

## เอกสารอ้างอิง

- ธวัช ศรีวีระชัย และสุนันดร์ ทัตตามนท์. 2538. การเลี้ยงกุ้งแซบบี้แบบพัฒนาในบ่อ ดิน. เอกสารวิชาการ ฉบับที่ 44/2538 สถานีเพาะเลี้ยงสัตว์น้ำชายฝั่งจังหวัด นราธิวาส กองเพาะเลี้ยงสัตว์น้ำชายฝั่ง กรมประมง กระทรวงเกษตรและ สหกรณ์.
- บุญศรี จาจูธรรมสิง. 2537. ชีวิทยากุ้งแซบบี้ (*Penaeus merguiensis*) ในบริเวณ อ่าวพังงา. รายงานสัมมนาวิชาการประจำปี 2537 กรมประมง กระทรวง เกษตรและสหกรณ์.
- เมธี วัฒนสิงห์. 2543. การเลี้ยงกุ้งแซบบี้แบบพัฒนา ภูมิปัญญาคนไทยตลาดในและ นอกยังเปิดกว้าง. วารสารสัตว์น้ำ. 11(131): 5-16.
- วิวัฒน์ชัย พรมสาขา ณ สกลนคร และสมพร โลสวัสดิ์กุล. 2532. การแพร่กระจาย และความซุกซุมของทรพยากรกุ้งทะเลในอ่าวไทย. รายงานการสัมมนาวิชา การประจำปี 2532 กรมประมง กระทรวงเกษตรและสหกรณ์.
- ศรีรัตน์ สอดสุข และพนม กระจ่างพจน์. 2541. ความหลากหลายทางพันธุกรรมของ กุ้งแซบบี้จาก 3 แหล่งในประเทศไทย. เอกสารวิชาการ ฉบับที่ 19/2541 สถาบันวิจัยและพัฒนาพันธุกรรมสัตว์น้ำ กรมประมง กระทรวงเกษตร และสหกรณ์.
- สุพจน์ จึงแย้มปืน และชัยรัตน์ พุ่มช่วย. 2543. ผลงานชิ้นโบแดงสถานีเพาะเลี้ยงสัตว์ น้ำชายฝั่ง จังหวัดตรังเลี้ยงพ่อแม่แซบบี้ในบ่อดินสำเร็จ. วารสารสัตว์น้ำ 11(132): 37-44.
- Antoniello, S., Auletta, M., Vatiero, V., Nigro, C. and Cacciatore, L. 1989.  $\beta$ -hexosaminidase activity in alcoholic fatty liver and in  $CCl_4$  induce fibrosis of the rat. *Enzyme* 42, 68-72.

- Aronson, N.N.Jr., Backes, M. and Kuranda, M. 1989. Rat liver chitobiase: purification, properties and role in the lysosomal degradation of Asn-linked glycoproteins. *Arch. Biochem. Biophys.* 272, 290-300.
- Berger, S., Menudier, A., Julien, R. and Karamanos, Y. 1995. Do de-N-glycosylation enzymes have an important role in plant cells. *Biochimie.* 77, 751-760.
- Bradford, M.M. 1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Anal. Biochem.* 72: 248-254.
- Brine, C.J. 1984. Chitin: Accomplishment and perspectives in chitin, chitosan and related enzymes. *Academic Press*, New York.
- Cabib, E. 1987. The synthesis and degradation of chitin. *Adv. Enzymol.* 59-101.
- Cacan, R., Dengremont, C., Labiau, O., Kmleclk, D., Mir, A.M. and Verbert, A. 1996. Occurrence of a cytosolic neutral chitobiase activity involved in oligomannoside degradation: a study with Madin-Darby bovine kidney (MDBK) cells. *Biochem. J.* 33, 597-602.
- Cattaneo, F., Ogiso, M., Hoshi, M., Perotti, M.E. and Pasini, M.E. 2002. Purification and characterization of the plasma membrane glycosidases of *Drosophila melanogaster* spermatozoa. *Insect Biochem. Mol Biol.* 32, 929-941.
- Choi, S.Y. and Gross, K.C. 1994. N-acetyl- $\beta$ -D-glucosaminidase from golden delicious apples. *Phytochemistry* 36, 1-6.
- Cohon, R.J. 1986.  $\beta$ -N-acetylglucosaminidase from *Phycomyces blakeslecanus*. *Plant Sci.* 43, 93-101.

