

# BIOPOLYMERS and CELL

SCIENTIFIC JOURNAL  
ESTABLISHED IN JANUARY 1985

Volume **28** N **4** **2012**

APPEARS BIMONTHLY

**July–August**

## CONTENTS

### Reviews

- GAVRILOV A. A., RAZIN S. V., IAROVAIA O. V. C-methods to study 3D organization of the eukaryotic genome. . . . . 245  
ULIANOV S. V., MARKOVA E. N., GAVRILOV A. A., RAZIN S. V. Insulators in vertebrates: regulatory mechanisms and chromatin structure. . . . . 252  
KOULINTCHENKO M. V., DIETRICH A., KONSTANTINOV Yu. M. Mitochondrial genetic transformation via biotechnological approaches or natural competence mechanism: do we have a choice? . . . . . 261  
STEPANENKO A. A., KAVSAN V. M. Evolutionary karyotypic theory of cancer *versus* conventional cancer gene mutation theory. . . . . 267

### Minireviews

- ALGRET R., DOKUDOVSKAYA S. S. The SEA complex – the beginning. . . . . 281  
TSFASMAN T., KLIBI M., PICHUGIN A., LIPINSKI M., VASSETZKY Y. S. HIV: implication in Burkitt lymphoma. . . . . 285  
BILOUSOV O. O., KATANAIEV V. L., KOZERETSKA I. A. Miniature as a hypothetical regulatory protein of the Bursicon/Rickets signaling cascade in the wing epithelia of *Drosophila melanogaster*. . . . . 288

### Structure and Function of Biopolymers

- ZAZHYTSKA M. O., AFANASIEVA K. S., CHOPEI M. I., VIKHREVA M. A., SIVOLOB A. V. Influence of chloroquine on kinetics of single-cell gel electrophoresis . . . . . 292

### Bioorganic Chemistry

- ENDUTKIN A. V., SIDORENKO V. S., ZHARKOV D. O. Genotoxicity of a carcinogenic metabolite of benzo[*a*]pyrene for cells of neuronal differentiation lineage. . . . . 298

### Methods

- KHORUZHENKO A. I. Optimization the conditions of cultivation of malignant cells in soft agar for subsequent immunohistochemical analysis . . . . . 302

### Short Communications

- GRIN I. R., VASILYEVA S. V., DOVGHERD A. P., SILNIKOV V. N., ZHARKOV D. O. Human and bacterial DNA polymerases discriminate against 7,8-dihydro-8-oxo-2'-deoxyadenosine-5'-triphosphate . . . . . 306  
KLIMENKO E. S., ZAPOROZHCHENKO I. A., MILEYKO V. A., MOROZKIN E. S., KOULINTCHENKO M. V., LAKTIONOV P. P., KONSTANTINOV Yu. M. Human cultured cells are capable to incorporate isolated plant mitochondria loaded with exogenous DNA. . . . . 310  
NOVOKHATSKA O. V., SKRYPKINA I. Ya., DERGAI M. V., TSYBA L. O., RYNDITCH A. V. RTK signaling regulator SPRY2 associates with endocytic adaptor ITSN1 *in vivo*. . . . . 314  
PESTRYAKOV P. E., KHODYREVA S. N., CURMI P. A., OVCHINNIKOV L. P., LAVRIK O. I. Effect of multifunctional protein YB-1 on the AP site cleavage by AP endonuclease I and tyrosyl phosphodiesterase 1 . . . . . 317  
SUDAKOV N. P., POPKOVA T. P., NOVIKOVA M. A., KATYSHEV A. I., NIKIFOROV S. B., PUSHKAREV B. G., GOLDBERG O. A., KLIMENKOV I. B., LEPEKHOVA S. A., EZHIKEEVA S. D., TEN M. N., OSIPOV V. G., KONSTANTINOV Yu. M. The level of blood plasma mitochondrial DNA upon acute myocardium damage in experiment. . . . . 322