

Food Technology and Biotechnology

(formerly Prehrambeno-tehnološka i biotehnološka revija)

Vol. 40

Contents, Author and Subject Index

ZAGREB
CROATIA
2002

CONTENTS

ORIGINAL SCIENTIFIC PAPERS

Maja Matulić and Branko Brdar

- Urokinase-type Plasminogen Activator and Plasminogen Activator Inhibitor Induction by Etoposide in a Glioblastoma Cell Strain. (1) 1

Michael Bauer, Roland Geyer, Herfried Griengl and Walter Steiner

- The Use of Lewis Cell to Investigate the Enzyme Kinetics of an (S)-Hydroxynitrile Lyase in Two-Phase Systems. (1) 9

Christian Dotzauer, Matthias A. Ehrmann and Rudi F. Vogel

- Occurrence and Detection of *Thermoanaerobacterium* and *Thermoanaerobacter* in Canned Food. (1) 21

M. Legija and S. Golič Grdadolnik

- Influence of Dissolved Oxygen Concentration on Intracellular pH and Consequently on Growth Rate of *Aspergillus niger*. (1) 27

Liliana N. Ceci and Jorge E. Lozano

- Amylase for Apple Juice Processing: Effects of pH, Heat, and Ca²⁺ Ions (1) 33

Dubravka Kipčić, Jelena Vukušić and Blaženka Šebečić

- Monitoring of Chlorinated Hydrocarbon Pollution of Meat and Fish in Croatia (1) 39

Peter Raspor, Franc Cus, Katja Povhe Jemec, Tatjana Zagorc, Neza Cadez and Julij Nemanic

- Yeast Population Dynamics in Spontaneous and Inoculated Alcoholic Fermentations of Zametovka Must. (2) 95

Ana Majdak, Stanka Herjavec, Sandi Orlić, Sulejman Redžepović and Nikola Mirošević

- Comparison of Wine Aroma Compounds Produced by *Saccharomyces paradoxus* and *Saccharomyces cerevisiae* Strain (2) 103

Željka Filipović-Kovačević, Miroslav Mikšaj, Nikola Berčuk and Marijana Jukić

- Amperometric Biosensor for Monitoring Respiration Activity of *Saccharomyces cerevisiae* in the presence of Cobalt and Zinc (2) 111

Romana Karas, Marlena Skvarča and Božidar Žlender

- Sensory Quality of Standard and Light Mayonnaise during Storage (2) 119

Olivera Koprivnjak, Lanfranco Conte and Nicola Totis

- Influence of Olive Fruit Storage in Bags on Oil Quality and Composition of Volatile Compounds. . . (2) 129

David A. Mitchell, Oscar F. von Meien, Luiz Fernando L. Luz Jr. and Nadia Krieger

- Evaluation of Productivity of Zymotis Solid-State Bioreactor Based on Total Reactor Volume. . . . (2) 135

Zoran Herceg, Vesna Lelas and Mirjana Škreblin

- Influence of Tribomechanical Micronisation on the Rheological Properties of Whey Proteins (2) 145

Nataša Bauer, Dunja Leljak Levanić, Snježana Mihaljević and Sibila Jelaska

- Genetic Transformation of *Coleus blumei* Benth. Using *Agrobacterium* (3) 163

Petra Zrimšek and Marinka Drobnič-Košorok

- Diagnostic Value of ELISA Tests for the Detection of Specific Antibodies in Cats and Rabbits with Dermatophytosis (3) 171

Tina Zorman and Sonja Smole Možina

- Classical and Molecular Identification of Thermotolerant Campylobacters from Poultry Meat. . . . (3) 177

Dunja Bandelj, Jernej Jakše and Branka Javornik

- DNA Fingerprinting of Olive Varieties by Microsatellite Markers (3) 185

José Díz, José M. Cruz, Herminia Domínguez and Juan C. Parajž

- Xylitol Production from *Eucalyptus* Wood Hydrolysates in Low-Cost Fermentation Media (3) 191

Rosslyn M. Birch, Ann Dumont and Graeme M. Walker

- The role of Magnesium and Calcium in Governing Yeast Agglomeration. (3) 199

Branka Mozetič, Polonca Trebše and Janez Hribar

- Determination and Quantitation of Anthocyanins and Hydroxycinnamic Acids in Different Cultivars of Sweet Cherries (*Prunus avium* L.) from Nova Gorica Region (Slovenia). . . . (3) 207

