

## CONTENTS

Foreword .....	XV
<b>I – Co-evolution hosts pathogens: characterization and management of genetic diversity of both partners</b>	
Spatial pattern for resistance to a pathogen. Theoretical approach and empirical approach at the phenotypic and molecular levels <i>Claire Neema, Claire Lavigne, Juliette de Meaux, Isabelle Cattan-Toupance, Julio Franco de Oliveira, Alexandra Deville, Thierry Langin</i> .....	S1
Life-trait evolution of a parasite strongyle nematode in response to host resistance: an experimental approach using <i>Haemonchus contortus</i> in black belly lambs <i>Maité Saulai, Jacques Cabaret, Gérard Hostache, Nathalie Mandonnet, Gilles Aumont</i> .....	S23
Lack of correlation between (a)virulence and phylogenetic relationships in root-knot nematodes ( <i>Meloidogyne</i> spp.) <i>Jean-Philippe Semblat, Philippe Castagnone-Sereno</i> .....	S43
<b>II – Technologies of conservation for animal and plant genetic resources</b>	
Cholesterol/phospholipid ratio in sperm of several domestic species does not directly predict sperm fitness for cryopreservation <i>Catherine Labbé, Jean-François Bussière, Philippe Guillouet, Bernard Leboeuf, Michèle Magistrini</i> .....	S59
Abscisic acid and desiccation tolerance in oil palm ( <i>Elaeis guineensis</i> Jacq.) somatic embryos <i>Frédérique Aberlenc Bertossi, Nathalie Chabrilange, Yves Duval</i> ...	S73
Numerical simulation for freezing and thawing mammalian spermatozoa. Evaluation of cell injuries at different depths in bags or straws during all steps of the technique <i>Jean-Luc Courtens, Jean-Michel Réty</i> .....	S83
<b>III – Methods for inventory and characterization of genetic diversity in natural environment</b>	
Transposable elements and genome evolution of invasive species: the case of <i>Drosophila simulans</i> <i>Christian Biémont, Cristina Vieira, Nathalie Borie</i> .....	S105

Is phenotypic variation of blue tits ( <i>Parus caeruleus</i> L.) in Mediterranean mainland and insular landscapes adaptative? <i>Jacques Blondel, Philippe Perret, Paula C. Dias,</i> <i>Marcel M. Lambrechts</i> .....	S121
Setting conservation priorities: the case study of <i>Carabus solieri</i> (Col. Carabidae) <i>Jean-Yves Rasplus, Stéphane Garnier, Serge Meusnier, Silvain Piry,</i> <i>Guénaëlle Mondor, Philippe Audiot, Jean-Marie Cornuet</i> .....	S141
Genetic structure of Black Grouse ( <i>Tetrao tetrix</i> ) populations of the French Alps <i>Alain Caizergues, Sophie Dubois, Guénaëlle Mondor, Anne Loiseau,</i> <i>Laurence N. Ellison, Jean-Yves Rasplus</i> .....	S177
Development of microsatellite multiplexes for wild goats using primers designed from domestic Bovidaeae <i>Célia Maudet, Gordon Luikart, Pierre Taberlet</i> .....	S193
Microsatellite analysis of polyandry and spawning site competition in brown trout ( <i>Salmo trutta</i> L.) <i>Carlo R. Largiadèr, Arnaud Estoup, Frédéric Lecerf,</i> <i>Alexis Champigneulle, René Guyomard</i> .....	S205
Genetic variation, geographic variation and gene flow in some French butterfly species <i>Henri Descimon, Marie Zimmermann, Emmanuel Cosson,</i> <i>Bernard Barascud, Gabriel Nève</i> .....	S223
Olive domestication from structure of oleasters and cultivars using nuclear RAPDs and mitochondrial RFLPs <i>Guillaume Besnard, Philippe Baradat, Catherine Breton,</i> <i>Bouchaib Khadari, André Bervillé</i> .....	S251
Use of RFLP markers to study genetic diversity and to build a core collection of the wild wheat relative <i>Ae. geniculata</i> Roth (= <i>Ae. ovata</i> L.) <i>Maria Zaharieva, Sylvain Santoni, Jacques David</i> .....	S269
Characterization of genetic diversity in a population of wild grapes from <i>Pic Saint-Loup</i> area and its relationship with the cultivated grapes <i>Patrice This, Catherine Roux, Pierre Parra, René Siret, Thibaut Bourse,</i> <i>Anne-Françoise Adam, Michel Yvon, Thierry Lacombe, Jacques David,</i> <i>Jean-Michel Boursiquot</i> .....	S289

