

CONTENTS

[1-5] – **TITLE PAGES**

[6-8] – **AUTHOR INDEX**

[9-53] – **PLENARY LECTURES**

[9] – **When you look deep into the human eye... A biophysicist's perspective**

Wiesław I. Gruszecki

[9] – **Room temperature phosphorescence with direct triplet state excitation**

Ignacy Gryczyński

[9] – **Conjugates of DNA and boron clusters as building blocks for nanoparticle carriers of therapeutic nucleic acids with gene silencing activities**

Krzysztofa Śmiałkowski, Katarzyna Bednarska-Szczepaniak, Katarzyna Ebenryter-Olbińska, Katarzyna Kulik, Justyna Suwara, Gabriela Gajek, Lidia Fiedorowicz, Aleksander Foryś, Bohumir Grüner, Barbara Nawrot and Zbigniew Leśnikowski

[10] - **Cell Response Driven by Surface chemistry and Charges on electrospun polymer NANOfibers**

Urszula Stachewicz

[11] - **Reengineering of a Bacterial Compartment INTO Tailorable Bionanomaterials**

Yusuke Azuma

[12] - **Nanocarrier-based delivery of rose bengal for enhanced photodynamic therapy of basal cell carcinoma**

Barbara Klajnert-Maculewicz, Monika Dąbrzalska, Krzysztof Sztandera, Michał Gorzkiewicz

[13] - **Peptidooliposomal formulations for antiviral therapies**

Olga Michel, Aleksandra Kaczorowska, Lucyna Matusiewicz, Kliwia Piórkowska, Marlena Golec, Wiktoria Fus, Kazimierz Kuliczkowski, Aleksander F. Sikorski, Aleksander Czogalla

[14] - **Hotter together: boosting hyperthermia efficiency through inter-particle interactions**

Adrian Radoń, Agnieszka Ciuraskiewicz, Piotr Piotrowski, Andrzej Hudecki, Grzegorz Litwinienko, Anna Lewińska, Maciej Wnuk

[14] - **From MDa to kDa – across the scale of the cryoEM SPA analysis of biological molecules**

Artur P. Biela

[15] - **pH-responsive chlorophyll derivatives-modified liposomes for doxorubicin delivery**

Katarzyna Wiktorska, Katarzyna Medyńska, Anna Pogorzelska, Maciej Mazur

[16] - **X-ray synchrotron and neutron scattering studies of biomembrane-protein interactions at air-liquid and solid-liquid interfaces**

Jarosław Majewski

[17] - **Lipid droplets in vascular dysfunction**

Natalia Chorazy, Kamila Wojnar-Lason, Anna Gdula, Diane Bakker, Coert J. Zuurbier, Stefan Chlopicki, Marta Z. Pacia

[17] - **Antigen binding to surface immobilized antibodies: ToF-SIMS examination of the IgG orientation and immobilization stability**

