

## เอกสารอ้างอิง

- Amiji M.M. (1999) Drug delivery using pH-sensitive semi-interpenetrating network hydrogels. US Patent no: 5,904,927.
- Avella, M., Pace, E.D., Immirzi, B. and Impallomeni, G. (2007). Addition of glycerol plasticizer to seaweeds derived alginates: Influence of microstructure on chemical-physical properties. *Carbohydrate Polymer. Inpress*.
- Bergmeyer, H.U. (1983). *Methods of Enzymatic Analysis*, 3<sup>rd</sup> Ed. FL, USA: Verlag Chemis International.
- Chang, T.M.S. (2003) Artificial cells for cell and organ replacements. *Artificial Organs*. 28, 265-270.
- Chan, Y.K. (1986). Utilization of simple phenolics for dinitrogen fixation by soil diazotrophic bacterial. *Plants and Soil*. 90: 87-94.
- Chang, M.Y. and Juang, R.S. (2005). Activities, stabilities, and reaction kinetics of three free and chitosan-clay composite immobilized enzymes. *Enzyme and Microbial Technology*. 36, 75-82.
- Clementi, F., Crudele, M.A., Oarente, E., Mancini, M. and Moresi, M. (1999). Production and characterization of alginate from *Azotobacter vinelandii*. *Journal of Science Food and Agricultural*. 79: 602-610.
- Clementi, F., Mancini M. and Moresi, M. (1998) Rheology of alginate from *Aztobacter vinelandii* in aqueous dispersions. *J. Food Eng.* 36, 51-62.
- Fett, W.F., Osman, S.F., Fishman, M.L. and Siebles, T.S. (1986). Alginate production by plant-pathogenic *Pseudomonads*. *Applied Environmental and Microbiology*. 52: 466-473.
- Gaona, G., Nunez,C., Goldberg, J.B., Linford, A.S., Najera, R., Castaneda, M., Guzman, J., Espin, G. and Soberon-Chavez, G. (2004) Characterization of the *Azotobacter vinelandii* *algC* gene involved in alginate and lipopolysaccharide production. *FEMS Microbio. Letters*. 238, 199-206.
- Hardy, R. W. F., Holsten, R.D., Jackson, E.K. and Burns, R.C. (1968). The acetylene-ethylene assay for  $N_2$  fixation: laboratory and field evaluation. *Plant Physiology*. 43: 1185-1207.
- Hjelland F. (2005) Process for the production of alginate having a high mannuronic acid-content. US Patent no: US2005/0038237 A1.  
<http://ava.biosci.arizona.edu/index.html>  
[http://genome.jgi-psf.org/draft\\_microbes/azovi/azovi.home.html](http://genome.jgi-psf.org/draft_microbes/azovi/azovi.home.html)
- Konsoula, Z., Kyriakides, M.L. (2006). Starch hydrolysis by the action of an entrapped in alginate capsules  $\alpha$ -amylase from *Bacillus subtilis*. *Enzyme and Microbial Technology*. 41: 343-349.

- Laca, A., Quiros, C., García, L.A. and Díaz, M. (1998). Modelling and description of internal profiles in immobilized cell system. *Journal of Biochemical Engineering*.1: 225-232.
- Lawson, C.J and Sutherland, I.W. (1978). Polysaccharide. In *Economic microbiology; Primary products of metabolism* (Vol. II, pp.328-389). London, England: Academic Press Ltd.
- Linkerhagner, K. and Oelze, J. (1995). Cellular ATP level and nitrogenase switch off upon oxygen stress in chemostat cultures of *Azotobacter vinelandii*. *Journal of Bacteriology*. 177: 5289-5293.
- Linkerhagner, K. and Oelze, J. (1997). Nitrogenase activity and regeneration of the cellular ATP pool in *Azotobacter vinelandii* adapted to different oxygen concentrations. *Journal of Bacteriology*. 179: 1362-1367.
- Liu, J.K., Lee, F.T., Lin, C.S., Yao, X.T., Davenport, J.W. and Wong, T.Y. (1995). Alternative function of the electron transport system in *Azotobacter vinelandii*: Removal of excess reductant by the cytochrome d pathway. *Applied and Environmental Microbiology*. 61: 3998-4003.
- Mejia-Ruiz, H., Moreno, S., Guzman, J., Najera, R., Leon, R., Soberon-Chavez, G. and Espin, G. (1997) Isolation and characterization of an *Azotobacter vinelandii* *algK* mutant. *FEMS Microbio. Letters* 156, 101-106.
- Pace, G.W. (1981). Microbial polysaccharides. In *Advance in biotechnology VIII* (pp.433-439). New York, Pergamon Press Ltd.
- Page, W.J., Bhanthumnavin, N., Manchak, J. and Ruman, M. (1997). Production of poly ( $\beta$ -hydroxybutyrate- $\beta$ -hydroxyvalerate) copolymer from sugars by *Azotobacter salinestris*. *Applied Microbiology and Biotechnology* 48: 88-93.
- Pal, S., Manna, A. and Paul, A.K. (1998). Nutritional and cultural conditions for production of poly-3-hydroxybutyric acid by *Azotobacter chroococcum*. *Folia Microbiologica*. 43: 171-176.
- Parente, E., Crudele, M.A., Aquino M. and Clementi, F. (1998) Alginate production by *Azotobacter vinelandii* DSM576 in batch fermentation. *Industrial microbiology and biotechnology* 20: 171-176.
- Parente, E., Crudele, M.A., Aquino M. and Clementi, F. (2000) Effect of ammonium sulphate concentration and agitation speed on the kinetics of alginate production by *Azotobacter vinelandii* DSM576 in batch fermentation. *Industrial microbiology and biotechnology* 25: 242-248.
- Pena, C., Campos, N. and Galindo, E. (1997). Change in alginate molecular mass distributions broth apparentand morphology of *Azotobacter vinelandii* cultured in shake flasks. *Applied Microbiology and Biotechnology*. 48: 510-515.

