



ISBC

2012

A MESSAGE FROM THE ISBC PRESIDENT:

I would like to welcome you to the International Symposium on Bioluminescence and Chemiluminescence that will be held in Guelph, Canada in 2012. This is the 17th in this long-running series of symposia that have been held previously at venues in Europe, Asia, and North America.

As in previous years, our goal is to provide a platform for presentations on all aspects of bioluminescence and chemiluminescence, both the fundamental and applied aspects. Bioluminescence and chemiluminescence continue to be the basis of important technologies that have had a major impact in both basic and applied research and in routine clinical diagnostics. An integral part of the symposium will be an exhibit of commercial products and we invite companies with reagents and instruments for bioluminescent and chemiluminescent test procedures to exhibit their products at the symposium.

This is the second time ISBC symposium to be held in Canada (the first one was in 1993 in Banff, Alberta) and I am very much looking forward to meeting you at the symposium in Guelph in May 2012.

Larry J Kricka, *President of the ISBC*

ORAL PRESENTATION REQUIREMENTS:

Please note that the time assigned for an oral presentation includes the time for a Question/Answer period. Please plan your talk accordingly.

POSTER REQUIREMENTS:

Poster board size should not to exceed 3' width by 4' height (90cm wide by 110cm high)



LOCAL ORGANIZING COMMITTEE:

CHAIR:

Dr. Lubov Brovko
University of Guelph
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MEMBERS:

Prof. Mansel W. Griffiths
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Prof. John Goddard
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Praxsep Inc.
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EVENT MANAGER:

Mrs. Irina Brovko
iren_brovko@hotmail.com

MON. MAY 28TH

17:00 - 19:00	Registration
19:00 - 20:30	Welcome Reception

TUE. MAY 29TH

8:00 - 9:00	Registration
9:00 - 10:00	Welcome greetings, Introductory Presentations
10:00 - 10:30	Coffee Break
10:30 - 12:00	In vivo Imaging and Bioluminescent Cell-Based Assays(I)
12:05 - 13:30	Lunch
13:30 - 14:30	Poster Session
14:30 - 15:30	In vivo Imaging and Bioluminescent Cell-Based Assays(II)
15:30 - 16:00	Coffee Break
16:00 - 17:30	In vivo Imaging and Bioluminescent Cell-Based Assays(II)

WED. MAY 30TH

8:30 - 10:00	Computational and Theoretical Aspects of Bioluminescence(I)	Biology and physiology of luminous organisms (I)
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Computational and Theoretical Aspects of Bioluminescence(I)	Biology and physiology of luminous organisms (I)
12:00-13:30	Lunch	
13:30-14:30	Poster Session	
14:30-15:30	Computational and Theoretical Aspects of Bioluminescence(II)	Biology and physiology of luminous organisms (II)
15:30 - 16:00	Coffee Break	
16:00 - 18:00	Computational and Theoretical Aspects of Bioluminescence(II)	Biology and physiology of luminous organisms(II) Bioluminescence - Fundamentals (I)

THU. MAY 31ST

8:30 - 17:00	Day trip to Niagara Falls
17:00 - 18:00	ISBC Council Meeting

FRI. JUNE 1ST

8:30 - 10:00	Bioluminescence - Fundamentals (II)	Chemiluminescence - Fundamentals
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Bioluminescence - Fundamentals (II)	Chemiluminescence - Fundamentals
12:00-13:30	Lunch	
13:30 -15:30	Bioluminescence - Fundamentals (III)	Chemiluminescence - Fundamentals
15:30-16:00	Coffee Break	
16:00-18:00	Bioluminescence - Fundamentals (III)	
19:00 -21:00	Banquet	

SAT. JUNE 2ND

8:30 - 10:00	Bioluminescence - Applications	Chemiluminescence - Applications
10:00 - 10:30	Coffee Break	
10:30 - 12:00	Bioluminescence - Applications	Chemiluminescence - Applications
12:00 - 13:30	Lunch	
13:30 - 14:30	Bioluminescence - Applications	

