science and Technology, Jamaica Conference Centre, Nov. 21-23, 1995 Abstracts of Papers.* Pp.2-3.
  166. Iyare, O.A. and **Asemota, H.N.** (1995). Biochemical Indices for assessing acclimatisation of *in vitro* yam plantlets. *SRC 9th Annual National Conference on Science and Technology, Jamaica Conference Centre, Nov. 21-23, 1995. Abstracts of Papers.* Pg.3.
  167. **Asemota H. N.**, Ahmad, M.H., Morrison, E.Y., Devi Prasad, P.V. and Kahl, G. (1995). RAPD markers reveal genetic relationship among *Dioscorea alata* cultivars from Nigeria and Jamaica environments. *Proceedings of the 2nd Conference of Faculty of Natural Sciences, UWI, Mona, March 7-9, 1995.* pp. 17-18.
  168. **Asemota, H. N.**, Mullings, K.A., Grindley, P.B. and Morrison, E.Y. (1995). Enzymatic assay for the quantitation of endogenous cyanogenic glucoside in post-harvest yam (*Dioscorea* spp.) tubers. *Proceedings of the 2nd Conference of Faculty of Natural Sciences, UWI, Mona, March 7-9, 1995.* p. 19.
  169. Mitchell, S.A. **Asemota, H. N.**, Curtis, B. and Ahmad, M. H. (1995). Optimising

- the transfer of tissue cultured yam (*Dioscorea* spp.) plantlets to the terrestrial environment. *Proceedings of the 2nd Conference of Faculty of Natural Sciences, UWI, Mona, March 7-9, 1995.* pp. 19-20.
170. Omoregie, S.N., **Asemota, H. N.**, Devi Prasad, P.V. and Henry, C. (1995). Transformation studies of *Dioscorea* protoplasts and endophytes. *Proceedings of the 2nd Conference of Faculty of Natural Sciences, UWI, Mona, March 7-9, 1995.* p. 21.
  171. **Asemota H. N.**; Omoregie S. N.; Ahmad M. H. and Mantell S. (1994). Endophytic bacteria in tubers of yams cultivated in Jamaica: potential for exploitation in yam genetic improvement. *SRC 8th Annual Conference on Science and Technology, Jamaica Conference Centre, Nov. 22-24, 1994.* Abstracts of Papers. Pg.6.
  172. **Asemota H. N.** (1994). Study of genetic polymorphism in cultivated yam species through Random Amplified Polymorphic DNA (RAPD) analyses: a tool for cultivar identification. *SRC 8th Annual Conference on Science and Technology, Jamaica Conference Centre, Nov 22-24, 1994.* Abstracts of Papers. Pg.7.
  173. **Asemota, H. N.**; Omoregie, S. N.; Grindley, P. B. and Morrison, E. Y. (1994). Postharvest storage of yams: lipid profiles and linamarin levels in Jamaican yam tubers. *SRC 8th Annual Conference on Science and Technology, Jamaica Conference Centre, Nov. 22-24, Abstracts of Papers.* Pg.7.
  174. **Asemota, H.N.**, Taylor, D., Mitchell, S.A., Muzac-Tucker, I. and Ahmad, M.H. (1994). Polyphenol oxidase activities in *Dioscorea alata* cv. Sweet Yam at different stages of production of tissue culture plantlets. *Proceedings of the 1st Conference, Faculty of Natural Sciences, UWI, Mona, Jamaica.* Pg. 1.
  175. **Asemota, H.N.**, Mitchell, S.A., Richards, A.K. and Ahmad, M.H. (1994). Effect of Polyphenol oxidase inhibitors on the growth of plantlets and browning of tissue-culture yam (*Dioscorea* spp.) plantlets. *Proceedings of the 1st Conference, Faculty of Natural Sciences, UWI, Mona, Jamaica.* Pg. 1.
  176. Mitchell, S.A., **Asemota, H.N.** and Ahmad, M.H. (1994). Studies on *in vitro* growth patterns of *Dioscorea cayenensis* and *D. trifida* initiated from auxillary nodal segments. *Proceedings of the 1st Conference, Faculty of Natural Sciences, UWI, Mona, Jamaica.* Pg. 2.
  177. Muzac-Tucker, I., **Asemota, H.N.** and Ahmad, M.H. (1994). Analysis of genetic polymorphism in yam DNA by PCR techniques. *Proceedings of the 1st Conference, Faculty of Natural Sciences, UWI, Mona, Jamaica.* Pg.3.
  178. **Asemota, H. N.** Prasad, D. P.V., Khudeira, Z. Stewart-Clarke, E. and Henry C. (1993). Protoplast release in Caribbean yams (*Dioscorea* sp.). New York Academy of Sciences Conference "DNA: The Double Helix Forty Years, Perspective and Prospective" held at the Chicago Marriot Hotel, Chicago, U.S.A. Oct.13-16, 1993. Book of Poster Abstracts. Pg. 2.
  179. **Asemota, H. N.**, Muzac-Tucker, I., Golden, K. Ahmad, H. M. and Odutuga, A. A. (1992). Changes in total lipid content and fatty acid composition in stored yam tubers. Paper presented at the 3rd annual conference of the Caribbean Biotechnology Network held at the University of the West Indies, Mona, Kingston, Jamaica, 6-8 July 1992. Book of Abstracts. P.2.
  180. **Asemota, H. N.** and Osagie, A.U. (1987). Carbohydrate metabolism in stored yam tubers: Contribution of starch breakdown, glycolysis and pentose phosphate pathway. *Paper presented at the 2nd National Symposium on Yam tuber*, held at the Anambra State University of Technology, Enugu, Nigeria, 8 -10 June 1987. Book of Abstracts. pp.10
  181. **Asemota, H. N.** and Osagie, A.U. (1986). Partial purification and some kinetic properties of yellow yam (*Dioscorea cayenensis*) Phosphofructokinase. *Paper presented at the 11<sup>th</sup> conference of the Biochemical Society of Nigeria*, November 1986 held at the University of Ilorin, Nigeria. Book of Abstracts. pp. 12.
  182. **Asemota, H. N.** and Osagie, A. U. (1985). Levels of Phosphofructokinase, glucose 6-phosphate dehydrogenase activities and reducing sugars in fresh and stored yam tubers. *Paper presented at the 10th annual conference of the Biochemical Society of Nigeria*, November 24-28, 1985 held at the College of Medicine, University of Lagos, Idiaraba, Lagos. Nigeria. Book of Abstracts. pp. 18.
  183. Ikediobi, C.O. and **Obasuyi, H. N.** (1982). Comparison of the properties of polyphenol oxidases from ten cultivars of four species of yam grown for food in Nigeria.

