

Curriculum Vitae

Biology, Science, University of Ottawa

Dec 16, 2008

a) **ARNASON, John Thor**, full professor, tenured
Member of the School of Graduate Studies and Research : yes

Employee No.
35515

b) DEGREES:

B.Sc. (Hons-Chemistry), Carleton University, Ottawa 1966-70

Year of study (Ecology) Université de Grenoble, Grenoble, France 1970-71

Ph.D. (Biology) Carleton University, Ottawa 1971-76

P.D.F. (Biology) University of B.C., Vancouver 1978-79

c) EMPLOYMENT HISTORY:

| <u>Positions Held</u> | <u>Institution</u> | <u>Dates</u> |
|--|---|---------------|
| Professor | Biology, University of Ottawa | 1990- present |
| Associate Director Biopharmaceutical Sciences | Faculty of Science | 2005- present |
| Director Collaborative Program In Toxicology | Ottawa-Carleton Institutes | 1995-97 |
| Vice-Dean (Research) | Faculty of Science University of Ottawa | 1991-94 |
| Director | Ottawa-Carleton Institute of Biology | 1989-91 |
| Associate Director | Ottawa-Carleton Institute of Biology | 1987-89 |
| Visiting Professor | Laboratorio de Plantas Medicinales, Mexico | 1987 |
| Associate Professor (tenured) | University of Ottawa | 1983-90 |
| Assistant Professor | University of Ottawa | 1979-83 |
| NSERC Postdoctoral fellow | U.B.C. | 1978-79 |
| Project Manager, Indian Church Research Project, Belize, C.A. | C.I.D.A./C.U./B.M.A | 1977-78 |

e) SCHOLARLY AND PROFESSIONAL ACTIVITIES.

Health Canada Natural Health Product Directorate: expert advisory board (2004-present)
Director, Natural Health Product Research Society (2004-present)
Program Co-chair Natural Health Products Research Society, Toronto (2008)
Guest Editor (Canadian J. Physiology and Pharmacology, Canadian J Botany)
Conference co-chair, Canadian Society Plant Physiol. 50th anniversary meeting (2008)
PhD External Examiner, McGill, U. Sask, UQAM (2008)
Health Canada Citronella review panel (2006)
Canadian Botanical Association, Symposium organizer (2006)
External examiner, McGill, Rhodes University, SA (2006)
Editorial board, Planta Medica, Am Botanical Council, Tramil network (2005-present)
Workshop coordinator, Tropical conservancy Vietnam Biodiversity project
Editor, Biodiversity and Health Proceedings. 2005
Ph.D. external examiner, Memorial U., Universidad Metropolitana, Mexico (2005)
Conference co chair, joint ISCE and PSNA meeting 2004
USDA grants selection panel 2004
Program committee Natural Health Products Research Conference 2004
Program chair, Biodiversity and Health conference, 2003
Research network co-chair for Natural Product network 2003-4
Scientific SAB Phytobiotech Inc., Codena Inc, Nexcell Biosciences, 2003
Ph.D. external examiner : U.B.C., U de Pau (France), NUS (Singapore), 2003
Health Canada hepatotoxicity advisory panel, 2003-6
Consulatation sur mycotoxines, INRA, Bordeaux, France, 2002
Rapporteur, Habilitation direction de recherche, Universite de Pau, France, 2002
External examiner, PhD thesis, UNAM, Mexico, 2002
Natural Health Products, Health Canada, advisory groups 2001-3
National Institutes of Health, U.S.A. Botanical Centres grant selection committee 2001
American Botanical Council, Advisory board (1999-present)
Advisory boards : Trout Lake Farm, Klickitat, Herbon, Gaspasia Pharma (1999-2002)
Congress Organizing committee- Chemical Ecology Society (1999-1994)
Co-Organizer- Echinacea, past present and future, conference (1999)
Host- N. American Echinacea workshop (1998)
Associate Editor, Canadian J. Botany (1990-1999)
Advisory board, Phytochemical Society of North America (1997-2002)
President/Past President, Phytochemical Society (1995-96)
NSERC strategic grants selection committee (1994-1997)
Botanical Alternatives, Chair of Scientific advisory board (1990-present)
Bioforesta S.A., Costa Rica, Scientific board (1992-present)
Member, Board of Governors, University of Ottawa (1994-97)
Co-Direteur, Phytomedicine project, Togo, W. Africa (1995-98)
President elect Phytochemical Society (1994)
NSERC strategic grants selection committee (1994)
Program review, Forest Pest Management Institute (1993)
Program organizer, Phytochemical Society Meetings (1994)
Selection committee, Director operating grants, NSERC (1993)