Massimo Mozzon, Natale G. Frega, Baldassare Fronte and Massimo Tocchini	
Effect of Dietary Fish Oil Supplements on Levels of n-3 Polyunsaturated Fatty Acids, <i>trans</i> Acids and Conjugated Linoleic Acid in Ewe Milk	(3) 213
Irena Budić-Leto and Tomislav Lovrić	
Identification of Phenolic Acids and Changes in their Content during Fermentation and Ageing of White Wines Pošip and Rukatac	(3) 221
Ivana Ivančić-Baće, Nikolina Škrobot, Davor Zahradka, Erika Salaj-Šmic and Krunoslav Brčić-Kostić	
Genetic Requirements for Conjugational Recombination in the Presence of the λ Gam Protein in <i>Escherichia coli</i>	(4) 261
Gordana Rusak, Herwig O. Gutzeit and Juta Ludwig-Müller	
Effect of Structurally Related Flavonoids on hsp Gene Expression in Human Promyeloid Leukaemia Cells	(4) 267
Biljana Balen, Jadranka Milošević and Marijana Krsnik-Rasol	
Protein and Glycoprotein Patterns Related to Morphogenesis in <i>Mammillaria gracillis</i> Pfeiff. Tissue Culture	(4) 275
Jerka Dumić, Sanja Dabelić and Mirna Flögel	
Curcumin – a Potent Inhibitor of Galectin-3 Expression	(4) 281
Maria Feligini, Vlatka Cubric-Curik, Pietro Parma, Ino Curik, Gian Franco Greppi and Giuseppe Enne	
Polymorphism of κ -Casein in Italian Goat Breeds: A New ACRS-PCR Designed DNA Test for Discrimination of A and B Alleles	(4) 293
Snježana Mihaljević, Ivana Bjedov, Maja Kovač, Dunja Leljak Levanić and Sibila Jelaska	
Effect of Explant Sources and Growth Regulators on <i>in vitro</i> Callus Growth of <i>Taxus baccata</i> L. Washingtonii	(4) 299
Martins Bekers, Mara Grube, Livija Vulfa, Dagnija Upite, Elena Kaminska, Rita Scherbaka, Armands Vigants and Aleksejs Danilevich	
Stillage as a Source of Growth Promoting Biofactors and a Stimulator of Levan and Extracellular Levansucrase Synthesis for <i>Zymomonas mobilis</i>	(4) 305
Chengling Yuan, Ji Wang, Yun Shang, Guohong Gong, Jianming Yao and Zengling Yu	
Production of Arachidonic Acid by <i>Mortierella alpina</i> I ₄₉ -N ₁₈	(4) 311
Fabio Coloretti, Carlo Zambonelli, L. Castellari, V. Tini and S. Rainieri	
The Effect of DL-Malic Acid on the Metabolism of L-Malic Acid during Wine Alcoholic Fermentation	(4) 317
Dejan Bavčar and Tatjana Košmerl	
Determination of Alcohol and Total Dry Extract in Slovenian Wines by Empirical Relations	(4) 321
Damir Magdić, Daniela Horvat, Zorica Jurković, Rezica Sudar and Želimir Kurtanjek	
Chemometric Analysis of High Molecular Mass Glutenin Subunits and Image Data of Bread Crumb Structure from Croatian Wheat Cultivars	(4) 331

PRELIMINARY COMMUNICATIONS

Aleksandra Kućec, Marin Berović, Štefan Čelan and Mojmir Wondra	
The Role of On-line Redox Potential Measurement in <i>Sauvignon blanc</i> Fermentation	(1) 49
M. A. Priede, J. J. Vangas and U. E. Viesturs	
Performance of <i>Aspergillus niger</i> Cultivation in Geometrically Dissimilar Bioreactors Evaluated on the Basis of Morphological Analyses	(1) 57
Borislav Miličević, Mara Banović, Karin Kovačević-Ganić and Leo Gracin	
Impact of Grape Varieties on Wine Distillates Flavour	(3) 227

SCIENTIFIC NOTES

Darija Vranešić, Želimir Kurtanjek, Andrelina M. P. Santos and Francisco Maugeri	
Optimisation of Inulinase Production by <i>Kluyveromyces bulgaricus</i>	(1) 67
Vlatka Cubric-Curik, Maria Feligini, Jasmina Lukac-Havranek, Ino Curik and Giuseppe Enne	
Genetic Polymorphism of β -Lactoglobulin in Native Sheep from the Island of Pag	(1) 75

Zeljko Jurjevic, Michele Solfrizzo, Bogdan Cvjetkovic, Analisa De Girolamo and Angelo Visconti		
Occurrence of Beauvericin in Corn from Croatia	(2)	91
Juan Carlos Espinosa, Monica Fernandez-Gonzalez, Juan Ubeda and Ana Briones		
Identification of Wine Yeasts by PCR-RFLP without Previous Isolation on Plate	(2)	157
Sonja Durajlija-Žinić, Helena Ćetković, Werner E. G. Müller and Vera Gamulin		
Signal Recognition Particle 54 kD Protein (SRP54) from the Marine Sponge <i>Geodia cydonium</i>	(3)	233
Gordan Lauc, Jerka Dumić, Sandra Šupraha and Mirna Flögel		
Lectins Labelled with Digoxin as a Novel Tool to Study Glycoconjugates	(4)	289
Tihomira Gojmerac, Božica Mandić, Jelka Pleadin and Mario Mitak		
Determination of Clenbuterol in Pig Liver Following Prolonged Administration at a Growth-Promoting Dose	(4)	343

