



ANEXA 1

FIȘA DE EVALUARE GENERALĂ A STANDARDELOR UNIVERSITĂȚII

CRITERII	DESCRIPTORI	PUNCTAJE ACORDATE
I. ACTIVITATEA DE CERCETARE (70%) 5737.18 x70% = 4016	1. Articole științifice publicate <i>in extenso</i> în reviste cotate <i>Web of Science</i> cu factor de impact	(60 puncte x factor de impact + 25) / număr autori 1232
	2. Articole științifice publicate <i>in extenso</i> în reviste indexate fără factor de impact	20 puncte / număr autori
	3. Articole științifice publicate <i>in extenso</i> în reviste indexate BDI	15 puncte / număr autori
	4. Articole științifice publicate <i>in extenso</i> în volumele conferințelor	indexate ISI: 30 puncte / număr autori 13.75
		indexate în BDI: 15 puncte / număr autori
		alte categorii: 5 puncte / număr autori
	5. Cărți științifice publicate (doar prima ediție)	edituri academice internaționale: 100 puncte la 100 pagini / număr autori
		alte edituri internaționale: 70 puncte la 100 pagini / număr autori
		edituri academice naționale: 50 puncte la 100 pagini / număr autori 86
		alte edituri naționale: 20 puncte la 100 pagini / număr autori
	6. Cărți științifice traduse și publicate în edituri din străinătate	100 puncte la 100 pagini / număr autori
	7. Coordonarea și editarea de volume, traduceri și antologii	edituri academice internaționale: 60 puncte / număr autori
		alte edituri internaționale: 40 puncte / număr autori
		edituri academice naționale: 30 puncte / număr autori
		alte edituri naționale: 15 puncte / număr autori
	8. Articole publicate în dicționare și enciclopedii	edituri academice internaționale: 30 puncte / număr autori
		alte edituri internaționale: 20 puncte / număr autori
		edituri academice naționale: 15 puncte / număr autori
		alte edituri naționale: 5 puncte / număr autori
	9. Contracte de cercetare științifică în instituții academice (universități, institute ale Academiei Române, institute naționale de cercetare, institute de cercetare din străinătate, alte categorii de institute academice)	contracte internaționale – director: 100 puncte pentru fiecare 100.000 Euro
		contracte internaționale – membru: 100 puncte pentru fiecare 100.000 Euro / numărul membrilor echipei de cercetare 53
		contracte naționale – director: 50 puncte pentru fiecare 500.000 lei 30



CRITERII	DESCRIPTORI	PUNCTAJE ACORDATE
		contracte naționale – membru: 50 puncte pentru fiecare 500.000 lei / numărul membrilor echipei de cercetare 83.62
	10. Contracte de cercetare în mediul de afaceri și sectorul public	organizații internaționale: 100 puncte pentru fiecare 100.000 Euro
		firmе multinaționale: 100 puncte pentru fiecare 100.000 Euro
		firmе naționale: 50 puncte pentru fiecare 500.000 Euro
		organizații administrative naționale: 40 puncte pentru fiecare 500.000 Euro
		alte organizații publice de nivel național: 30 puncte pentru fiecare 500.000 Euro
	11. Brevete	internaționale: 100 puncte / număr de autori
		naționale: 30 puncte / număr autori
	12. Citări și recenzii ale lucrărilor științifice	reviste de specialitate din străinătate: (10 + 20 x factor de impact) / număr autori, pentru fiecare citare 3877
		reviste de specialitate din țară: (5 + 10 x factor de impact) / număr autori, pentru fiecare citare 3.81
		monografii academice din străinătate: 50 puncte / număr autori, pentru fiecare citare
		monografii academice din țară: 25 puncte / număr autori, pentru fiecare citare
	13. Lucrări susținute în calitate de invitat la manifestări științifice (conferințe, congrese, simpozioane, seminarii și ateliere de lucru)	străinătate: 25 puncte pentru fiecare activitate
		țară: 10 puncte pentru fiecare activitate 10
	14. Profesor/cercetător invitat la universități/institute de cercetare	străinătate: 25 puncte pentru fiecare activitate
		țară: 10 puncte pentru fiecare activitate
	15. Editor/Membru în <i>Editorial Board & Advisory Board</i>	reviste cotate <i>Web of Science</i> : editor, 30 puncte pentru fiecare revistă; membru, 20 puncte pentru fiecare revistă
		reviste internaționale și alte reviste ale Universității: editor, 15 puncte pentru fiecare revistă; membru, 10 puncte pentru fiecare revistă
	16. Premii internaționale obținute printr-un proces de selecție	100 puncte / categorie / număr persoane
	17. Premii ale Academiei Române	50 puncte / categorie / număr persoane
	18. Alte premii naționale ale instituțiilor culturale	20 puncte / categorie / număr persoane
	19. Participări la manifestări științifice	internaționale: președinte comitet organizare/consiliu științific, 25 puncte



CRITERII	DESCRIPTORI	PUNCTAJE ACORDATE
II. ACTIVITATEA DIDACTICĂ (30%) 213.4 x30% =64.02		<p>pentru fiecare activitate; membru comitet organizare/consiliu științific, 15 puncte pentru fiecare activitate; moderator de panel, 15 puncte pentru fiecare activitate; raportor pe secțiuni/paneluri, 10 puncte pentru fiecare activitate</p> <p style="text-align: right;">310</p>
		<p>naționale: președinte comitet organizare/consiliu științific, 15 puncte pentru fiecare activitate; membru comitet organizare/consiliu științific, 5 puncte pentru fiecare activitate; moderator de panel, 5 puncte pentru fiecare activitate; raportor pe secțiuni/paneluri, 2 puncte pentru fiecare activitate</p> <p style="text-align: right;">38</p>
	1. Tratatе și manuale universitare	<p>30 puncte la 100 pagini / număr de autori</p> <p style="text-align: right;">53.4</p>
	2. Proiecte didactice (înființare/dotare laboratoare licență, master, săli workshop, biblioteci proprii facultăților, departamentelor, laboratoarelor și grupurilor de cercetare)	40 puncte pentru fiecare activitate
	3. Materiale suport curs, seminar, lucrări practice și programe analitice detaliate	<p>10 puncte pentru fiecare activitate</p> <p style="text-align: right;">160</p>
	4. Organizare de aplicații și practică de specialitate	5 puncte pentru fiecare activitate

Punctaj Total (70% I + 30% II) = 4080

Justificare punctaj:

I. ACTIVITATEA DE CERCETARE (70%)

I. 1. Articole științifice publicate *in extenso* în reviste cotate *Web of Science* cu factor de impact [(60 puncte x factor de impact + 25) / număr autori]

