Prof. Dr. Willem F. Stevens.

Biography

http://www.sc.mahidol.ac.th/scbt/academics/research_areas/ws_homepage.htm.

Contact Details :
Centex Shrimp Biotechnology, Room 440
Chalerm Prakiat Building 4th Floor, Faculty of Science, Mahidol University
Rama VI Road Bangkok 10400, Thailand
Tel : 0-2201-5873 Fax : 0-2354-7344.
E-mail: stevens@Gmail.com

Academic Position : Visiting Professor
Centex Shrimp Biotechnology, Faculty of Science, Mahidol University

Research Interest :
- Chitosan microspheres for drug delivery and tissue engineering
- Production of high quality chitosan
- Product diversification of chitosan
- Quality control of chitosan
- Chitin oligomer chitin synthesis and fractionation
- Chitin nanoparticles

Collaborations and Networking (selection) :
Collaboration with Universities and Institutes in Thailand
Research collaboration with Universities in Singapore, Osaka, Gwangju (Korea), Nha Trang (VN) and Palmerstone (NZ)

Committee member Asia Pacific Conferences on Chitin and Chitosan Bangkok (1996, 2002), Singapore (2004) and Busan Korea (2006). Co-organizer Asian Pacific Conference on Chitin and Chitosan in Yangon, Myanmar June 2008

Member of the EU consortium on Nano Bio Saccharides, a joint research program with 10 prominent European laboratories including Universities of Muenster (Germany), Lyon (France) , Santiago de Compostela (Spain) and Aarhus (Denmark)

Areas of Specialization :
Medical and animal biotechnology
Molecular and cell biology
Production chitin chitosan biopolymers from shrimp and crab shell
Application chitosan in agriculture, food, feed, cosmetics, medicine
Quality control of chitin and chitosan
Preparation of chitin and chitosan microparticles and microspheres
Research on cloning of chitin deacetylase in the yeast Pichia
Toxicology and occupational toxicology

Previous Job Experiences :
J. F. Kennedy Professor in Bioprocess Technology 1994-2003
Asian Institute of Technology, Bangkok, Thailand
Coordinator PhD and MSc program. Advisor of thesis research of PhD and MSc students during 10 years
Research in biopolymers mainly on industrial aspects of chitosan from shrimp, on starch from cassava and on DNA detection.

Division Director TNO Health Research Organization The Netherlands 1990-94
Research programs in gene technology, genotoxicity, gerontology, primate research, radiobiology, neurotoxicology, preventive health care and cardiovascular biochemistry.

Director Medical Biological Laboratory TNO
The Netherlands 1978 -1990
Research programs in microbiology, DNA technology, cell biology, (occupational) toxicology

Academic Achievements so far :

Leyden University	BSc Chemistry cum laude	1963
Leyden University	MSc Biochemistry cum laude	1965
Leyden University	PhD Mol. Biology cum laude	1969
USA McArdle Cancer	DNA Technology post doc	1969-71
TNO Medical Biology	Neurobiology post doc	1972-77
TNO Director Medical Biology	1978-90	
TNO Division director	Health Care Research	1990-94
AIT Full Professor	Bioprocess Technology	1994-2003
Paris University Orsay	Visiting Professor	2002-04
Mahidol University	Visiting Professor	2005-
Chulalongkorn Univ.	Visiting Professor	2005-06

Major Research Areas 1965-1994 :
Protein biosynthesis in vitro
Metabolism and enzyme regulation in bacteria
Elucidation origin DNA replication in bacteriophage lambda
Neuron and myotube development in tissue culture

Consultancy experiences :

Starch Institute Changchun China	FAO	1997
Biotech in Organic farming	APO, Hanoi	2003
Nha Trang University of Fisheries	Vietnam	2004

Membership experiences :
Dutch Society for Biochemistry
Japanese Society for Chitin Chitosan
Thai C hitin and Chitosan Consultancy Group
Dutch Governmental Steering Committees on Industrial and Medical Biotechnology
Editor Journal Gene
Academic Board of University of Rotterdam
Chair Committee for Molecular Biology, University of Amsterdam

Publications :

Chitosan-Alginate Multilayer Beads for Gastric Passage and Controlled Intestinal Release of Proteins
Anil K. Anal, Deepak Bhopatkar, Seiichi Tokura, Hiroshi Tamura and Willem F. Stevens
Drug Dev Ind Pharm (2003) 29, 713-724

Characterization of Decrystallized Chitosan and its Application in Biosorption of Textile Dyes.
Trung, Trang Si, Ng Chuen How and Willem F. Stevens
Biotechnology Lett. (2003) 25: 1185-1190.

Quantification and Characterization of Insoluble Chitinous Materials in Viscous Chitosan Solutions.
Hein San, Ng Chuen How and Willem F. Stevens
Biotechnology Lett.(2003) 25: 863-868.

