

REFERENCES

- Abbotts, A.P., Preston, V.G., Hughes, M., Patel, A.H. and Stow, N.D. 2000. Interaction of the herpes simplex virus type 1 packaging protein U_L15 with full-length and deleted forms of the U_L28 protein. *Journal of General Virology*. 81: 2999-3009.
- Adhikari, U., Mateu, C.G. and Chattopadhyay, K. 2006. Structure and antiviral activity of sulfated fucans from *Stoechospermum marginatum*. *Phytochemistry*, 67 (22): 2474-2482.
- Aftab, J and Shameel. 2009. Studies on the phycochemistry and bioactivity of *Spirogyra* (*Zygnemophyphyceae* Shameel) from Miani Hor, Pakistan. *International journal of phycology and phycochemistry* 5(1): 57-66.
- Albà, M.M., Das, R.D., Orengo, C.A. and Kellam, P. 2001. Genomewide function conservation and phylogeny in the herpesviridae. *Genome Research*. 11(1): 43-54.
- Al-Haiza, M.A., Mostafa, M.S. and EL-Kady, M.Y. 2005. Preparation of some new coumarin derivatives with biological activity. *Scientific Journal of King Faisal University (Basic and Applied Sciences)*. 6(1): 75-94.
- Allahverdiyev, A., Duran, N., Ozguven, M. and Koltas, S. 2004. Antivital activity of volatile oils of *Melissa officinalis* L. against herpes simplex virus type 2. *Phytomedicine*. 11(7-8): 657-661.
- Amen, M.A. and Griffiths, A. 2011. Packaging of non-coding RNAs into herpesvirus virions: comparisons to coding RNAs. *Frontiers in Genetics*. 2(81): 1-5.
- Amersham Biosciences. 1998. miniVE electrophoresis and electrotransfer unit user manual, San Francisco, United States.
- Amersham Biosciences. 2000. SE 600 Ruby standard dual cooled gel electrophoresis unit user manual, Piscataway, New Jersey, United States.
- Amersham Biosciences. 2003. Ettan IPGphor Isoelectric focusing system user manual, Piscataway, New Jersey, United States.
- Amersham pharmacia biotech. 2004. Immobiline drystrip visualization of pH gradients,

Buckinghamshire, England.

- Aminabhavi, T.M., Agnihotri, S.A. and Naidu, V.K. 2004. Rheological properties and drug release characteristics of pH-responsive hydrogels. *Journal of Applied Polymer Science*. 94(5): 2057-2064.
- Antrobus, R., Grant, K., Gangadharan, B., Chittenden, D., Everett, R. D., Zitzmann, N. and Boutell, C. 2009. Proteomic analysis of cells in the early stages of herpes simplex virus type-1 infection reveals widespread changes in the host cell proteome. *Proteomics*. 9: 3913-3927.
- Anzivino, E., Fioriti, D., Mischitelli, M., Bellizzi, A., Barucca, V., Chiarini, F. and Pietropaolo, V. 2009. Herpes simplex virus infection in pregnancy and in neonate: status of art of epidemiology, diagnosis, therapy and prevention. *Virology Journal*. 6:40-50.
- Arama, V., Cercel, S., Vladareanu, R., Mihai, C., Mihailescu, R., Rankin, J., Goschin, S., Filipescu, A., Rafila, A., Arama, S., Hristea, A., Malkin, J.E., Pimenta, J.M. and Smith, J.S. 2010. Type-specific herpes simplex virus-1 and herpes simplex virus-2 seroprevalence in Romania: comparison of prevalence and risk factors in women and men. *International Journal of Infectious Diseases*. 14S: e25-e31.
- Armaka, M., Papanikolaou, E., Sivropoulou, A. and Arsenakis, M. 1999. Antiviral properties of isoborneol, a potent inhibitor of herpes simplex virus type 1. *Antiviral Research*. 43: 79-92.
- Asasutjarit, R., Sirivat, A. and Vayumhasuwan, P. 2005. Viscoelastic properties of carbopol 940 gels and their relationships to piroxicam diffusion coefficients in gel bases. *Pharmaceutical Research*. 22(12): 2134-2140.
- Augenbraun, M., Feldman, J., Chirgwin, K., Zenilman, J., Clarke, L., Hovitz, J. D., Landesman, S. and Minkoff, H. 1995. Increased genital shedding of herpes simplex virus type 2 in HIV-seropositive women. *Annals of Internal Medicine*. 123: 845-847.
- Bai, M.S., Gao, J.M., Fan, C., Yang, S.X., Zhang, G. and Zheng, C.D. 2010. Bioactive dammarane-type triterpenoids derived from the acid hydrolysate of *Gynostemma pentaphyllum* saponins. *Food Chemistry*. 119(1): 306-310.

- Baines, G.D. 2011. Herpes simplex virus capsid assembly and DNA packaging: a present and future antiviral drug target. *Trends in Microbiology*. 19(12): 606-613.
- Bajaj, S., Singla, D. and Sakhuja, N. 2012. Stability testing of pharmaceutical products. *Journal of Applied Pharmaceutical Science*. 2(3): 129-138.
- Banfield, B.W., Leduc, Y., Esford, L., Schubert, K. and Tufaro, F. 1995. Sequential isolation of proteoglycan synthesis mutants by using herpes simplex virus as a selective agent: evidence for a proteoglycan-independent virus entry pathway. *Journal of Virology*. 69(6): 3290-3298.
- Becker, C. H. and Bern, M. 2011. Recent developments in quantitative proteomics. *Mutation Research*. 722(2): 171-182.
- Belcher, H. and Swale, E. 1978. *A beginner's guide to Freshwater Algae*. Culture Centre of Algae and Protozoa, Cambridge, United Kingdom.
- Bender, F.C., Whitbeck, J.C., Lou, H., Cohen, G.H. and Eisenberg, R.J. 2005. Herpes simplex virus glycoprotein B binds to cell surfaces independently of heparan sulfate and blocks virus entry. *Journal of Virology*. 79(18): 11588-11597.
- Berry, H.A. and Lembi, C.A. 2000. Effects of temperature and irradiance on the seasonal variation of a *Spirogyra* (Chlorophyta) population in a Midwestern lake (U.S.A.). *Journal of Phycology*, 36(5): 841-851.
- Beyrer, C., Jitwatcharanan, K., Natpratan, C., Kaewvichit, R., Nelson, K. E., Chen, C. Y., Weiss, J. B. and Morse, S. A. 1998. Molecular methods for the diagnosis of genital ulcer disease in a sexually transmitted disease clinic population in northern Thailand: predominance of herpes simplex virus infection. *The Journal of Infectious Diseases*. 178(1): 243-246.
- BioRadiations. 2013. 2-D electrophoresis workflow how-to guide, 4th edition. Bio-Rad Laboratories, Inc., Hercules, California.
- Black, J. G. 2011. *Microbiology principles and explorations* 7th edition. John Wiley & Sons, Inc., Hoboken, New Jersey.
- Block, T.M. and Hill, J.N. 1997. The latency associated transcripts (LAT) of herpes simplex virus: still no end in sight. *Journal of Neuro Virology*. 3(5): 313-321.
- Boehmer, P.E. and Lehman, T.R. 1993. Physical interaction between the herpes