FI – factor impact

- Asandei, A., Ciuca, A., Apetrei, A., Schiopu, I., **Mereuta, L.**, Seo, C.H., Park, Y., Luchian, T, *Nanoscale Investigation of Generation 1 PAMAM Dendrimers Interaction with a Protein Nanopore*, SCIENTIFIC REPORTS Volume: 7 Article Number: 6167 Published: JUL 21 2017 **35**
FI 4.25
- Asandei, A., Chinappi, M., Kang, H.-K., Seo, C.H., **Mereuta, L.**, Park, Y., Luchian, T., *Acidity-Mediated, Electrostatic Tuning of Asymmetrically Charged Peptides Interactions with Protein Nanopores*, ACS APPLIED MATERIALS & INTERFACES Volume: 7 Issue: 30 Pages: 16706-16714 Published: AUG 5 2015 **64.77**
FI 7.14



3. Asandei, A., Chinappi, M., Lee, J.-K., Seo, C.H., **Mereuta, L.**, Park, Y., Luchian, T. *Placement of oppositely charged aminoacids at a polypeptide termini determines the voltage-controlled braking of polymer transport through nanometer-scale pores*, SCIENTIFIC REPORTS Volume: 5 Article Number: 10419 Published: JUN 1 2015 **56.37**
FI 5.22
4. Asandei, A., Iftemi, S., **Mereuta, L.**, Schiopu, I., Luchian, T. *Probing of Various Physiologically Relevant Metals: Amyloid-beta Peptide Interactions with a Lipid Membrane-Immobilized Protein Nanopore*, JOURNAL OF MEMBRANE BIOLOGY Volume: 247 Issue: 6 Pages: 523-530 Published: JUN 2014 **34.4**
FI 2.45
5. **Mereuta, L.**, Roy, M., Asandei, A., Lee, J.K., Park, Y., Andricioaei, I., Luchian, T. *Slowing down single-molecule trafficking through a protein nanopore reveals intermediates for peptide translocation*, SCIENTIFIC REPORTS Volume: 4 Article Number: 3885 Published: JAN 27 2014 **51.31**
FI 5.57
6. **Mereuta, L.**, Asandei, A., Seo, C.H., Park, Y.d, Luchian, T. *Quantitative Understanding of pH- and Salt-Mediated Conformational Folding of Histidine-Containing, beta-Hairpin-like Peptides, through Single-Molecule Probing with Protein Nanopores* ACS APPLIED MATERIALS & INTERFACES Volume: 6 Issue: 15 Pages: 13242-13256 Published: AUG 13 2014 **85.64**
FI 6.72
7. Asandei, A., Schiopu, I., Iftemi, S., **Mereuta, L.**, Luchian, T. *Investigation of Cu²⁺ Binding to Human and Rat Amyloid Fragments A beta (1-16) with a Protein Nanopore*, LANGMUIR Volume: 29 Issue: 50 Pages: 15634-15642 Published: DEC 17 2013 **57.56**
FI 4.38
8. **Loredana Mereuta**, Irina Schiopu, Alina Asandei, Yoonkyung Park, Kyung-Soo Hahm, and Tudor Luchian *Protein Nanopore-Based, Single-Molecule Exploration of Copper Binding to an Antimicrobial-Derived, Histidine-Containing Chimera Peptide* dx.doi.org/10.1021/la303782d | Langmuir 2012, 28, 17079–17091 **45.97**
FI 4.18
9. Schiopu, I; **Mereuta, L**; Apetrei, A; Park, Y; Hahm, KS; Luchian, T *The role of tryptophan spatial arrangement for antimicrobial-derived, membrane-active peptides adsorption and activity*, MOLECULAR BIOSYSTEMS Volume: 8 Issue: 11 Pages: 2860-2863 DOI: 10.1039/c2mb25221j Published: 2012 **37.67**
FI 3.35
10. **Loredana Mereuta**, Alina Asandei and Tudor Luchian, *‘Meet me on the other side: trans-bilayer modulation of a model voltage-gated ion channel activity by membrane electrostatics asymmetry’*, PLoS ONE 6(9): e25276. doi:10.1371/journal.pone.0025276 **90.17**
FI 4.092
11. Alina Asandei, **Loredana Mereuta** and Tudor Luchian, *‘The kinetics of ampicillin complexation by β -cyclodextrins. A single molecule approach’*, Journal of Physical Chemistry B *J. Phys. Chem. B*, 2011, 115 (33), pp 10173–10181, DOI: 10.1021/jp204640t **82.25**
FI 3.696
12. Aurelia Apetrei, **Loredana Mereuță**, Tudor Luchian *The RH 421 styryl dye induced, pore model-dependent modulation of antimicrobial peptides activity în reconstituted planar membranes*, Biochimica et Biophysica Acta (BBA) - General Subjects 1790 (8), 2009, 809-816 **67.49**
FI 2.958
13. **Loredana Mereuță**, Tudor Luchian, Yoonkynung Park and Kyung-Soo Hahm, *The role played by lipids unsaturation upon the membrane interaction of the Helicobacter pylori HP(2–20) antimicrobial peptide analogue HPA3*, Journal of Bioenergetics and Biomembranes 41, 2009, 79–84 **66.47**
FI 4.015
14. **Loredana Mereuță**, Tudor Luchian, Yoonkyung Park and Kyung-Soo Hahm, *Single-molecule investigation of the interactions between reconstituted planar lipid membranes and an analogue of the HP(2–20) antimicrobial peptide*, Biochemical and Biophysical Research Communications 373 (4), 2008, 467-472 **45.97**
FI 2.648



15. Alina Asandei, **Loredana Mereuță**, Tudor Luchian, -‘*Influence of membrane potentials upon reversible protonation of acidic residues from the OmpF eyelet*’, Biophysical Chemistry 135, 2008, 32–40 **55.53**
FI 2.36
16. Tudor Luchian, **Loredana Mereuță**, *Phlorizin- and 6-ketocholestanol-mediated antagonistic modulation of alamethicin activity în phospholipid planar membranes*, Langmuir 22(20), 2006, 8452-8457 **129.56**
FI 3.902
17. **Loredana Mereuță**, Tudor Luchian, *A virtual instrumentation based protocol for the automated implementation of the inner field compensation method*, Central European Journal of Physics 4(3), 2006, 405-416 **36.83**
FI 0.811
18. Tudor Luchian, **Loredana Mereuță**, *Selective transfer of energy through an alamethicin-doped artificial lipid membrane studied at discrete molecular level*, Bioelectrochemistry 69, 2006,94-98 **68.9**
FI 1.88
19. **Loredana Mereuță**, Tudor Luchian *How could a chirp be more effective than a louder clock – resonant transfer of energy between sub-threshold excitation pulses and excitable tissues*, Journal of Cellular and Molecular Medicine 9(2), 2005, 446-456 **120.68**
FI 3.606