Katarzyna Gajos, Panagiota Petrou, Andrzej Budkowski

- [18] - **Heme and heme oxygenases – novel activities of old friends**
Witold Nowak, Grzegorz Sokołowski, Patryk Chudy, Wojciech Krzeptowski, Alicja Józkowicz
- [19] - **Mind the gap! Biomolecules in plasmonic nanocavity**
Ewelina Lipiec, Adrian Cernescu, Anna Chachaj-Brekiesz, Michał Czaja, Dhiman Ghosh, Janina Kaderli, Jan Kobierski, David Lupa, David Perez-Guaita, Roland Riek, Sara Seweryn, Katarzyna Skirlińska-Nosek, Kamila Sofińska, Anita Wnętrzak, Renato Zenobi, Marek Szymoński
- [20] - **Development of novel optical microscopy methods to study cell migration**
Zenon Rajfur, Tomasz Kołodziej, Olga Adamczyk, Aleksandra Mielnicka, Adam Wojciechowski
- [21] - **Correlative AFM–optical nanoscopy for polypharmacy studies in hepatic endothelium**
Bartłomiej Zapotoczny, Marcin Luty, Jerzy Kotlinowski, Annika Kiel, Wolfgang Hübner, Karolina Szafranska, Henning Ortkrass, Małgorzata Lekka, Jan Schulte am Esch, Thomas Huser
- [22] - **The impact of 3D microenvironment rheology on cell invasion accompanied by protein expression changes in cancer spheroids**
Sara Metwally, Justyna Pabijan, Małgorzata Lekka
- [22] - **How tissue stiffness affects microglial migration and morphology**
Monika Szczepanek-Dulska, Klemencja Berghauzen-Maciejewska, Kamil Dulski, Katarzyna Pogoda
- [23] - **Predicting patient health trajectories with foundation models: a new frontier in computational medicine**
Arkadiusz Sitek
- [24] - **Perspectives of the use of hemorheological tests in medical diagnostics.**
Anna Marcinkowska-Gapińska
- [25] - **Expression and functional role of TRPV1 channels in T lymphocytes: implications for immune regulation**
Joanna K. Bujak, Anna Kosieradzka, Artur Wardaszka, Piotr Bednarczyk
- [25] - **Time-dependent reversal of High-Fat Diet-Induced insulin resistance, Perivascular Adipose Tissue biochemical changes in relation to Endothelial (Dys)function**
Krzysztof Czamara, Izabela Czyzyska-Cichon, Anna Bar, Ewa Stanek, Mateusz Wawro, Marta Z. Pacia, Zeinep Berkimbayeva, Brygida Marczyk, Elvira Bragado-García, Paloma Palma-Guzman, María Soledad Fernandez-Alfonso, Stefan Chlopicki
- [26] - **Oxidative stress caused by acrolein and glyoxal in mononuclear human blood cells**
Michał Kopera, Joanna Bernasińska-Słomczewska, Małgorzata Adamkiewicz, Anna Pieniążek
- [27] - **Mapping spatial organization of functional inputs in valence-related amygdalo-hippocampal circuits**
Dario Cupolillo, Vincenzo Regio, Andrea Barberis
- [28] - **Excitatory effects of metabotropic receptors in neocortical vasoactive intestinal polypeptide-expressing interneurons**
Karolina Bogaj, Joanna Urban-Ciecko
- [28] - **A deterministic model of nicotinic receptor function: a shift from stochastic paradigms**
Ewa Nurowska, Krzysztof A. Meissner
- [29] - **Structure-function relationship of the GABA type A Receptor**
Michał A. Michałowski, Katarzyna Terejko, Karol Kłopotowski, Jerzy W. Mozrzymas
- [30] - **The effects of 17 β -estradiol and progesterone on the BK channel activity in human glioblastoma cells**
Anna Lalik, Beata Dworakowska, Anna Sekrecka-Belniak, Klaudia Skutnik, Michał Wojcik, Kamil Niezabitowski, Jakub Kraus, Paulina Trybek, Agata Wawrzekiewicz-Jałowicka