- simplex virus 1 origin-binding protein and single-stranded DNA-binding protein ICP8. Proceedings of the National Academy of Sciences of the United States of America. 90(18): 84444-84448.
- Bokesch, H. R., O'Keefe, B. R., McKee, T.C., Pannell, L.K., Patterson, G.M., Gardell, R.S., Sowder, R.C., Turpin, J., Watson, K. and Buckheit, R.W. 2003. A potent novel anti-HIV protein from the cultured cyanobacterium, *Scytonema Varium*. Biochemistry. 42 : 2578–2584.
- Bonacucina, G., Martelli, S. and Palmieri, G.F. 2004. Rheological, mucoadhesive and release properties of Carbopol gels in hydrophilic cosolvents. International Journal of Pharmaceutics. 282(1-2): 115-130.
- Boukarim, C., Jaoudé, S.A., Bahnam, R., Barada, R. and Kyriacos, S. 2009. Preservatives in liquid pharmaceutical preparations. Journal of Applied Research. 9(1-2): 14-17.
- Boutell, C. and Everett, R. D. 2013. Regulation of alphaherpesvirus infections by the ICP0 family of proteins. Journal of General Virology. 94: 465-481.
- Bradford, M.M. 1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. Analytical Biochemistry. 72, 248-254.
- Brem, B., Seger, C., Pacher, T., Hofer, O., Vajrodaya, S. and Greger, H. 2002. Feeding deterrence and contact toxicity of *Stemona alkaloids*- a source of potent natural insecticides. Journal of Agriculture and Food Chemistry. 50(22): 6383–6388.
- Brooks, G.F., Carroll, K.C., Butel, J.S., Horse, S.A. and Mietzner, T.A. 2010. Chapter 33 Herpesviruses. In Jawerz, Melnick and Adelberg's Medical Microbiology, 25th (ed). (pp 433-455), New York. United state of America: The McGraw Hill companies, Inc.
- Brown, J.C. and Newcomb, W.W. 2011. Herpesvirus capsid assembly: insights from structural analysis. Current Opinion in Virology. 1(2): 142-149.
- Brown, S.H. *Senna alata*. [On line] available
<http://www.lee.ifas.ufl.edu/Hort/GardenPubsAZ/SennaAlata> Cassia
 AlataCandlebush.pdf (26 November 2013).

- Brugha, R., Keersmaekers, K., Renton, A. and Meheus, A. 1997. Genital herpes infection: a review. *International Journal of Epidemiology*. 26(4): 698-709.
- Burrela, S., Ait-Arkoubb, Z., Aguta, H. and Boutolleau, D. 2012. Genotypic characterization of herpes simplex virus DNA polymerase UL42 processivity factor. *Antiviral Research*. 93(1): 199-203.
- Campadelli-Fiume, G., Menotti, L., Avitabile, E. and Gianni, T. 2012. Viral and cellular contributions to herpes simplex virus entry into the cell. *Current Opinion in Virology*. 2(1): 28-36.
- Cann, A.J. 2012 *Principles of Molecular Virology*. 5th Edition. Academic Press, London, England.
- Carter, J. B. and Saunders, V. A. 2007. *Virology: principles and applications*. Academic Press, Inc., Liverpool, England.
- Castro, A., Bernis, C., Vigneron, S., Labbe, J.C. and Lorca, T. 2005. The anaphase-promoting complex: a key factor in the regulation of cell cycle. *Oncogene*. 24: 314-25.
- Chaliewchalad, P., Chansakaow, S., Thongwai, N. and Tragoolpua, Y. 2013. Inhibition of Herpes Simplex Virus Activity *In vitro* by Some Medicinal Plant Extracts. A Doctor of Philosophy (Applied Microbiology) 's thesis. Faculty of Science, Chiang Mai University. Thailand.
- Chan, T., Barra, N.G., Lee, A.J. and Ashkar, A.A. 2011. Innate and adaptive immunity against herpes simplex virus type 2 in the genital mucosa. *Journal of Reproductive Immunology*. 88(2): 210-218.
- Chattopadhyay, D. and Naik, N.T. 2007. Antivirals of ethnomedicinal origin: structure-activity relationship and scope. *Mini-Reviews in Medicinal Chemistry*. 7(3): 275-301.
- Chaurand, P., DaGue, B.B., Pearsall, R.S., Threadgill, D.W. and Caprioli, R.M. 2001. Profiling proteins from azoxymethane-induced colon tumors at the molecular level by matrix-assisted laser desorption/ ionization mass spectrometry. *Proteomics*.1: 1320-1326.
- Chen, X., Wang, Z., Yang, Z., Wang, J., Xu, Y. and Tan, R.X. 2011. *Houttuynia cordata* blocks HSV infection through inhibition of NF- κ B activation.

- Antiviral Research. 92(2): 341-345.
- Chibo., Mijch, A., Doherty, R and Birch, C. 2002. Novel mutation in the thymidine kinase and DNA polymerase genes of acyclovir and foscarnet resistant herpes simplex viruses infecting an immunocompromised patient. *Journal of Clinical Virology*. 25: 165-170.
- Chirasuwan, N., Chaiklahan, R., Kittakoop, P., Chanasattru, W., Ruengjitchatchawalya, M., Tanticharoen, M. and Bunnag, B. 2009. Anti HSV-1 activity of sulphoquinovosyl diacylglycerol isolated from *Spirulina platensis*. *Science Asia*. 35: 137-141.
- Ciechanover A. 1998. The ubiquitin-proteasome pathway: on protein death and cell life. *The European Molecular Biology Organization Journal*. 17: 7151-7160.
- Clark, D.N., Poole, B.D., Hammond, D.V., Hedman, T., Catts, D., Stewart, A. and Jonhson, F.B. 2011. Characterization of herpes simplex virus clinical isolate Y3369 as a glycoprotein G variant and its bearing on virus typing. *Virology Journal*. 8: 290-293.
- Coen, D.M. and Schaffer, P.A. 2003. Antiherpesvirus drugs: a promising spectrum of new drugs and drug targets. *Nature Reviews Drug Discovery*. 2: 278-288.
- Compel, P. and Deluca, N.A. 2003. Temperature-Dependent conformational changes in herpes simplex virus ICP4 that affect transcription activation. *Journal of Virology*. 77(5): 3257-3268.
- Constantin, N. and Dodson, M.S. 1999. Two-hybrid analysis of the interaction between the U_L52 and U_L8 subunits of the herpes simplex virus type 1 helicase-primase. *Journal of General Virology*. 80: 2411-2415.
- Corey, L. 2004. Clinical tools for preventing sexual transmission of genital herpes. *Medscape Infectious Diseases*. 6(1): 1-7.
- Corona A.H., Nieves I., Meckes M., Chamorro M. and Barron B.L. 2002. Antiviral activity of *Spirulina maxima* against herpes simplex virus type 2. *Antiviral Research*.; 56: 279-285.
- Cowan, M.M. 1999. Plant products as antimicrobial agents. *Clinical Microbiology reviews*. 12(4): 564-582.
- Crute, J.J. and Lehman, I.R. 1989. Herpes simplex-1 DNA polymerase: Identification

- of an intrinsic 5'-3' exonuclease with ribonuclease H activity. *Journal of Biological Chemistry*. 264(32): 19266-19270.
- Daberte, I., Barene, I., Rubens, J., Daugavietis, M. and Sazhenova, N. 2011. Stability of soft gelatin capsules containing thick extract of pine needles. *Medicina (Kaunas)*. 47(2): 71-77.
- Dacosta, X., Kramer, M.F., Zhu, J., Brockman, M.A. and Knipe, D.M. 2000. Construction, phenotypic analysis, and immunogenicity of a U_L5/U_L29 double deletion mutant of herpes simplex virus 2. *Journal of Virology*. 74(17): 7963-71.
- Daheshia, M., Kanangat, S. and Rouse, B.T. 1998. Production of key molecules by ocular neutrophils early after herpetic infection of the cornea. *Experimental Eye Research*. 67: 619–624.
- Danaher, R.J., Wang, C., Dai, J., Mumper, R.J. and Miller, C.S. 2011. Antiviral effects of blackberry extract against herpes simplex virus type 1. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology*. 112(3): e31-e35.
- Dave, H. and Ledwani, L. 2012. A review on anthraquinones isolated from Cassia species and their applications. *Indian Journal of Natural Products and Resources*. 3(3): 291-319.
- Davis, J.M. 1994. *Basic cell culture: a practical approach*. Oxford University Press, New York, United States.
- Davison, A.J. 2010. Herpesvirus systematics. *Veterinary Microbiology*. 143(1): 52-69.
- Dimmock, N., Easton, A. and Leppard, K. 2007. *Introduction to modern virology*, 6th Edition, Blackwell, Malden.
- Dobson, A.T., Little, B.B. and Scott, L.L. 1998. Prevention of herpes simplex virus infection and latency by prophylactic treatment with acyclovir in a weanling mouse model. *American Journal of Obstetrics and Gynecology*. 179(2): 527-532.
- Doherty, C.B., Doherty, S.D. and Rosen, T. 2010. Thermotherapy in dermatologic infections. *Journal of the American Academy of Dermatology*. 62(6): 909-

926.