REVIEWS

Ivana Weygand-Durasevic, Ita Gruic-Sovulj, Sanda Rocak and Irena Landeka		
The Accuracy of Seryl-tRNA Synthesis.	(4)	247
Dragana Korenčić, Ivan Ahel and Dieter Söll		
Aminoacyl-tRNA Synthesis in Methanogenic Archaea	(4)	255
Carlo Zambonelli, Cristiana Chiavari, Marzia Benevelli and Fabio Coloretti		
Effects of Lactic Acid Bacteria Autolysis on Sensorial Characteristics of Fermented Foods	(4)	347
Saša Bavec and Peter Raspotnig		
Patenting Biotechnical Inventions in Europe	(4)	353

PROFESSIONAL PAPER

Marjeta Recek, Neža Čadež and Peter Raspotnig		
Identification and Characterization of Yeast Isolates from Pharmaceutical Waste Water	(1)	79

APPENDIX

Mirna Flögel		
Foreword – Vision of Integrated Life Sciences at the First Croatian Congress on Molecular Life Sciences (CCOMLIS) Displayed Challenges and Opportunities of the Genetic Age	(4)	243
Book Review	(4)	363

AUTHOR INDEX

Ahel, Ivan	(4)	255	Gamulin, Vera	(3)	233
Balen, Biljana	(4)	275	Geyer, Roland	(1)	9
Bandelj, Dunja	(3)	185	Gojmerac, Tihomira	(4)	343
Banović, Mara	(3)	227	Golič Grdadolnik, S.	(1)	27
Bauer, Michael	(1)	9	Gong, Guohong	(4)	311
Bauer, Nataša	(3)	163	Gracin, Leo	(3)	227
Bavčar, Dejan	(4)	321	Greppi, Gian Franco	(4)	293
Bavec, Saša	(4)	353	Grube, Mara	(4)	305
Bekers, Martins	(4)	305	Griengl, Herfried	(1)	9
Benevelli, Marzia	(4)	347	Gruic-Sovulj, Ita	(4)	247
Berčuk, Nikola	(2)	111	Gutzeit, Herwig O.	(4)	267
Berović, Marin	(1)	49	Herceg, Zoran	(2)	145
Birch, Rosslyn M.	(3)	199	Herjavec, Stanka	(2)	103
Bjedov, Ivana	(4)	299	Horvat, Danijela	(4)	331
Brčić-Kostić, Krunoslav	(4)	261	Hribar, Janez	(3)	207
Brdar, Branko	(1)	1	Ivančić-Baće, Ivana	(4)	261
Briones, Ana	(2)	157	Jakše, Jernej	(3)	185
Budić-Leto, Irena	(3)	221	Javornik, Branka	(3)	185
Castellari, L.	(4)	317	Jelaska, Sibila	(3,4)	163, 299
Ceci, Liliana N.	(1)	33	Jukić, Marijana	(2)	111
Chiavari, Cristiana	(4)	347	Jurjević, Zeljko	(2)	91
Coloretti, Fabio	(4)	317, 347	Jurković, Zorica	(4)	331
Conte, Lanfranco	(2)	129	Kaminska, Elena	(4)	305
Cruz, José M.	(3)	191	Karas, Romana	(2)	119
Cubrik-Curik, Vlatka	(1,4)	75, 293	Kipčić, Dubravka	(1)	39
Curik, Ino	(1,4)	75, 293	Koprivnjak, Olivera	(2)	129
Cus, Franc	(2)	95	Korenčić, Dragana	(4)	255
Cvjetkovic, Bogdan	(2)	91	Košmerl, Tatjana	(4)	321
Čadež, Neža	(1,2)	79, 95	Kovač, Maja	(4)	299
Čelan, Štefan	(1)	49	Kovačević-Ganić, Karin	(3)	227
Ćetković, Helena	(3)	233	Krieger, Nadia	(2)	135
Dabelić, Sanja	(4)	281	Krsnik-Rasol, Marijana	(4)	275
Danilevich, Aleksejs	(4)	305	Kukec, Aleksandra	(1)	49
De Girolamo, Analisa	(2)	91	Kurtanjek, Želimir	(1,4)	67, 331
Diz, José	(3)	191	Landeka, Irena	(4)	247
Domínguez, Herminia	(3)	191	Lauc, Gordan	(4)	289
Dotzauer, Christian	(1)	21	Legiša, M..	(1)	27
Drobnič-Košorok, Marinka.	(3)	171	Lelas, Vesna	(2)	145
Dumić, Jerka	(4)	281, 289	Leljak Levanić, Dunja	(3,4)	163, 299
Dumont, Ann	(3)	199	Lovrić, Tomislav	(3)	221
Durajlija-Žinić, Sonja	(3)	233	Lozano, Jorge E.	(1)	33
Ehrmann, Matthias A.	(1)	21	Ludwig-Müller, Jutta	(4)	267
Enne, Giuseppe.	(1,4)	75, 293	Lukac-Havranek, Jasmina	(1)	75
Espinosa, Juan Carlos.	(2)	157	Luz Jr., Luiz Fernando L.	(2)	135
Feligini, Maria	(1,4)	75, 293	Magdić, Damir.	(4)	331
Fernandez-Gonzalez, Monica.	(2)	157	Majdak, Ana	(2)	103
Filipović-Kovačević, Željka	(2)	111	Mandić, Božica	(4)	343
Flögel, Mirna	(4)	243,	Matulić, Maja	(1)	1
		281, 289	Maugeri, Francisco	(1)	67
Frega, Natale G.	(3)	213	Mihaljević, Snježana.	(3,4)	163, 299
Fronte, Baldassare	(3)	213	Mikšaj, Miroslav	(2)	111
			Miličević, Borislav	(3)	227
			Milošević, Jadranka.	(4)	275