- [31] - **Atomic-resolution structural insights into naturally-crystalline proteinaceous mosquitocides**
Jacques-Philippe Colletier
- [32] - **BKCa channel as a novel modulator of DNA damage response in human bronchial epithelial cells exposed to particulate matter**
Kamila Maliszewska-Olejniczak, Agata Kustra, Wojciech Szymański, Adrianna Dąbrowska-Hulka, Monika Żochowska, Bogusz Kulawiak, Piotr Bednarczyk
- [32] - **Structure-guided stabilization of membrane-active peptides as a strategy to combat antibiotic resistance**
Monika Wojciechowska, Małgorzata Lobka, Izabela Siekierska, Joanna Trylska
- [33] - **Bicarbonate transport correction drives clinical benefit of Elexacaftor/Teza caftor/Ivacaftor in F508del-CF**
Miroslaw Zajac, Agathe Lepissier, Yashoda Yalal, Elise Dreano, Aurelie Hatton, Isabelle Sermet-Gaudelus
- [34] - **Metallic nanoparticles as potential modulators of anticancer therapy**
Grzegorz Gołuński, Patrycja Bełdzińska, Marcin Zakrzewski, Barbara Galikowska-Bogut, Natalia Derewońko, Katarzyna Bury, Marzena Jamrógiwicz, Dariusz Wyrzykowski, Rafał Sądej, Jacek Piosik
- [35] – **Proteins: new avenues for the design of optical biosensors**
Sabato D'Auria
- [35] – **What Vesicles Remember: Nanoscale Traces of Cellular Identity in Plasma Membrane Models**
Katarzyna Pogoda, Karolina Chrabąszcz and Natalia Piergies
- [36] – **Probing the impact of cannabidiol on cellular lipid dynamics via vibrational spectroscopy**
Karolina Chrabąszcz, Agnieszka Panek and Katarzyna Pogoda
- [37] - **The lasing spectroscopy in studies on protein aggregation linked with neurodegenerative diseases**
Piotr Hanczyc
- [37] - **The Mobility of EGFP Chromophore: Environmental Influence on Fluorescence Lifetime and Anisotropy DECAY**
Joanna Krasowska, Anna Modrak-Wójcik, Zygmunt Gryczyński, Ignacy Gryczyński, Beata Wielgus-Kutrowska
- [38] - **From Cells-on-a-Chip to Organ-on-a-Chip – new devices and tools for preclinical studies**
Agnieszka Żuchowska, Patrycja Baranowska, Magdalena Flont, Agnieszka Gnyszka, Weronika Świtlik, Zuzanna Iwoń-Szczawińska, Dominik Kołodziejek, Joanna Konopka, Oliwia Tadko, Paweł Romańczuk, Aleksandra Szlachetka, Gabryela Ułanowicz, Elżbieta Jastrzebska, Zbigniew Brzózka
- [39] - **Electrochemical biosensors for multiple biomarkers detection**
Iwona Grabowska
- [40] - **Advanced microfluidic strategies for droplet handling and biomedical applications**
Piotr M. Korczyk, Sławomir Błoński, Damian Zaremba, Barbara Kupikowska-Stobba, Tetuko Kumiawan
- [41] - **Electrochemical RNA-based aptasensor for neomycin detection in milk samples**
Katarzyna Kurzątkowska-Adaszyńska, Aleksandra Adamicka, Agnieszka Jackowska, Iwona Grabowska
- [42] - **Monitoring of the mitochondrial network in a cellular model of Parkinson's disease under the influence of Mdivi-1**
Julia Anchimowicz, Damian Woźnica, Piotr Zielonka and Sławomir Jakieła
- [43] – **Studies in yeast revealed a molecular mechanism of neurodegenerative diseases linked to mt-Atp6 mutations**