- Drew, W. L. 2004. Herpesviruses. In Sherris medical microbiology 4th edition. pp. 556-562, The McGraw-Hill Companies, Inc., New York.
- Duangjan, K., Amornlerdpison, D., Kamjanapothi, D., Taesotikul, T. and Peerapornpisal, Y. 2009. Gastroprotective Activity of *Spirogyra neglecta* (Hassall) Kutzing. 4th National Conference on Algae and Plankton. Khon Kean, Thailand, 25-27 March 2009:122. Abstract.
- Dudex, T.E., Torres-Lopez, E., Crumpacker, C. and Knipe, D.M. 2011. Evidence for differences in immunologic and pathogenesis properties of herpes simplex virus 2 strains from the United States and South Africa. *Journal of Infectious Disease*. 204(3):1434-1441.
- Dulbecco, R. 1952. Production of plaques in monolayer tissue cultures by single particles of an animal virus. *Proceedings of the National Academy of Sciences of the United States of America*. 38, 747-752.
- Dulbecco, R. and Vogt, M. 1953. Some problems of animal virology as studied by the plaque technique. *Quantitative Biology Journals*. 18: 273-279.
- ExPaSy 2010. TagIdent tool [software]. Available <http://web.expasy.org/tagident> (3 February 2014).
- ExPaSy 2011. World-2DPAGE repository search proteins by pI/Mw range [software]. Available <http://world-2dpage.expasy.org/repository> (3 February 2014).
- Faral-Tello, P., Mirazo, S., Dutra, C., Pérez, A., Geis-Asteggiate, L., Frabasile, S., Koncke, E., Davyt, D., Cavallaro, L., Heinzen, H. and Arbiza, J. 2012. Cytotoxic, virucidal, and antiviral activity of south american plant and algae extracts. *Scientific World Journal*. 2012:1-5.
- Farnsworth, A. and Johnson, D.C. 2006. Herpes simplex virus gE/gI must accumulate in the trans-Golgi network at early times and then redistribute to cell junctions to promote cell-cell spread. *Journal of Virology*. 80(7):3167-3179.
- Faro, S. 1998. A review of famciclovir in the management of genital herpes. *Infectious Disease in Obstetrics and Gynecology*. 6(1): 38-43.
- Fatahzadeh, M. and Schwartz, R.A. 2007. Human herpes simplex virus infections: epidemiology, pathogenesis, symptomatology, diagnosis, and management.

- Journal of the American Academy of Dermatology. 57(5): 737-762.
- Fathy, I.A-A., Hamdy, M.D. and Ahmed, M.S.A. 2010. Preparation, characterization, and stability studies of piroxicamloaded microemulsions in topical formulations. Drug Discoveries and Therapeutics. 4(4): 267-275.
- Field, H.J. 2001. Herpes simplex virus antiviral drug resistance, current trends and future prospects. Journal of Clinical Virology. 21: 261-269.
- Flangan, W.M., Papavassiliou, A.G., Rice, M., Hecht, L.B. and Silverstein, S. 1991. Analysis of the herpes simplex virus type 1 promoter controlling the expression of U_L38, a true late gene involved in capsid assembly. Journal of Virology. 65(2): 769-786.
- Fleming, D.T., Mcquillan, G.M., Johnson, R.E., Nahmias, A.J., Aral, S.O., Lee, F.K. and Louis, M.E. 1997. Herpes simplex virus type 2 in the United states, 1976 to 1994. Journal of Medicine. 337(16): 1105-1111.
- Flint, S.J., Enquist, L.W., Racaniello, V.R. and Skalka, A.M. 2003. Principles of virology: molecular biology, pathogenesis, and control of animal viruses, 2nd edition. ASM Press, Inc., Washington. United States.
- Flint, S.J., Enquist, L.W., Racaniello, V.R. and Skalka, A.M. 2008. Principles of virology, 3rd edition. ASM Press, Inc., Washington. United States.
- Fontaine-Rodriguez, E.C., Taylora, T.J., Oleskya, M. and Knipea, D.M. 2004. Proteomics of herpes simplex virus infected cell protein 27: association with translation initiation factors. Virology. 330(2): 487-492.
- Foster, T.P., Rybachuk, G.V. and Kousoulas, K.G. 1998. Expression of the enhanced green fluorescent protein by herpes simplex virus type 1 (HSV-1) as an *in vitro* or *in vivo* marker for virus entry and replication. Journal of Virological Methods. 75(2): 151-160.
- Frampton, A.R., Goins, W.F., Nakano, K., Burton, E.A. and Glorioso, J.C. 2005. HSV trafficking and development of gene therapy vectors with applications in the nervous system. Gene Therapy. 12(11): 891-901.
- Früh, K., Ahn, K., Djaballah, H., Sempé, P., Van Endert, P.M., Tampé, R., Peterson, P. A. and Yang, Y. 1995. A viral inhibitor of peptide transporters for antigen presentation. Nature. 375(6530): 415-418.

- Furlong, D., Swift, H. and Roizman, B. 1972. Arrangement of herpesvirus deoxyribonucleic acid in the core. *Journal of Virology*. 10(5): 1071-1074.
- Garfin, D.E. 2003. Chapter 7 Gel Electrophoresis of Proteins. In John Davey and Mike Lord (ed). (pp 197-268). Oxford University Press, Oxford, UK.
- Gasteiger, E., Hoogland, C., Gattiker, A., Duvaud, S., Wilkins, M.R., Appel, R.D. and Bairoch, A. 1999. Protein identification and analysis tools on the ExPASy server. *Methods in Molecular Biology*. 112: 531-552.
- Georges, D.V., Naima, Z., Isabelle, R., Gerard, P., Claude, C.J. and Philippe, A. 2002. Evaluation of the cytotoxicity effect of dimethyl sulfoxide (DMSO) on Caco2/TC7 colon tumor cell cultures. *Biological and Pharmaceutical Bulletin*. 25(12): 1600-1603.
- Ghosh, P., Adhikari, U., Ghosal, P.K., Pujol, C.A., Carlucci, M.J., Damonte, E.B. and Ray, B. 2004. In vitro anti-herpetic activity of sulfated polysaccharide fractions from *Caulerpa racemosa*. *Phytochemistry*. 65: 3151–3157.
- Ghazala, B. and M. Shameel. 2005. Phycochemistry and bioactivity of some freshwater green algae from Pakistan. *Pharmaceutical Biology*. 43(4): 358-369.
- Gilbert, C, Bestman-Smith, J. and Boivin, G. 2002. Resistant of herpesvirus to Antiviral drugs:clinical impacts and molecular mechanisms. *Drug Resistant Updateds*. 5: 88-114.
- Görg, A. 2004. 2-D Electrophoresis principles and methods. Amersham Biosciences Corp., Buckinghamshire.
- Gottlieb, J., and Challberg, M.D. 1994. Interaction of herpes simplex virus type 1 DNA polymerase and the U_L42 accessory protein with a model primer template. *Journal of Virology*. 68(8): 4937-4945.
- Greco, A., Diaz, J.J., Thouvenot, D. and Morfin F. 2007. Novel targets for the development of anti-herpes compounds. *Infectious Disorder-Drug Targets*. 7(1): 11-18.
- Griffiths, A. 2011. Slipping and sliding: Frameshift mutations in herpes simplex virus thymidine kinases and drug-resistant. *Drug Resistance Update*. 14(6): 251-259.
- Guo, L., Wu, W. J., Liu, L.D., Wang, L.C., Zhang, Y., Wu, L. Q., Guan, Y. and Li, Q.

