

CONTENTS

VOL. 1

Introduction	XV
---------------------------	----

Environmental Microbiology

Use of Anaerobic-Aerobic Treatment Systems for Maize Processing Installations: Applied Microbiology in Action C. Durán-de Bazúa, S.A. Sánchez-Tovar, M.R. Hernández-Morales and M. Bernal- González.....	3-12
Bacterial Adhesion to Food Contacting Surfaces P. Teixeira, S. Silva, F. Araújo, J. Azeredo and R. Oliveira.....	13-20
Prolonged Effects of He-Ne Laser Irradiation on Ultrastructure of Mitochondria in Successive Generations of Yeast Cells V. Manteifel, T. Kart.....	21-31
Evaluation of early stages of oral Streptococci biofilm growth by optical microscopy. Effect of antimicrobial agents. C. Cortizo and M. Fernández Lorenzo.....	32-40
Quorum-sensing in <i>Pseudomonas aeruginosa</i> and <i>Salmonella</i>: Active natural compounds as antagonists. P. Jiménez-Gómez, M.J. Pozuelo de Felipe, F. Llinares Pinell and J. E. García de los Ríos....	41-51
A simple technique to detect <i>Klebsiella</i> biofilm-forming-strains. Inhibitory potential of <i>Lactobacillus fermentum</i> CRL 1058 whole cells and products N.C. Maldonado, C. Silva de Ruiz, M. Cecilia and M.E.Nader-Macias.....	52-59
Helminths and Sanitation B.E. Jimenez-Cisneros and C. Maya-Rendon.....	60-71
Algae and Protozoa Communities on Solid Matters in Jingyuetan Lake, Chuangchun, China D.Dong, L.Liu, X.Hua, F.Yang and S.Dong.....	72-78
Biophotolysis-based Hydrogen Production by Cyanobacteria and Green Microalgae J. Yu and P. Takahashi.....	79-89
Isolation and Characterization of a Heterotrophic Bacterium Able to Grow in Different Environmental Stress Conditions, Including Crude Oil and Heavy Metals E. Diestra, I. Esteve, M. Burnat, J. Maldonado and A. Solé.....	90-99

Biodegradation of cyanide-containing wastes by <i>Pseudomonas pseudoalcaligenes</i> CECT5344	
M. I. Igeño, E. Orovengua, M. I. Guijo, F. Merchán, A. Quesada and R. Blasco.....	100-107
Interactions between Metals and Bacteria: Fundamental and Applied Research	
M.L. Merroun.....	108-119
Why do food and drink smell like earth?	
R.R.M. Paterson, A. Venâncio and N. Lima.....	120-128
Activity of ribosomes and tmRNA of <i>Streptomyces aureofaciens</i> during development and stress conditions induced by changes in temperature and the presence of antibiotics	
K. Mikulík and P.Palečková.....	129-136
Nutrient effects on ten <i>Streptomyces</i> spp. sporulation	
M. H. Kontro, U. Lignella, A. Hyvärinen, M. Vahteristö, M.-R. Hirvonena and A. Nevalainen.....	137-142
Biom mineralization induced by Myxobacteria	
C. Jimenez-Lopez, F. Jroundi, M. Rodríguez-Gallego, J. M. Arias and M.T. Gonzalez-Muñoz.....	143-154
DNA replication and Pathogenicity of MYMIV	
D.K. Singh, S. Karjee, P.S. Malik, N. Islam and S.K. Mukherjee.....	155-162
Glycoproteins of sugarcane plants facilitate the infectivity of <i>Ustilago scitaminea</i> and <i>Xanthomonas albilineans</i>, two sugarcane pathogens	
M. Blanch, M.E. Legaz, A.M. Millanes and C. Vicente.....	163-169
In the light of the haloarchaea metabolism	
M.J. Bonete, M. Camacho, R.M. Martínez-Espinosa, J. Esclapez, V. Bautista, C. Pire, B. Zafrilla, S. Díaz, F. Pérez-Pomares and F. Llorca.....	170-183
Effect of abiotic stress on <i>Chlamydomonas acidophila</i> viability	
I. Garbayo, M.J. Domínguez, J. Vígara and JM Vega.....	184-189
FAS or PKS, lipid biosynthesis and stable carbon isotope fractionation in deep-sea piezophilic bacteria	
Jiasong Fang and Chiaki Kato.....	190-200
The fungus <i>Mucor racemosus</i> as a model of phenotypic multidrug resistance in lower eukaryotes	
K. A. McGee and G. Shearer.....	201-212

