

เอกสารอ้างอิง

- เขมิกา ไชมพัตร. 2545. การควบคุมการทำงานของไนเตรตรีดักเทสในต้นข้าวไร่. วิทยานิพนธ์วิทยาศาสตร์มหาบัณฑิต สาขาชีวเคมี คณะบัณฑิตวิทยาลัย มหาวิทยาลัยสงขลานครินทร์.
- ประทุม ฤทธิสุนทร. 2547. ผลของความเค็มต่อการทำงานของเอนไซม์ไนเตรตรีดักเทสในต้นข้าว. วิทยานิพนธ์วิทยาศาสตร์มหาบัณฑิต สาขาชีวเคมี คณะบัณฑิตวิทยาลัย มหาวิทยาลัยสงขลานครินทร์
- ประวิทย์ พิทักษ์วารี. 2533. นิเวศวิทยาของสาหร่ายบริเวณน้ำพุร้อน บ้านโป่งส่อม อำเภอสันกำแพง จังหวัดเชียงใหม่. วิทยานิพนธ์สาขาการสอนชีววิทยา มหาวิทยาลัยเชียงใหม่.
- ปราโมทย์ ทัศนาศูวรรณ. 2529. น้ำพุร้อนธรรมชาติที่เมืองระนอง. อนุสาร อ.ส.ท. 26(10): 18-30.
- พิมพรรณ ต้นสกุล. 2534. ปฏิบัติการสาหร่ายวิทยา. ภาควิชาชีววิทยา คณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์.
- วิรัชเนีย ภูษิตวิทย์. 2534. การศึกษาชนิดและชีววิทยาของสาหร่ายในน้ำพุร้อน อ. เขาชัยสน จ. พัทลุง. การศึกษาโครงการทางชีววิทยา ภาควิชาชีววิทยา คณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์.
- อุดมลักษณ์ สมพงษ์. 2544. ความหลากหลายทางชีวภาพของสาหร่ายในน้ำพุร้อนบางแหล่ง ในเขตภาคเหนือตอนบนของประเทศไทย. วิทยานิพนธ์วิทยาศาสตร์มหาบัณฑิต สาขาชีววิทยา บัณฑิตวิทยาลัย มหาวิทยาลัยเชียงใหม่.
- Addiscott, T. M., Whitmore, A. P. and Powlson, D. S. 1991. Farming, Fertilizers and the Nitrate Problem, C.A.B. International, Wallingford, U.K.
- Afshar, S., Johnson, E., Vries, S. D. and Schroder, I. 2001. Properties of a thermostable nitrate reductase from the hyperthermophilic archaeon *Pyrobaculum aerophilum*. J. Bacteriol. 183: 5491-5495.
- Aguera, E., Poblete, L., Haba, P. and Maldonado, J. M. 1999. Light modulation and in vitro effects of adenine nucleotide on leaf nitrate reductase activity in cucumber (*Cucumis sativas*). Physiol. Plant. 105: 218-223.
- Allen, M. M. and Stainer, R. Y. 1968. Selective isolation of blue-green algae from water and soil. J. Gen Microbiol. 51: 203-209.
- Amy, N. K. and Garrett, R. H. 1974. Purification and characterization of the nitrate reductase from the diatom *Thalassiosira pseudonana*. Plant Physiol. 54: 629-637.