- H. 2012. Herpes simplex virus 1 ICP22 inhibits the transcription of viral gene promoters by binding to and blocking the recruitment of P-TEFb. *PLoS One*. 7(9): 45749.
- Guo, H., Shen, S., Wang, L. and Deng, H. 2010. Role of tegument proteins in herpesvirus assembly and egress. *Protein Cell*. 1(11): 987–998.
- Gupta, N., Augustine, M. and Jayaseelan, E. 2002. Eczema herpeticum in two elderly patients. *Indian Journal of Dermatology, Venereology and Leprology*. 68(5): 306-308.
- Gupta, R., Warren, T. and Wald, A. 2007. Genital herpes. *The lancet*. 21227-2137.
- Gupta, V.K., Fatima, A., Faridi, U., Negi, A.S., Shanker, K., Kumar, J.K., Rahuja, N., Luqman, S., Sisodia, B.S., Saikia, D., Darokar, M.P. and Khanuja, S.P.S. 2008. Antimicrobial potential of *Glycyrrhiza glabra* roots. *Journal of Ethnopharmacology*. 116(2): 377-380.
- Hainza, R., Wöbera, C. and Schagerl, M. 2009. The relationship between *Spirogyra* (Zygnematophyceae, Streptophyta) filament type groups and environmental conditions in Central Europe. *Aquatic Botany*, 91(3): 173-180.
- Hamatake, R.K., Bifano, M., Hurlburt, W.W. and Tenney, D.J. 1997. A functional interaction of ICP8, the herpes simplex virus single-stranded DNA-binding protein, and the helicase-primase complex that is dependent on the presence of the UL8 subunit. *Journal of General Virology*. 78: 857-865.
- Hancock, M.H., Mossman, K.L. and Smiley, J.R. 2009. Cell Fusion-Induced Activation of interferon-stimulated genes is not required for restriction of a herpes simplex virus VP16/ICP0 mutant in heterokarya formed between permissive and restrictive cells. *Journal of Virology*. 83(17): 8976-8979.
- Hann, L.E., Cook, W.J., Uprichard, S.L., Knipe, D.M. and Coen, D.M. 1998. The role of herpes simplex virus ICP27 in the regulation of UL24 gene expression by differential polyadenylation. *Journal of Virology*. 72(10): 7709-7714.
- Haque, F. 2010. Mammalian SUN protein interaction networks at the inner nuclear membrane and their role in laminopathy disease processes. *Journal of Biological Chemistry*. 285: 3487-3498.
- Harden, E.A., Falshaw, R., Carnachan, S.M., Kern, E.R. and Prichard, M.N. 2009.

- Virucidal activity of polysaccharide extracts from four algal species against herpes simplex virus. *Antiviral Research*. 83(3): 282-289.
- Higgs, M.R., Preston, V.G. and Stow, N.D. 2008. The U_L 15 protein of herpes simplex virus type 1 is necessary for the localization of the U_L28 and U_L33 proteins to viral DNA replication centers. *Journal of General Virology*. 89: 1709-1715.
- Hoek, C., Mann, D.G. and Jahns, H.M. 2010. *Algae- an introduction to phycology*. Cambridge University Press, Cambridge, United Kingdom.
- Hoshaw, R.W. and McCourt, R.M. 1988. The Zygnemataceae (Chlorophyta): a twenty-year update of research. *Phycologia*, 27:511-548.
- Hung, S.L., Wang, Y.H., Chen, H.W., Lee, P.L. and Chen, Y.T. 2002. Analysis of herpes simplex virus entering into cells of oral origin. *Virus Research*. 86(1-2): 56-69.
- Hunt, R. 2013. *Virology, Herpes viruses, microbiology and immunology*. University of South Carolina School of Medicine. Available at September 12, 2013.
- Itzhaki, R.F., Lin, W-R, L., Shang, D., Wilcock, G.K., Faragher, B. and Jamieson, G.A. 1997. Herpes simplex virus type 1 in brain and risk of Alzheimer's disease. *The Lancet*. 349(9058): 241-244.
- Iwata, T., Munekata, H., Inayama, T. and Kato, T. 1990. Effects of *Spirulina platensis* on the blood pressure of rats. *Bulletin of Kagawa Nutrition University*. 21: 63-70.
- Jain, P.K. and Joshi, H. 2012. Coumarin: chemical and pharmacological profile. *Journal of applied pharmaceutical science*. 2(6): 236-240.
- James, O., Nnacheta, O.P. and Okpara, M. 2009. Cytotoxicity and antioxidant screening of some selected Nigerian medicinal plants. *Asian Journal of Pharmaceutical and Clinical Research*. 2(4): 48-53.
- Jassim, S.A.A. and Najj, M.A. 2003. A review: Novel antiviral agents: a medicinal plant perspective. *Journal of Applied Microbiology*. 95(3): 412-427.
- John, D.M., Whitton, B.A. and Brook, A.J. 2002. *The Freshwater Algal Flora of the British Isles: an identification guide to freshwater and terrestrial algae*. Cambridge: Cambridge University Press.
- Johnson, D.C., Wisner, T.W. and Wright, C.C. 2011. Herpes simplex virus

- glycoproteins gB and gD function in a redundant fashion to promote secondary envelopment. *Journal of Virology*. 85(10): 4910-4926.
- Jones, M., Fsbery, R., Gregory, J. and Taylor, D. 2014. *Biology Course*. Cambridge University Press, Cambridge, United Kingdom.
- Kadir, F., Othman, F., Abdulla, M.A., Hussan, F. and Hassandarvish, P. 2011. Effect of *Tinospora crispa* on thioacetamide-induced liver cirrhosis in rats. *Indian Journal of Pharmacology*. 43(1): 64-68.
- Karamać, M., Kosińska, A., Rybarczyk, A. and Amarowicz, R. 2007. Extraction and chromatographic separation of tannin fractions from tannin-rich plant material. *Polish Journal of Food and Nutrition Sciences*. 57(4): 471-474.
- Karasneh, G.A. and Shukla, D. 2011. Herpes simplex virus infects most cell types in vitro: clues to its success. *Virology Journal*. 8: 481.
- Kartal, M., Orhan, I., Abu-Asaker, M. and Senol, F.S. 2009. Research article. Antioxidant And Anticholinesterase Assets and Liquid Chromatography-Mass Spectrometry Preface of Various Fresh-Water and Marine Macroalgae. 20: 291-297.
- Kelly, B.J., Diefenbach, E., Fraefel, C. and Diefenbach, R.J. 2012. Identification of host cell proteins which interact with herpes simplex virus type 1 tegument protein pUL37. *Biochemical and Biophysical Research Communications*. 417(3): 961-965.
- Kent, J.R., Kang, W., Miller, C.G. and Fraser, N.W. 2003. Herpes simplex virus latency-associated transcript gene function. *Journal of Neurovirology*. 9: 285-290.
- Khalid, M.N., Shameel, M. and Ghazala, B. 2012. Bioactivity and Phycochemistry of Two Species of *Spirogyra* (*Zygnemophyceae*) from Pakistan.. *International Journal on Algae*. 14(3): 237-246.
- Khanna, K.M., Lepisto, A.J. and Hendricks, R.L. 2004. Immunity to latent viral infection: many skirmishes but few fatalities. *Trends in Immunology*. 25(5): 230-234.
- Kim, J.H., Kim, Y.H. and Lee, I.K. 2004. Morphotaxonomy of the genus *Spirogyra* (Zygnematales, Chlorophyta) in Korea. *Algae*, 19(2):91-1.5.