External examiner, Ph.D. thesis, Guelph U., Brock (1993-5)
 Organizer, Botanical Pesticides workshop, Thailand (1992)
 Science and Technology advisor, Ottawa separate school board (1992)
 NSERC 1967 Scholarship committee (1987-90))
 ESC, publications committee
 Instructor, Nato advanced school in photobiology, Kingston (1992)
 Safer Ltd., Scientific advisory board, 1987-90.

f) SUPERVISION OF GRADUATE WORK; (approximate)

| | Completed | In Progress | Inactive |
|------------------|-----------|-------------|----------|
| Doctoral theses: | 20 | 4 | 0 |
| Masters theses: | 30 | 4 | 0 |

Current students

M. Mullaly, PhD Mode of action of anxiolytic triterpenes, 2006-9 (on maternity leave)
 K. Kramp, Ph.D. Supercritical extraction, 2003-7 (on maternity leave)
 C. Harris, Ph.D. Substances preventing diabetic neuropathy 2003-8
 C. Ogradavczyk, M.Sc. CAR and PXR induction by botanicals 2006-8
 B. Walshe Roussel, PhD. Antiinflammatory agents from plants 2006-8
 C-H Ta, MSc Biofilm inhibitor 2007-
 S. Nguyen, MSc Furanocoumarins as P450 inhibitors, 2007-
 A. Waye, MSc Bioactives in pulp effluents, 2007-

Recent students

R. Awad, PhD Mechanism of anxiolytic natural products, 2002-7
 J V. Fillion, MSc , Arctic medicinal plants 2005-7
 R. Leduc, MSc. Canadian Botanicals 2004-7 (completed)
 J. Mao, MSc, OXO modified corn, 2003-6
 P. Ruddock, M.Sc., Reversing antibiotic resistance, 2003-5 (Co-supervisor J. Dillon)
 N. Bourbonais- M.Sc Spear, Kekchi ethnobotany, 2003-5
 S. Collins, M.Sc. E. Timor ethnobotany, 2003-5
 S. Omar Ph.D. Antimalarials from traditionally used plants 1996-2001
 V. Assinewe Ph.D. Immunostimulant action of American Ginseng 1997-2001
 N. Jones M.Sc. Quantitative ethnobotany of E. Canada 1996-2000
 S. Binns Ph.D. Chemotaxonomy of Echinaceae 1997-2001
 A. Boucher M.Sc. Mycorrhizal modulation of secondary metabolism 1997-00
 V. Amiguet-Treyvaud Ph.D. Phytochemical discovery in the neotropics 2000-4
 A. Ramputh Ph.D QTL analysis of phenolic dimers in maize 1997-2001
 A. Burt, M.Sc. Biologically active maize substances 2000-2
 J. Budinski, M.Sc. Herbal-drug interaction, 1999-2002
 P. Wijeweera, M.Sc. Psychopharmacological effects of Gotukola, 1999-2003
 N. Bafi-Yeboa, M.Sc. Phytochemistry of prickly ash, 2000-2002
 I. Scott, Ph.D. Botanical insecticides of Piperaceae, 1999-2004
 A. Bily, Ph.D. Phytochemical resistance to Fusarium, 1999-2003 (co-supervised Philogene)