Mirošević, Nikola	(2)	103	Škrobot, Nikolina	(4)	261
Mitak, Mario	(4)	343	Šupraha, Sandra	(4)	289
Mitchell, David A.	(2)	135	Tini, V.	(4)	317
Mozetič, Branka	(3)	207	Tocchini, Massimo	(3)	213
Mozzon, Massimo	(3)	213	Totis, Nicola.	(2)	129
Müller, Werner E. G.	(3)	233	Trebše, Polonca	(3)	207
Nemanic, Julij	(2)	95			
Orlić, Sandi	(2)	103	Ubeda, Juan	(2)	157
Parajó, Juan C..	(3)	191	Upite, Dagnija	(4)	305
Parma, Pietro	(4)	293	Vanags, J. J.	(1)	57
Pleadić, Jelka	(4)	343	Viesturs, U. E.	(1)	57
Povhe Jemec, Katja	(2)	95	Vigants, Armands	(4)	305
Priede, M. A.	(1)	57	Visconti, Angelo	(2)	91
Rainieri, S.	(4)	317	Vogel, Rudi F.	(1)	21
Raspor, Peter	(1,2,4)	79, 95, 353	von Meien, Oscar F.	(2)	135
Recek, Marjeta	(1)	79	Vranešić, Darija	(1)	67
Redžepović, Sulejman	(2)	103	Vukušić, Jelena.	(1)	39
Rocak, Sanda	(4)	247	Vulfa, Livija	(4)	305
Rusak, Gordana	(4)	267			
Salaj-Šmic, Erika	(4)	261	Walker, Graeme M.	(3)	199
Santos, Andrelina M. P.	(1)	67	Wang, Ji	(4)	311
Scherbaka, Rita	(4)	305	Weygand-Durasevic, Ivana.	(4)	247
Shang, Yun	(4)	311	Wondra, Mojmir	(1)	49
Skvarča, Marlena.	(2)	119			
Smole Možina, Sonja	(3)	177	Yao, Jianming	(4)	311
Solfrizzo, Michelle	(2)	91	Yu, Zengling.	(4)	311
Söll, Dieter	(4)	255	Yuan, Chengling	(4)	311
Steiner, Walter	(1)	9	Zahradka, Davor.	(4)	261
Sudar, Rezica	(4)	331	Zagorc, Tatjana	(2)	95
Šebečić, Blaženka.	(1)	39	Zambonelli, Carlo	(4)	317, 347
Škreblin, Mirjana	(2)	145	Zorman, Tina	(3)	177
			Zrimšek, Petra	(3)	171
			Žlender, Božidar	(2)	119

SUBJECT INDEX

A

- α -amylase
for apple juice processing, 33
effects of pH, heat and Ca^{2+} ions on its activity, 33
- agglomeration
of yeast and influence of magnesium and calcium on, 199
- Agrobacterium*
use for genetic transformation of *Coleus blumei* Benth., 163
- Agrobacterium tumefaciens*
transformation of *Mammillaria gracillis* Pfeiff. tissue culture with, 275
- alcohol
determination in Slovenian wines by empirical relations, 321
- amino acid selection and recognition
in tRNA serilation, 247
- aminoacyl-tRNA synthetases
ensure high fidelity of translation, 247
in methanogenic archaea, 247
in yeast and plants, 247
evolutionary diversity, 247
activation of aminoacylation, 247
- anabolic agent
residual clenbuterol in pig liver after administration at growth-promoting dose, 343
- anaerobic thermophiles
from canned food, 21
- anthocyanins
in sweet cherries, 207
determination and quantitation by HPLC, 207
- apple juice
effects of pH, heat and Ca^{2+} ions on starch hydrolysis in, 33
- arachidonic acid
production by *Mortierella alpina*, industrial scale, 311
detection by mass spectrometry and gas chromatography, 311
- Aspergillus niger*
influence of dissolved oxygen concentration on intracellular pH, 27
growth rate and metabolism, 27, 57
cultivation in geometrically dissimilar bioreactors, 57
morphological analyses of, 57
citric acid production, 57
- autochthonous cultivars
Pošip and Rukatac from Croatia (*Vitis Vinifera*, L.), 221
- autohydrolysis
of *Eucalyptus* wood in xylitol production by *Debaryomyces hansenii*, 191