- Kimberlin, D. 2004. Herpes simplex virus, meningitis and encephalitis in neonates. *Herpes*. 2: 65A-76A.
- Klinedinst, D.K., Challberg, M.D. 1994. Helicase-primase complex of herpes simplex virus type 1: a mutation in the U_L52 subunit abolishes primase activity. *Journal of Virology*. 68(6): 3693-3701.
- Kott, Y. 1981. Virus and Bacteriophages. *Science of the environment*. 18: 13-23.
- Kriebs, J.M. 2008. Understanding herpes simplex virus: transmission, diagnosis, and considerations in pregnancy management. *Journal of Midwifery and Women's Health*. 53(3): 202-208.
- Kumar, A., Ilavarasan, R., Jayachandran, T., Decaraman, M., Aravindhan, P., Padmanabhan, N. and Krishnan, M.R.V. 2009. Phytochemicals investigation on a tropical plant, *Syzygium cumini* from Kattuppalayam, Erode district, Tamil Nadu, South India. *Pakistan Journal of Nutrition*. 8(1): 83-85.
- Lachmann, R. 2003. Herpes simplex virus latency. *Expert Reviews in Molecular Medicine*. 5(29): 1-14.
- Lee, M.K., Ha, N.R., Yang, H., Sung, S.H., Kim, G.H. and Kim, T.C. 2008. Antiproliferative activity of triterpenoids from *Eclipta prostrata* on hepatic stellate cells. *Phytomedicine*. 15(9): 775-780.
- Lee, R.E. 2008. *Phycology*. Cambridge University Press, United States of America.
- Lehtineu, M. (1986). HSV infected RAJI-cell specify HSV specific immediate early and/or early DNA-binding protein. *Archives of Virology*. 87(1-2): 107-118.
- Lipipun, V., Kurokawa, M., Suttisri, R., Taweechotipart, P., Pramyothin, P., Hattori, M. and Shiraki, K. 2003. Efficacy of Thai medicinal plant extracts against herpes simplex virus type 1 infection *in vitro* and *in vivo*. *Antiviral Research*. 60(3):175-180.
- Locatelli, M., Tamaro, F., Menghini, L., Carlucci, G., Epifano, F. and Genovese, S. 2009. Anthraquinone profile and chemical fingerprint of *Rhamnus saxatilis* L. from Italy. *Phytochemistry Letters*. 2(4): 223-226.
- Lokonis, C.J., Burkham, J. and Weller, S.K. 1997. Herpes simplex virus type 1 prereplicative sites are a heterogeneous population: only a subset are likely to be precursors to replication compartments. *Journal of Virology*. 71(6): 4771-

4781.

- Loya, S., Reshef, V., Mizrahi, E., Silberstein, C., Rachamim, Y., Carmeli, S. and Hizi, A. 1998. The inhibition of the reverse transcriptase of HIV-1 by the natural sulfoglycolipids from cyanobacteria: contribution of different moieties to their high potency. *Journal of Natural Products*. 61: 891–5.
- Lu, L., Lu, H. and Skolnick, J. 2002. Multiprospector: an algorithm for the prediction of protein-protein interactions by multimeric threading. *Proteins*, 49(3): 350-364.
- Lu, W. 2012. Nesprin interchain associations control nuclear size. *Cellular and Molecular Life Sciences*. 69: 3493-509
- Lucotte, G., Bathelier, C., Lespiaux, V., Bali, C. and Champenois, T. 1995. Detection and genotyping of herpes simplex virus types 1 and 2 by polymerase chain reaction. *Molecular and Cellular Probes*. 9(5): 287-290.
- Lückemeyer, D.D., Müller, V.D.M., Moritz, M.I.G., Stoco, P.H., Schenkel, E.P., Barardi, C.R.M., Reginatto, F.H. and Simões, C.M.O. 2012. Effects of *Ilex paraguariensis* A.St.Hil. (yerba mate) on herpes simplex virus type 1 and 2 replication. *Phytotherapy Research*. 26(4): 535-540.
- Madhavan, H.N., Priya, K., Anand, A.R. and Therese, L. 1999. Detection of herpes simplex virus (HSV) genome using polymerase chain reaction (PCR) in clinical samples comparison of PCR with standard laboratory methods for the detection of HSV. *Journal of Clinical Virology*. 14(2): 145-151.
- Malaiwan, T. 2007. Study on Antioxidant of *Cladophora glomerata* Kutzing, *Nostochopsis lobatus* wood em guttler and *Spirogyra* sp. B. Sc. special project report. Faculty of Science, Chiang Mai University.
- Mandal, P., Pujol, C.A., Carlucci, M.J. and Chattopadhyay, K. 2008. Anti-herpetic activity of a sulphated xylomannan from *Scinaaia hatei*. *Phytochemistry*. 69(11): 2193-2199.
- Manservigi, R., Spear, P.G. and Buchan, A. 1977. Cell fusion induced by herpes simplex virus is promoted and suppressed by different viral glucoproteins. *Proceedings of the National Academy of Sciences of the United States of America*. 74(9): 3913-3917.

- Mardberg, K., Trybala, E., Tufaro, F. and Bergstrom, T. 2002. Herpes simplex virus type 1 glycoprotein C is necessary for efficient infection of chondroitin sulfate-expressing gro2C cells. *Journal of General Virology*. 83(Pt2): 291-300.
- Marques, A. and Straue, S. 2000. Herpes simplex type 2 infections-an update. *Journal of Advances in Internal Medicine*. 46; 327-359.
- Mazumder S., Ghosal K. P., Pujol A.C., Carlucci J.M. and Ray B. 2002. Isolation, chemical investigation and antiviral activity of polysaccharides from *Gracilaria corticata* (Gracilariaceae, Rhodophyta). *International Journal of Biological Macromolecules* . 31: 87-95
- McCourt, R.M., Hoshaw, R.W. and Wang, J.C. 1986. Distribution, morphological diversity and evidence for polyploidy in North American Zygnemataceae (Chlorophyta). *Journal of Phycology*, 22: 307–313.
- Melancon, J.M., Luna, R.E., Foster, T.P. and Kousoulas, K.G. 2005. Herpes simplex virus type 1 gK is required for gB-mediated virus-induced cell fusion, while neither gB and gK nor gB and U_L 20p function redundantly in virion development. *Journal of Virology*. 79(1): 299-313.
- Melis, R. and White, R. Characterization of colonic polyps by twodimensional gel electrophoresis. 1999. *Electrophoresis*. 20: 1055 – 64.
- Mellad, J.A., Warren, D.T. and Shanahan, C.M. 2011. Nesprins LINC the nucleus and cytoskeleton. *Current Opinion in Cell Biology*. 23: 47-54.
- Mirunalini, S. and Krishnaveni, M. 2011. Coumarin: a plant derived polyphenol with wide biomedical applications. *International Journal of PharmTech Research*. 3(3): 1693-1696.
- Montgomery, R.T., Warner, M.S., Lum, B.J. and Spear, P.G. 1996. Herpes simplex virus-1 entry into cells mediated by a novel member of the TNF/NGF receptor family. *Cell*. 1(87): 427-436.
- Morello, C.S., Levinson, M.S., Kraynyak, K.A. and Spector, D.H. 2011. Immunization with herpes simplex virus 2 (HSV-2) genes plus inactivated HSV-2 is highly protective against acute and recurrent HSV-2 disease. *Journal of Virology*. 85(7): 3461-3472.