Post doctoral fellows

- JA Guerrero, Antidiabetic principles from plants (2007-9)
- V. Treyvaud Amiguet, arctic nutraceuticals (2005-7)
- M. Asim, anti-diabetic phytochemicals (2006-7)
- A, Agbonon, antioxidants from plants (2004-5)
- J. Rodriguez, Polysaccharides with immunostimulant properties (2002)
- Z.J. Zhang, Antimalarials and novel natural products (2000-2)
- A. Teshome, Traditional knowledge-Sorghum (2001-2)
- C. Bergeron, Phytochemistry of medicinal plants (1997-8)
- C. Bernard, Metabolism of dillapiol(1996-7)
- D. Classen, Phytochemistry (1985-86)
- P. Fields, Phototoxins (1987-1988)
- A. Sen, Phenolics in maize (1988-90)
- R. Marles, Feverfew mode of action (1989-1992)
- M. Abou-Zaid, Guava, mode of action (1990-1992)
- C. Chauret, Tropical natural products(1993-1995)
- P. Yat, Ginseng evaluation project (1995-96)

g) Graduate courses

Ethnobotany and ethnopharmacology 1998, 2000, 2002, 2003, 2004
Plant Animal Interactions 2002, 1999, 1997, 1995, 1993, 1991, 2002, 2006, 2008

h) RESEARCH GRANTS (current)

NSERC- Phytochemical discovery
CIHR- Team in aboriginal antidiabetic medicines
ORF- Ontario Ginseng Innovation research Centre
CFI- phytochemical facilities for MDRC
NSERC- RTI- phytochemical facility

j) PUBLICATIONS:

1) LIFETIME LIST :

Books edited.....5
Book Chapters.....10
Papers in refereed journals..... 300
Papers in refereed conference proceedings.. ...16
Technical reports/semi technical publication9
Patents.....8
Abstracts.....>300

(Some figures are approximate)

2).DETAILED LIST OF PUBLICATIONS (last seven years)

BOOKS and SYMPOSIA EDITED

A. Cuerrier and J.T. Arnason, 2008 Special ethnobotany issue, *Can J. Botany*

P. Haddad, J.T. Arnason, 2007 Special NHP issue, *Can J. Physiol. & Pharmacol.*

J.T. Arnason, P. Catling, E. Small, P.T. Dang and J.D.H Lambert 2005. *Biodiversity and Health*, NRC

J.T. Arnason, R. Mata and J. Romeo 1995. "Phytochemistry of Medicinal Plants", *Rec. Adv. Phytochem.*

M. Gbeassor and J. Thor Arnason (eds) 1997. *Developpement de phytomedicaments ethiques*, Les Presses de L=Universite du Benin, Lome, Togo

REFEREED CONFERENCE PROCEEDINGS/BOOK CHAPTERS/ Reviews

Foster, B.C. Arnason J.T., and Briggs, C.J. Natural health products and drug disposition, *Ann. Rev. Pharmacol. Toxicol.* 2005; 45:203-26. Review

J.T. Arnason, et al 2005, *Biodiversity and Health*, NRC Press. Symposium

J.T. Arnason, T. Durst and B.J.R. Philogene, 2003 *Prospection d'insecticides phytochimiques, in Biopesticides d'origine vegetale*, C. Regnault-Roger, B.J.R. Philogene et C. Vincent (eds) Editions TEC

J. Arnason, S.E. Binns and B.R. Baum 2002, *Phytochemical diversity and biological activity in Echinacea phytomedicines*, pp 9-19 in « *Phytochemicals in Nutrition and Health* », M. Meskin, W.R. Bidlack, A.J. Davies, and S.T. Omaye (eds) CRC press, Boca Raton.

LIST OF REFEREED PUBLICATIONS (last seven years)

(numbers refer to lifetime list of contributions):

Publications in peer reviewed journals

2008

Avula, B., Wang, Y.H., Ali, Z., Smillie, T.J., Fillion, V., Cuerrier, A., Arnason, J.T., and Khan, I.A. 2008. RP-HPLC determination of phenylalkanooids and terpenoids in *Rhodiola rosea* and identification by LC-MSD-TOF. *Planta Med.* **74**(3): 365-366.