B

- β_2 -adrenergic agonist
residual clenbuterol in pig liver, 343
measured by ELISA, 343
- β -lactoglobulin
genetic polymorphism of, in Pag sheep, 75
- beauvericin
in corn from Croatia, 91
- bioreactors
geometrically dissimilar bioreactors, 57
solid-state fermentation bioreactors, 135
Zymotis bioreactor, 135
packed-bed bioreactors, 135
- biosensor
for monitoring respiration of *S. cerevisiae* in the presence of cobalt and zinc, 111
- biotech inventions
patent system in Europe, 353
- bread quality
by use of computer image analysis, 331
the influence of high molecular weight glutenin proportions on, 331

C

- Cactaceae*
Mammillaria gracillis Pfeiff. tissue culture, 275
intra- and extracellular glycoproteins from, 275
transformation with *Agrobacterium tumefaciens*, 275
- callus culture
genetic transformation of, 163
Coleus blumei Benth., 163
- callus induction
of European yew (*Taxus baccata* L. Washingtonii), 299
effects of explant sources and growth regulators on, 299
- Campylobacter coli*
in poultry meat, 177
genotypic identification by PCR, 177
- Campylobacter jejuni*
in poultry meat, 177
genotypic identification by PCR, 177
- campylobacters
identification in poultry meat, 177
Campylobacter jejuni, 177
Campylobacter coli, 177
phenotypic identification, 177
genotypic identification by PCR, 177
- cancer
flavonoids as specific inhibitors of hsp gene expression, 267

Candida stellata

from spontaneous and inoculated fermentations of Zametovka must, 95

canned food

occurrence and detection of thermophilic bacteria in, 21

cat

detection of specific IgG in, with dermatophyte infection, 171

cdtB gene

for molecular identification of thermotolerant campylobacters, 177

cheese

effect of lactic acid bacteria autolysis on its sensorial properties, 347

chemometric analysis

of high molecular mass glutenin, 331

chlorinated hydrocarbons

in meat and fish imported to Croatia, 39

in meat from Croatia and fish from Adriatic Sea, 39

citric acid

production by *Aspergillus niger* in geometrically dissimilar bioreactors, 57

clenbuterol

in pig liver after administration at growth-promoting dose, 343

measured by ELISA, 343

cobalt

influence on respiratory activity of the yeast, 111

COD

reduction in pharmaceutical waste water by yeast, 79

cognac

impact of grape varieties on its flavour, 227

Coleus blumei Benth.

genetic transformation of, using *Agrobacterium*, 163

conjugated linoleic acid

in ewe milk, 213

effect of fish oil on levels of, 213

conjugational recombination

in the presence of λ Gam protein in *E. coli*,

crown-gall tumor, 261

curcumin

as a potent inhibitor of galectin-3 expression, 281

D

Debaryomyces hansenii

xylitol production from *Eucalyptus* wood by, 191

dermatophytes

detection of specific IgG in cats and rabbits, infected with, 171

deterioration

of mayonnaise during storage, 119

diagnostic evaluation

of ELISA tests for dermatophytosis, 171

dietary supplements

effects of flavonoids on hsp genes expression, 267

digoxin

for labeling of lectins, as a novel tool to study glycoconjugates, 289

dissolved oxygen concentration

its influence on intracellular pH of *Aspergillus niger*, 27

its influence on growth rate of *Aspergillus niger*, 27

DL-malic acid

effect on L-malic acid metabolism during wine alcoholic fermentation, 317

DNA fingerprinting

of olive varieties by microsatellite markers, 185

docosahexaenoic acid

in ewe milk, 213

effect of fish oil on levels of, 213

E

eicosapentaenoic acid

in ewe milk, 213

effect of fish oil on levels of, 213

electrophoretic karyotyping

of yeast isolates from pharmaceutical waste water, 79

ELISA

tests for the detection of specific IgG in cats and rabbits with dermatophytosis, 171

determination of clenbuterol in pig liver by, 343

empirical relations

in determination of alcohol and total dry extract in wines, 321

enzyme kinetics

of an (S)-hydroxynitrile lyase in two-phase systems, 9

Escherichia coli

conjugational recombination in the presence of λ Gam protein, 261

ethanol

production of, by *Zymomonas mobilis*, 305

etoposide

uPA and PAI induction by, in glioblastoma cell strain, 1

Eucalyptus wood

xylitol production from, by *Debaryomyces hansenii*, 191

European yew (*Taxus baccata* L. Washingtonii)