- Morfin, F. and Thouvenot, D. 2003. Herpes simplex virus resistance to antiviral drugs. *Journal of Clinical Virology*. 26(1): 29-37.
- Nakayama, K.I. and Nakayama, K. 2006. Ubiquitin ligases: cell-cycle control and cancer. *Nature Review Cancer*. 6: 369-81.
- Navaneethan, U., Lancaster, E., Venkatesh, P.G., Wang, J. and Neff, G.W. 2010. Herpes simplex virus hepatitis-It's high time we consider empiric treatment. *Journal of Gastrointestinal and Liver Diseases*. 20(1): 93-96.
- Nawawi, A., Ma, C., Nakamura, N., Hattori, M., Kurokawa, M., Shirak, K., Kashiwada, N. and Ono, M. 1999. Anti-herpes simplex virus activity of alkaloids isolated from *Stephania cepharantha*. *Biological and Pharmacuetical Bulletin*. 22(3): 268-274.
- Nikomtat, J., Meepowpan, P. and Tragoolpua, Y. 2011. Inhibition of *Inula cappa* (Ham. Ex.D. Don) DC. extracts on herpes simplex virus infection *in vitro*. *African Journal of Microbiology Research*. 5(24): 4049-4058.
- Nikomtat, J., Thongwai, N., Lumyong, S. and Tragoolpua, Y. 2011. Anti-herpes simplex virus type 2 of *Drymaria diandra* Blume medicinal plant. *Chiang Mai Journal of Science*. 38(3): 439-452.
- Ogasawara, M., Suzutani, T., Yoshida, I. and Azuma, M. 2001. Role of the U_L25 gene product in packaging DNA into the herpes simplex virus capsid: location of U_L25 product in the capsid and demonstration that it binds DNA. *Journal of Virology*. 75(3):1427-1436.
- Ördög, V., Strik, W.A., Lenobl, R., Banciová, M., Strand, M., Staden, J.V., Szigeti, J. and Németh, L. 2004. Screening microalgae for some potentially useful agricultural and pharmaceutical secondary metabolites. *Journal of applied Phycology*. 16: 309-314.
- Palamara, A.T., Perno, C.F., Ciriola, M.R., Dini, L., Balestra, E., D'Agostini, C., Francesco, D.I., Favalli, P., Rotilio, C. and Garaci, G. 1995. Evidence for antiviral activity of glutathione: *in vitro* inhibition of Herpes simplex type 1 replication. *Antiviral Research*. 27(3): 237-253.
- Pandey, M.K., Singh, G.N., Sharma, R.K. and Lata, S. 2012. Phytochemical standardization of *Ecipta alba* (L) Hassk: an ayurvedic drug. *World Journal of*

- Pharmacy and Pharmaceutical Sciences. 1(2): 569-584.
- Panyoyai, T. and Peerapornpisal, Y. 2008. Antioxidant Activity of Tao, *Spirigyra neglacta (Hassall) Kutzing*. M.Sc. thesis. Faculty of Science, Chiang Mai University.
- Patel, A.H., Rixon, F.J., Cunningham, C. and Davison, A.J. 1996. Isolation and characterization of herpes simplex virus type 1 mutants defective in the U_L6 gene. *Virology*. 217(1):111-123.
- Peerapornpisal, Y., Dounporn, A., Chaiyong, R., Khomson, R. and Duangta, K., 2006. Two Endemic Species of Macroalgae in Nan River, Northern Thailand, as Therapeutic Agents. *Science Asia*, 32(1): 71-76.
- Peerapornpisal, Y., Pongsirikul, I. and Kanjanapothi, D. 2005. Potential of Freshwater Macroalgae as Food and Medicine. Final report submitted to Thailand Research Fund (TRF).
- Penkert, R.R. and Kalejta, R.F. 2011. Tegument protein control of latent herpes virus establishment and animation. *Herpesviridae*. 2(1): 1-20.
- Pereira, V.S., Moizeis, R.N., Femandes, T.A., Araujo, J.M., Meissner, R.V. and Femandes, J.V. 2012. Herpes simplex virus type 1 is the main cause of genital herpes in women of Natal, Brazil. *European Journal of Obstetrics and Gynecology and Reproductive Biology*. 161(2): 190-193.
- Person, S., Laquerre, S., Desai, P. and Hempel, J. 1993. Herpes simplex virus type 1 capsid protein, VP21, originates within U_L26 open reading frame. *Journal of General Virology*. 74: 2269-2273.
- Piccordi, R., Frosini, A., Tredici, M.R. and Margheri, M.C. 2000. Bioactivity in free-living and symbiotic cyanobacteria of the genus *Nostoc*. *Journal of applied Phycology*. 12: 543-547.
- Piret, J. and Boivin, G. 2011. Resistance of herpes simplex viruses to nucleoside analogues: mechanisms, prevalence, and management. *Antimicrobial Agents and Chemotherapy*. 55(2): 459-472.
- Pithon, M.M. and Andrade, A.C.D.V. 2010. Primary herpetic gingivostomatitis in an adult patient using an orthodontic appliance. *International Journal of Odontostomatology*. 4(2): 157-160.

- Powthongsook, S. 2000. Utilization of algae: a research and development potential of Thailand. Bangkok: Chulalongkorn University press.
- Preston, C.M., Frame, M.C. and Campbell, M.E.M. 1998. A complex formed between cell components and an HSV structural polypeptide binds to a viral immediate early gene regulatory DNA sequence. *Cell*. 52(3):425-434.
- Raja, A.X.V. and Sama, K. 2012. Phytochemical and biochemical analysis of the plat extract of *Acacia concinna* (Wild). *International Journal of Pharmaceutical Research and Development*. 3(12): 136-139.
- Rajcáni, J. and Vojvodová. 1998. The role of herpes simplex virus glycoproteins in the virus replication cycle. *Acta Virologica*. 42(2): 103-118.
- Rao, V.S., Srinivas, K., Sujini, G.N. and Kumar, G.N. 2014. Protein-protein interaction detection: methods and analysis. *International Journal of Proteomics*. Article ID: 147648.
- Reichling, J., Neuner, A., Sharaf, M., Harkenthl, M. and Schnitzler, P. 2009. Antiviral activity of *Rhus aromatic* (fragrant sumac) extracts against two types of herpes simplex viruses in cell culture. *Pharmazie*. 64(8): 538-541.
- Riley, L.E. 1998. Herpes simplex virus. *Seminar in Perinatology*. 22(4): 284-292.
- Rispail, N., Morris, P. and Webb, K.J. 2005. Phenolic compound: extraction and analysis. Chapter 7.5. A.J. Marquez (Ed) *Lotus japonicas Handbook*. Pp. 349-355.
- Robin, V., Irurzun, A., Amoros, M., Boustie, J. and Carrasco, L. 2002. Antipoliiovirus flavonoids from *Psiadia dentata*. *Antiviral Chemistry and Chemotherapy*. 12(5): 283-291.
- Roizman, B. and Spears, A.E. 1996. Herpes simplex viruses and their replication. In B.N. Fields, D.M. Knipe, R.M. Chanock, M.S. Hirsch, J.L. Melnick, T.P. Monath, Roizman, B. (Eds.). *Virology vol.2* (pp. 2231-2295). 3rd edition. Lippincott-Raven Publishers, Philadelphia, United States.
- Roizman, B., Knipe, D.M. and Whitley, R.J. 2007. Herpes simplex viruses. In Fields, D.M. Knipe and P.M. Howley (Eds). *Virology* (pp. 2501-2601). 5th edition. Lippincott Williams and Wilkins, Philadelphia, United States.
- Rungprom, W. and Prasantawong, A. 2009. Bioactive compounds in ray grass