Awad, R., Crump, K., Mullally, M., Sardana, R.K., Arnason, J.T., and Trudeau, V.L. 2008. An improved method for production of recombinant human glutamic acid decarboxylase 65 for use in phytopharmaceutical assessment. *Pharm. Biol.* **46**(1-2): 72-81.

Benhaddou-Andaloussi, A., Martineau, L.C., Spoor, D., Vuong, T., Leduc, C., Joly, E., Burt, A., Meddah, B., Settaf, A., Arnason, J.T., Prentki, M., and Haddad, P.S. 2008. Antidiabetic activity of *Nigella sativa* seed extract in cultured pancreatic beta-cells, skeletal muscle cells, and adipocytes. *Pharm. Biol.* **46**(1-2): 96-104.

Black, P.L., Arnason, J.T., and Cuerrier, A. 2008. Medicinal plants used by the Inuit of Oikiqtaaluk (Baffin island, Nunavut). *Botany-Botanique* **86**(2): 157-163.

Budzinski, J.W., Foster, B.C., Trudeau, V.L., Drouin, C.E., Bafi-Yebo, N., and Arnason, J.T. 2008. The interaction of selected phytochemicals, HIV drugs, and commercial-source herbal teas and capsules with human cytochrome P450 3A4 and P-glycoprotein. *Pharm. Biol.* **46**(1-2): 53-65.

Cuerrier, A. and Arnason, J.T. 2008. Ethnobotany in Canada: where biological and cultural diversity meet. *Botany-Botanique* **86**(2): V-VI.

Farsi, D.A., Harris, C.S., Reid, L., Bennett, S.A.L., Haddad, P.S., Martineau, L.C., and Arnason, J.T. 2008. Inhibition of non-enzymatic glycation by silk extracts from a Mexican land race and modern inbred lines of maize (*Zea mays*). *Phytotherapy Research* **22**(1): 108-112.

Galvan, I.J., Mir-Rashed, N., Jessulat, M., Atanya, M., Golshani, A., Durst, T., Petit, P., Amiguet, V.T., Boekhout, T., Summerbell, R., Cruz, I., Arnason, J.T., and Smith, M.L. 2008. Antifungal and antioxidant activities of the phytomedicine pipsissewa, *Chimaphila umbellata*. *Phytochemistry* **69**(3): 738-746.

Sharma, M., Vohra, S., Arnason, J.T., and Hudson, J.B. 2008. Echinacea extracts contain significant and selective activities against human pathogenic bacteria. *Pharm. Biol.* **46**(1-2): 111-116.

Vuksan, V., Sung, M.K., Sievenpiper, J.L., Stavro, P.M., Jenkins, A.L., Di Buono, M., Lee, K.S., Leiter, L.A., Nam, K.Y., Arnason, J.T., Choi, M., and Naeem, A. 2008. Korean red ginseng (*Panax ginseng*) improves glucose and insulin regulation in well-controlled, type 2 diabetes: Results of a randomized, double-blind, placebo-controlled study of efficacy and safety. *Nutrition Metabolism and Cardiovascular Diseases* **18**(1): 46-56.

2007

Allen-Hall, L., Cano, P., Arnason, J.T., Rojas, R., Lock, O., and Lafrenie, R.M. 2007. Treatment of THP-1 cells with *Uncaria tomentosa* extracts differentially regulates the expression of IL-1 beta and TNF-alpha. *J. Ethnopharmacol.* **109**(2): 312-317.

Allen-Hall, L., Cano, P., Arnason, J.T., Rojas, R., Lock, O., and Lafrenie, R.M. 2007. Treatment of THP-1 cells with *Uncaria tomentosa* extracts differentially regulates the expression of IL-1 beta and TNF-alpha. *J. Ethnopharmacol.* **109**(2): 312-317.

Altamirano-Dimas, M., Hudson, J.B., Cochrane, D., Nelson, C., and Arnason, J.T. 2007. Modulation of immune response gene expression by echinacea extracts: results of a gene array analysis. *Can. J. Physiol. Pharmacol.* **85**(11): 1091-1098.