- Costanzi, E., Beccari, T., Francisci, D., Orlacchio, A. and Tassi, C. 1996. Lysosomal hydrolases in serum from human immunodeficiency virus-infected patients. *Clin. Chem. Acta* 225, 57-65.
- Deane, E.E., Whipps, J.M., Lynch, J.M. and Peberdy, J.F. 1998. The purification and characterization of a *Trichoderma harzianum* exochitinase. *Biochem. Biophys. Acta. Prot.. Stru. Mole. Enz.* 1383, 101-110.
- Deelder, C.L. 1978. A short note on the intensive culture of eel (*Anguilla anguilla* L.) *Aquaculture* 13, 289-290.
- Dennis, L.Y.D. and Hart, G.W. 1994. Purification and characterization of an O-GlcNAc selective N-acetyl- $\beta$ -D-glucosaminidase from rat spleen cytosol. *J. Biol. Chem.* 269, 19321-19330.
- Drouillard, S., Armand, S., Davies, G.J., Vorgias, C.E. and Henrissat, B. 1997. *Serratia marcescens* chitobiase is a retaining glycosidase utilizing substrate acetamido group participation. *Biochem J.* 159, 115-122.
- Esaiassen, M., Myrness, B. and Olsen, R.L. 1992. Purification and some properties of two  $\beta$ -N-acetylhexosaminidase from the hepatopancreas of northern shrimp, *Pandalus borealis*. *Comp. Biochem. Physiol.* 101B, 513-517.
- Flach, J., Pilet, P.E. and Jolles, P. 1992. What is new in chitinase. *Res. Rev. Exp.* 48, 701-716.
- Godknecht, A. and Honegger, T.G. 1991. Isolation, characterization and localization of sperm-bound N-acetylglucosaminidase that is indispensable for fertilization in the ascidian, *Phallussia mammillata*. *Develop. Biol.* 143, 398-407.

- Grey, D., Dall, W. and Baker, A. 1983. A guide to the Australian penaeid prawn. 140 pp.
- Havukkala, I., Mitamura, C., Hara, S., Hirayae, K., Nishizawa, Y. and Hibi, T. 1993. Induction and purification of *Beauveria bassiana* chitinolytic enzyme. *J. Invert. Pathol.* 61, 97-102.
- Hultberg, B. and Isaksson, A. 1983. Isoenzyme pattern of serum  $\beta$ -hexosaminidase in liver disease, alcohol intoxication and pregnancy. *Enzyme* 30, 166-171.
- Hultberg, B. and Isaksson, A., Lindgren, A., Isaksson, B. and Brattstrom, L. 1996. Plasma  $\beta$ -hexosaminidase isoenzyme A and B in patients with cerebral infarction. *Clin. Chim. Acta* 244, 35-44.
- Hutchinson, T., Dwivedi, K., Rastogi, A., Prasad, R. and Pereira, B.M.J. 2002. N-acetyl  $\beta$ -D-glucosaminidase is not attached to human sperm membranes through the glycosylphosphatidyl inositol (GPI) anchor. *Asian J. Androl.* 4, 27-33.
- Jain, R.S., Binder, R.L., Walz, C., Buck, C.A. and Warren, L. 1977. Purification of beta-N-acetyl-D-glucosaminidase of the horseshoe crab by affinity chromatography. *J. Chromatogr.* 136, 141-146.
- Jiravanichpaisal, P. and Miyazaki, T. 1994. Histopathology, biochemistry, and pathogenicity of *Vibrio harveyi* infecting black tiger prawn, *Penaeus monodon*. *J. Aquat. Anim. Health* 6, 27-35.
- Kang, H.K., Kim, D.K., Lee, B.H., Om, A.S., Hong, J.H., Koh, H.C., Lee, C.H., Shin, I.C. and Kang, J.S. 2001. Urinary N-acetyl- $\beta$ -D-glucosaminidase and malondialdehyde as a markers of renal damage in burned patients. *J. Korean Med. Sci.* 16, 598-602.