Total I.1 1232

I. 4. Articole științifice publicate *in extenso* în volumele conferințelor (indexate ISI: 30 puncte / număr autori)

1. Loredana Mereuță, Roxana Chiriac, Tudor Luchian, *Activity modulation of certain ion-pore forming proteins by electric properties of artificial lipid membranes*, Journal of Optoelectronic and Advanced Materials 10 (7), 2008,1837 – 1842 **FI 0.577**

30/3=10 p

2. Janosi, Lorant; Mereuta, Loredana; Luchian, Tudor; et al.; *Synthesis and investigation of novel small antimicrobial peptides*; Conference: European Biotechnology Congress Location: Bucharest, ROMANIA Date: MAY 07-09, 2015

JOURNAL OF BIOTECHNOLOGY Volume: 208 Supplement: S Pages: S10-S10 Published: AUG 20 2015, **FI=2.66**

30/8= 3.75 p

Total I.4 = 13.75

I. 5. Cărți științifice publicate (doar prima ediție) edituri academice naționale: 50 puncte la 100 pagini / număr autori

Loredana Mereuta, *Metode Actuale în Biofizica Moleculară*’ 2017, Editura Universității „Alexandru Ioan Cuza”-Iasi, ISBN 978-606-714-369-0,

172 pag. – 86 puncte

Total I. 5 = 86



I.9. Contracte de cercetare științifică în instituții academice (universități, institute ale Academiei Române, institute naționale de cercetare, institute de cercetare din străinătate, alte categorii de institute academice)

contracte internaționale – membru: 100 puncte pentru fiecare 100.000 Euro / numărul membrilor

- **Membru în proiectul internațional de cercetare nr. 830/21.01.2015 (România - Coreea)**, cu titlul „Design and Development of Therapeutic AMPs against Epidemic Superbugs”/ perioada 2014-2019/ UAIC ~375.000 euro/7 membri

53

contracte naționale – director: 50 puncte pentru fiecare 500.000 lei

- **Responsabil proiect Partener P1** în cadrul proiectului nr. 98/2012 PN II PCCA1 *Tehnica imunochimică de analiză în faza omogenă bazată pe nanoparticule funcționalizate. Aplicație pentru detectia contaminantului pesticidic acid 2,4-diclorofenoxiacetic din probe alimentare și de mediu* (HINANODET) 2012-2015/ 2.000.000 ron pe proiect/300.000 ron P1

30

Membru: contracte naționale – membru: 50 puncte pentru fiecare 500.000 lei / numărul membrilor

1. ‘Studiul mecanismelor de rezistență la antibiotice prin impermeabilitate la bacteriile Gram-negative pe membrane naturale și reconstituite’, CEEX (VIASAN) nr.168/2006; perioada 2006-2008

350.000 ron / 2 membri echipa Partener

17.5

2. ‘Investigații nanoscopice ale interacțiunilor existente între biomembrane, toxine bacteriene și proteine implicate în transferul unor agenți antibacterieni prin biomembrane’, CEEX (CERES) nr. 239/2006; perioada 2006-2008

429.237 ron / 4 membri echipa Coordonator

10.73

3. ‘Caracterizarea moleculară a mecanismelor de acțiune a peptidelor antimicrobiene și predicția *de novo* a unor structuri moleculare cu potențial antimicrobian sporit’, PN II nr. 61-16/2007(ANTIMPEP); perioada 2007-2010

429.816 ron / 5 membri echipa Partener 2

8.59

4. ‘Elucidarea mecanismelor de interacțiune a unor peptide citotoxice selectate cu celule tumorale, și optimizarea proprietăților lor anti-tumorale’, PN II nr. 62061/2008(PEPCITOTUM); perioada 2008-2011

40.000 ron / 5 membri echipa Coordonator

8.8

5. Ion sensing and separation through modified cyclic peptides, cyclodextrins and protein pores/ Detectia și separarea ionică prin intermediul peptidelor ciclice, al ciclodextrinelor și al porilor proteici, PN II IDEI PCCE nr.1/2012 (BIOSENS); perioada 2012-2015; 1.200.000 ron/ 5 membri echipa Coordonator

24

6. Generarea și investigarea unor noi peptide antimicrobiene, cu dimensiune redusă. Corelarea structurii peptidelor cu funcția lor, Rational design and generation of synthetic, short antimicrobial peptides. Linking structure to function (BIOPEP), PN II PCCA tip1 nr.123/2012; perioada 2012-2015

700.000 ron / 5 membri echipa Coordonator

14

Total I. 9 = 166.62



I. 12. Citări și recenzii ale lucrărilor Științifice /reviste de specialitate din străinătate:(10 + 20 x factor de impact) / număr autori, pentru fiecare citare

FI-factor impact/ p –punctaj calculat

Acidity-Mediated, Electrostatic Tuning of Asymmetrically Charged Peptides Interactions with Protein Nanopores

By: Asandei, A., Chinappi, M., Kang, H.-K., Seo, C.H., Mereuta, L., Park, Y., Luchian, T.

ACS APPLIED MATERIALS & INTERFACES Volume: 7 Issue: 30 Pages: 16706-16714

Published: AUG 5 2015

1. Structural stability of the photo-responsive DNA duplexes containing one azobenzene via a confined pore
By: Meng, Fu-Na; Li, Zi-Yuan; Ying, Yi-Lun; et al.
CHEMICAL COMMUNICATIONS Volume: 53 Issue: 68 Pages: 9462-9465 Published: SEP 4 2017
FI 6.319/p 19.48
2. Single-molecule nanopore enzymology
By: Willems, Kherim; Van Meervelt, Veerle; Wloka, Carsten; et al.
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES Volume: 372 Issue: 1726 Article Number: 20160230 Published: AUG 5 2017
FI 5.846/p 18.13
3. Hydrogen Peroxide Sensing Based on Inner Surfaces Modification of Solid-State Nanopore
By: Zhu, Libo; Gu, Dejian; Liu, Quanjun
NANOSCALE RESEARCH LETTERS Volume: 12 Article Number: 422 Published: JUN 20 2017
FI 2.833/p 9.52
4. A Protein Nanopore-Based Approach for Bacteria Sensing
By: Apetrei, Aurelia; Ciuca, Andrei; Lee, Jong-kook; et al.
NANOSCALE RESEARCH LETTERS Volume: 11 Article Number: 501 Published: NOV 15 2016
FI 2.833/ p 9.52
5. Electroosmotic Trap Against the Electrophoretic Force Near a Protein Nanopore Reveals Peptide Dynamics During Capture and Translocation
By: Asandei, Alina; Schiopu, Irina; Chinappi, Mauro; et al.
ACS APPLIED MATERIALS & INTERFACES Volume: 8 Issue: 20 Pages: 13166-13179 Pub: MAY 25
FI 7.504/ p 22.86
6. Detection of a single enzyme molecule based on a solid-state nanopore sensor
By: Tan, ShengWei; Gu, DeJian; Liu, Hang; et al.
NANOTECHNOLOGY Volume: 27 Issue: 15 Article Number: 155502 Published: APR 15 2016
FI 3.44/ p 11.25
7. Driven diffusion against electrostatic or effective energy barrier across alpha-hemolysin
By: Ansalone, Patrizio; Chinappi, Mauro; Rondoni, Lamberto; et al.
JOURNAL OF CHEMICAL PHYSICS Volume: 143 Issue: 15 Article Number: 154109 OCT 21 2015
FI 2.894/ p 9.69
8. Nanopore tweezers: Voltage-controlled trapping and releasing of analytes
By: Chinappi, Mauro; Luchian, Tudor; Cecconi, Fabio
PHYSICAL REVIEW E Volume: 92 Issue: 3 Article Number: 032714 Published: SEP 15 2015
FI 2.252/ p 7.86