TUE. MAY 29TH IN VIVO IMAGING AND BIOLUMINESCENT CELL-BASED ASSAYS (I)*CHAIRS: E. Michelini & Y. Ohmiya*

10:30 - 11:00	E. Michelini, L. Cevenini, C. Canali, L. Ekstrom, J. Schulze, M. Garle, A. Rane, A. Roda	Whole-cell bioluminescent biosensor for on-site antidoping screening.
11:00 - 11:30	SV Markova, LP Burakova, ES Vysotski	High active truncated luciferase of copepod <i>Metridia longa</i> and its characterization as secreted reporter in mammalian cells
11:30 - 12:00	J. Lampinen, J. Choi, M. Dobbs, D. Hughes, J. Narahari, B. Webb	Novel single-step dual luciferase reporter gene assays using spectral resolution

TUE. MAY 29TH IN VIVO IMAGING AND BIOLUMINESCENT CELL-BASED ASSAYS (II)*CHAIRS: E. Michelini & Y. Ohmiya*

14:30 - 14:50	DG Deryabin, IF Karimov	Bioluminescent measurement of innate immunity bactericidal factors
14:50 - 15:10	D. Close, S. Ripp, S. Patterson, G, Sayler	The use of autonomously bioluminescent human cell lines for detection of bacterial contamination
15:10 - 15:30	R. Akiyoshi, H. Suzuki	Preliminary attempt for pharmacometrics assay by bioluminescence imaging in <i>Drosophila</i> embryogenesis
16:00 - 16:30	L. Mezzanotte, Na An, E. Kaijzel, C. Lowik	Development of a triple color bioluminescent breast cancer cell line for high content analysis
16:30 - 16:50	N. Morita, S. Haga, T. Ozawa, SJ Remington, M. Ozaki	Bio-imaging of surgical stress: Dynamic analysis of liver oxidative stress and damage
16:50 - 17:20	Y. Ohmiya, Chun Wu	Bioluminescence in vivo imaging using a <i>Cypridina</i> luciferase

TUE. MAY 30TH COMPUTATIONAL AND THEORETICAL ASPECTS OF BIOLUMINESCENCE (I)*CHAIRS: R. Lindh & J. Goddard*

08:30 - 09:00	X. Li, L. W. Chung, L. Ding, K. Morokuma	Theoretical studies on dynamics, mechanism and active species in luminescence and photoconversion of chromophores in protein
09:00 - 09:30	A. Krylov	Quantum chemistry behind bioimaging: Insights from ab initio studies of Fluorescent proteins and their chromophores

WED. MAY 30TH COMPUTATIONAL AND THEORETICAL ASPECTS OF BIOLUMINESCENCE (I)*CHAIRS: R. Lindh & J. Goddard*

09:30 - 10:00	Jun-Ya Hasegawa	Color tuning in photofunctional proteins: electronic structure and interactions
10:30 - 11:00	I Navizet, Y-J Liu, N Ferre, D Roca-Sanjuan, M. Delcey, R. Lindh	The chemistry of Bioluminescence: An analysis of chemical functionalities
11:00 - 11:20	FN Tomilin, LV Tikhonova, EV Eremeeva, SG Ovchinnikov, ES Vysotski	Quantum chemical study of 2-hydroperoxycoelentraine generation
11:20 - 11:40	D. Roca-Sanjuan, MG Delcey, I. Navizet, N. Ferre, Ya-Jun Liu, R. Lindh	WARNING! The light-emitting molecular structures responsible for the chemiluminescence and fluorescence phenomena are not necessarily the same!
11:40 - 12:00	Luis Pinto da Silva , Joaquim CG Esteves da Silva	Computational Investigation of the Photinus pyralis luciferase-oxyluciferin system

WED. MAY 30TH COMPUTATIONAL AND THEORETICAL ASPECTS OF BIOLUMINESCENCE (II)*CHAIRS: K Morokuma & Joaquim CG Esteves da Silva*

14:30 - 15:00	Xue Qin Ran, JD Goddard	Theoretical study of the spectral-structure relations of series of oxyluciferin derivatives
15:00 - 15:30	Ling Yue, Ya-Jun Liu	Mechanistic insights into chemiluminescent decomposition of firefly dioxetane
16:00 - 16:30	D Cai, MAL Marques, F Nogueira	pH Sensitivity of color shift of firefly chromophore due to electrostatic field from neighboring water ions
16:30 - 17:00	Luis Pinto da Silva, Joaquim CG Esteves da Silva	Recent advances on the Computational studies of Oxyluciferin from Firefly luciferase
17:00 - 17:20	I Navizet, Ya-Jun Liu, N. Ferre, Shu-Feng Chen, Hong-Yan Xiao, R. Lindh	Light emission in firefly: a theoretical study
17:20 - 17:40	Ai-Min Ren, Chungang Min, J Goddard	Some investigations on the chemical origin of the multicolor bioluminescence and mechanism for firefly
17:40 - 18:00	Chang-ik Song, Young Min Rhee	Emission modulations in the bioluminescent firefly luciferase-oxyluciferin system studied by molecular dynamics on the electronically excited potential energy surface