- Bachmann, M., McMichael, R. W., Huber, J. L., Kaiser, W. M. and Huber, S. C. 1995. Partial purification and characterization of a calcium-dependent protein kinase and an inhibitor protein required for inactivation of spinach leaf nitrate reductase. *Plant physiol.* 118: 1083-1091.
- Bedzyk, L., Wang, T. and Ye, R.W. 1999. The periplasmic nitrate reductase in *Pseudomonas* sp. Stain G-179 catalyzes the first step of denitrification. *J. Bacteriol.* 181: 2802-2806.
- Berges, J. A. 1997. Algal nitrate reductase. *Eur. J. Phycol.* 32: 3-8.
- Berks, B. C., Richardson, D. J., Robinson, C., Reilly, A., Aplin, R. T. and Ferguson, S. J. 1994. Purification and characterization of the periplasmic nitrate reductase from *Thiosphaera pantotropha*. *Eur. J. Biochem.* 220: 117-124.
- Berks, B. C., Ferguson, S. J., Moir, J. W. B. and Richardson, D. J. 1995. Enzymes and associated electron transport systems that catalyse the respiratory reduction of nitrogen oxides and oxyanions. *Biochim. Biophys. Acta.* 1232: 97-173.
- Blasco, F., Nunzi, F., Pommier, J., Brasseur, R., Chippaux, M. and Giordano, G. 1992. Formation of active heterologous nitrate reductase between nitrate reductase A and Z of *Escherichia coli*. *Mol. Microbiol.* 6: 209-219.
- Blasco, F., Pommier, F., Augier, V., Chippaux, M. and Giordano, G. 1992. Involvement of the *narJ* or *narW* gene product in the formation of active nitrate reductase in *Escherichia coli*. *Mol. Microbiol.* 6:221-230.
- Blasco, R., Castillo, F. and Martinez-Luque, M. 1997. The assimilatory nitrate reductase from phototrophic bacterium, *Rhodobacter capsulatus* E1F1, is a flavoprotein. *FEBS Lett.* 414: 45-49.
- 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.
- Brock, T. D. and Brock, M. L. 1968. Measurement of steady state growth rates of a thermophilic alga directly in nature. *J. Bacteriol.* 95(3): 811-815.
- Cabello, P., Roldan, M. D. and Moreno-Vivian, C. 2004. Nitrate reduction and the nitrogen cycle in archaea. *Microbiol.* 150: 3527-3546.

- Campbell, W.H. 1996. Nitrate reductase biochemistry comes of age. *Plant Physiol.* 111: 355-361.
- Campbell, W.H. 1999. Nitrate reductase structure, function and regulation: bridging the gap between biochemistry and physiology. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* 50: 277-303.
- Campbell, W.H. 2001. Structure and Function of eukaryotic NAD(P)H: nitrate reductase. *Cell. Mol. Life Sci.* 58: 194-204.
- Campbell, W.H., Ziegler, P. and Beck, E. 1984. Development of nitrogen assimilation enzymes during photoautotrophic growth of *Chenopodium rubrum* suspension. *Plant Physiol.* 74: 947-950.
- Castenholz, R. W. 1969. Thermophilic blue-green algae and the thermal environment. *Bacteriol Reviews.* 33(4): 476-504.
- Castenholz, R. w. 1977. The effect of sulfide on the blue-green algae of hot spring II, Yellowstone National Park. *Microbiol Ecology.* 3: 79-105.
- Cataldo, D. A., Haroon, M., Schrader, L. E. and Youngs, V. L. 1975. Rapid colorimetric determination of nitrate in plant tissue by nitration of salicylic acid. *Commun. Soil Sci. and Plant Anal.* 6: 71-80.
- Chiang, R. C., Cavicchioli, R. and Gunsalus, R. P. 1997. 'Locked-on' and 'losed-off' signal transduction mutations in the periplasmic domain of the *Escherichia coli* NarQ and NarX sensors affect nitrate- and nitrite-dependent regulation by NarL and NarP. *Mol. Microbiol.* 24: 1049-1060.
- Clesceri, L. S., Greenberg, A. E. and Trussell, R. R. 1989. Standard Methods for the Examination of Water and Wastewater, 17th Edn. Pp. 4-135-4-139. American Public Health Association, Washington, DC.
- Clinch, J. R., Worsfold, P. J. and Casey, H. 1987. An automated spectrophotometric field monitor for water quality parameters-Determination of Nitrate. *Anal. Chim. Acta.* 200: 523-531.
- Crawford, N. M. 1995. Nitrate: nutrient and signal for plant growth. *Plant Cell.* 7: 859-868.
- Craske, R., Ferguson, S. J. 1986. The respiratory nitrate reductase from *Paracoccus denitrificans* : Molecular characterization and kinetic properties. *J. Biochem.* 158:

429-436.