*Paper presented at the 8th Annual conference of the Biochemical Society of Nigeria (BSN), March 23 -26, at Ahmadu Bello University, Zaria, Nigeria. Book of Abstracts. pp.8.*

184. Ikediobi. C.O., and **Obasuyi, H. N.** (1982). Purification and some properties of the Browning enzymes from the white yam (*Dioscorea rotundata*) tuber. *Paper presented at the 22nd Annual conference of the Science Association of Nigeria (SAN), March 22 - 24, 1982 held at the University of Jos, Nigeria. Book of Abstracts. pp. 10.*

#### 8.6. ANNUALS:

185. Williams E.; **Asemota H.**; and Fapojuwo F. "State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability" Annual. © 2006. Aardvark Global Publishing.
186. (In April 2006, in collaboration with Dr. Mercy Fapojuwo and Dr. Elvira Williams, I established an academic Periodical titled "**State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability.**" It will be soliciting for Science and Technology publications in Academia, in the Industries, in the Government, and in the Non Profit Organizations. Topics will be relating to strategies on bridging the social and economic gaps of Science and Technology within the global system. That is, publications are expected to be global. Topics expected, will cover an example of the following: All topics in the Sciences will be as an outreach endeavor, Distance/Flexible Education as an outreach endeavor, Web/Learning Communities as an outreach endeavor, New Possibilities in Information Technology as an outreach endeavor.)
187. (Co-published the following 4 articles in the first volume of the Periodical named above) **Asemota H.**; Fapojuwo F.; and Williams E. Channeling Inner-city Unreached Populations in Wake County into Post-Secondary Education. *State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability Annual.* © 2006. Aardvark Global Publishing. (**Article I:** Proposal draft for "Channeling Inner-city Unreached Populations in Wake County into Post-Secondary Education")
188. Fapojuwo F.; **Asemota H.**; and Williams E. Facilitating and Mentoring Rural Populations in Johnston County into Post-Secondary Education Through Exposure to Modern Technologies. *State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability Annual.* © 2006. Aardvark Global Publishing. (**Article II:** Proposal draft for "Facilitating and Mentoring Rural Populations in Johnston County into Post-Secondary Education Through Exposure to Modern Technologies")
189. Williams E.; **Asemota H.**; and Fapojuwo F. Preparing and Steering Durham County North Carolina Drug Abuse/Drop-out Population into Post-Secondary Education through Mentoring Using Modern Technologies. *State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability Annual.* © 2006. Aardvark Global Publishing. (**Article III:** Proposal draft for "Preparing and Steering Durham County North Carolina Drug Abuse/Drop-out Population into Post-Secondary Education Through Mentoring Using Modern Technologies")
190. **Asemota H.**; Fapojuwo F.; and Williams E. Cutting Edge Technology Outreach Unit for Training Wake County Under-represented Female Heads of Household. *State-of-the-Art Technology Strategies for Reaching Unreached Populations for Education, Development and Sustainability Annual.* © 2006. Aardvark Global Publishing. (**Article IV:** Proposal draft for "Cutting Edge Technology Outreach Unit for Training Wake County Under-represented Female Heads of Household")

#### 8.6. UWI RESEARCH DAY POSTER PRESENTATIONS & EXHIBITIONS:

- **Asemota, H.** (1998) Tuber crops Biotechnology Research for sustainable development: *Flagship Project.* Presented at the 1998 UWI Annual Research Day
- McAnuff, M., Omoruyi, F., Harding, W., Wheatley, A., Anderson, N., Jacobs, H., Morrison, E. and **Asemota, H.** (2000) Jamaican Yams: Natures Own Medicine. Presented at the UWI Annual Research Day.