WED. MAY 30TH BIOLOGY AND PHYSIOLOGY OF LUMINOUS ORGANISMS (I)

CHAIRS: SHD Haddock & J. Mallefet

08:30 - 09:15	SHD Haddock, ML Powers, NC Shaner, AG McDermott, LM Christianson	Diversity and Evolution of Calcium-Activated Photoproteins
09:15 - 09:40	J. Gitelson, V. Bondar, E. Rodicheva, S. Medvedeva, G. Vydryakova	Chemiluminescence of higher fungi
09:40 - 10:00	A. Gouveneaux, and J. Mallefet	First description of neural control mechanisms in bioluminescence of <i>Tomopteris helgolandica</i> (Annelida, Polychaeta)
10:30 - 11:15	J. Mallefet	News in Echinoderm's luminescence
11:15 - 11:35	A. Gohain Barua	Diffraction of the bioluminescent light of the firefly
11:35 - 11:55	Martini, S., Nerini, D., Tamurini, C.	How to analyze bioluminescence time series from in situ observatories? Example from high frequency records and real time data at the ANTARES site

WED. MAY 30TH BIOLOGY AND PHYSIOLOGY OF LUMINOUS ORGANISMS (II)

CHAIRS: J. Gitelson & V. Viviani

14:30 - 14:50	J. Delroisse, J. Mallefet, and P. Flamming	Between emission and perception: do luminous brittle-stars perceive their own light?
14:50 - 15:10	A. Jones, J. Mallefet	New evidence to "burglar-alarm" function of bioluminescence in the ophiuroid species <i>Ophiopsila aranea</i>
15:10 - 15:30	M. Renwart, Mallefet, J.	Light emitting system in a deep sea shark: <i>Etmopterus spinax</i> (Squaloidea: Etmopteridae)
16:00 - 16:20	M. Plyuscheva, A. Goni, N. Aneli, and F. Kondrashov	Bioluminescence and fluorescence in scale-worms (Polychaeta, Polynoidea)

WED. MAY 30TH BIOLUMINESCENCE – FUNDAMENTALS (I)

CHAIRS: V. Viviani & SV Stevani

16:30 - 17:00	V. Viviani, RA Prado	From Darkness to Brightness: origin and Artificial Evolution of Luciferase activity in <i>Zophobas morio</i> mealworm AMP-ligase (Protoluciferase)
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WED. MAY 30TH BIOLUMINESCENCE – FUNDAMENTALS (I)*CHAIRS: V. Viviani & SV Stevani*

17:00 - 17:20	DT Amaral, Prado RA, Viviani V	A new luciferase from <i>Fulgeochizus bruchi</i> , a Brazilian click-beetle with a single abdominal lantern: cDNA cloning, molecular properties and evolution (Coleoptera:Elateridae)
17:20 - 17:40	AG Oliveira, RP Carvalho, HE Waldenmaier, VR Viviani, SV Stevani	On purification of the NAD(P)H dependent reductase involved in fungal bioluminescence

FRI. JUNE 1ST BIOLUMINESCENCE – FUNDAMENTALS (II)*CHAIRS: N. Ugarova & B. Branchini*

08:30 - 09:00	VR Viviani	Multicolor Brazilian Beetle luciferases: Structural origin of bioluminescence spectra, biotechnological and environmental applicability
09:00 - 09:30	MI Koksharov, NN Ugarova	Combined effect of mutations stabilizing green and red emitters on bioluminescence of firefly luciferase
09:30 - 10:00	K. Terakado, R. Yoshimune, K. Gomi, N. Kajiyama, H. Ikeuchi, J. Hiratake, H. Kato, T. Nakatsu	Structural basis for color modulations mechanism of firefly luciferase bioluminescence
10:30 - 11:00	S. Hosseinkhani, M. Nazari, M. Imani	Stability and color shift of <i>Photinus pyralis</i> firefly luciferase upon introduction of sequential disulfide bridges
11:00 - 11:30	Yu Wang, Yuhei Hayamizu, Hidefumi Akiyama	Spectroscopic study on oxyluciferin-luciferase complex in firefly bioluminescent reaction solution and clues to understand the color tuning mechanism
11:30 - 12:00	P. Naumov, K.M. Soltsev, S. Laptенок	Enol or Keto - that is the question: Steady-state and time-resolved spectroscopy of firefly oxiluciferin and its derivatives