- (*Leptochloa chinensis* (L.) Nees). Agricultural Science Journal. 40: 118-120.
- Ruyechan, W. 1983. The major herpes simplex virus DNA-binding protein holds single-stranded DNA in an extended configuration. Journal of Virology. 46(2): 661-666.
- Sacks, S.L., Griffiths, P.D., Corey, L., Cohen, C., Cunningham, A., Dusheiko, G.M., Self, S., Spruance, S., Stanberry, L.R., Wald, A. and Whitley, R.J. 2004. HSV-2 transmission. Antiviral Research. 63: 27-35.
- Saha, S., Navid, M.H., Bandyopadhyay, S.S., Schnitzler, P. and Ray, B. 2012. Sulfated polysaccharides from *Laminaria angustata*: structural features and in vitro antiviral activities. Carbohydrate Polymers. 87:123–130.
- Sahoo, S.S., Shukla, S., Nandy, S. and Sahoo, H.B. 2012. Synthesis of novel coumarin derivatives and its biological evaluations. European Journal of Experiment Biology. 2(4):899-908.
- Sakulpanich, A. and Gritsanapan, W. 2009. Determination of anthraquinone glycoside content in *Cassia fistula* leaf extracts for alternative source of laxative drug. International Journal of Biomedical and Pharmaceutical Science. 3(1): 42-45.
- Saltzman, R., Jurewicz, R. and Boon, R. 1994. Safety of famciclovir in patients with herpes zoster and genital herpes. Antimicrobial Agents and Chemotherapy. 38(10): 2454-2457.
- Sangtongdee, S., Kotruchin, S., Kamkaen, N. and Pitiporn, S. 2006. A Bachelor of Pharmacy's Thesis. Faculty of Pharmacy, Srinakharinwirot University. Thailand. (In Thai with English abstract).
- Sarmiento, M. and Spear, P.G. 1979. Membrane proteins specified by herpes simplex viruses IV. conformation of the virion glycoprotein designated VP7 (B₂). Journal of virology. 29(3): 1159-1167.
- Sauerbrei, A., Eichhorn, U., Hottenrott, G. and Wutzler, P. 2000. Virological diagnosis of herpes simplex encephalitis. Journal of Clinical Virology. 17: 31-36.
- Sayda, M.A., Hetta, M.H., Salah El Din, R.A. and Ali, G.H. 2010. Growth evaluation and bioproduct characteristics of certain freshwater algae isolated from Nile River, Egypt. Journal of Applied Sciences Research. 6(6): 642-652.
- Scheffne, M., Nuber, U. and Huibregtse, J.M. 1995. Protein ubiquitination involving an

- E1-E2-E3 enzyme ubiquitin thioester cascade. *Nature*. 373: 81-3.
- Schippner, L.E. and Crumpacker, C.S. 1980. Resistance of herpes simplex virus to acycloguanosine : the role of viral thymidine kinase and DNA polymerase. *Proceedings of the National Academy of Sciences, U.S.A.* 77: 2270-2273.
- Serkedjieva, J. and Ivancheva, S. 1998. Antiherpes virus activity of extracts from the medicinal plant *Geranium sanguineum* L. *Journal of Ethnopharmacology*. 64(1): 59-68.
- Seth, R. and Sarin, R. 2010. Analysis of the phytochemical content and anti-microbial activity of *Jatropha gossypifolia* L. *Archives of Applied Science Research*. 2(5): 285-291.
- Shah, U. 2011. *Cissus quadrangularis* L.: phytochemicals, traditional uses and pharmacological activities-a review. *International Journal of Pharmacy and Pharmaceutical Sciences*. 2(4): 41-44.
- Shalaby, S. and Shukr, M. 2011. The influence of the type and concentration of alcohol on the rheological and mucoadhesive properties of carbopol 940 hydroalcoholic gels. *Der Pharmacia Sinica*. 2(6): 161-171.
- Shameel, M. 2001. An approach to the classification of algae in the new millennium. *Pakistan Journal of Biological Sciences*. 7(1/2): 233-250.
- Sheaffer, A.K., Newcomb, W.W. and Tenney, D. 2000. Evidence for controlled incorporation of herpes simplex virus type 1 U_L26 proteases into capsids. *Journal of Virology*. 74(15): 6838-6848.
- Sherman, G., Gottlieb, J. and Challberg, M.D. 1992. The U_L8 subunit of the herpes simplex virus helicase-primase complex is required for efficient primer utilization. *Journal of Virology*. 66(8): 44884-44892.
- Shirahashi H., Murakami N., Watanabe M., Nagatsu A., Sakakibara J., Tokuda H., Nishino H. and Iwashima A. 1993. Isolation and identification of anti-tumorpromoting principles from the fresh-water cyanobacterium *Phormidium tenue*, *Chemical Pharmaceutical Bulletin*. 41: 1664-6.
- Shivhare, U.D., Jain, K.B., Mathur, V.B., Bhusari, K.P. and Roy, A.A. 2009. Formulation development and evaluation of diclofenac sodium gel using water soluble polyacrylamide polymer. *Digest Journal of Nanomaterials and*

Biostructures. 4(2): 285-290.

- Sierra, C.A., Bedoya, A.M., Paris, S., Baena, A., Gaviria, A.M., Rojas, C.A., Arbelaez, M.P. and Sanchez, G.I. 2011. Prevalence of specific herpes simplex virus-2 antibodies and associated factors in women of a rural town of Colombia. *Transactions of the Royal Society of Tropical Medicine and Hygiene.* 105(4): 232-238.
- Simonato, M., Manservigi, R., Marconi, P. and Glorioso, J. 2000. Gene transfer into neurons for the molecular analysis of behavior: focus on herpes simplex vectors. *Trends Neurosciences.* 23(5): 183-190.
- Singh, R.K., Tiwari, S.P., Rai, A.K. and Mohapatra, T.M. 2011. Cyanobacteria: an emerging source for drug discovery. *Journal of Antibiotics.* 64: 401–412.
- Smith, G. M. 1955. *Cryptogamic Botany*, McGraw-Hill, New York, United States of America.
- Soni, M.G., Taylor, S.L., Greenberg, N.A. and Burdock, G.A., 2002. Evaluation of the health aspects of methyl paraben: a review of the published literature. *Food and Chemical Toxicology.* 40(10): 1335-1373.
- Spear, P.G. 2004. Herpes simplex virus: receptors and ligands for cell entry. *Cellular Microbiology.* 6(5): 401-410.
- Spear, P.G. and Roizman, B. 1972. Proteins specified by herpes simplex virus V. purification and structural proteins of the herpesvirion. *Journal of Virology.* 9(1): 143-159.
- Spencer, J.V., Trus, B.L., Booy, F.P., Steven, A.C., Newcomb, W.W. and Brown, J.C. 1997. Structure of the herpes simplex virus capsid: peptide A862-H880 of the major capsid protein is displayed on the rim of the capsomer protrusions. *Virology.* 228(2): 229-235.
- Spruance, S.L., McKeough, M.B. and Cardinal, J.R. 1983. Dimethyl sulfoxide as a vehicle for topical antiviral chemotherapy. *Annals of the New York Academy of Sciences.* 411:28-33.
- Steiner, I. and Kennedy, P.G. 1995. Herpes simplex virus latent infection in the nervous system. *Journal of NeuroVirology.* 1(1): 19-29.
- Stevenson, A.J., Morrison, E.E., Chaudhari, R., Yang, C.C. and Merdith, D.M. 1997.