Placement of oppositely charged aminoacids at a polypeptide termini determines the voltage-controlled braking of polymer transport through nanometer-scale pores

By: Asandei, A., Chinappi, M., Lee, J.-K., Seo, C.H., Mereuta, L., Park, Y., Luchian, T.

SCIENTIFIC REPORTS Volume: 5 Article Number: 10419 Published: JUN 1 2015 (1.863)

1. Single-molecule nanopore enzymology
By: Willems, Kherim; Van Meervelt, Veerle; Wloka, Carsten; et al.
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES Volume: 372 Issue: 1726 Article Number: 20160230 Published: AUG 5 2017
FI 5.846/ p 18.13



2. Characterization of DNA duplex unzipping through a sub-2 nm solid-state nanopore
By: Lin, Yao; Shi, Xin; Liu, Shao-Chuang; et al.
CHEMICAL COMMUNICATIONS Volume: 53 Issue: 25 Pages: 3539-3542 Published: MAR 28 2017
FI 6.319/ p 19.48
3. Artificial Cell Membrane Systems for Biosensing Applications
By: Osaki, Toshihisa; Takeuchi, Shoji
ANALYTICAL CHEMISTRY Volume: 89 Issue: 1 Pages: 216-231 Published: JAN 3 2017
FI 6.32/ p 19.48
4. Nanopore sensor for copper ion detection using a polyamine decorated beta- cyclodextrin as the recognition element
By: Guo, Yanli; Jian, Feifei; Kang, Xiaofeng
RSC ADVANCES Volume: 7 Issue: 25 Pages: 15315-15320 Published: 2017
FI 3.108/ p 10.308
5. Electroosmotic Trap Against the Electrophoretic Force Near a Protein Nanopore Reveals Peptide Dynamics During Capture and Translocation
By: Asandei, Alina; Schiopu, Irina; Chinappi, Mauro; et al.
ACS APPLIED MATERIALS & INTERFACES Volume: 8 Issue: 20 Pages: 13166-13179 MAY 25 2016
FI 7.504/ p 22.86
6. Analytical applications for pore-forming proteins
By: Kasianowicz, John J.; Balijepalli, Arvind K.; Ettegui, Jessica; et al.
BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1858 Issue: 3 Special Issue: SI
Pages: 593-606 Published: MAR 2016
FI 3.498/ p 11.42
7. Probing driving forces in aerolysin and alpha-hemolysin biological nanopores: electrophoresis versus electroosmosis
By: Boukhet, Mordjane; Piguet, Fabien; Ouldali, Hadjer; et al.
NANOSCALE Volume: 8 Issue: 43 Pages: 18352-18359 Published: 2016
FI 7.367/ p 22.477
8. Driven diffusion against electrostatic or effective energy barrier across alpha-hemolysin
By: Ansalone, Patrizio; Chinappi, Mauro; Rondoni, Lamberto; et al.
JOURNAL OF CHEMICAL PHYSICS Volume: 143 Issue: 15 Article Number: 154109 Published: OCT 21 2015
FI 2.894/ p 9.697
9. Nanopore tweezers: Voltage-controlled trapping and releasing of analytes
By: Chinappi, Mauro; Luchian, Tudor; Cecconi, Fabio
PHYSICAL REVIEW E Volume: 92 Issue: 3 Article Number: 032714 Published: SEP 15 2015
FI 2.252/ p 7.86
10. Voltage and blockade state optimization of cluster-enhanced nanopore spectrometry
By: Chavis, Amy E.; Brady, Kyle T.; Kothalawala, Nuwan; et al.
ANALYST Volume: 140 Issue: 22 Pages: 7718-7725 Published: 2015
FI 4.033/ p 12.95

Quantitative Understanding of pH- and Salt-Mediated Conformational Folding of Histidine-Containing, beta-Hairpin-like Peptides, through Single-Molecule Probing with Protein Nanopores;

By: Mereuta, L., Asandei, A., Seo, C.H., Park, Y.d, Luchian, T.

**ACS APPLIED MATERIALS & INTERFACES Volume: 6 Issue: 15 Pages: 13242-13256
Published: AUG 13 2014**

1. Electroosmotic flow through an alpha-hemolysin nanopore
By: Bonome, Emma Letizia; Cecconi, Fabio; Chinappi, Mauro
MICROFLUIDICS AND NANOFUIDICS Volume: 21 Issue: 5 Article Number: 96 MAY 2017
FI 2.344/ p 11.37
2. Channel of viral DNA packaging motor for real time kinetic analysis of peptide oxidation states
By: Wang, Shaoying; Zhou, Zhi; Zhao, Zhengyi; et al.
BIOMATERIALS Volume: 126 Pages: 10-17 Published: MAY 2017
FI 8.402/ p 35.608



3. A Protein Nanopore-Based Approach for Bacteria Sensing
By: Apetrei, Aurelia; Ciuca, Andrei; Lee, Jong-kook; et al.
NANOSCALE RESEARCH LETTERS Volume: 11 Article Number: 501 Published: NOV 15 2016
FI 2.833/ p 13.33
4. Fingerprinting of Peptides with a Large Channel of Bacteriophage Phi29 DNA Packaging Motor
By: Ji, Zhouxiang; Wang, Shaoying; Zhao, Zhengyi; et al.
SMALL Volume: 12 Issue: 33 Pages: 4572-4578 Published: SEP 7 2016
FI 8.643/ p 36.57
5. Electroosmotic Trap Against the Electrophoretic Force Near a Protein Nanopore Reveals Peptide Dynamics During Capture and Translocation
By: Asandei, Alina; Schiopu, Irina; Chinappi, Mauro; et al.
ACS APPLIED MATERIALS & INTERFACES Volume: 8 Issue: 20 Pages: 13166-13179 Published: MAY 25 2016
FI 7.504/ p 32.016
6. Nanopore tweezers: Voltage-controlled trapping and releasing of analytes
By: Chinappi, Mauro; Luchian, Tudor; Cecconi, Fabio
PHYSICAL REVIEW E Volume: 92 Issue: 3 Article Number: 032714 Published: SEP 15 2015
FI 2.252/ p 11.008
7. Enhanced Resolution of Low Molecular Weight Poly(Ethylene Glycol) in Nanopore Analysis
By: Cao, Chan; Ying, Yi-Lun; Gu, Zhen; et al.
ANALYTICAL CHEMISTRY Volume: 86 Issue: 24 Pages: 11946-11950 Published: DEC 16 2014
FI 5.636/ p 25.54

Probing of Various Physiologically Relevant Metals: Amyloid-beta Peptide Interactions with a Lipid Membrane-Immobilized Protein Nanopore

By: Asandei, A., Iftemi, S., Mereuta, L., Schiopu, I., Luchian, T.