FRI. JUNE 1ST BIOLUMINESCENCE – FUNDAMENTALS (III)*CHAIRS: S. Hosseinkhani & V. Kratasyuk*

13:30 - 14:00	BR Branchini, JC Rosenberg, DM Fontaine, TL Southworth, CE Behney, L Uzasci	The half reaction of firefly luciferase bioluminescence proceeded via the domain alternation mechanism
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FRI. JUNE 1ST BIOLUMINESCENCE – FUNDAMENTALS (III)*CHAIRS: S. Hosseinkhani & V. Kratasyuk*

14:00 - 14:20	YA Modestova, GY Lomakina, NN Ugarova	The role of non-conservative Cys 62, 86, 146, and 164 residues in the functioning of <i>Luciola mingrelica</i> luciferase)
14:20 - 14:40	VR Viviani, Amaral D, Prado RA, Arnoldi FGC	The blue shifted luciferase from the Brazilian <i>Amydetes fanestratus</i> (Coleoptera:Lampyridae) firefly: molecular evolution and structure/ functional properties
14:40 - 15:00	ML Powers, S Haddock	Cloning, expression, and purification of the photoprotein responsible for luminescence in the deep-sea Ctenophore <i>Bathocyroe fosteri</i>
15:00 - 15:20	K. Niwa, Y. Ichino, M. Maenaka, T. Kubo, Y. Hirashi, D-I Kato, Y. Ohmiya	Quantum yield and kinetics of the bioluminescence reaction using various beetle luciferases
15:20 - 15:40	DV Gulnov, EV Nemtseva, MA Gerasimova, VA Kratasyuk.	Estimation of hydrodynamic volume of NADH and FMN in viscous media by fluorescence anisotropy technique
16:20 - 16:40	IE Sukovataya, OS Sutormin, VA Kratasyuk	Fluorescence studies of thermal affect on enzymes of the couples enzymatic system of luminous bacteria NADH:FMN oxidoreductase-luciferase in viscous media
16:40 - 17:00	OS Sutormin, IE Sukovataya, VA Kratasyuk	Thermal stability of coupled enzyme system NADH:FMN oxidoreductase-luciferase in solvents of different viscosity
17:00 - 17:20	AG Oliveira, RP Carvalho, CV Stevani	On the purification of the fungal luciferin
17:20 - 17:40	EV Nemtseva, MA Gerasimova, TI Avsievich, VA Kratasyuk	Heterogeneous binding of 1-anilinonaphtalene-8-sulfonate to bacterial luciferase from steady-state and time-resolved fluorescence

FRI. JUNE 1ST CHEMILUMINESCENCE – FUNDAMENTALS*Chairs: W. Baader & A. Trofimov*

08:30 - 09:00	WJ Baader, FA Augusto, FH Bartoloni, LFM Ciscato	Peroxyoxalate chemiluminescence: mechanisms and applications
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FRI. JUNE 1ST CHEMILUMINESCENCE – FUNDAMENTALS*Chairs: W. Baader & A. Trofimov*