- The recognition pattern of green algae by lichenized fungi can be extended to lichens containing a cyanobacterium as photobiont**
M. Sacristán, M. Vivas, A.M. Millanes, B. Fontaniella, C. Vicente and M. E. Legaz..... 213-219

- Role, Circulation and Molecular Characterization of Integrons and ICEs in Clinical and Environmental *Vibrio***
D. Ceccarelli and M. M. Colombo..... 220-229

Industrial and Food Microbiology

- Fungal laccase – a versatile enzyme for biotechnological applications**
A. Kunamneni, A. Ballesteros, F.J. Plou and M. Alcalde..... 233-245

- Thiol stress induces catalaseA in *Streptomyces coelicolor***
H. Vekaria, K. Sadagopan, J. Adamec, G.K. Jarori and C.R. Prabha..... 246-254

- A Glance on *Pseudomonas aeruginosa* Phosphorylcholine Phosphatase, an Enzyme whose Synthesis Depends on the Presence of Choline in its Environment**
A.T. Lisa, P.R. Beassoni, M.J. Massimelli, L.H. Otero and C.E. Doménech..... 255-262

- Continuous Production of Urokinase by Alginate-Immobilized Cells of a Mutated MPGN Kidney Cell Line in an Airlift Bioreactor**
R. B. Devi, A. Kunamneni, T. Prabhakar, F.J. Plou and P. Ellaiah..... 263-270

- Heterologous products from the yeast *Kluyveromyces lactis*: exploitation of KIPDC1, a single-gene based system**
C. Micolonghi, E. Corsi, R. Conte and M.M. Bianchi..... 271-282

- Natural Ribosomally Synthesized Circular Proteins**
M. Sánchez-Hidalgo, M. Montalbán-López, M. Martínez-Bueno, E. Valdivia and M. Maqueda..... 283-294

- Biosynthesis, biodegradation, and application of poly(3-hydroxybutyrate) and its copolymers - natural polyesters produced by diazotrophic bacteria**
A.P. Bonartsev, V.L. Myshkina, D.A. Nikolaeva, E.K. Furina, T.A. Makhina, V.A. Livshits, A.P. Boskhomdzhev, E.A. Ivanov, A.L. Iordanskii and G.A. Bonartseva..... 295-307

- Comparative Study of the Effect of Iron on Citrate-producing Yeast Growing on Different Substrates**
S. Anastassiadis, S. V. Kamzolova, I.G. Morgunov and H.J. Rehm..... 308-314

- Simultaneous production and decomposition of different rifamycins during *Amycolatopsis mediterranei* growth in shake flask and in stirred tank bioreactor**
H.A. El Enshasy, A.F. El Baz and E.M. Ammar..... 315-321

- Anti-aflatoxigenic activity of some bacteria related with fermentation**
Jong-Gyu Kim..... 322-328