- Khan, S.R., Sherock, P.N. and Hackett, B.L. 1989. Urinary enzyme and calcium oxalate urolithiasis. *J. Urol.* 142, 846-849.
- Kimura, S. 1977. Exo- $\beta$ -N-acetylglucosaminidase and chitobiase in *Bombyx mori*. *Insect Biochem.* 7, 237-245.
- Knorr, D. 1984. Use of chitinase polymers in food. *Food Technol.* 38, 85-97.
- Koga, D., Hoshika, H., Matsushita, M., Tanaka, A., IDE, A. and Kono, M. 1996. Purification and characterization of  $\beta$ -N-acetyl hexosaminidase from the hepatopancreas of kuruma prawn (*Penaeus japonicus*). *Biosci. Biotech. Biochem.* 60, 194-199.
- Le Chevalier, P. and Van Wormhoudt, A. 1998. Alpha-glucosidase from the hepatopancreas of the shrimp, *Penaeus vannamei* (crustacea-decapoda). *J. Exp. Zool.* 280, 384-394.
- Leitner, G., Chaffer, M., Zamir, S., Mor, T., Glickman, A., Winkler, M., Weisblit, L. and Saran, A. 2001. Udder disease etiology, milk somatic cell counts and NAGase activity in Israeli Assaf sheep throughout lactation. *Small Ruminant Res.* 39, 107-112.
- Lindsay, G.J.H. 1986. The significance of chitinolytic enzymes and lysozyme in rainbow trout (*Salmo gairdneri*) defence. *Aquaculture* 51, 169-173.
- Lundblad, G., Faenge, R. and Slettengren, K. 1979. Lysozyme, chitinase and exo N-acetyl-beta-D-glucosaminidase (NAGase) in lymphomyeloid tissue of marine fishes. *Marine Biol.* 53, 311-315.
- Lynn, K.R. 1990. Chitinase and chitobiase from the American lobster (*Homarus americanus*). *Comp. Biochem. Physiol.* 96B, 761-766.
- Manson, F.D.C., Fletcher, T.C. and Gooday, G.W. 1992. Localization of chitinolytic enzyme in blood of turbot, *Scophthalmus maximus* and possible roles in defence. *J. Fish Biol.* 40, 919-927.

- Martinez, M.L., Martelotto, L. and Cabada, M.O. 2000. Purification and biological characterization of N-acetyl beta-D-glucosaminidase from *Bufo arenarum* spermatozoa. *Mol. Reprod. Develop.* 57, 194-203.
- Miller, D.J., Gong, X. and Shur, B.D. 1993. Sperm require beta-N-acetylglucosaminidase to penetrate through the egg zona pellucida. *Develop. Cambridge, England* 118, 1279-1283.
- Moroni, P. and Cuccuru, C. 2001. Relationship between mammary gland infections and some milk immune parameters in Sardinian breed ewes. *Small Ruminant Res.* 41, 1-7.
- Nagai, T., Hamada, M., Kai, N., Tanoune, Y., Ueno, S. and Nagayama, F. 1997. Existence of chitinase and beta-N-acetylglucosaminidase in several jellyfish. *Fish. Sci.* 63, 157-158.
- Nok, A.J., Shuaibu, M.N., Choudhry, M.K., Oyebanjo, O., Ibrahim, S. and Williams, S. 2001. N-acetyl alpha-D-glucosaminidase from the venom of African puff adder (*Bitis arietans*). *J. Biochem. Mol. Toxicol.* 15, 221-227.
- Omero, C., Horwitz, B.A. and Chet, I. 2001. A convenient fluorometric method for the detection of extracellular N-acetylglucosaminidase production by filamentous fungi. *J. Micro. Method.* 43, 165-169.
- Omondi, J.G. and Stark, J.R. 1995. Some digestive carbohydrates from the midgut gland of *Penaeus indicus* and *Penaeus vannamei* (decapoda: Penaeide). *Aquaculture* 134, 121-135.
- Oosterhuis, S.S., Baars, M.A. and Klein Breteler, W.C.M. 2000. Release of the enzyme chitobiase by the copepod *Temora longicornis*: characteristics and potential tool for estimating crustacean biomass production in the sea. *Marine Ecol. Prog. Ser.* 196, 195-206.