Asim, M., Hussien, H., Arnason, J.T., Poveda, L., and Durst, T. 2007. Spirocaracolitone triterpenoids from the bark of *Ruptiliocarpon caracolito*. *J. Nat. Prod.* **70**(8): 1228-1232.

Awad, R., Levac, D., Cybulska, P., Merali, Z., Trudeau, V.L., and Arnason, J.T. 2007. Effects of traditionally used anxiolytic botanicals on enzymes of the gamma-aminobutyric acid (GABA) system. *Can. J. Physiol. Pharmacol.* **85**(9): 933-942.

Bourbonnais-Spear, N., Awad, R., Merali, Z., Maquin, P., Cal, V., and Arnason, J.T. 2007. Ethnopharmacological investigation of plants used to treat susto, a folk illness. *J. Ethnopharmacol.* **109**(3): 380-387.

Budzinski, J.W., Trudeau, V.L., Drouin, C.E., Panahi, M., Arnason, J.T., and Foster, B.C. 2007. Modulation of human cytochrome P450 3A4 (CYP3A4) and P-glycoprotein (P-gp) in

Caco-2 cell monolayers by selected commercial-source milk thistle and goldenseal products. *Can. J. Physiol. Pharmacol.* **85**(9): 966-978.

Chauhan, B., Yu, C., Krantis, A., Scott, I., Arnason, J.T., Marles, R.J., and Foster, B.C. 2007. In vitro activity of uva-ursi against cytochrome P450 isoenzymes and P-glycoprotein. *Can. J. Physiol. Pharmacol.* **85**(11): 1099-1107.

Ernst, C., Cappuccino, N., and Arnason, J.T. 2007. Potential novel hosts for the lily leaf beetle *Lilioceris lillii* Scopoli (Coleoptera : Chrysomelidae) in eastern North America. *Ecol. Entomol.* **32**(1): 45-52.

Fraser, M.H., Cuerrier, A., Haddad, P.S., Arnason, J.T., Owen, P.L., and Johns, T. 2007. Medicinal plants of Cree communities (Quebec, Canada): antioxidant activity of plants used to treat type 2 diabetes symptoms. *Can. J. Physiol. Pharmacol.* **85**(11): 1200-1214.

Garcia-Lara, S., Arnason, J.T., Diaz-Pontones, D., Gonzalez, E., and Bergvinson, D.J. 2007. Soluble peroxidase activity in maize endosperm associated with maize weevil resistance. *Crop Sci.* **47**(3): 1125-1130.

Harris, C.S., Burt, A.J., Saleem, A., Le, P.M., Martineau, L.C., Haddad, P.S., Bennett, S.A.L., and Arnason, J.T. 2007. A single HPLC-PAD-APCI. *Phytochem. Anal.* **18**(2): 161-169.

Harris, C.S., Mo, F., Migahed, L., Chepelev, L., Haddad, P.S., Wright, J.S., Willmore, W.G., Arnason, J.T., and Bennett, S.A.L. 2007. Plant phenolics regulate neoplastic cell growth and survival: a quantitative structure-activity and biochemical analysis. *Can. J. Physiol. Pharmacol.* **85**(11): 1124-1138.

Mao, J.Q., Burt, A.J., Ramputh, A.I., Simmonds, J., Cass, L., Hubbard, K., Miller, S., Altosaar, I., and Arnason, J.T. 2007. Diverted secondary metabolism and improved resistance to european corn borer (*Ostrinia nubilalis*) in maize (*Zea mays* L.) transformed with wheat oxalate oxidase. *J. Agric. Food Chem.* **55**(7): 2582-2589.

Nair, V.D.P., Dairam, A., Agbonon, A., Arnason, J.T., Foster, B.C., and Kanfer, I. 2007. Investigation of the antioxidant activity of African potato (*Hypoxis hemerocallidea*). *J. Agric. Food Chem.* **55**(5): 1707-1711.