- Roza Kucharczyk, Emilia Baranowska, Alain Dautant, Katarzyna Niedzwiecka, Jean-Paul di Rago, Deborah Tribouillard-Tanvier, Hubert Dominique Becker
- [43] - **Puzzling path of potassium influx into mitochondria – the story of mitoK_{ATP}**
Piotr Koprowski
- [44] - **Enhancing antiplatelet efficacy through bioenergetic modulation: combined inhibition of glycolysis and oxidative phosphorylation**
Patrycja Kaczara, Anna Kurpińska, Olena Lytvynenko, Agnieszka Kij, Kamil Przyborowski, Katarzyna Rafa-Zabłocka, Stefan Chłopicki
- [45] - **Unravelling metabolic disruptions in MPAN disease – insights from patients fibroblasts**
Agata Wydrych, Barbara Pakula, Patrycja Jakubek-Olszewska, Justyna Janikiewicz, Aneta M. Dobosz, Marta Skowrońska, Iwona Kurkowska-Jastrzębska, Bogusz Kulawiak, Monika Żochowska, Agnieszka Dobrzyń, Magdalena Lebedzinska-Arciszewska, Mariusz R. Wieckowski
- [46] - **Light-mediated activation of mitochondrial BKCa channel protects guinea pig cardiomyocytes against hypoxic injury**
Joanna Lewandowska, Piotr Bednarczyk, Barbara Kalenik, Bogusz Kulawiak, Antoni Wrzosek, Adam Szewczyk
- [47] - **The role of phase separation in regulating animal gene expression**
Adam Kłosin
- [47] - **Enhancing GōMartini 3 approach for the study of conformational changes in large-scale biomolecular assemblies**
Adolfo Poma Bernaola
- [48] - **Back to first principles: models of intrinsically disordered protein conformations**
Radost Waszkiewicz, Barbara P. Klepka, Anna Niedzwiecka
- [48] - **The devil is in details – protein hdx reveals critical changes in dynamics underlying protein functional differences**
Michał Dadlez
- [48] - **In or out? GW182 SD joints the biomolecular condensates party in miRNA-mediated gene silencing**
Michał K. Białołbrzewski, Maja K. Cieplak-Rotowska, Zuzanna Staszałek, Marc R. Fabian, Nahum Sonenberg, Michał Dadlez, Anna Niedzwiecka
- [49] - **Looking for molecular mechanisms of the cytoprotective role of NPAS4**
Beata Greb-Markiewicz, Izabela Krauze, Piotr Kruszyński
- [50] - **How machine learning allows to reconstruct cardiomyocyte action potential from the surface of the body**
Sebastian Wildowicz, Tomasz Gradowski, Elżbieta Katarzyna Biernacka, Karolina Borowiec, Olgierd Woźniak, Igor Olczak, Paulina Figura, Aleksandra Bedełek, Teodor Buchner
- [51] – **Deep learning for medical diagnosis**
Szymon Płotka
- [51] - **From Rosenblatt’s perceptron to jumper’s AlphaFold**
Szymon Nowakowski
- [52] - **Computational insights into targeting Pteridine Reductase 1, a key enzyme from pathogenic trypanosomatids**
Joanna Panecka-Hofman, Ina Pöhner, K. Uszyńska, Edyta Dyguda-Kazimierowicz, Rebecca C. Wade
- [53] - **SimDNA: a coarse-grained method for DNA folding simulations and 3D structure prediction**
Maciej Maciejczyk, Naeim Moafinejad, Michał J. Boniecki, Janusz M. Bujnicki

[54 - 97] - POSTERS**[54] - Innovative applications of known antioxidants: lipid nanocarriers with α -tocopherols - DSC and AFM analysis**

Andrzej Dudek, Bartosz Pruchnik, Małgorzata Serowik, Teodor Gotszalk, Hanna Pruchnik

[55] - Next-Generation Cell Sheet Engineering via Smart Polymer Brush Coatings

Yana Shymborska, Andrzej Budkowski, Yuriy Stetsyshyn

[55] - Platinum nanoparticles interact with idarubicin and affect its biological activity

Marcin Zakrzewski, Patrycja Beldzińska, Grzegorz Gołuński, Dariusz Wyrzykowski, Katarzyna Bury, Jacek Piosik

[56] - How do platinum nanoparticles affect the biological activity of doxorubicin?

Patrycja Beldzińska, Marcin Zakrzewski, Inez Mruk, Natalia Derewońko, Katarzyna Bury, Grzegorz Gołuński, Michał Rychłowski, Jacek Piosik

[57] - Nucleobindin-2 as a potential modulator of biomineralization

Dominika Bystranowska, Jarosław Stolarski, Andrzej Ożyhar

[58] - Insight into the oligomeric state of the Nudt12 NUDIX protein

Maciej Zagrodzki, Anna Modrak-Wójcik, Maciej Łukaszewicz

[58] - Cooperativity between the mRNA 5' cap and 4E-BP binding sites in eIF4E explored via tryptophan mutagenesis and fluorescence lifetime analysis

Aneta Raczyńska, Joanna Żuberek, Anna Modrak-Wójcik

[58] - Dependence of the fluorescence quantum yield of individual tryptophan residues in a protein on the excitation wavelength