JOURNAL OF MEMBRANE BIOLOGY Volume: 247 Issue: 6 Pages: 523-530 JUN 2014

1. Electroosmotic Trap Against the Electrophoretic Force Near a Protein Nanopore Reveals Peptide Dynamics During Capture and Translocation
By: Asandei, Alina; Schiopu, Irina; Chinappi, Mauro; et al.
ACS APPLIED MATERIALS & INTERFACES Volume: 8 Issue: 20 Pages: 13166-13179 Published: MAY 25 2016
FI 7.504/ p 32.016
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BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1848 Issue: 1 Pages: 192-199 Part: A Published: JAN 2015

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7. Modifiers of Membrane Dipole Potentials as Tools for Investigating Ion Channel Formation and Functioning

By: Ostroumova, Olga S.; Efimova, Svetlana S.; Malev, Valery V.

Edited by: Jeon, KW

INTERNATIONAL REVIEW OF CELL AND MOLECULAR BIOLOGY, VOL 315 Book Series: International Review of Cell and Molecular Biology Volume: 315 Pages: 245-297 Published: 2015

3.752/ 28.34667

8. Investigation of Channel-Forming Activity of Polyene Macrolide Antibiotics in Planar Lipid Bilayers in the Presence of Dipole Modifiers

By: Efimova, S. S.; Schagina, L. V.; Ostroumova, O. S.

ACTA NATURAE Volume: 6 Issue: 4 Pages: 67-79 Published: OCT-DEC 2014

1/10

9. Channel-Forming Activity of Cecropins in Lipid Bilayers: Effect of Agents Modifying the Membrane Dipole Potential

By: Efimova, Svetlana S.; Schagina, Ludmila V.; Ostroumova, Olga S.

LANGMUIR Volume: 30 Issue: 26 Pages: 7884-7892 Published: JUL 8 2014

4.457/ 33.04667

10. The interaction of dipole modifiers with amphotericin-ergosterol complexes. Effects of phospholipid and sphingolipid membrane composition

By: Ostroumova, Olga S.; Efimova, Svetlana S.; Mikhailova, Ekaterina V.; et al.

EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 43 Issue: 4-5 Pages: 207-215 Published: MAY 2014

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11. Recent Results in Alamethicin Research

By: Kredics, Laszlo; Szekeres, Andras; Czifra, Dorina; et al.

CHEMISTRY & BIODIVERSITY Volume: 10 Issue: 5 Pages: 744-771 Published: MAY 2013

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12. The Interaction of Dipole Modifiers with Polyene-Sterol Complexes

By: Ostroumova, Olga S.; Efimova, Svetlana S.; Chulkov, Evgeny G.; et al.

PLOS ONE Volume: 7 Issue: 9 Article Number: e45135 Published: SEP 21 2012

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13. Permeabilization of mitochondria and red blood cells by polycationic peptides BTM-P1 and retro-BTM-P1



By: Lemeshko, Victor V.

PEPTIDES Volume: 32 Issue: 10 Pages: 2010-2020 Published: OCT 2011

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14. Surfactin Activity Depends on the Membrane Dipole Potential

By: Ostroumova, Olga S.; Malev, Valery V.; Ilin, Maxim G.; et al.

LANGMUIR Volume: 26 Issue: 19 Pages: 15092-15097 Published: OCT 5 2010

4.269/ 31.79333

The role played by lipids unsaturation upon the membrane interaction of the Helicobacter pylori HP(2-20) antimicrobial peptide analogue HPA3

By: Loredana Mereuță, Tudor Luchian, Yoonkynung Park and Kyung-Soo Hahm,

JOURNAL OF BIOENERGETICS AND BIOMEMBRANES Volume: 41 Issue: 1 Pages: 79-84

Published: FEB 2009

1. A helix-PXXP-helix peptide with antibacterial activity without cytotoxicity against MDRPA-infected mice By: Lee, Jong-Kook; Park, Seong-Cheol; Hahm, Kyung-Soo; et al. BIOMATERIALS Volume: 35 Issue: 3 Pages: 1025-1039 Published: JAN 2014
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2. Combined Mass and Structural Kinetic Analysis of Multistate Antimicrobial Peptide-Membrane Interactions By: Hirst, Daniel J.; Lee, Tzong-Hsien; Swann, Marcus J.; et al. ANALYTICAL CHEMISTRY Volume: 85 Issue: 19 Pages: 9296-9304 Published: OCT 1 2013
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3. Does the lipid environment impact the open-state conductance of an engineered beta-barrel protein nanopore? By: Tomita, Noriko; Mohammad, Mohammad M.; Niedzwiecki, David J.; et al. BIOCHIMICA ET BIOPHYSICA ACTA BIOMEMBRANES Volume: 1828 Issue: 3 Pages: 1057-1065 Published: MAR 2013
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4. Effect of acyl chain structure and bilayer phase state on binding and penetration of a supported lipid bilayer by HPA3 By: Hirst, Daniel J.; Lee, Tzong-Hsien; Swann, Marcus J.; et al. Conference: 455th Seminar on Biophysics of Membrane Active Peptides Location: Bad Honnef, GERMANY Date: APR 11-14, 2010 EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 40 Issue: 4 Special Issue: SI Pages: 503-514 Published: APR 2011
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5. ORF8a of SARS-CoV forms an ion channel: Experiments and molecular dynamics simulations By: Chen, Cheng-Chang; Krueger, Jens; Sramala, Issara; et al. BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1808 Issue: 2 Special Issue: SI Pages: 572-579 Published: FEB 2011
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6. Unimolecular study of the interaction between the outer membrane protein OmpF from E. coli and an analogue of the HP(2-20) antimicrobial peptide By: Apetrei, Aurelia; Asandei, Alina; Park, Yoonkyung; et al. JOURNAL OF BIOENERGETICS AND BIOMEMBRANES Volume: 42 Issue: 2 Pages: 173-180 Published: APR 2010
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7. The membrane insertion of helical antimicrobial peptides from the N-terminus of Helicobacter pylori ribosomal protein L1 By: Lee, Tzong-Hsien; Hall, Kristopher N.; Swann, Marcus J.; et al. BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1798 Issue: 3 Pages: 544-557 Published: MAR 2010
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Single-molecule investigation of the interactions between reconstituted planar lipid membranes and an analogue of the HP(2-20) antimicrobial peptide