effect of explant sources and growth regulators on its growth, 299

growth on MS medium, 299

callus induced from zygotic embryo, 299

evolutionary diversity

of methanogenic archaea, 247

ewe milk fat

effect of fish oil on levels of, 213

n-3 polyunsaturated fatty acids in, 213

- trans* fatty acids in, 213
conjugated linoleic acid in, 213
- F**
- fish
chlorinated hydrocarbons pollution in, 39
fish oil
effect of, on levels of ewe milk fat, 213
flaA gene
for molecular identification of thermotolerant campylobacters, 177
flavonoids
effect on *hsp* genes expression, 267
flavour
of wine distillates from different grape varieties, 227
of wines fermented with different yeast strains, 103
of olive oils after different olive fruit storage, 129
flow energy distribution
in geometrically dissimilar bioreactors, 57
fumonisins
in corn from Croatia, 91
Fusarium species
beauvericin production by, 91
- G**
- galectin-3
in glioblastoma cells, 281
curcumin as a potent inhibitor of its expression, 281
exposure to UV light and MNNG, 281
gas chromatography/mass spectrometry tests
for detection of polyunsaturated fatty acids, 311
genetic polymorphism
of κ -casein genes in Italian goat breeds, 293
geometrically dissimilar bioreactors
cultivation of *Aspergillus niger* in, 57
stirring intensity measuring device in, 57
flow energy distribution in, 57
Gewürztraminer wine
chemical and sensory characteristics, 103
influence of *S. cerevisiae* and *S. paradoxus* on its quality, 103
glioblastoma cells
uPA and PAI induction by etoposide in, 1
expression of galectin-3 in, 281
curcumin as a potent inhibitor of galectin-3 expression, 281
glutenin
influence on bread quality, 331
chemometric analysis of high molecular weight glutenin, 331
glycoconjugates
studying by lectins labeled with digoxin, 289
- goat
genetic polymorphism of κ -casein genes in Italian goat breeds, 293
grape juice fermentation
redox potential as an indicator of yeast metabolic activity in, 49
of *Sauvignon blanc*, 49
of Zametovka (*Vitis Vinifera*), 95
of Gewürztraminer grape, 103
yeast population in spontaneous and inoculated fermentation, 95
grape varieties
impact on wine distillates flavour, 227
- H**
- Hanseniaspora uvarum*
from spontaneous and inoculated fermentations of Zametovka must, 95
heat transfer
in Zymotis solid-state bioreactor, 135
Hevea brasiliensis
enzyme kinetics of hydroxynitrile lyase from, 9
hippuricase gene
target gene for multiplex PCR to identify thermotolerant campylobacters, 177
HPLC analysis
of phenolic components in sweet cherries, 207
of reductive sugars and alcohol in wine, 49
of phenolic acids in white wines, 221
hsp genes
as potential targets for cancer diagnosis and treatment, 267
effects of flavonoids and quercetin on its expression, 267
from human myeloid leukaemia cells (HL60), 267
human myeloid leukaemia cells (HL60), 267
hydrocolloids
addition in whey protein concentrates, 145
influence on rheological properties of whey protein concentrates, 145
hydroxycinnamic acids
in sweet cherries, 207
determination and quantitation by HPLC, 207
hydroxynitrile lyase
from *Hevea brasiliensis*, 9
enzyme kinetics of, 9
- I**
- identification
of yeast isolates from pharmaceutical waste water, by PCR-RFLP, 79
of yeast isolates from must fermentations, by PCR-RFLP, 95, 157

- of thermotolerant campylobacters from poultry meat by PCR, 177
- image analysis
 - bread quality determined by, 331
- intracellular pH
 - of *Aspergillus niger*, 27
 - influence of dissolved oxygen on, 27
- inulin
 - hydrolysis by inulinase from *Kluyveromyces bulgaricus*, 67
- inulinase
 - production by *Kluyveromyces bulgaricus*, 67
- K**
- κ -casein
 - polymorphism of, 293
 - in Italian goat breeds, 293
 - new ACRS-PCR for discrimination A and B alleles of, 293
- Kluyveromyces marxianus* var. *bulgaricus*
 - inulinase production by, 67
- L**
- λ Gam protein
 - influence on conjugational recombination in *E. coli*, 261
- lactic acid bacteria autolysis
 - effects on sensorial characteristics of fermented foods, 347
- large scale cultivation
 - modelling of the Zymotis solid-state bioreactor, 135
- lectins
 - labeled with digoxin, for analysis of glycoconjugates, 285
- levan
 - production of, by *Zymomonas mobilis*, 305
- levansucrase
 - stillage as a stimulator of its synthesis for *Zymomonas mobilis*, 305
- Lewis cell
 - enzyme kinetics investigation with, 9
- low-cost fermentation media
 - in xylitol production from *Eucalyptus* wood by *Debaryomyces hansenii*, 191
- M**
- malo-alcoholic fermentation
 - effect of DL-malic acid on metabolism of L-malic acid by yeasts, 317
- Mammillaria gracilis* Pfeiff. (*Cactaceae*) tissue culture
 - protein pattern after transformation with *Agrobacterium tumefaciens*, 275
- intra- and extracellular glycoproteins from, 275
- mass transfer
 - in two phase system enzyme kinetics investigation, 9
- mathematical model
 - for calculating aroma chromatogram similarity of wine distillates, 227
 - for evaluation of productivity of Zymotis solid-state bioreactor, 135
- mayonnaise
 - sensory attributes during storage, 119
 - deterioration, 119
 - physico-chemical parameters during storage, 119
- meat
 - chlorinated hydrocarbons pollution in, 39
- metabolism
 - of *Aspergillus niger*, 27, 57
- metal ions
 - magnesium and calcium influence on yeast agglomeration, 199
 - zinc and cobalt influence on respiratory activity of the yeast, 111
- Metazoa
 - as common ancestor to all multicellular animals, 233
 - signal recognition particle from *Geodia cydonium*, 233
- methanogenic archaea
 - aminoacyl-tRNA synthetases in, 247
 - evolutionary diversity, 247
- microsatellites
 - in DNA fingerprinting of olive varieties, 185
- MNNG
 - exposure of glioblastoma cells, 281
- modelling
 - of the Zymotis solid-state bioreactor, 135
- molecular evolution
 - Porifera as common ancestor to all multicellular animals, 233
 - signal recognition particle from *Geodia cydonium* with high similarity with human SRP54, 233
- morphogenesis
 - of *Mammillaria gracilis* Pfeiff. tissue culture transformed with *Agrobacterium tumefaciens*, 275
- morphology
 - changes of *Aspergillus niger* pellets in geometrically dissimilar bioreactors, 57
- Mortierella alpina*
 - production of arachidonic acid by, at industrial scale, 311
- MS medium
 - for growth induction of European yew, 299
- mycotoxins
 - produced by *Fusarium* species, 91
 - fumonisins, 91
 - beauvericin, 91
 - ochratoxin A, 91