Folate production by lactic acid bacteria and other food-grade microorganisms J. G. LeBlanc, G. S. de Giori, E.J. Smid, J. Hugenholtz and F. Sesma.....	329-339
Biosurfactant Production from olive oil by <i>Pseudomonas fluorescens</i> M. Abouseoud, R. Maachi and A. Amrane.....	340-347
UV-A promotes long-term carotenoid production of <i>Dunaliella</i> in photobioreactors with retention of cell viability B. Mogedas, A. Salguero, C. Casal and C. Vilchez.....	348-355
Enhancement of carotenoid production in <i>Nannochloropsis</i> by phosphate and sulphur limitation E. Forján, I. Garbayo, C. Casal and C. Vilchez.....	356-364
Elaboration of efficient bio-additives for plant growth acceleration on the basis of mixed microbial cultures and cell promoters A.Vinarov and E.Dirina.....	365-377
Genetically modified yeasts as a new oral drug delivery system: from in vitro to in vivo validation of the concept S. Blanquet-Diot, G. Garrat, J.F. Jarrige and M. Alric.....	378-390
Potential of solid-state fermentation for laccase production J. L. Toca-Herrera, J. F. Osma and S. Rodríguez Couto.....	391-400
INDISIM-YEAST, an individual-based model to study yeast population in batch cultures M. Ginovart, J. Xifré, D. López and M. Silbert.....	401-409
A Strategy to Compare Yeast Strains and Improve Cell Survival in Ethanol Production Processes above 30°C. C.S. Souza, K.F. Oliveira, H.C. Trevisan and C. Laluece.....	410-417
Immobilisation of yeasts for continuous fermentation C.M.S.G. Baptista, J.M.A. Córias, A.C.M. Oliveira and J.M.S. Rocha.....	418-425
Microbial resources and industrial microbial processes design and behavior M. Hamdi.....	426-436
Analyzing microbial consortia for biotechnological processes design J.L. Navarrete-Bolaños, O. Serrato-Joya, E. Botello-Alvarez, H. Jimenez-Islas, M. Cardenas-Manriquez, E. Conde-Barajas and R. Rico-Martínez, R.....	437-449
Simple and efficient method of bacterial polysaccharides purification for vaccines production using hydrolytic enzymes and tangential flow ultrafiltration V. Maimoni Gonçalves, M.Takagi, T. Souza Carmo, R. Barbosa Lima, S. Maria Ferreira Albani, J. Ventura Pinto, T. Cristina Zangirolami, R. de Campos Giordano, M. Massako Tanizaki and J. Cabrera-Crespo.....	450-457

Functional foods, mucosal immunity and aging: effect of probiotics on intestinal immunity in young and old rats K. Thoreux, R. Owen and D.L. Schmucker.....	458-465
Probiotics: 100 years (1907-2007) after Elie Metchnikoff's Observation K.C. Anukam and G. Reid.....	466-474
Biopreservation, an ecological approach to improve the safety and shelf-life of foods S. Ananou, M. Maqueda, M. Martínez-Bueno and E. Valdivia.....	475-486
Microbiological quality of commercial dairy products L. Varga.....	487-494
A faster and more economical alternative to the standard plate count (SPC) method for microbiological analyses of raw milks P. Munsch-Alatossava, H. Rita and T. Alatossava.....	495-499
Nitrogen metabolism in lactic acid bacteria from fruits: a review M. C. Manca de Nadra.....	500-510
Sous-vide cooking of traditional meat products: effect on the microbiology of dry-cured pork foreleg A. Cobos and O. Diaz.....	511-517
Salmonella vaccines C. Gamazo and J.M. Irache.....	518-524

VOL. 2

Introduction.....	XV
--------------------------	----

Techniques

Identification and characterization of <i>Aspergillus flavus</i> and aflatoxins P. Rodrigues, C. Soares, Z. Kozakiewicz, R.R.M. Paterson, N. Lima and A. Venâncio.....	527-534
Yeast molecular identification and typing J. Alcoba-Flórez, M.P. Arévalo-Morales, E. Pérez-Roth, F. Laich, B. Rivero-Pérez and S. Méndez-Álvarez.....	535-546
Human Papillomaviruses Genotyping by Pyrosequencing Method B.Y. Zheng, B. Gharizadeh and KL Wallin.....	547-556
Different strategies for purification of antimicrobial peptides from Lactic Acid Bacteria (LAB) E. Vera Pingitore, E. Salvucci, F. Sesma and M. E. Nader-Macías.....	557-568