By: Loredana Mereuță, Tudor Luchian, Yoonkyung Park and Kyung-Soo Hahm

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS Volume: 373 Issue: 4

Pages: 467-472 Published: SEP 5 2008 (0.962)

1. Two types of syringomycin E channels in sphingomyelin-containing bilayers
By: Efimova, Svetlana S.; Zakharova, Anastasiia A.; Schagina, Ludmila V.; et al.
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 45 Issue: 1 Pages: 91-98 Published: JAN 2016
1.472/ 9.86



2. Modifiers of the Dipole Potential of Lipid Bilayers
By: Efimova, S. S.; Ostroumova, O. S.
ACTA NATURAE Volume: 7 Issue: 4 Pages: 70-79 Published: OCT-DEC 2015
1.77/ 11.35
3. The Influence of Halogen Derivatives of Thyronine and Fluorescein on the Dipole Potential of Phospholipid Membranes
By: Efimova, Svetlana S.; Schagina, Ludmila V.; Ostroumova, Olga S.
JOURNAL OF MEMBRANE BIOLOGY Volume: 247 Issue: 8 Pages: 739-745 Published: AUG 2014
2.457/ 14.785
4. Channel-Forming Activity of Cecropins in Lipid Bilayers: Effect of Agents Modifying the Membrane Dipole Potential
By: Efimova, Svetlana S.; Schagina, Ludmila V.; Ostroumova, Olga S.
LANGMUIR Volume: 30 Issue: 26 Pages: 7884-7892 Published: JUL 8 2014
4.457/ 24.785
5. Electrophysiology Investigation of Trichogin GA IV Activity in Planar Lipid Membranes Reveals Ion Channels of Well-Defined Size
By: Iftemi, Sorana; De Zotti, Marta; Formaggio, Fernando; et al.
CHEMISTRY & BIODIVERSITY Volume: 11 Issue: 7 Pages: 1069-1077 Published: JUL 2014
1.515/ 10.075
6. The interaction of dipole modifiers with amphotericin-ergosterol complexes. Effects of phospholipid and sphingolipid membrane composition
By: Ostroumova, Olga S.; Efimova, Svetlana S.; Mikhailova, Ekaterina V.; et al.
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 43 Issue: 4-5 Pages: 207-215 Published: MAY 2014
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7. The Interaction of Dipole Modifiers with Polyene-Sterol Complexes
By: Ostroumova, Olga S.; Efimova, Svetlana S.; Chulkov, Evgeny G.; et al.
PLOS ONE Volume: 7 Issue: 9 Article Number: e45135 Published: SEP 21 2012
3.73/ 21.15
8. Effect of Dipole Modifiers on the Magnitude of the Dipole Potential of Sterol-Containing Bilayers
By: Efimova, Svetlana S.; Ostroumova, Olga S.
LANGMUIR Volume: 28 Issue: 26 Pages: 9908-9914 Published: JUN 3 2012
4.187/ 23.435
9. Unimolecular study of the interaction between the outer membrane protein OmpF from E. coli and an analogue of the HP(2-20) antimicrobial peptide
By: Apetrei, Aurelia; Asandei, Alina; Park, Yoonkyung; et al.
JOURNAL OF BIOENERGETICS AND BIOMEMBRANES Volume: 42 Issue: 2 Pages: 173-180
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10. The membrane insertion of helical antimicrobial peptides from the N-terminus of Helicobacter pylori ribosomal protein L1
By: Lee, Tzong-Hsien; Hall, Kristopher N.; Swann, Marcus J.; et al.
BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1798 Issue: 3 Pages: 544-557
Published: MAR 2010
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Influence of membrane potentials upon reversible protonation of acidic residues from the OmpF eyelet

By: Asandei, Alina; Mereuta, Loredana; Luchian, Tudor

BIOPHYSICAL CHEMISTRY Volume: 135 Issue: 1-3 Pages: 32-40 Published: JUN 2008 (0.765)

1. NMR Evidence for Grotthuss-like Proton Diffusion on the Surface of N-Alkyl-ammonium Micelles in Acidic Aqueous Solution
By: Delpuech, Jean J.; Dupont-Leclercq, Laurence; Parant, Stephane; et al.
JOURNAL OF SOLUTION CHEMISTRY Volume: 46 Issue: 8 Pages: 1698-1720 Published: AUG 2017
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2. Two types of syringomycin E channels in sphingomyelin-containing bilayers
By: Efimova, Svetlana S.; Zakharova, Anastasiia A.; Schagina, Ludmila V.; et al.
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 45 Issue: 1 Pages: 91-98 Published: JAN 2016
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3. Modifiers of the Dipole Potential of Lipid Bilayers
By: Efimova, S. S.; Ostroumova, O. S.
ACTA NATURAE Volume: 7 Issue: 4 Pages: 70-79 Published: OCT-DEC 2015
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4. Investigation of Channel-Forming Activity of Polyene Macrolide Antibiotics in Planar Lipid Bilayers in the Presence of Dipole Modifiers
By: Efimova, S. S.; Schagina, L. V.; Ostroumova, O. S.
ACTA NATURAE Volume: 6 Issue: 4 Pages: 67-79 Published: OCT-DEC 2014
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5. The interaction of dipole modifiers with amphotericin-ergosterol complexes. Effects of phospholipid and sphingolipid membrane composition
By: Ostroumova, Olga S.; Efimova, Svetlana S.; Mikhailova, Ekaterina V.; et al.
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 43 Issue: 4-5 Pages: 207-215 Published: MAY 2014
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6. Uni-molecular detection and quantification of selected beta-lactam antibiotics with a hybrid alpha-hemolysin protein pore
By: Asandei, Alina; Apetrei, Aurelia; Luchian, Tudor JOURNAL OF MOLECULAR RECOGNITION Volume: 24 Issue: 2 Pages: 199-207 Published: MAR-APR 2011
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7. The ionization state of D37 in E. coli porin OmpF and the nature of conductance fluctuations in D37 mutants
By: Vrouenraets, Maarten; Miedema, Henk
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 39 Issue: 12 Pages: 1563-1571 Published: NOV 2010
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8. Unimolecular study of the interaction between the outer membrane protein OmpF from E. coli and an analogue of the HP(2-20) antimicrobial peptide
By: Apetrei, Aurelia; Asandei, Alina; Park, Yoonkyung; et al.
JOURNAL OF BIOENERGETICS AND BIOMEMBRANES Volume: 42 Issue: 2 Pages: 173-180 Published: APR 2010
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9. Ion Selectivity of a Biological Channel at High Concentration Ratio: Insights on Small Ion Diffusion and Binding
By: Lidon Lopez, M.; Aguilera-Arzo, Marcel; Aguilera, Vicente M.; et al.
JOURNAL OF PHYSICAL CHEMISTRY B Volume: 113 Issue: 25 Pages: 8745-8751 Published: JUN 25 2009
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10. Effects of novel antituberculosis agents on OmpF channel activity
By: Mahdiuni, H.; Mobasheri, H.; Shafiee, A.; et al.
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Phlorizin- and 6-ketocholestanol-mediated antagonistic modulation of alamethicin activity in phospholipid planar membranes

By: Luchian, Tudor; Mereuta, Loredana

LANGMUIR Volume: 22 Issue: 20 Pages: 8452-8457 Published: SEP 26 2006 (1.329)

1. Effects of Dipole Potential Modifiers on Heterogenic Lipid Bilayers
By: Efimova, Svetlana S.; Malev, Valery V.; Ostroumova, Olga S.