09:00 - 09:20	FA Augusto, FH Bartoloni, WJ Baader	Peroxyoxalate chemiluminescence in aqueous medium: concurrence between hydrolysis and perhydrolysis
09:20 - 09:40	O. Nozaki, H. Kubota, M. Shizuma, M. Munesue, T. Ikeda	Spectrum of the chemiluminescence from the heme-catalyzed imidazole chemiluminescence
09:40 - 10:00	LFML Ciscato, JW Baader	First experimental evidence for intramolecular electron transfer in induced 1,2 dioxetane decomposition obtained from Hammett linear free energy correlations
10:30 - 11:00	DI Batovska, GF Fedorova, VD Kancheva, VA Menshov, VV Naumov, AV Trofimov, YB Tsaplev, RF Vasil'ev	Scrutinizing the oxidative and antioxidant properties of biologically active species: Fundamentals of the chemiluminescence approach
11:00 - 11:20	Yi He, Hua Cui	Synthesis of Highly Chemiluminescent Graphene Oxide/metal Nanoparticles Nano-Composites and Their Analytical Applications
11:20 - 11:40	KN Swanick, S. Ladouceur, E. Zyzman-Colman, Z. Ding	Electrogenerated Chemiluminescence of iridium(III) complexes
11:40 - 12:00	YT Zholudov, OM Bilash, AV Kukoba, MM Rozhitskii	Spectroscopic Identification of emitter in electroluminescent reaction with tetraphenylborate anion
13:30 - 14:00	DV Kazakov, FE Safarov, TA Nazirov, OB Kazakova, AO Terent'ev, DA Borisov, W Adam	Chemiluminescence of 1,2,4-trioxolanes and 1,2,4,5-tetroxanes: Fundamentals and possible biomedical applications
14:00 - 14:20	D. Weiss, LFML Ciscato, WJ Baader, D. Ziegenbalg, D. Kralisch, R. Beckert	Progress in the Synthesis of 1,2-dioxetanes
14:20 - 14:40	K Novikov, O. Yablonskaya, N. Berdnikova, A. Novikov, E. Bouravleva, V. Voeikov	Modulation of luminescence intensity of whole non-diluted human blood by hydrated fullerenes in ultralow doses
14:40 - 15:00	O. Yablonskaya, VL Voeikov, ND Vilenskaya, SI Malishenko, KN Novikov	Effect of hydrated fullerenes on the luminescence of bacterial luciferase, of whole blood, and of bicarbonate water solutions
15:00 - 15:20	N.M. Ayvazyan, A.E. Zaqaryan	The process of free radical oxidation in phylogenic development of vertebrates

SAT. JUNE 2ND BIOLUMINESCENCE – APPLICATIONS*CHAIRS: A. Roda & N.N. Ugarova*

08:30 - 09:00	A. Roda, C. Canali, E. Michelini, L. Ceveninin, L.S. Dolchi, P. Simoni, B.R. Branchini	New tools for multiplexed bio-chemiluminescent biosensors: metabolically biotinylated thermostable Red- and Green emitting photinus pyralis luciferases
09:00 - 09:30	D. Turner, J. Sun, S. Nelson, V. Sailsbury, DM Reynolds	Quantitative analysis of bacteriophage plaque expansion by use of bioluminescent imaging
09:30 - 10:00	L.A. Frank, V.V. Krasitckaya, A.N. Kudryavtsev, L.P. Burakova, G.A. Stepanyuk, S.V. Markova, E.S. Vysotskii	Bioluminescent re-engineered proteins as effective reporters for in vitro assay
10:30 - 11:00	N.N. Ugarova, M.I. Koksharov, G.Y. Iomakina, V.G. Frundzhyan, I.V. Yashin	“Lumtek” bioluminescent test systems
11:00 - 11:30	Lundin, A., B. Malm, N. Touma	Comparison of purity and activity of D-luciferin from 8 manufacturers
11:30 - 12:00	V. Kratasyuk, E. Esimbekova	Bioluminescent enzymatic biosensors: from idea to laboratory
13:30 - 13:50	D.V. Smirnova, M.I. Koksharov, N.N. Ugarova	Fusion proteins of <i>Luciola mingrelica</i> luciferase: preparation, properties, application
13:50 - 14:10	K. Karasawa, Y. Sano, H. Arakawa	Development of novel telomerase assay by bioluminescent detection method
14:10 - 14:30	N.S. Kudryashova, M.A. Alexandrova, T.V. Rohko	Using bioluminescent assay to monitor radioactive toxicity

SAT. JUNE 2ND CHEMILUMINESCENCE – APPLICATIONS*CHAIRS: M.M. Rozhitskii & Hua Cui*

08:30 - 09:00	Hua Cui	Chemiluminescence functionalized nanoprobe for bioassays
09:00 - 09:20	C. Rosticher, C. Chaneac, B. Viana, A. Bessiere	Synthesis and optical characterization of nanoparticles with persistent luminescence in the red-near infrared range

SAT. JUNE 2ND CHEMILUMINESCENCE – APPLICATIONS*CHAIRS: M.M. Rozhitskii & Hua Cui*