- Orlacchio, A., Beccari, T. and Maffei, C. 1985. Isoenzyme separation by chromatofocusing and kinetic properties of  $\beta$ -hexosaminidase from *Spirographis spallanzani*, *Allolobophora caliginosa* and *Hirudo medicinalis*. *Comp. Biochem. Physiol.* 80B, 923-926.
- Overdijk, B., Willy, M.J., Kroef, V.D., Van Steijn, G.J. and Lisman, J.W. 1981. Isolation and further characterization of bovine brain hexosaminidase C. *Biochim. Biophys. Acta* 659, 255-266.
- Peters, G., Saborowski, R., Mentlein, R. and Buchholz, F. 1998. Isolation of N-acetyl- $\beta$ -D-glucosaminidase from the antarctic krill, *Euphausia superba* : purification and antibody production. *Comp. Biochem. Physiol.* 120B, 743-751.
- Quintio, E.T., Hara, A., Yamauchi, k., Mizushima, T. and Fuji, A. 1989. Identification and characterization of vitellin in a hermaphrodite shrimp, *Pandalus kessleri*. *Comp. Biochem. Physiol.* 94B, 445-451.
- Sasaki, T., Sukegawa, K., Masue, M., Fukuda, S., Tomaatsu, S. and Orii, T. 1991. Purification and partial characterization of alpha N-acetylglucosaminidase from human liver. *J. Biochem.* 110, 842-846.
- Shaikh, S.A. and Deshpande, M.V. 1993. Chitinolytic enzymes: their contribution to basic and applied research. *World J. Micro. Biotech.* 9, 468-475.
- Slawson, C., Pidala, J. and Potter, R. 2001. Increased N-acetyl- $\beta$ -glucosaminidase activity in primary breast carcinomas corresponds to a decrease in N-acetylglucosamine containing proteins. *Biochim. Biophys. Acta* 1537, 147-157.

- Spindler, K.D. 1976. Initial characterization of chitinase and chitobiase from the integument of *Drosophila hydei*. *Insect Biochem.* 6, 663-667.
- Tarentino, A.L., Plummer, T.H. and Maley, F. 1972. Are-evolution of oligosaccharide sequence associated with ovalbumin. *J. Biol. Chem.* 247, 2629-2631.
- Tikhonov, V.E., Lopez-Llorca, L.V., Salinas, J. and Jansson, H.B. 2002. Purification and characterization of chitinase from the nematophagous fungi *Verticillium chlamydosporium* and *V. suchlasporium*. *Fungal Genetics Biol.* 35, 67-78.
- Towbin, H. Staehelin, T. and Gordon, J. 1979. Electrophoretic transfer of protein from polyacrylamide gel to nitrocellulose sheets: Procedure and some application. *Proc. Natl. Acad. Sci.* 76, 4350-4356.
- Tuma, D.J. 1967. A description of primary and secondary sexual characters in the banana prawn *Penaeus merguiensis* de Man (Crustacea: Decapoda; Penacidae). *Australian J. Marine Freshwater Res.* 18, 73-88.
- Wallace, R.A. 1965. Resolution and isolation of avian and amphibian yolk granule protein using DEAE-Cellulose. *Anal. Biochem.* 11, 297-311.
- Watanabe, T. and Kono, M. 1997. Isolation of cDNA encoding a chitinase family protein from cuticular tissues of the kuruma prawn (*Penaeus japonicus*). *Zoo. Sci.* 14, 65-68.
- Wessel, G.M., Truschel, M.R., Chamber, S.A. and Mcclay, D.R. 1987. A cortical granule-specific enzyme,  $\beta$ -1,3-glucanase, in sea urchin eggs. *Gamete Res.* 18, 339-348.

- Zelck, U.E., Trippensee, G. and Becker, W. 1996. Detection and partial characterization of glycosidase in hemolymph of *Biomphalaria glabrata* (Gastropoda). *Comp. Biochem. Physiol.* 114B, 281-286.
- Zhao, K.W. and Neufeld, E.F. 2000. Purification and characterization of recombinant human alpha-N-acetylglucosaminidase secreted by chinese hamster ovary cells. *Protein Express. Purific.* 19, 202-211.
- Zhu, X., Zhang, H., Fukamizo, T., Muthukarishnan, S. and Kramer, K.J. 2001. Properties of *Manduca sexta* chitinase and its C-terminal deletions. *Insect Biochem. Mol. Biol.* 31, 1221-1230.
- Zielkowski, R. and Spindler, K.D. 1978. Chitinase and chitobiase from the integument of *Locusta migratoria*: characterization and titer during the fifth larval instar. *Insect Biochem.* 8, 67-71.
- Zou, E. and Fingerman, M. 1999. Chitobiase activity in the epidermis and hepatopancreas of the fiddler crab, *Uca pugulator* during the molting cycle. *Marine Biol.* 133, 97-101.