JOURNAL OF MEMBRANE BIOLOGY Volume: 249 Issue: 1-2 Pages: 97-106 Published: APR 2016
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2. Phloretin increases the anti-tumor efficacy of intratumorally delivered heat-shock protein 70 kDa (HSP70) in a murine model of melanoma

By: Abkin, Sergey V.; Ostroumova, Olga S.; Komarova, Elena Y.; et al.

CANCER IMMUNOLOGY IMMUNOTHERAPY Volume: 65 Issue: 1 Pages: 83-92 JAN 2016
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3. Two types of syringomycin E channels in sphingomyelin-containing bilayers

By: Efimova, Svetlana S.; Zakharova, Anastasiia A.; Schagina, Ludmila V.; et al.

EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 45 Issue: 1 Pages: 91-98 Published: JAN 2016
1.472/ 19.72

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ACTA NATURAE Volume: 7 Issue: 4 Pages: 70-79 Published: OCT-DEC 2015
1.667/ 21.67

5. Modifiers of Membrane Dipole Potentials as Tools for Investigating Ion Channel Formation and Functioning

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Edited by: Jeon, KW

INTERNATIONAL REVIEW OF CELL AND MOLECULAR BIOLOGY, VOL 315 Book Series:
International Review of Cell and Molecular Biology Volume: 315 Pages: 245-297 Published: 2015
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6. Measurement of Dipole Potential in Bilayer Lipid Membranes by Dielectric Spectroscopy

By: Hidaka, Yuta; Asami, Koji

JOURNAL OF MEMBRANE BIOLOGY Volume: 247 Issue: 8 Pages: 721-727 Published: AUG 2014
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7. The Influence of Halogen Derivatives of Thyronine and Fluorescein on the Dipole Potential of Phospholipid Membranes

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JOURNAL OF MEMBRANE BIOLOGY Volume: 247 Issue: 8 Pages: 739-745 Published: AUG 2014
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4.457/ 49.57

9. Electrophysiology Investigation of Trichogin GA IV Activity in Planar Lipid Membranes Reveals Ion Channels of Well-Defined Size

By: Iftemi, Sorana; De Zotti, Marta; Formaggio, Fernando; et al.

CHEMISTRY & BIODIVERSITY Volume: 11 Issue: 7 Pages: 1069-1077 Published: JUL 2014
1.515/20.15

10. The interaction of dipole modifiers with amphotericin-ergosterol complexes. Effects of phospholipid and sphingolipid membrane composition

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EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS Volume: 43 Issue: 4-5 Pages: 207-215 Published: MAY 2014
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11. The Interaction of Dipole Modifiers with Polyene-Sterol Complexes

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PLOS ONE Volume: 7 Issue: 9 Article Number: e45135 Published: SEP 21 2012
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12. Effect of Dipole Modifiers on the Magnitude of the Dipole Potential of Sterol-Containing Bilayers

By: Efimova, Svetlana S.; Ostroumova, Olga S.

LANGMUIR Volume: 28 Issue: 26 Pages: 9908-9914 Published: JUN 3 2012
4.187/ 46.87



13. Observing a Model Ion Channel Gating Action in Model Cell Membranes in Real Time in Situ: Membrane Potential Change Induced Alamethicin Orientation Change
By: Ye, Shuji; Li, Hongchun; Wei, Feng; et al.
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY Volume: 134 Issue: 14 Pages: 6237-6243
Published: APR 11 2012
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14. Influence of the membrane dipole potential on peptide binding to lipid bilayers
By: Zhan, Huan; Lazaridis, Themis
BIOPHYSICAL CHEMISTRY Volume: 161 Pages: 1-7 Published: FEB 2012
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15. Probing Amphotericin B Single Channel Activity by Membrane Dipole Modifiers
By: Ostroumova, Olga S.; Efimova, Svetlana S.; Schagina, Ludmila V.
PLOS ONE Volume: 7 Issue: 1 Article Number: e30261 Published: JAN 19 2012
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16. 5- and 4'-Hydroxylated flavonoids affect voltage gating of single alpha-hemolysin pore
By: Ostroumova, Olga S.; Efimova, Svetlana S.; Schagina, Ludmila V.
BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1808 Issue: 8 Pages: 2051-2058
Published: AUG 2011
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17. Surfactin Activity Depends on the Membrane Dipole Potential
By: Ostroumova, Olga S.; Malev, Valery V.; Ilin, Maxim G.; et al.
LANGMUIR Volume: 26 Issue: 19 Pages: 15092-15097 Published: OCT 5 2010
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18. Gramicidin Channels Are Internally Gated
By: Jones, Tyson L.; Fu, Riqiang; Nielson, Frederick; et al.
BIOPHYSICAL JOURNAL Volume: 98 Issue: 8 Pages: 1486-1493 Published: APR 21 2010
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19. DIPOLE POTENTIAL-INDUCED MODULATION OF THE INTERACTIONS BETWEEN RECONSTITUTED LIPID MEMBRANES AND CERTAIN PORE-FORMING PEPTIDES
By: Luchian, Tudor
REVUE ROUMAINE DE CHIMIE Volume: 54 Issue: 6 Pages: 455-463 Published: JUN 2009
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20. Ion selectivity, transport properties and dynamics of amphotericin B channels studied over a wide range of acidity changes
By: Asandei, Alina; Luchian, Tudor
COLLOIDS AND SURFACES B-BIOINTERFACES Volume: 67 Issue: 1 Pages: 99-106 Published:
NOV 15 2008
2.539/ 30.39
21. Altering the activity of syringomycin E via the membrane dipole potential
By: Ostroumova, Olga S.; Malev, Valery V.; Bessonov, Andrey N.; et al.
LANGMUIR Volume: 24 Issue: 7 Pages: 2987-2991 Published: APR 1 2008
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22. pH modulation of transport properties of alamethicin oligomers inserted in zwitterionic-based artificial lipid membranes
By: Chiriac, Roxana; Luchian, Tudor
BIOPHYSICAL CHEMISTRY Volume: 130 Issue: 3 Pages: 139-147 Published: NOV 2007
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23. Effect of agents modifying the membrane dipole potential on properties of syringomycin E channels
By: Ostroumova, Olga S.; Kaulin, Yuri A.; Gurnev, Philip A.; et al.
LANGMUIR Volume: 23 Issue: 13 Pages: 6889-6892 Published: JUN 19 2007
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**Selective transfer of energy through an alamethicin-doped artificial lipid membrane studied at discrete molecular level****By: Luchian, Tudor; Mereuta, Loredana****BIOELECTROCHEMISTRY Volume: 69 Issue: 1 Pages: 94-98 Published: SEP 2006**