#### IV – Inventory, characterization and monitoring of microbial diversity

Quantification of bacterial populations in complex ecosystems using fluorescent *in situ* hybridization, confocal laser scanning microscopy and image analysis

*Théodore Bouchez, Patrick Dabert, Michael Wagner,  
Jean-Jacques Godon, René Moletta* ..... S307

Experimental and theoretical evaluation of typing methods based upon random amplification of genomic restriction fragments (AFLP) for bacterial population genetics

*Christophe Mougel, Sylvie Teyssier, Cathy d'Angelo, Karine Groud,  
Marc Neyra, Karim Sidi-Boumedine, Axel Cloeckert, Michèle Peloille,  
Sylvie Baucheron, Élisabeth Chaslus-Dancla, Sophie Jarraud,  
Hélène Meugnier, Françoise Forey, François Vandenesch, Gérard Lina,  
Jérôme Etienne, Jean Thioulouse, Charles Manceau, Patrick Robbe,  
Renaud Nalin, Jérôme Briolay, Xavier Nesme* ..... S319

Composition of human intestinal flora analysed by fluorescent *in situ* hybridisation using group-specific 16S rRNA-targeted oligonucleotide probes

*Violaine Rochet, Lionel Rigottier-Gois, Fabienne Béguet, Joël Doré* S339

Use of specific DNA probes for the rapid characterization of yeasts isolated from complex biotopes

*Anne-Marie Davila, Monique Diez, Mauricio Corredor, Yves Pagot,  
Michèle Winckler, Claude Gaillardin, Serge Casaregola* ..... S353

Evaluation of AFLP for the grouping of *Bradyrhizobium* strains

*Anne Willems, Florence Daignon-Bourcier, Monique Gillis,  
Philippe de Lajudie* ..... S365

#### V – Dynamic management of genetic resources

Mitochondrial DNA diversity and phenotypic variation in wild and cultivated populations of *Medicago sativa*: insights into the dynamics of contact zones between the two related forms.

*Marie-Hélène Muller, Christian Balseira, Gérard Génier,  
Jean-Marie Prosperi, Sylvie Roussel, Sylvain Santoni, Olivier Soudière,  
Denis Tauzin, Marin Vabre, Joëlle Ronfort* ..... S381

Evolution of genetic diversity in metapopulations: *Arabidopsis thaliana* as an experimental model

*Claire Lavigne, Xavier Reboud, Madeleine Lefranc, Emmanuelle Porcher,  
Fabrice Roux, Isabelle Olivieri, Bernard Godelle* ..... S399

Genetic diversity and population dynamics of weedy rice in <i>Camargue</i> area	
<i>Cécile Bres-Patry, Martine Bangratz, Alain Ghesquière</i> .....	S425
Strong selection in wheat populations during ten generations of dynamic management	
<i>Isabelle Goldringer, Jérôme Enjalbert, Anne-Laure Raquin, Philippe Brabant</i> .....	S441
Local management and regional dynamics of varietal diversity of cassava in Amazonia	
<i>Doyle McKey, Laure Emperaire, Marianne Elias, Florence Pinton, Thierry Robert, Sylvain Desmoulière, Laura Rival</i> .....	S465
Cassava in Brazilian Amazonia: intra-specific diversity and market	
<i>Florence Pinton, Laure Emperaire</i> .....	S491
Methods of rapid appraisal for <i>in situ</i> management of genetic resources: a Malagasy set of tools	
<i>Didier Babin, Fleurette Andriantsilavo, Sigrid Aubert, Géraldine Péchard, Caroline Bourgeois, Martine Antona, Eléonore Béchaux, Lolona Ramamonjisoa Ranaivoson, Hélène I. Joly</i> .....	S513
Networks for the conservation of plant genetic resources: economic incentives and institutional constraints	
<i>Michel Trommetter</i> .....	S537