Karolina Stachurska-Korzeniowska, Jan M. Antosiewicz

[61] - Treatment of flexibility of protein backbone in simulations of protein-ligand interactions using steered molecular dynamics

Duc Toan Truong, Kiet Ho, Pham Dinh Quoc Huy, Mateusz Chwastyk, Thai Nguyen-Minh, Minh Tho Nguyen

[61] - Biophysical aspects of adipose tissues remodeling during obesity development

Piotr Deptuła, Łukasz Suprewicz, Mariusz Sawieljew, Robert Bucki

[62] - Effects of LPS and FPR2 agonist (IG4) on the mechanical properties of microglial cells

Justyna Śmiałek-Bartyzel, Jakub Frydrych, Krzysztof Łukowicz, Beata Grygier, Ewa Trojan, Agnieszka Basta-Kaim, Małgorzata Lekka

[62] - Substrate viscoelasticity and adhesive ligands as regulators of glioma cell migration

Krzysztof Żochowski, Monika Szczepanek-Dulska, Katarzyna Pogoda, Robert Bucki

[63] - The effect of pollution on the electrophysiology of epithelium – insights from Caco-2 cell model

Gabriela Węglińska, Piotr Bednarczyk, Mirosław Zajac

[64] - IMIX as a parameter used in the evaluation of collagen treatment for lower leg ulcers

Weronika Kawalkiewicz, Anna Majewska, Marta Janus-Kubiak, Anna Marcinkowska-Gapińska, Dorota Hojan-Jezierska, Leszek Kubisz

- [64] - **New 1,2-benzothiazine derivatives as inhibitors of cyclooxygenase with membrane perturbing potency**
Jadwiga Maniewska, Katarzyna Gębczak, Łucja Cwynar-Zajac, Berenika Szczęśniak-Sięga
- [65] - **Toxicity assessment of chitosan-based films modified with quercetin and metals - preliminary wound healing studies**
Beata Bielska, Abdelkrim El Kadib, Katarzyna Miłowska
- [66] - **Physicochemical Descriptors of Halogenated Flavonoids: Insights into Their Antibacterial Potential**
Martyna Perz, Kamila Środa-Pomianek, Anna Pałko-Łabuz, Daria Szymanowska, Edyta Kostrzewa-Susłow, Olga Wesołowska
- [67] - **Activity of immucillins on the purine nucleoside phosphorylase (PNP) from *H. pylori* and on the bacterial growth**
Marta I. Wojtyś, Marta Narczyk, Monika Krystian, Ivana Lešćić Ašler, Agnieszka Bzowska
- [68] - **The role of the mitochondrial BKCa channel in the physiology and damage of respiratory epithelial cells induced by urban particulate matter**
Adrianna Dabrowska-Hulka, Karolina Pytlak, Kamila Maliszewska-Olejniczak, Jakub Hoser, Mirosław Zajac, Bogusz Kulawiak, Piotr Bednarczyk
- [69] - **Radiogenic effects on ion channel function: investigating the role of BKCa potassium channel in DNA damage response**
Michał Fryc, Patrycja Chuchała, Aleksandra Lenartowicz-Gasik, Martyna Araszkiewicz, Mateusz Jakielaszek, Patrycja Kamińska, Urszula Kaźmierczak, Agnieszka Korgul, Jacek Rzadkiewicz, Wojciech Soroka, Bogusz Kulawiak, Piotr Bednarczyk, Kamila Maliszewska-Olejniczak
- [70] - **The role of ion transport induced by modified ionophores and compounds of natural origins**
Jakub Hoser, Mirosław Zajac, Anna Sekrecka-Belniak, Marta Jedrzejczyk, Adam Huczynski, Piotr Bednarczyk
- [70] - **The role of the potassium and chloride transport in the development of inflammation induced by particulate matter**
Sandra Jaworowska, Kamila Maliszewska-Olejniczak, Agnieszka Łukasiak, Jakub Hoser, Mirosław Zajac, Piotr Bednarczyk
- [71] - **Polystyrene nanoparticles interfere with DNA repair mechanisms in human intestinal Caco-2 cell line model**
Agata Kustra, Karolina Pytlak, Bogusz Kulawiak, Piotr Bednarczyk, Kamila Maliszewska-Olejniczak
- [72] - **Electrophysiological Assessment of BK Channel Activity in LRRC26-Positive Cells**
Sz. Talarek, A. Adamska, Maciej Gawlak, Beata Dworakowska, Ewa Nurowska
- [73] - **The inhibitory effect of resveratrol on Kv1.3 channels in jurkat T cells – a putative role in anti-cancer activity**
Andrzej Teisseyre, Anna Uryga, Kamila Środa-Pomianek, Anna Palko-Łabuz
- [74] - **Assessment of TRPM2 Expression in Lymphocytes T Under Hypoxic Conditions**
Artur Wardaszka, Anna Smolarska, Piotr Bednarczyk, Joanna K. Bujak
- [75] - **Effect of mutations in the KCNMA1 gene on BK channel activity**
Anna Sekrecka-Belniak, Beata Dworakowska, Piotr Koprowski, Piotr Bednarczyk