- Omoruyi, F. McAnuff, M., Dilworth, L., Harding, W., Wheatley., Anderson, N., Jacobs, H., Morrison, E. and **Asemota, H.** (2001) Sustainable development potential of Jamaican tuber crops through exploitation of the Natural products. Poster presentation at the Research Day (October 18, 2001), UWI, Mona, Kingston, Jamaica. **Prize winning poster**
- Wheatley, A.O., Ahmad, M.H., Morrison, E.Y. and **Asemota, H.N.** (2001) UWI Agri-outreach for poverty alleviation. Poster presentation at the Research Day (October 18, 2001), UWI, Mona, Kingston, Jamaica.
- Wheatley, A.O., Riley, C.K, Brown, C. and **Asemota, H.N.** (2001) Preserving our heritage -Jamaican yam germplasm collection. Poster presentation at the Research Day (October 18, 2001), UWI, Mona, Kingston, Jamaica.
- **Posters for UWI Research Day, 2006**
  - *Bioactive compounds in Jamaican Food Crops.* **Helen Asemota**, Andrew Wheatley, Errol Morrison, Anthony Osagie, Lowell Dilworth, Dewayne Stennett, Curtis Green and Dennis Bailey.
  - *Root and Tuber Crop Research.* **Helen Asemota**, Andrew Wheatley, Errol Morrison, Anthony Osagie, Cliff Riley, Lowell Dilworth, Perceval Bahado-Singh, Melissa Powell, Kathleen Lobban and Cornelius Pyne.

## 9. INVITED LECTURES/SEMINARS:

- **Asemota, H.N.** (2005) Shaw University Nanobiotechnology Research Proposal Concepts. North Carolina Biotechnology Center, Research Triangle Park (RTP), USA. October 2005.
- **Asemota, H.N.** (2005) Overview of Biotechnology Application in Agriculture. *Keynote Address.* UN-FAO Farmers' Seed Potato Production Training Workshop, Tajikistan, July 28, 2005.
- **Asemota, H.N.** (2005) Global Issues in Science. NASA week activities. Bennett College. Greensboro, North Carolina. USA. March 23, 2005.
- **Asemota, H.N.** (2005) Natural Products in some Caribbean foods and the metabolic effects of their consumption in rat models. Dept. of Public Health, Center for Alternative Medicine, Morgan State University, Maryland, USA. May 19, 2005
- **Asemota, H.N.** (2004) Conservation of Biodiversity, Improvement of Production and Exploitation of *Dioscorea* Yams for Sustainable Development. Dept. of Public Health, Center for Alternative Medicine, Morgan State University, Maryland, USA. July 23, 2004.
- **Asemota, H. N.** (2001) Biotechnology and its use in crop production improvement. Guest Lecture at the FAO/GOSM "National Training Workshop on Potato Seed Production through Tissue Culture", at GOSM, Aleppo, Syria. November 24, 2001
- **Asemota, H. N.** (2000) Biotechnology for yam production improvement. Guest Lecture on the occasion of Year 2000 Yam Festival, Southern Trelawny Environmental Agency, Trelawny Parish, Jamaica. April 18, 2000.
- **Asemota, H. N.** (1999). Production of efficient yam planting materials through biotechnology.
- Guest Lecture on the occasion of 1999 Yam Festival, Southern Trelawny Environmental Agency, Trelawny Parish, Jamaica. March 30, 1999.
- **Asemota, H.N.** (1998). Improvement of Yam production using modern technology. Symposium on the Occasion of 1998 Yam Festival, Falmouth, Trelawny Parish, Jamaica. April 7, 1998.
- **Asemota, H.N.** (1998). Yams: Current Research Advances and Application of Biotechnology. Ministry of Agriculture Research Seminars, Bodles, Jamaica. April 15, 1998.

- **Asemota, H.N.** (1998). Molecular Biology Research at Mona. Lecture given at the Faculty of Pure and Applied Sciences Lecture Theatre on the occasion of UWI 50th Anniversary Celebrations, UWI Mona Research Day, November 5, 1998.
- **Asemota, H.N.** (1996) Biotechnology of root and tuber crops. Seminar organised by the Chemistry Department and the Biotechnology Centre, UWI, Mona in honour of Prof. G. Lalor's retirement. Faculty of Natural Sciences, UWI, Mona. September 19, 1996.
- **Asemota, H.N.** (1994) Random Amplified Polymorphic DNA (RAPD) analysis of *Dioscorea* cultivated species. Invited Lecture and Demonstration at the Dept. of Biological Sciences, Chicago State University, Chicago, USA. October 7, 1994.

**10. PATENTS:**

- The assessment of the efficacy of acclimatization of tissue culture derived plantlets by the use of a biochemical indicator.
- Simple, efficient, and inexpensive procedure for acclimatization of *in vitro* derived yam (*Dioscorea spp.*) plantlets.