Development of PCR-based molecular tools for the detection of emerging food- and water-borne pathogenic bacteria	
L. Beneduce and G. Spano.....	569-576
The applications of microbes in environmental monitoring	
R. Marinšek Logar and M. Vodovnik.....	577-585
Extraction and quantification of pigments from a marine microalga: a simple and reproducible method	
M. Henriques, A. Silva and J. Rocha.....	586-593
Behavior of redox potentials in artificial wetlands models: A tool for controlling its efficiency	
A. Guido-Zárate, G. Buitrón-Méndez, P. Mijaylova-Nacheva and C. Durán-de-Bazúa.....	594-601
Improvement of simple cultivation conditions for polysaccharide synthesis by <i>Haemophilus influenzae</i> type b	
M. Takagi, T.C. Zangirolami, M.M. Tanizaki and J. Cabrera-Crespo.....	602-608
Peptaibols of <i>Trichoderma atroviride</i>: screening, identification, and structure elucidation by liquid chromatography-tandem mass spectrometry	
R. Schuhmacher, N. Stoppacher and S. Zeilinger.....	609-617
Learning to Operate Anaerobic Bioreactors	
A. Franco, A. Mosquera-Corral, J.L. Campos and E. Roca.....	618-627
Fractal Analysis of Binding and Dissociation of Protein-Analyte Interactions on Biosensor Surfaces	
Kennon Shelton and Ajit Sadana.....	628-635
Cationic Liposomes as Antimicrobial Agents	
E. M. Mamizuka and A. M. Carmona-Ribeiro.....	636-647
PhD (Per hour Doctor): a ludic, interactive, educational activity using microscopy	
M. A. Vannier-Santos and E. Deccache-Maia.....	648-653

Medical and Veterinary Microbiology, Medical Genetics

Smallpox: an old disease but still a threat in the XXI century	
J. E. García de los Ríos and P.A. Jiménez-Gómez.....	657-667
New approaches in pertussis vaccines for developing countries	
W. O. Dias, L. C.C. Leite, D. S.P.Q. Horton, M. A. Sakauchi, F. S. Kubrusly, N.Furuyama, I. P. Nascimento, W. Quintilio, H. G. Higashi and I. Raw.....	668-672
Bovine papillomavirus infections in animals	
G. Borzacchiello.....	673-679

Human papilloma virus infection and cervical cancer: pathogenesis and epidemiology D. Tena Gómez and J. López Santos.....	680-688
Virus-Like Particles as a vaccinal strategy against tumors induced by papillomavirus infection E. C. Coimbra, H. M. de Souza, M. C. G. Leitão, J. F. dos Santos, W. Beçak, R. C. Stocco dos Santos and A. C. Freitas.....	689-696
Papillomavirus DNA detection in non epithelial tissues: a discussion about bovine papillomavirus A.C. Freitas, M.A.R. Silva, C.C.R. Carvalho, E.H. Birgel Jr., J. F. dos Santos, W. Beçak and R. C. Stocco dos Santos.....	697-704
Role Of Gut Flora In Inflammatory Bowel Disease- A State Of Art J. Paul, A.K. Verma and R. Verma.....	705-718
Non-<i>Candida albicans</i> Candida yeasts of the oral cavity J.H. Meurman, E. Siikala, M. Richardson and R. Rautemaa.....	719-731
Effect of a medium simulating vaginal fluid on the growth and expression of beneficial characteristics of potentially probiotic lactobacilli M.S.J. Tomás and M.E. Nader-Macías.....	732-739
Comparative effect of viable, heat- killed or sonicated <i>Lactobacillus fermentum</i> CRI 1058 in the protection of uropathogenic <i>E. coli</i> in the urinary tract of a murine experimental model C.S. de Ruiz and M.E.F. Nader-Macías.....	740-748
<i>Lactobacillus</i> adhesion to epithelial cells from bovine vagina M.C. Otero and M.E. Nader-Macías.....	749-757
Insights in the Human Bifidobacterial Flora Through Culture-Dependent and Independent Techniques A. Léké, M.B. Romond and C. Mullié.....	758-765
Molecular epidemiology of methicillin-resistant <i>Staphylococcus aureus</i> R.H. Deurenberg, S. Kalenic, A.W. Friedrich, F.H. van Tiel and E.E. Stobberingh.....	766-777
Toxigenicity in <i>Staphylococcus</i> with emphasis on coagulase-negative staphylococci M.L.R.S. Cunha and R.A.O. Calsolari.....	778-782
The Variability in the Fungal Ribosomal DNA (ITS1, ITS2, and 5.8 S rRNA Gene): Its Biological Meaning and Application in Medical Mycology M. Korabecna.....	783-787
Human herpesvirus 6 in neurological diseases M. Koskiniemi and J.O. Virtanen.....	788-793