Nair, V.D.P., Foster, B.C., Arnason, J.T., Mills, E.J., and Kanfer, I. 2007. In vitro evaluation of human cytochrome P450 and P-glycoprotein-mediated metabolism of some phytochemicals in extracts and formulations of African potato. *Phytomedicine* **14**(7-8): 498-507.

Omar, S., Marcotte, M., Fields, P., Sanchez, P.E., Poveda, L., Mata, R., Jimenez, A., Durst, T., Zhang, J., MacKinnon, S., Leaman, D., Arnason, J.T., and Philogene, B.J.R. 2007. Antifeedant activities of terpenoids isolated from tropical Rutales. *J. Stored Prod. Res.* **43**(1): 92-96.

Omar, S., Marcotte, M., Fields, P., Sanchez, P.E., Poveda, L., Mata, R., Jimenez, A., Durst, T., Zhang, J., MacKinnon, S., Leaman, D., Arnason, J.T., and Philogene, B.J.R. 2007. Antifeedant activities of terpenoids isolated from tropical Rutales. *J. Stored Prod. Res.* **43**(1): 92-96.

Ryan, S.D., Harrist, C.S., Mo, F., Lee, H., Hou, S.T., Bazan, N.G., Haddad, P.S., Arnason, J.T., and Bennett, S.A.L. 2007. Platelet activating factor-induced neuronal apoptosis is initiated independently of its G-protein coupled PAF receptor and is inhibited by the benzoate orsellinic acid. *J. Neurochem.* **103**(1): 88-97.

Santiago, R., Reid, L.M., Arnason, J.T., Zhu, X.Y., Martinez, N., and Malvar, R.A. 2007. Phenolics in maize genotypes differing in susceptibility to *Gibberella stalk rot* (*Fusarium graminearum* Schwabe). *J. Agric. Food Chem.* **55**(13): 5186-5193.

Scott, I.M., Helson, B.V., Strunz, G.M., Finlay, H., Sanchez-Vindas, P.E., Poveda, L., Lyons, D.B., Philogene, B.J.R., and Arnason, J.T. 2007. Efficacy of *Piper nigrum* (Piperaceae) extract for control of insect defoliators of forest and ornamental trees. *Can. Entomol.* **139**(4): 513-522.

Sharma, M., Hudson, J.B., and Arnason, J.T. 2007. Anti-bacterial properties of Echinacea extracts. *Planta Med.* **73**(9): 823-823.

Teshome, A., Patterson, D., Asfew, Z., Torrance, J.K., and Arnason, J.T. 2007. Changes of *Sorghum bicolor* landrace diversity and farmers' selection criteria over space and time, Ethiopia. *Genet. Resour. Crop Evol.* **54**(6): 1219-1233.

2006

Amiguet, V.T., Arnason, J.T., Maquin, P., Cal, V., Sanchez-Vindas, P., and Alvarez, L.P. 2006. A regression analysis of Q'eqchi' Maya medicinal plants from southern Belize. *Econ. Bot.* **60**(1): 24-38.

Amiguet, V.T., Petit, P., Ta, C.A., Nunez, R., Sanchez-Vindas, P., Alvarez, L.P., Smith, M.L., Arnason, J.T., and Durst, T. 2006. Phytochemistry and antifungal properties of the newly discovered tree *Pleodendron costaricense*. *J. Nat. Prod.* **69**(7): 1005-1009.

Bourbonnais-Spear, N., Poissant, J., Cal, V., and Arnason, J.T. 2006. Culturally Important Plants from Southern Belize: Domestication by Q'eqchi' Maya Healers and Conservation. *Ambio* **35**(3): 138-140.

Cappuccino, N. and Arnason, J.T. 2006. Novel chemistry of invasive exotic plants. *BIOLOGY LETTERS* **2**(2): 189-193.

Collins, S., Martins, X., Mitchell, A., Teshome, A., and Arnason, J.T. 2006. Quantitative ethnobotany of two East Timorese cultures. *Econ. Bot.* **60**(4): 347-361.