09:20 - 09:50	O.A. Sushko, O.M. Bilash, M.M. Rozhitskii	New nanophotonic detection method of carcinogenic polycyclic aromatic hydrocarbons by example of benzo(a) pyrene
10:30 - 11:00	I.Yu. Sakharov, M.M. Vdovenko	Plant peroxidases-catalyzed detection systems and their use in ultrasensitive chemiluminescent enzyme immunoassay
11:00 - 11:20	G.F. Fedorova, V.A. Menshov, A.V. Trofimov, Yu.B. Tsaplev, R.F. Vasil'ev	Oxidants and antioxidants in the cigarette smoke. Chemiluminescent monitoring
11:20 - 11:40	D.V. Snizhko, M.M. Rozhitskii	Chemiluminescent system of antioxidant activity definition of bioobjects
11:40 - 12:00	K. Muzyka, O. Bilash, Y. Zholudov, A. Kukoba, M Rozhitskii	Electroluminescent determination of free unconjugated bilirubin in aquatic solution

LIST OF POSTER PRESENTATIONS:

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|----|---|--|
| 1 | Gelatin and starch as stabilizers of bacterial luciferase and oxidoreductase | Bezrukikh A., E. Esimbekova, V. Kratasyuk |
| 2 | A firefly luciferase based turn-on sensor for biothiols | DM Fontaine, J. Yi, BR Branchini |
| 3 | NanoLight technology-based probe, a useful tool for detection of apoptotic cells | M. Nazari, R. Emazadeh, S. Hosseinkhani, L. Ceveninin, E. Micheline, A. Roda |
| 4 | Interaction of Halogenated compounds with bioluminescent enzymes | TN Kirillova, MA Gerasimova, EV Nemtseva, NS Kudryashova |
| 5 | General toxicity of heavy metal solutions in the presence of humic substances. Bioluminescent monitoring | Kislan SL, Tarasova AS, Kudryashova, NS |
| 6 | Simultaneous determination of SNP genotypes by photoprotein obelin and <i>R. muelleri</i> luciferase | VV Krasitckaya, LP Burakova, LA Frank |
| 7 | Characteristics of coupled enzymatic system of luminous bacteria co-immobilized with substrates and stabilizers into starch gel | V. Lonshakova, E. Esimbekova, V. Kratasyuk |
| 8 | Dual-analyte single-well bioluminescence immunoassay based on Obelin color mutants | AN Kudryavtsev, VV Krasitckaya, LA Frank |
| 9 | Biotinylated in vivo Obelin produced in <i>E. coli</i> cells | Larionova MD, Markova SV, Frank LA, Vysotskii ES |
| 10 | Conjugation of <i>Luciola mingrelica</i> firefly luciferase with biospecific proteins through the enzyme SH-groups | GY Lomakina, NN Ugarova |
| 11 | Bioluminescent assays for monitoring air pollution | Rimatskaya NV, Nemtseva EV, Kratasyul VA |
| 12 | Effect of Tritium on Bioluminescent System | MA Alexandrova, GA Badun, NS Kudryashova |
| 13 | Thermoinactivated photoprotein obelin: fluorescence peculiarities | RR Alieva, NV Belogurova, AS Petrova, NS Kudryashova |
| 14 | Origin and evolution of photogenic tissue in larval fireflies | P. Tonolli, F.C. Abdalla, V. R. Viviani |
| 15 | Fluorescence spectra of discharged photoprotein Obelin at different calcium concentrations | NV Belogurova, NS Kudryashova |
| 16 | Sensitivity of Ca ²⁺ regulated photoprotein bioluminescence to magnesium ions is determined by EF-hand motif III | Burakova LP, Malikova NP, Vysotskii ES |
| 17 | Fast kinetics of bioluminescent emitting species | Eremeeva EV, Leferink NGH, Visser AJWG, Markova SV, van Berkel WJH, Vysotskii ES |

LIST OF POSTER PRESENTATIONS:

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| 18 | Enantioselective thioesterification activity in bioluminescent enzyme, firefly luciferase | Dai-ichiro Kato, Y. Hiraishi, K. Yokoyama, K. Niwa, Y. Ohmiya, M. Takeo, S. Negoro |
| 19 | Effect of the substitutions G216N/A217L and S398M on thermal stability, activity and bioluminescence color of <i>L. mingrelica</i> luciferase | MI Koksharov, NN Ugarova |
| 20 | Color tuning of bioluminescence reaction by modifying the hydrogen bond network around the active site in firefly luciferase | M. Maenaka, D-I. Kato, T. Kubo, K. Niwa, Y. Ohmiya, M Takeo, S. Negoro |
| 21 | Characterization and site-directed mutagenesis of the luciferin binding site of Malpighian luciferase-like enzyme from <i>Zophobas morio</i> (Coleoptera:Tenebrionidae) | Prado R, Barbosa JA, Viviani V |
| 22 | Chemiluminescence characteristics of Quinoxaline derivative as green fluorophores in Peroxyoxalate hydrogen peroxide system | MJ Chaichi, A. Khdabandeh, R. Akhoondi, T. Khajvand, MR Sadeghi Maleki |
| 23 | Optimization of chemiluminescence based on peroxide-sodium hydrogen carbonate-CdS quantum dot system using Box-Behnken design | SN Azizi, MJ Chaichi, P. Shakeri |
| 24 | Study on the second order scattering spectrum of new type rhodamine derivative neomycin microemulsion | S Ge, X Jiao, D Chen |
| 25 | Enhancing chemiluminescence reaction of luminal from specific species of <i>Lumbricus rubellus</i> Earthworm | MJ Chaichi, A. Khodabandeh, R. Akhoondi, A. Esmaeli, M Parvar |
| 26 | Synthesis and chemiluminescence of N-(5-Halogen-2-Oxo-2,3-dihydrobenzofuran-3-yl) benzamides | S. Schramm, D. Weiss, R. Beckert |
| 27 | Chemiluminescence of firefly luciferin in deoxygenated DMSO solutions with <i>t</i> -BuOX[X=Na,K] | R. Sibata, K. Hatanaka, N. Wada |
| 28 | Study of Mechanisms of Singlet Oxygen Generation by Energy Transfer Processes from Excited Quantum Dots | IV Berzovska, MM Rozhitskii |
| 29 | Chemiluminescence characteristics of furan derivatives as blue fluorophores in peroxyoxalate-hydrogen peroxide system | M. J. Chaichi , S.N. Azizi, M. Heidarpour, O.Aalijanpour, M.Qandalee |
| 30 | Electrochemiluminescence determination of an antihistamine pharmaceuticals, dioxylamine succinate | R. Ghobadian, MJ Chaichi, MR Ganjali, P Norouzi, M Hosseini |

LIST OF POSTER PRESENTATIONS:

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| 31 | Indirect chemiluminescence-based determination of catecholamines in pharmaceutical formulations by diethyl 2-(tert-butylamino)-5-biphenyl-3,4-furandicarboxylate as a novel blue fluorophores in peroxyoxalate system | MJ Chaichi, T. Khadjvand, S. Asghari, M. Qandalee |
| 32 | Resonance Rayleigh scattering technology for determination of nucleic acids at nanogram levels | Yanjing Chen, Shuzhen Pan |
| 33 | Fluorescence spectroscopic study on the interaction between bovine serum albumin and silymarin | Yanjing Chen, Yan Guo |
| 34 | Tb+3 -protocatechuic acid complex as probe for determination of protein | Yanjing Chen, Xiaomei Bi |
| 35 | Catalytic fluorescence method for determination of trace vanadium | S Ge, X Jiao, D Chen |
| 36 | Application of Immunoluminescence for tumor cell immunophenotyping and functional analysis of cell surface proteins | F. Laube |
| 37 | Effect of Ethylenediamin Bispyridine copper (II) perchlorate as an enhancer of luminal chemiluminescence | O. Nazari, A. Ehtesham, MJ Chaichi, H. Golchoubian, J. Mehrzad |
| 38 | Chemiluminescence measurement of autotoxin activity in human serum | M. Guardigli, M Di Fusco, M. Mirasoli, P. Simioni, F. Azzaroli, G. Mazzella, A. Roda |
| 39 | Parovirus B19 DNA detection in serum samples employing a microfluidic device based on chemiluminescence contact imaging | M. Mirazoli, LS Dolci, F. Bonvicini, A Buragina, F Di Furio, M. Zangheri, M. Guardigli, G Gallinella, A. Roda |
| 40 | Antiradical capacity evaluation of extracts and infusions from Baccharis regnelli using a chemiluminescent assay procedure | FU de Matos, S de Oliveiora, MJP Ferreira, OA Favero, NP Lopes, WJ Baader, P Romoff |
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