- Pena, C., Mauricio, A.T. and Enrique, G. (2000) Influence of dissolved oxygen tension and agitation speed on alginate production and its molecular weight in cultures of *Azotobacter vinelandii*. *Enzyme and Microbial Tech.* 27: 390-398.
- Post, E., Kleiner, D. and Oelze, J. (1982) Whole cell respiration and nitrogenase activities in *Azotobacter vinelandii* growing in oxygen controlled continuous culture. *Archives of Microbiology.* 134: 68-72.
- Prasertsan, P., Wichienchot, S., Doelle, H. and Kennedy, J.F. (2008). Optimization for biopolymer production by *Enterobacter cloacae* WD7. *Journal of Carbohydrate Polymer.* 71: 468-475.
- Reyes, C., Pena, C. and Galindo, E. (2003) Reproducing shake flasks performance in stirred fermentors: production of alginates by *Azotobacter vinelandii*. *J. Biotech.* 105, 189-198.
- Sabra, W.A., Zeng, A.P., Sabry, S. Omar, S. and Deckwer, W.D. (1999). Effect of phosphate and oxygen concentrations on alginate production and stoichiometry of metabolism of *Azotobacter vinelandii* under microaerobic conditions. *Applied of Microbiology and Biotechnology.* 52: 773-780.
- Saude, N. and Junter, G-A. (2002). Production and molecular weight characteristics of alginate from free and immobilized cell cultures of *Azotobacter vinelandii*. *Process Biochemistry.* 37: 895-900.
- Shu, X.Z. and Zhu, K.J. (2002) The release behavior of brilliant blue from calcium-alginate gel beads coated by chitosan: the preparation method effect. *European J. Phar. Biophar.* 53, 193-201.
- Smidsrid, O. and Skjak-Braek, G. (1990). Alginate as immobilization matrix for cells. *Trends of Biotechnology.* 8: 71-78.
- Steinbuchel, A., Vandamme, E.J. and De Baets, S. (2001). *Biopolymer.* Wiley-vch verlag GmbH, Weinheim, Germany, pp.179-180.
- Taqieddin, E. and Amiji, M. (2004) Enzyme immobilization in novel alginate-chitosan core-shell microcapsules. *Biomaterials* 25, 1937-1945.
- Taqieddin, E., Lee, C. and Amiji, M. (2002) Perm-selective chitosan-alginate hybrid microcapsules for enzyme immobilization technology. *Phar. Engineer.* 22, 1-3.
- Vargas-Garcia, M.C., Lopez, M.J., Elorrieta, M.A., Suarez, F. and Moreno, J. (2001). Influence of nutritional and environmental factors on polysaccharide production by *Azotobacter vinelandii* cultured on 4-hydroxybenzoic acid. *Journal of Industrial Microbiology and Biotechnology.* 27: 5-10.
- Vermani, M.V., Kelkar, S.M. and Kamat, M.Y. (1997) Studies in polysaccharide production and growth of *Azotobacter vinelandii* MTCC 2459, a plant rhizosphere isolate. *Letters App. Microbio.* 24, 379-383.

Wachenheim, D.E. and Patterson, J.A. (1992). Anaerobic production of extracellular polysaccharide by *Butyrivibrio fibrisolvens* nux. Applied and Environmental. Microbiology. 58: 385-391.