Antimicrobial resistance in β-hemolytic streptococci in Argentina H. Lopardo.....	794-798
Antiviral drug discovery: HIV-1 RNase H, the next hit target F. Esposito, L. Zinzula and E. Tramontano.....	799-809
The Cell Biology of Virulence – Lessons from the Pathogenic Fungus <i>Cryptococcus neoformans</i> J.C. Panepinto and P.R. Williamson.....	810-819
Differentiation and apoptosis in the sleeping sickness inducing parasite <i>Trypanosoma brucei</i> V. Denninger, K. Figarella, B. Kubata and M. Duszenko.....	820-829
The Role of Extracellular Matrix in the Development of Experimental Cardiac Hypertrophy W. Briest.....	830-838
Diagnosis of visceral leishmaniasis N. Santarém and A. Cordeiro-da-Silva.....	839-846
Diversity of G-type and P-type of human and animal rotaviruses and its genetic background N. Kobayashi, M. Ishino, Y-H. Wang, M. Chawla-Sarkar, T. Krishnan and T.N. Naik.....	847-858
Detection of persistent polioviruses in patients with the postpolio syndrome A. Baj, G. Maccari and A. Toniolo.....	859-867
Identification and characterization of influenza virus isolated from Brazilian snakes D.A.P. Mancini, R.M.Z Mendonça, A.H.N Kawamoto, M. Giorgetti, H.G. Trindade, W. Fernandes, K.F. Grego, M.M. Antoniazzi, C. Jared and J.R. Pinto.....	868-874
Modification of Baculovirus for Gene Therapy You-Kyoung Kim, Hu-Lin Jiang, Yeon-Ho Je, Myung-Haing Cho and Chong-Su Cho.....	875-884
What can bacteriophages do for us? P. Veiga-Crespo, J. Barros-Velázquez and T.G. Villa.....	885-893
Viral Encephalitis through years. A changing panorama, a review M.Koskiniemi.....	894-901
Designs and antiviral activity of gene-based drugs A.P. Carroll, J.P. Wong and M.J. Cairns.....	902-914
A full complement of transfer RNA genes in the <i>Candida albicans</i> genome J. Fan, F. Savard, M. Wu and S.-H. Shen.....	915-925

Sequence analysis reveals complex mutational processes for allele length variation at two polymorphic microsatellite loci in <i>Candida albicans</i> P. Sampaio, A. Correia, L.Gusmão, A.Amorim and C. Pais.....	926-935
The Effect of Vector with Higher Control System in hbFGF Leaky Expression in <i>Escherichia coli</i> Hasan Mirzahoseini, Nafiseh S. Mohammadi, Marzieh Arabi, Hamed Arfaee1 and Eskandar Omidinia.....	936-940
mRNA stability and control of cell proliferation C. Mazzoni.....	941-945