N

- n-3 polyunsaturated fatty acids
 - in ewe milk, 213
 - eicosapentaenoic acid, 213
 - docosahexaenoic acid, 213
 - effect of fish oil on levels of, 213

O

- ochratoxin A
 - in corn from Croatia, 91
- olive oil
 - influence of olive fruit storage on its quality, 129
 - composition of volatile compounds, 129
- olives (*Olea europaea* L.)
 - DNA fingerprinting of its varieties, by microsatellite markers, 185
- optimisation
 - of inulinase production by *Kluyveromyces bulgaricus*, 67

P

- packed-bed bioreactors
 - modified bioreactor Zymotis, 135
- patent system
 - of the European Patent Office(EPO), 353
 - in the field of biotechnology, 353
- PCR analysis
 - of yeast isolates from pharmaceutical waste water, 79
 - of yeast isolates from must fermentations, 95, 157
 - of *Coleus blumei* Benth. transformed with *Agrobacterium*, 163
 - of thermotolerant campylobacters from poultry meat, 177
 - 16S-rRNA-gene sequencing of thermophilic bacteria with, 21
 - total RNA analysis from glioblastoma cells, 281
 - ACRS-PCR designed for discrimination A and B alleles of κ-casein, 293

- pesticides
 - the pollution of fish and meat in Croatia with, 39
- phage λ
 - Gam protein of, 261
 - influence on conjugational recombination in *E. coli*, 261
- phenolic acids
 - in white wines Pošip and Rukatac, 221

- Pichia anomala*
 - isolates from pharmaceutical waste water, 79
 - COD reduction by, 79
- pig liver
 - residual clenbuterol in, 343
- plasminogen activator inhibitor (PAI)

induction by etoposide in a glioblastoma cell strain, 1

PAI promoter, 1

pollution

with chlorinated hydrocarbons in meat and fish in Croatia, 39

polymorphism

of β-lactoglobulin in Pag sheep, 75

population dynamics

of wine yeast in red grape must fermentation, 95

Porifera

as common ancestor to all multicellular animals, 233

signal recognition particle from *Geodia cydonium*, 233

Pošip

phenolic acids in, 221

posthydrolysis

of *Eucalyptus* wood in xylitol production by *Debaryomyces hansenii*, 191

poultry meat

identification of thermotolerant campylobacters from, 177

predhydrolysis

of *Eucalyptus* wood in xylitol production by *Debaryomyces hansenii*, 191

protein-protein interactions

in tRNA serilation, 247

Pulsed Field Gel Electrophoresis (PFGE)

of wine yeasts isolates from Zametovka must, 95

Q

quercetin

effect on hsp genes expression, 267

R

rabbit

detection of specific IgG in, with dermatophyte infection, 171

rDNA-RFLP analysis

of yeast isolates from pharmaceutical waste water, 79

of yeast isolates from must fermentations, 95, 157

RecBCD enzyme

in homologous recombination in *E. coli*, 261

effect of λ phage Gam protein on its activity, 261

redox potential

as indicator of yeast metabolic activity in wine fermentation, 49

response surface analysis

for optimisation of inulinase production by *Kluyveromyces bulgaricus*, 67

rheological properties

of whey protein concentrates, 145

influence of tribomechanical micronisation on, 145

Rukatac

phenolic acids in, 221

S*Saccharomyces cerevisiae*

- metabolic activity in *Sauvignon blanc* fermentation, 49
- from spontaneous and inoculated fermentations of Zametovka must, 95
- wine aroma compounds produced by, 103
- in amperometric biosensor, 111
- cobalt and zinc influence on its respiratory activity, 111
- magnesium and calcium influence on its agglomeration, 199