- De la Rosa, M. A. and Vega, J. M. 1981. Composition and structure of assimilatory nitrate reductase from *Ankistrodesmus braunii*. J. Biol. Chem. 10: 5814-5819.
- Delrio, M. J., Ramazanov, Z. and Garcia-Reina, G. 1994. Dark induction of nitrate reductase in the halophilic alga *Dunaliella salina*. Planta. 192: 40-45.
- Denis, K., Dias, F. M. and Rowe, J. J. 1990. Oxygen regulation of nitrate transport by diversion of electron flow in *Escherichia coli*. J. Biol. Chem. 265: 18095-18097.
- Everest, S. A., Hipkin, C. R. and Syrett, P. J. 1984. The effect of phosphate and flavin adenosine dinucleotide on nitrate reductase activity of some unicellular marine algae. J. Exp. Biol. Ecol. 76: 263-275.
- Fatima Lopes, P., de Cabral Oliveira, M. and Colepicolo, P. 2002. Characterization daily Variation of nitrate reductase in *Gracilaria tenuistipitata* (Rhodophyta). Biochem. Biophys. Res. Commun. 295: 50-54.
- Gangeswaran, R., and Eady, R. A. 1996. Flavodoxin 1 of *Azotobacter vinelandii*: characterization and role in electron donation to purified assimilatory nitrate reductase. Biochem. J. 317: 103-108.
- Gates, A. J., Huges, R. O., Sharp, S. R., Millington, P. D., Nilavongse, A., Cole, J. A., Leach, E., Jepson, B., Richardson, D. J. and Butler, C. S. 2003. Properties of the periplasmic nitrate reductase from *Paracoccus pantotrophus* and *Escherichia coli* after growth in tungsten-supplemented media. FEMS Microbiol. 220: 261-269.
- Goldman, B. S., Lin, J. T. and Stewart, V. 1994. Identification and structure of the *nasR* gene encoding a nitrate- and nitrite-responsive positive regulator of *nasFEDCBA* (nitrate assimilation) operon expression in *Klebsiella pneumonia* M5a1. J. Bacteriol. 176: 5077-5085.
- Granbom, M., Chow, F., Lopes, P. T., oliveira, M. C., Colepicolo, P., Paula, E. J. and Pedersen, M. 2004. Characterization of nitrate reductase in the marine macroalga *Kappaphycus alvarezii* (Rhodophyta). Aquat. Bot. 78: 295-305.
- Gruber, H., Goetinek, S. D., Kirk, D. L. and Schmitt, R. 1992. The nitrate reductase encoding gene of *Volvox carteri*: map location, sequence and induction kinetics. Gene. 12; 120(1): 75-83.

- Guerrero, M. G., Vega, J. M. and Losada, M. 1981. The assimilatory nitrate-reducing system and its regulation. *Annu. Rev. Plant Physiol.* 32: 169-204.
- Herrero, A., De la Rosa, M. A., Diez, J., Vega, J. M., 1980. Catalytic properties of *Ankistrodesmus braunii* nitrate reductase. *Plant Sci Lett.* 17: 409-915.
- Hochdtein, L. L., and Tomlinson, G. A. 1988. The enzymes associated with denitrification. *Annu. Rev. Microbiol.* 42: 231-261.
- Hochstein, L.I., and Lang, F. 1991. Purification and properties of a dissimilatory nitrate reductase from *Haloferax denitrificans*. *Arch. Biochem. Biophys.* 288: 380-385.
- Howard, W. D., Solomonson, L. P. 1981. Kinetic mechanism of assimilatory NADHL nitrate reductase from *Chlorella*. *J. Biol. Chem.* 256: 12725-12730.
- Huber, J.L., Redinbaugh, M.G., Huber, S.C. and Campbell, W.H. 1994. Regulation of maize leaf nitrate reductase activity involves both gene expression and protein phosphorylation. *Plant Physiol.* 106: 1667-1674.
- Hyde, G.E., Wilberding, J.A., Meyer, A.L., Campbell, E.R. and Campbell, W.H. 1989. Monoclonal antibody-based immuno affinity chromatography for purifying corn and squash NADH-NR. *Plant Mol. Biol.* 18: 233-246.
- Im, C. S. and Arthur, G. R. 2001. Identification and regulation of high light-induced genes in *Chlamydomonas reinhardtii*. *The Plant Journal.* 30(3): 301-313.
- Jeschmann, K., Solomonson, L. P. and Vennesland, B. 1972. Activation of nitrate reductase by oxidation. *Biochim. Biophys. Acta.* 275: 276-278.
- Jones, G.I. and Morel, F.M.M. 1988. Plasmalemma redox activity in the diatom *Thalassiosira*. A possible role for nitrate reductase. *Plant Physiol.* 87: 143-147.
- Kay, C. J. and Barber, M. J. 1986. Assimilatory nitrate reductase from *Chlorella*. *J. Biol Chem.* 261: 14125-14129.
- Kessler, E. and Osterheld, H. 1970. Nitrification and induction of nitrate reductase in nitrogen-deficient algae. *Nature.* 228: 287-288.
- Kramer, S. P., Johnson, J. L., Ribeiro, A. A., Millington, D. S. and Rajagopalan, K. V. 1987. The structure of the molybdenum cofactor, characterization of di-(carboxamidomethyl) molybdopterin from sulfite oxidase and xanthine oxidase. *J. Biol. Chem.* 262: 16357-16363.