Genetically Modified Soybeans: False-Positive Detection in Fermented Natural Soybean (Tempe)
Budi Prakoso, Sunee Nitisinprasert and Willem F. Stevens
Biotechnology Lett (2003) 25 1485-1490

Chitosan Membrane as a Wound Healing Dressing: Characterization and Clinical Applications
Abul Kalam Azad, Niwet Sermsintham, S. Chandrkrachang and Willem F. Stevens
J. Biomed Mat. Res. 69B (2004) 216-222

Effect of Urea on Fungal Chitosan Production in Solid Substrate Fermentation
Nwe, Nitar and Willem F. Stevens
Process Biochemistry. 39 (2004) 1639-1642

Salt and pH Tolerance of Lactobacillus plantarum Strains for their use as Starters for Seafood by-products Fermentation
Rao, M. S., Jean-Pierre Guyot, Jose Pintado and Willem F. Stevens
Bioresources Technology 94 (2004) 331-337

Transdermal Delivery by a Chitosan Membrane
Wah Wah Thein-Han and Willem F. Stevens
Drug Development and Industrial Pharmacy 30/4 (2004) 397-404

Improved Chitin Production by Pretreatment of Shrimp Shells
Kyaw Nyein Aye and Willem F. Stevens
J. Chem. Technol. and Biotechnol. (2004) 79: 421-425

Chitosan as a surface sizing agent for offset printing paper
Lertsutthiwong, P., Nazhad, M. M., Chandrkrachang, S. and Stevens, W.F.
Appita Journal (2004) 274-280

Expression of Chitin Deacetylase from Colletotrichum lindemutheanum in Pichia pastoris: Purification and Characterization.

Shrestha, B., Blondeau, K., Stevens, W.F., and Le Hegarat, F.
Protein Expression and Purification 38 (2004) 196-204

Chitin and Chitosan: Production and Application Research
Asian Institute of Technology 1994 – 2004
Willem F. Stevens
J. Metals, Materials and Minerals 15 (2005) 75-83

Chitosan Alginate Multilayer Beads for Controlled Release of Ampicillin
Anil Kumar Anal and Willem F. Stevens
International Journal of Pharmaceutics 290 (2005) 45-50

Ionotrophic Alginate Beads for Controlled Intestinal Protein Delivery: Effect of Chitosan and Barium Counterions on Entrapment and Release.
Bhopatkar,D., Anil Kumar Anal and Willem F. Stevens
Journal of Microencapsulation 22-1 (2005) 91-100

Chitin production by Lactobacillus fermentation of shrimp waste in a drum reactor and its chemical conversion to chitosan
Mukku Shrinivas Rao and Willem F. Stevens
J. of Chem Techn and Biotechnology 80 (2005) in press

Functional characteristics of shrimp chitosan and its membranes as affected by the degree of deacetylation
Trang Si Trung, Wah Wah Thein-Han, Nguyen Thi Qui, Chuen-How Ng and Stevens, Willem F.
Bioresources Technology 97 (2006) 659-663

Peripheral Enzymatic Deacetylation of Regenerated Chitin Particles
Kyaw Nyein Aye, Renuka Karuppuswamy, Tangir Ahamed and Willem F. Stevens
Bioresource Technology 97 (2006) 577-582

Production of N-acetyl chitobiose from various chitin substrates using commercial enzymes
Paraman Ilankovan, San Hein,Ng Chuen How,Trang Si Trung Willem F. Stevens
Carbohydrate Polymers 63 (2006) 245-250

Chuen-How Ng, San Hein, Suwalee Chandrkrachang and Willem F. Stevens.
Evaluation of an Improved acid hydrolysis-HPLC Assay for the Acetyl Content measurement in Chitin and Chitosan
Journal of Biomedical Materials Research Part B: Applied Biomaterials 76B (2006) 155-160

Ionotropic cross-linked chitosan microspheres for controlled release of ampicillin
Anil K. Anal, Willem F. Stevens, Carmen Remuñán-López
International Journal of Pharmaceutics 312 (2006) 166-173

Optimum Parameters for Production of Chitin and Chitosan from Squilla (S. empusa)
Mukku Shrinivas Rao, Kyaw Aye Nyein, Trang Si Trung and Willem F. Stevens
Journal of Applied Polymer Science 103 (2006) 3694-3700

Optimization of solid substrate fermentation for the production of fungal chitosan

Nitar New and Willem F. Stevens
Korean Journal of Chitin Chitosan 11 (2006) 11-15

Fermentation of shrimp biowaste under different salt concentrations with amylolytic and non-amylolytic Lactobacillus strains for chitin production
Mukku Shrinivas Rao and Willem F. Stevens
Food Technology and Biotechnology (2006) in the press

Production of high quality chitin and chitosan from preconditioned shrimp shells
Nguyen Van Toan, Chuen-How Ng, Kyaw Nyein Aye, Trung Si Trang and Willem F. Stevens
J. of Chem Techn and Biotechnology 81 (2006) 1113-1118

Nwe, N and Stevens, W. F.
Optimization of Solid Substrate Fermentation for Production of Fungal Chitosan, Journal of Chitin Chitosan, 11 (2006) 11-15.

Nwe, N., Stevens, W. F, Tokura, S. and Tamura, H.
Fungal Chitosan Production on Sweet Potato,
Chitin and Chitosan Research, 12 (2006) 118-119.

Nge, K. L., Nwe, N., Chandrkrachang, S and Stevens, W. F.
Chitosan as growth stimulator in orchid tissue culture
Plant Science Journal, 170, 6 (2006) 1185-1190.

Shipin, O.V.S., EE, S.H.L.,Hiemchaisri, C.C.,Iwattanakom, W.W., Hosh, G.C.G., Anceno, A. J. and Stevens, W.F.
Piggery Wastewater Treatment in a Tropical Climate: Biological and Chemical Treatment Options
Environmental Technology 28 (2007) 329-337

Distribution of D-glucosamine moieties in heterogeneously deacetylated cuttlefish chitin.
Chuen-How Ng, San Hein, Kozo Ogawa, S. Chandrkrachang, Willem F. Stevens
Carbohydrate Polymers (2007) published on line.