- [75] - **Oligomer formation by the immune response protein IFIT1: a biochemical and biophysical study**
Anna Stankiewicz-Drogon, Joanna Grzymkowska, Tomasz Kobiela, Joanna Krasowska, Beata Wielgus-Kutrowska, Renata Grzela
- [76] - **Molecular spectroscopy as a power tool for studying the porphyrin–DNA interaction**
Olga A. Ryazanova
- [77] - **Bound protein influences triplet state relaxation time of AF488 fluorescent probe**
A. Smuczyńska, Igor Kumela, Barbara P. Klepka, Michał K. Białobrzewski, Radost Waszkiewicz, Anna Niedźwiecka
- [77] - **Quartz Crystal Microbalance with Immobilised Mitochondria as a Label-Free Biosensor for Rapid Screening of Neuroprotective Drugs**
Julia Anchimowicz, Sławomir Jakieła
- [78] - **Study of the expression of cancer biomarkers - EphA2 and survivin using automated capillary electrophoresis**
Hubert Grel, Magdalena Stobiecka
- [79] - **Advancing biomedical research through microfluidics: Microfluidic systems for single-cell analysis, high-precision oxygen release imaging, mechanobiology studies, and dynamic cell culture.**
Barbara Kupikowska-Stobba, Sławomir Błoński, Tetuko Kurniawan, Piotr M. Korczyk
- [80] - **Biosensors as Diagnostic Tools for early detection of cancer biomarkers**
Katarzyna Ratajczak, Magdalena Stobiecka
- [81] - **Electrochemical DNA biosensors for the detection of survivin cancer biomarker**
Diana Więclawik, Magdalena Stobiecka
- [81] - **Proximity labeling reveals new interactors of mitochondrial BK_{Ca} channels**
Bogusz Kulawiak, Monika Żochowska, Shur Gałęcka
- [82] - **What is the role of mitoBK_{Ca} channel in bronchial epithelium exposed to particulate matters (PMs)?**
Karolina Pytlak, Kamila Maliszewska - Olejniczak, Mirosław Zając, Piotr Bednarczyk, Bogusz Kulawiak
- [83] - **Functional reconstitution of diacylglycerol kinase epsilon and its complex with ROMK2 potassium channel in native copolymer nanodiscs**
Milena Szafraniec, Gabriela Traczyk, Natalia Roszkowska, Katarzyna Kwiatkowska, Piotr Koprowski
- [83] - **Liquid–Liquid Phase Separation of a Highly Charged Coral Protein Regulates Calcium Carbonate Formation**
Barbara P. Klepka, Agnieszka Michaś, Tomasz Wojciechowski, Anna Niedźwiecka
- [84] - **Distinguishing specific and nonspecific cation interactions with acid-rich proteins using FCS**
Igor Kumela, A. Smuczyńska, Barbara P. Klepka, Michał K. Białobrzewski, Radost Waszkiewicz, Anna Niedźwiecka
- [84] - **Condensation of Galectin-3 N-terminal domain in Martini 3 Coarse-Grained Simulations**
Paweł Rogowski, Bartosz Różycki
- [85] - **The intrinsically disordered AB region: a key modulator of the molecular properties of human RXR γ**
Katarzyna Sołtys, Krzysztof Skowronek, Dominika Bystranowska, Krzysztof Wycisk, Andrzej Ożyhar