- Kullberg, R. G. 1968. Algal diversity in several thermal spring effluents. *Ecology*. 49: 751-755.
- Lam, Y., and Nicholas, D. J. D. 1968. A nitrate reductase from *Micrococcus denitrificans*. *Biochim. Biophys. Acta*. 178: 225-234.
- Larios, B., Aguera, E., Haba, P., Perez-Vincente, R. and Maldonado, J. M. 2001. A short-term exposure of cucumber plant to rising atmospheric CO₂ increases leaf carbohydrate content and enhances nitrate reductase expression and activity. *Planta*. 212: 305-312.
- Lillo, C., Meyer, C., Lea, U. S., Proven, F. and Olstedal, S. 2004. Mechanism and importance of post-translational regulation of nitrate reductase. *J. Experimental Botany*. 55(401): 1275-1282.
- Lin, J. T., and Stewart, V. 1996. Nitrate and Nitrite-mediated transcription antitermination control of *nasF* (nitrate assimilation) operon expression in *Klebsiella pneumonia* M5a1. *J. Mol. Biol.* 256: 423-435.
- Lin, J. T., Goldman, B. S. and Stewart, V. 1994. The *nasFEDCBA* operon for nitrate and nitrite assimilation in *Klebsiella pneumonia* M5a1. *J. Bacteriol.* 176: 2551-2559.
- Loque, D., Tillard, P., Gojon, A. and Lepetit, M. 2003. Gene Expression of the NO₃⁻ transporter NRT1.1 and the nitrate reductase NIA1 is repressed in Arabidopsis roots by NO₂⁻, the product of NO₃⁻ reduction. *Plant Physiol.* 132: 958-967.
- Luque, I., Flores, E. and Herrero, A. 1994. Nitrate and nitrite transport in the cyanobacterium *Synechococcus* sp. PCC 7942 are mediated by the same permease. *Biochim. Biophys. Acta*. 1184: 296-298.
- Madigan, M. T. and Brock, T. D. 1977. Adaptation by hot spring phototrophs to reduced light intensities. *Arch. Microbiol.* 113: 111-120.
- Martinez-Espinosa, R. M., Marhuenda-Egea, F. C., and Bonete, M. J. 2001. Assimilatory nitrate reductase from the haloarchaeon *Haloferax mediterranei*: purification and characterization. *FEMS Microbiol. Lett.* 204: 381-385.
- Merrick, M. J., and Edwards, R. A. 1995. Nitrogen control in bacteria. *Microbiol. Rev.* 59: 604-622.