Saccharomyces paradoxus

- wine aroma compounds produced by, 103
- salami

- effect of lactic acid bacteria autolysis on its sensorial properties, 347

Sauvignon blanc

- the role of redox potential in its fermentation, 49

sensory attributes

- influence of *S. cerevisiae* and *S. paradoxus* on wine quality, 103
- of mayonnaise during storage, 119
- of wine distillates from different grape varieties, 227

sheep from the island of Pag

- genetic polymorphism of β -lactoglobulin in, 75
- signal recognition particle (SRP54)

- from *Geodia cydonium* with high similarity with human SRP54, 233

solid phase microextraction (SPME)

- determination of volatile compounds of olive oil with, 129

solid-state fermentation

- productivity in Zymotis bioreactor, 135

specific growth rate

- of *Aspergillus niger*, 27

sponge

- as common ancestor to all multicellular animals, 233
- signal recognition particle from *Geodia cydonium*, 233

starch hydrolysis

- in apple juice by Tyazyme L300, 33
- effects of pH, heat and Ca^{2+} ions on, 33

stillage media

- as growth promoting biofactors and stimulator of levan production by *Zymomonas mobilis*, 305

stirring intensity measuring device

- in geometrically dissimilar bioreactors, 57
- with rushton turbine stirrers, 57
- with axial counterflow stirrers, 57

storage

- of mayonnaise and influence on its sensory quality, 119
- of olive fruit and influence on oil quality, 129

sweet cherries (*Prunus avium* L.)

anthocyanins and hydroxycinnamic acids in, 207

T

taxanes

- from European yew (*Taxus baccata* L. Washingtonii), 299

Thermoanaerobacter

- occurrence and detection in canned food, 21

Thermoanaerobacterium

- occurrence and detection in canned food, 21

thermophilic bacteria

- from canned food, 21

total dry extract

- determination in Slovenian wines by empirical relations, 321

trans fatty acids

- in ewe milk, 213

- effect of fish oil on levels of, 213

transformation

- of *Coleus blumei* Benth. using *Agrobacterium*, 163

translation

- aminoacyl-tRNA synthetases in methanogenic archaea, 247

tribomechanical micronisation

- of whey protein concentrates, 145

tRNA

- aminoacyl-tRNA synthetases in methanogenic archaea, 247

- seril-tRNA synthetases in yeast and plants, 247

- amino acid recognition, 247

two-phase system

- for enzyme kinetics investigation, 9

U

urokinase-type plasminogen activator (uPA)

- induction by etoposide in a glioblastoma cell strain, 1

- uPA promoter, 1

UV light

- exposure of glioblastoma cells, 281

V

varietal identification

- of olive, by DNA fingerprinting, 185

vitamins

- as growth promoting biofactors and stimulators of levan production by *Zymomonas mobilis*, 305

volatile components

- in olive oil, after olive storage in bags, 129

- determination by solid phase microextraction (SPME), 129
 in wine, produced by *S. paradoxus* and *S. cerevisiae*, 103
 volumetric productivity of Zymotis solid-state bioreactor, 135
- W**
- waste water isolation and identification of indigenous yeast from, 79 COD reduction in, 79 wheat influence on bread quality, 331 high molecular weight glutenin proportions in, 331 whey protein concentrates tribomechanical micronisation of, 145 rheological properties of, 145 hydrocolloids addition, 145 wine volatile compounds, 103 sensory characteristics, 103 grape juice fermentations, 49, 95, 103, 157 *Sauvignon blanc*, 49 *Zametovka (Vitis Vinifera)*, 95 Gewürztraminer, 103 Pošip and Rukatac, 221 phenolic acids in, 221 determination of alcohol and total dry extract in, by empirical relations, 321 effect of lactic acid bacteria autolysis on red aged wines sensorial properties, 347 effect of DL-malic acid on wine fermentations, 317 wine distillates impact of grape varieties on its flavour, 227
- X**
- xylitol production from *Eucalyptus* wood by *Debaryomyces hansenii*, 191
- Y**
- yeast in *Sauvignon blanc* fermentation, 49 from pharmaceutical waste water, 79 rDNA-RFLP analysis of, 79, 95, 157 wine yeasts, 49, 95, 103, 157 in Zametovka must, 95 influence on chemical and sensory properties of Gewürztraminer wine, 103 agglomeration of, 199 magnesium and calcium influence on its agglomeration, 199 zinc and cobalt influence on its respiratory activity, 111 metabolism of L-malic acid during wine alcoholic fermentation, 317
- Z**
- Zametovka must yeast population dynamics in, 95 zinc influence on respiratory activity of the yeast, 111 zygotic embryo callus lines of European yew induced from, 299 *Zymomonas mobilis* production of ethanol and levan by, 305 stillage media and vitamins as a growth promoting biofactors, 305 Zymotis bioreactor productivity of, based on total reactor volume, 135 large scale cultivation, 135 heat transfer, 135