- Processing and intracellular localization of the herpes simplex virus type 1 proteinase. *Journal of General Virology*. 78: 671-675.
- Tal-Singer, R., Peng, C., Ponce De Leon, M., Abrams, W.R., Banfield, B.W., Tufaro, F., Cohen, G.H. and Eisenberg, R. J. 1995. Interaction of herpes simplex virus glycoprotein gC with mammalian cell surface molecules. *Journal of Virology*. 69(7): 4471-4483.
- Taylor, T.J., Brockman, M.A., McNamee, E.E. and Knipe, D.M. 2002. Herpes simplex virus. *Frontiers in Bioscience*. 1: 752-764.
- Thiamdao, S., Sitasuwan, N., Sardud, U., Vacharapiyasophon, P. and Peerapornpisal, Y. 2011. Diversity of edible freshwater macroalgae in Thailand during 2007-2008. A Doctor of Philosophy (Biology) 's thesis. Faculty of Science, Chiang Mai University. Thailand.
- Thomsen, D.R., Newcomb, W.W., Brown, J.C. and Homa, F.L. 1995. Assembly of the herpes simplex virus capsid: requirement for the carboxyl-terminal twenty-five amino acids of the proteins encoded by the U_L26 and U_L26.5 genes. *Journal of Virology*. 69(6): 36090-3703.
- Thurlow, J.K., Rixon, F.J., Murphy, M., Targett-Adams, P., Hughes, M. and Preston, V.G. 2005. The herpes simplex virus type 1 DNA packaging protein U_L17 is a virion protein that is present in both the capsid and the tegument compartments. *Journal of Virology*. 79(1): 150-159.
- Tiwari, P., Kumar, B., Kaur, M., Kaur, G. and Kaur, H. 2011. Phytochemical screening and extraction: a review. *International Pharmaceutica Scientia*. 1(1): 98-106.
- Tokuda, H., Nishino, H., Shirahashi, H., Murakami, N., Nagatsu, A. and Sakakibara, J. 1996. Inhibition of 12-O-tetradecanoylphorbol-13- acetate promoted mouse skin papilloma by digalactosyl diacylglycerols from the freshwater cyanobacterium *Phormidium tenue*. *Cancer Letter*. 104: 91-96.
- Tolo, F.M., Rukunga, G.M., Muli, F.W., Njagi, E.N.M., Njue, W., Kunon, K., Mungai, G.M., Muthaura, C.N, Muli, J.M., Keter, L.K., Oishi, E. and Kofi-Tsekpo, M.W. 2006. Anti-viral activity of the extracts of a Kenya medicinal plant *Carissa edulis* against herpes simplex virus. *Journal of Ethnopharmacology*. 104(1-2): 92-99.

- Tragoopua, Y. and Jatisatienr, A. 2007. Anti-herpes simplex virus activities of *Eugenia caryophyllus* (Spreng.) Bullock & S. G. Harrison and essential oil, eugenol. *Phytotherapy Research*. 21(12): 1153-1158.
- Turner, A., Bruun, B., Minson, T. and Browne, H. 1998. Glycoproteins gB, gD, and gHgL of herpes simplex virus type 1 are necessary and sufficient to mediate membrane fusion in a Cos cell transfection system. *Journal of Virology*. 72(1), 873–875.
- Usha D., K and Panikkar, M.V.N. 1994. Species of *Zygnema* Agardh from Keral, India. *Bionature*, 18: 21-26.
- Vipul, A. and Devesh, S. 2012. Stability testing of active pharmaceutical ingredient. *Journal of Pharmaceutical and Scientific Innovation*. 1(2): 18-23.
- Wagner, E.K. and Sandri-Goldin, R.M.. 2008. Herpes simplex virus : molecular Biology. *Encyclopedia of virology*.
- Wagner, E.K., Hewlett, M.J., Bloom, D.C. and Camerini, D. 2006. *Basic virology*. Third edition. Blackwell publishing Ltd. San Francisco.
- Wald, A., Langenberg, A.G., Link, K., Izu, A.E., Ashley, R., Warren, T., Tyring, S., Douglas Jr., J.M. and Corey, L. 2001. Effect of condoms on reducing the transmission of herpes simplex virus type 2 from men to women. *The Journal of the American Medical Association*. 285(24): 3100–3106.
- Wang, H., Li, C., Wu, X. and Lou, X. 2012. Effects of *Gynostemma pentaphyllum* (Thunb.) makino polysaccharides supplementation on exercise tolerance and oxidative stress induced by exhaustive exercise in rats. *African Journal of Agricultural Research*. 7(17): 2632-2638.
- Warren, D.T. 2005. Nesprins: intracellular scaffolds that maintain cell architecture and coordinate cell function. *Expert Reviews in Molecular Medicine*.7: 1-15.
- Wellman, C.H., Osterloff, P.L. and Mohiuddin, U. 2003. Fragments of the earliest land plants. *Nature* 425: 282–285.
- White, C.A., Stow, N.D., Patel, A.H., Hughes, M. and Preston, V.G. 2003. Herpes simplex virus type 1 portal protein UL6 interacts with the putative terminase subunits UL15 and UL28. *Journal of Virology*. 77(11): 6351–6358.
- Whitley, R.J. and Roizman, B. 2001. Herpes simplex virus infections. *The lancet*.

357(9267): 1513-1518.

- Whitley, R.J., Kimberlin, D.W. and Roizman, B. 1998. State-of-the-art clinical article. *Clinical Infectious Disease*. 26: 541-555.
- Wijesekara, I., Pangestuti, R., and Kim, S.K. 2011. Biological activities and potential health benefits of sulfated polysaccharides derived from marine algae. *Carbohydrate Polymers*. 84(1): 14–21.
- Xu, Y.X., Leung, S.W.S., Yeung, D.K.Y., Hu, L.H., Chen, G.H., Che, C.M. and Man, R.Y.K. 2007. Structure-activity relationships of flavonoids for vascular relaxation in porcine coronary artery. *Phytochemistry*. 68(8): 1179-1188.
- Yadav, R. and Agarwala, M. 2011. Phytochemical analysis of some medicinal plants. *Journal of Phytology*. 3(12): 10-14.
- Yoosook, C., Bunyaphatsara, N., Boonyakiat, Y. and Kuntasuk, C. 2000. Anti-herpes simplex virus activities of crude water extracts of Thai medicinal plants. *Phytomedicine*. 6(6):411-419.
- Yoosook, C., Panpisuthchai, Y., Chichana, S., Santisuk, T. and Reutrakul, V. 1999. Evaluation of anti-HSV-2 activities of *Barleria lupulina* and *Cliacanthus nutans*. *Journal of Ethnopharmacology*. 67(2): 179-187.
- Yucharoen, R., Meepowpan, P. and Tragoolpua, Y. 2012. Inhibitory effect of peppermint extracts and menthol against herpes simplex virus infection. *Chiang Mai Journal of Science*. 39(1):97-110.
- Zhang, H., Yao, M., Morrison, R.A. and Chong, S. 2003. Commonly used surfactant, Tween 80, improves absorption of P-glycoprotein substrate, digoxin, in rats. *Archives of Pharmacal Research*. 26(9): 768-772.
- Zhang, Q. 2005. Nesprin-2 is a multi-isomeric protein that binds lamin and emerin at the nuclear envelope and forms a subcellular network in skeletal muscle. *Journal of Cell Science* 118(4): 673-687.
- Zhou, C. and Knipe, D.M. 2002. Association of herpes simplex virus type 1 ICP8 and ICP27 proteins with cellular RNA polymerase II holoenzyme. *Journal of Virology*. 78(12): 5893-5904.
- Zhu, W., Ooi, V.E.C., Chan, P.K.S. and Ang, Jr.P.O. 2003. Isolation and Characterization of a sulfated polysaccharide from the brown alga *Sargassum*

patens and determination of its anti-herpes activity. *Biochemistry and Cell Biology*. 81:25-33.



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright© by Chiang Mai University
All rights reserved