- Mikami, B., and Ida, S. 1984. Purification and properties of ferridoxin- nitrate reductase from the cyanobacterium *Plectonema boryanum*. *Biochim. Biophys. Acta.* 791: 294-304.
- Moreno-Vivian. C., Cabello, P., Martinez-Luque, M., Blasco, R. and Castillo, F. 1999. Prokaryotic nitrate reduction: molecular properties and functional distinction among bacterial nitrate reductase. *J. Bacteriol.* 181: 6573-6584.
- Nakamura, Y. and Ikawa, T. 1993. Purification and properties of NADH: nitrate reductase from the red alga *Porphyra yezoensis*. *Plant Cell. Physiol.* 34(8): 1239-1249.
- Nolan, B. T., Ruddy, B. C., Hitt, K. J. and Helsel, D. R. 1998. A national look at nitrate contamination of ground water. ([http:// water usgs.gov/nawqa/wep/](http://water.usgs.gov/nawqa/wep/))
- Omata, T. 1995. Structure, function and regulation of the nitrate transport system of the cyanobacterium *Synechococcus* sp. PCC7942. *Plant Cell Physiol.* 36: 207-213.
- Ramirez-Arcos, S., Fernandez-Herrero, L. A. and Berenger, J. 1998. A thermophilic nitrate reductase is responsible for the strain specific anaerobic growth of *Thermus thermophilus* HB8. *Biochim. Biophys. Acta.* 1396: 215-227.
- Reyes, F., Roldan, M. D., Klipp, W., Castillo, F. and Moreno-Vivian, C. 1996. Isolation of periplasmic nitrate reductase genes from *Rhodobacter sphaeroides* DSM 158: structural and functional differences among prokaryotic nitrate reductases. *Mol. Microbiol.* 19: 1307-1318.
- Roberts, D. 1998. Eukaryotes in extreme environments. (<http://www.nhm.ac.uk/zoology/extreme.html>)
- Rubio, L. M., Herrero, A. and Flores, E. 1996. A cyanobacterial *narB* gene encodes a ferridoxin-dependent nitrate reductase. *Plant Mol. Biol.* 30: 845-850.
- Sears, H. J., Spiro, S. and Richardson, D. J. 1997. Effects of carbon substrate and aeration on nitrate reduction and expression of the periplasmic and membrane-bound nitrate reductase in carbon-limited continuous cultures of *Paracoccus denitrificans* Pd1222. *Microbiology.* 143: 3767-3774.
- Siddiqui, R. A., Warnecke-Eberz, U., Hengsberger, A., Schneider, B., Kostka, S. and Friedrich, B. 1993. Structure and function of a periplasmic nitrate reductase in *Alcaligenes eutrophus* H16. *J. Bacteriol.* 175: 5867-5876.

- Somer, W. A., Van Hartings veldt, W., Stigler, E. C. A. and van der Lugt, J. P. 1997. Electrochemical regeneration of redox enzymes for continuous use in preparative process. *TIBTECH*. 15: 495-500.
- Stevenson, R. J. 1996. Algal ecology in freshwater benthic habits. In *Algal Ecology, Freshwater Benthic Ecosystems* (edited by Stevenson, R.J., Bothwell, M.L. and Lowe, R.L.). p 3-30. Academic Press, San Diego, USA.
- Stohr, C., Ullrich, W. R. 1997. A succinate-oxidising at the plasma membrane of plant root. *Planta*. 203: 129-132.
- Tischner, R., Ward, M. R. 1989. A succinate-oxidising nitrate reductase is located at the plasma membrane of plant roots. *Planta*. 203: 129-132.
- Vazques-Bermudes, M. F., Herrero, A., Flores, E. 2003. Carbon supply and 2-oxoglutarate effects on expression of nitrate reductase and nitrogen-regulated genes in *Synechococcus* sp. Strain PCC 7942. *FEMS Microbiol. Lett.* 221: 155-159.
- Vincentz, M., Moureaux, T., Leydecker, M-T., Vaucheret, H. and Caboche, M. 1993. Regulation of nitrate and nitrite reductase expression in *Nicotiana plumbaginifolia* leaves by nitrogen and carbon metabolites. *Plant J.* 3: 315-324.
- Weiner, H. and Kaiser, W. M. 2000. Binding to 14-3-3 proteins is not sufficient to inhibit nitrate reductase in spinach leaves. *FEBS Lett.* 480: 217-220.
- Yamamoto, I., Shimizu, H., Tsuji, T. and Ishimoto, M. 1986. Purification and properties of nitrate reductase from *Mitsuokella multiacidus*. *J. Biochem.* 99: 961-969.
- Yoshimatsu, K., Sakurai, T., and Fujiwara, T. 2000. Purification and characterization of dissimilatory nitrate reductase from a denitrifying halophilic archaeon, *Haloarcula marismortui*. *FEBS Lett.* 470: 216-220.
- Yoshimatsu, K., Iwasaki, Y., and Fujiwara, T. 2002. Sequence and electron paramagnetic resonance analysis of nitrate reductase NarGH from a denitrifying halophilic euryarchaeote *Haloarcula marismortui*. *FEBS Lett.* 516: 145-150.