- [85] – **Investigation of aggregation properties of yeast DCs1 protein**
J. Kokosza, Marek Warzecha, Maciej Łukaszewicz
- [86] - **Is the development of molecular biophysics methods subject to the laws of evolution?**
Bogdan Lesyng
- [87] - **Predicting structure and properties of polytryptophan crystals**
Łukasz Mioduszewski
- [88] - **In silico design of molecularly imprinted polymers for remdesivir and its active metabolite**
Agnieszka Powała, Renata Rybakiewicz Sekita, Teresa Żółek
- [89] - **Inside the project agritech: different approaches for the evaluation of safety parameters along the agri-food supply chain**
Alessia Calabrese, Alessandro Capo, Michelangelo Pascale, Sabato D'Auria, Maria Staiano
- [90] - **Multistep loss of catalytic Activity and ligand binding ability of hexameric Purine Nucleoside Phosphorylase from *E. coli***
Marta Narczyk, Agnieszka Bzowska
- [91] - **Illuminating cancer: bioimaging potency of 3-(1,1-dicyanoethenyl)-1-phenyl-4,5-dihydro-1H-pyrazole (DCNP)**
Anna Palko-Łabuz, Kamila Łupińska, Dorota Zając, Martyna Perz, Olga Wesołowska, Kamila Środa-Pomianek, Lech Sznitko
- [92] - **New approaches for milk quality monitoring**
Cristina Giannattasio, Rosaria Cozzolino, Alessandra Di Concilio, Sofia Pellecchia, Sabato D'Auria, Angela Pennacchio
- [92] - **Synergy in antiproliferative activity between various modulators of cellular cholesterol homeostasis in colon cancer cells**
Maria Błaszczuk, Anna Palko-Łabuz, Kamila Środa-Pomianek, Olga Wesołowska
- [93] - **Polystyrene nanoparticles and their epigenetic effects in human peripheral blood mononuclear cells**
Kinga Malinowska, Kateryna Tarhonska, Marek Foksiński, Ewa Jabłońska, Edyta Reszka, Ewelina Zarakowska, Daniel Gackowski, Karolina Górecka, Aneta Balcerczyk, Bożena Bukowska, Paulina Sicińska
- [94] - **Transport mechanism of paracetamol in polymer nanocomposite MATERIALS**
Justyna Strankowska, Małgorzata Grzywińska, Ewelina Łęgowska, Michał Strankowski
- [95] - **Revealing cancer dynamics: The application of pyrimidinebased fluorescent compound for analyzing organelle accumulation with no toxicity in glioma and colon cancer cells**
Kamila Środa-Pomianek, Lech Sznitko, Daria Zając, Aleksandra Dupla, Martyna Perz, Olga Wesołowska, Anna Palko-Łabuz
- [96] - **Identification of volatile organic compounds (VOCs) as markers of goat cheeses ripening: perspectives and applicability in biosensor design**
G. Ferrara, Concetta Montagnese, Rosaria Cozzolino, Sabato D'Auria
- [97] - **Differential analysis of male and female cucumber lines at mRNA and miRNA levels**
Maksymilian Pisz, Szymon Turek, Agnieszka Skarzyńska-Łyżwa, Agata Głuchowska, Magdalena Pawełkiewicz

[97] - Fluorescence Correlation Spectroscopy assay to detect the presence of toxic microcystin-LR molecules in water

Anatonio Varriale, G. Ferrara, Alessandro Capo, Sabato D'Auria

[99 - 106] - CONTENTS