Jensen, H.R., Scott, I.M., Sims, S.R., Trudeau, V.L., and Arnason, J.T. 2006. The effect of a synergistic concentration of a *Piper nigrum* extract used in conjunction with pyrethrum upon gene expression in *Drosophila melanogaster* (vol 15, pg 329, 2006). *Insect Mol. Biol.* **15**(6): 861-861.

Jensen, H.R., Scott, I.M., Sims, S.R., Trudeau, V.L., and Arnason, J.T. 2006. The effect of a synergistic concentration of a *Piper nigrum* extract used in conjunction with pyrethrum upon gene expression in *Drosophila melanogaster*. *Insect Mol. Biol.* **15**(3): 329-339.

Mao, J.Q., Zaidi, M.A., Arnason, J.T., and Altosaar, I. 2006. In vitro regeneration of *Vigna unguiculata* (L.) Walp. cv. Blackeye cowpea via shoot organogenesis. *PLANT CELL TISSUE AND ORGAN CULTURE* **87**(2): 121-125.

Martineau, L.C., Couture, A., Spoor, D., Benhaddou-Andaloussi, A., Harris, C., Meddah, B., Leduc, C., Burt, A., Vuong, T., Mai Le, P., Prentki, M., Bennett, S.A., Arnason, J.T., and Haddad, P.S. 2006. Anti-diabetic properties of the Canadian lowbush blueberry *Vaccinium angustifolium* Ait. *Phytomedicine* **13**(9-10): 612-623.

Santiago, R., Butron, A., Arnason, J.T., Reid, L.M., Souto, X.C., and Malvar, R.A. 2006. Putative role of pith cell wall phenylpropanoids in *Sesamia nonagrioides* (Lepidoptera : Noctuidae) resistance. *J. Agric. Food Chem.* **54**(6): 2274-2279.

Scott, I.M., Leduc, R.I., Burt, A.J., Marles, R.J., Arnason, J.T., and Foster, B.C. 2006. The inhibition of human cytochrome P450 by ethanol extracts of North American botanicals. *Pharm. Biol.* **44**(5): 315-327.

Sharma, M., Arnason, J.T., Burt, A., and Hudson, J.B. 2006. Echinacea extracts modulate the pattern of chemokine and cytokine secretion in rhinovirus-infected and uninfected epithelial cells. *Phytotherapy Research* **20**(2): 147-152.

Sharma, M., Arnason, J.T., and Hudson, J.B. 2006. Echinacea extracts modulate the production of multiple transcription factors in uninfected cells and rhinovirus-infected cells. *Phytotherapy Research* **20**(12): 1074-1079.

Sievenpiper, J.L., Sung, M.K., Di Buono, M., Seung-Lee, K., Nam, K.Y., Arnason, J.T., Leiter, L.A., and Vuksan, V. 2006. Korean red ginseng rootlets decrease acute postprandial glycemia: Results from sequential preparation- and dose-finding studies. *J. Am. Coll. Nutr.* **25**(2): 100-107.

Spoor, D.C.A., Martineau, L.C., Leduc, C., Benhaddou-Andaloussi, A., Meddah, B., Harris, C., Burt, A., Fraser, M.H., Coonishish, J., Joly, E., Cuerrier, A., Bennett, S.A.L., Johns, T., Prentki, M., Arnason, J.T., and Haddad, P.S. 2006. Selected plant species from the Cree pharmacopoeia of northern Quebec possess anti-diabetic potential. *Can. J. Physiol. Pharmacol.* **84**(8-9): 847-858.

Wijeweera, P., Arnason, J.T., Koszycki, D., and Merali, Z. 2006. Evaluation of anxiolytic properties of Gotukola - (*Centella asiatica*) extracts and asiaticoside in rat behavioral models. *Phytomedicine* **13**(9-10): 668-676.

2005

Amiguet, V.T., Arnason, J.T., Maquin, P., Cal, V., Vindas, P.S., and Poveda, L. 2005. A consensus ethnobotany of the Q'eqchi' Maya of Southern Belize. *Econ. Bot.* **59**(1): 29-42.

Arnason, J.T. 2005. Professor George Hugh Neil Towers, Ph.D., FRSC (September 28, 1923-November 15, 2004) - In memoriam. *Pharm. Biol.* **43**(6): 489-489.

Bafi-Yebo, N.F.A., Arnason, J.T., Baker, J., and Smith, M.L. 2005. Antifungal constituents of Northern prickly ash, *Zanthoxylum americanum* Mill. *Phytomedicine* **12**(5): 370-377.

Beloin, N., Gbeassor, M., Akpagana, K., Hudson, J., de Soussa, K., Koumaglo, K., and Arnason, J.T. 2005. Ethnomedicinal uses of *Momordica charantia* (Cucurbitaceae) in Togo and relation to its phytochemistry and biological activity. *J. Ethnopharmacol.* **96**(1-2): 49-55.

Bourbonnais-Spear, N., Awad, R., Maquin, P., Cal, V., Vindas, P.S., Poveda, L., and Arnason, J.T. 2005. Plant use by the Q'eqchi' Maya of Belize in ethnopsychiatry and neurological pathology. *Econ. Bot.* **59**(4): 326-336.

Foster, B.C., Arnason, J.T., and Briggs, C.J. 2005. Natural health products and drug disposition. *Annu. Rev. Pharmacol. Toxicol.* **45**: 203-226.

Hudson, J., Vimalanathan, S., Kang, L., Amiguet, V.T., Livesey, J., and Arnason, J.T. 2005. Characterization of Antiviral Activities in Echinacea Root Preparations. *Pharm. Biol.* **43**(9): 790-796.

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8A.PATENTS (since 1990)

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Composition for treating viral infection e.g. HIV, poliovirus and cleansing surfaces comprises pyranocoumarin-, phenolic- or polyphenolic-enriched preparation derived from Zanthoxylum americanum or Zanthoxylum clava-herculis

BIONICHE LIFE SCI INC (BION-Non-standard)

BAFI-YEBOA N F A, BAKER J, **ARNASON J T**, et. Al

WO2004103388-A2; US2005019432-A1; EP1667698-A2; ...

[Composition, useful to reduce the incidence of infectious diseases, comprises evening primrose oil and a carrier](#)

BIONICHE LIFE SCI INC (BION-Non-standard); BAKER J D (BAKE-Individual); ARNASON J T (ARNA-Individual), et. al

BAKER J D, **ARNASON J T**, MCRAE C, et. Al

WO200291858-A; WO200291858-A1; AU2002302229-A1; ...

[Composition useful for treating anxiety comprising betulinic acid or its salts](#)

UNIV OTTAWA (UYOT-Non-standard); DURST T (DURS-Individual); SANCHEZ-VINDAS E P (SANC-Individual), et. al
DURST T, MERALI Z, **ARNASON J T**, et. Al

CA2198645-A

[Use of dillapiol and its analogues to control multi:drug resistance - used to treat e.g. cancer and malaria and to increase activity of pesticides](#)

MORRIS C (MORR-Individual); JURANKA P (JURA-Individual); DURST T (DURS-Individual), et. al
JURANKA P, MORRIS C, DURST T, et. al

US5180838-A

[Photo-toxic ter:thienyl cpds. used as insect control agents - useful in agriculture, forestry and for humans and domestic animals](#)

CANADA MIN NAT DEFENCE (MIND)
MORAND P, **ARNASON J T**, PHILOGENE B J R, et. al

US5045563-A; CA1308722-C

[Pesticidal compsn. - comprises carrier and biocidal amt. of photo-toxic, naturally-occurring thiophene and/or acetylene or synthetic deriv. or analogue](#)

CANADA MIN NAT DEFENCE (MIND)
MORAND P, **ARNASON J T**, PHILOGENE B J R, et. al

CA1267904-A

[Alpha ter:thienyl prodn. - by Grignard reaction in N-propyl ether solvent](#)

UNIV OTTAWA (UYOT-Non-standard)
MORAND P, LEITCH L C, MACEACHERN A, et. al

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Date