1. Membrane dipole modifiers modulate single-length nystatin channels via reducing elastic stress in the vicinity of the lipid mouth of a pore
By: Chulkov, Evgeny G.; Schagina, Ludmila V.; Ostroumova, Olga S.
BIOCHIMICA ET BIOPHYSICA ACTA-BIOMEMBRANES Volume: 1848 Issue: 1 Pages: 192-199
Part: A Published: JAN 2015
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2. Two-dimensional miscibility studies of alamethicin and selected film-forming molecules
By: Broniatowski, Marcin; Vila-Romeu, Nuria; Dynarowicz-Latka, Patrycja
JOURNAL OF PHYSICAL CHEMISTRY B Volume: 112 Issue: 26 Pages: 7762-7770 Published: JUL 3 2008
4.198/ 46.98

A virtual instrumentation based protocol for the automated implementation of the inner field compensation method**By: Mereuta, Loredana; Luchian, Tudor****CENTRAL EUROPEAN JOURNAL OF PHYSICS Volume: 4 Issue: 3 Pages: 405-416 Published: SEP 2006**

1. pH modulation of transport properties of alamethicin oligomers inserted in zwitterionic-based artificial lipid membranes By: Chiriac, Roxana; Luchian, Tudor BIOPHYSICAL CHEMISTRY Volume: 130 Issue: 3 Pages: 139-147 Published: NOV 2007
1.913/ 24.13

Total I. 12 = 3880.81**I.13. Lucrări susținute în calitate de invitat la manifestări științifice (conferințe, congrese, simpozioane, seminarii și ateliere de lucru) țară: 10 puncte pentru fiecare activitate**

The 8th General Conference of Balkan Physical Union, 5-7 iulie 2012, Universitatea Ovidius din Constanta, lucrare invitata: *Modulation Of α -Helical Antimicrobial Peptides Activity In Reconstituted Lipid Bilayers By Membrane Electrostatics*, **Loredana Mereuta**, Tudor Luchian

Total I.13 = 10 puncte



I. 19. Participări la manifestări științifice:

Participări la manifestări științifice internaționale(raportor pe secțiuni/paneluri, 10 puncte pentru fiecare activitate)

1. **L. Mereuță**, T. Luchian, *Electrical Coupling Between La^{3+} Ions and Alamethicin Insertion into Artificial Lipid Membranes*, International Conference on Fundamental and Applied Research in Physics FARPhys , Iasi, 26-29 October 2005 (prezentare orală)
2. **Mereuța L**, Asandei A, and Luchian T, "*Influence of Membrane Electrostatics upon Reversible Protonation Reactions Taking Place on the Constriction Region of the Ompf Porin*", The Annual InterNational Conference of the Romanian Society of Biochemistry and Molecular Biology, Bucharest, 29 – 31 May, 2008 (prez orală)
3. T. Luchian, A. Apetrei, **L. Mereuța**, *Roles of lipids and electric heterogeneity of lipid membranes in shaping antimicrobial peptides activity*, NanoRomania, Iasi, 2-5 iunie 2009 (prezentare orală)
4. T. Luchian, A. Apetrei, A. Asandei, **L. Mereuța**, *Interrogation of single-molecule chemistry with protein nanopores*, International conference "Processes in isotopes and molecules 2011, September 29- october 01, Cluj-Napoca, Romania (prezentare orală)
5. **L. Mereuță**, C. Petrea, A. Cernescu, T. Luchian, '*Compound action potential alterations induced by heavy metals on the nerve-striate muscle system, monitored via extracellular measurements*', 1st International Conference on Environmental, Industrial and Applied Microbiology (BioMicroWorld-2005), March 15-18th 2005, Badajoz, Spain (lucrare poster)
6. **L. Mereuță**, T. Luchian, *Selective Transfer of Energy Through an Alamethicin-doped Artificial Lipid Membrane Studied at Discrete Molecular Level*, IEEE Magnetism Society Chapter Romania Section, Iasi, 22-26 October, 2005 (lucrare poster)
7. **L. Mereuță**, T. Luchian, *Dipole moment-indexed modulation of ion channels activity in phospholipid planar membranes*, The 5th International Conference on Global Research and Education, 25-28 September 2006, Iasi, Inter-Academia 2006 (lucrare poster)
8. **L. Mereuța**, T. Luchian, *Membrane dipole potential-induced modulation of current fluctuations through the OmpF porin*, International Conference on Fundamental and Applied Research in Physics 2007, 25-28 october 2007, Iasi (poster)
9. A. Asandei, **L. Mereuță**, R. Chiriac, T. Luchian, *The Influence of Superficial Charge and Ionic Strength Upon The Interaction Between B-Lactam Antibiotics and Ompf Porins*, The Annual InterNational Conference of the Romanian Society of Biochemistry and Molecular Biology, Bucharest, 29 – 31 May, 2008 (poster)
10. R.Chiriac, A. Asandei, **L. Mereuță**, T. Luchian, *Rafts-Induced Modulation of Transport and Kinetic Properties of Certain Antimicrobial Peptides*, The Annual InterNational Conference of the Romanian Society of Biochemistry and Molecular Biology, Bucharest, 29 – 31 May, 2008 (lucrare poster)
11. **L. Mereuța** and Tudor Luchian, *pH and electric induced modulations of magainin 2 activity in reconstituted membranes*, The 8th International Conference on Physics of Advanced Materials (ICPAM-8) June 04-07, 2008, Iasi, Romania (poster)
12. **L. Mereuța** and Tudor Luchian, *The influence of lipid unsaturation upon the interaction between HPA3 antimicrobial peptide and reconstituted lipid membranes* German Biophysical Society Meeting 2008 – GBSM 2008 Berlin, September 28 - October 1 (lucrare poster)
13. A. Apetrei, **L. Mereuța**, T. Luchian *The study of the modulatory effect of melittin insertion upon membrane surface and dipole potentials*, IEEE ROMSC, Iasi, 6-9 iunie, 2009 (lucrare poster)
14. **L. Mereuța**, T. Luchian, *The modulatory role played by lipids packing upon the membrane - antimicrobial peptides interaction*, International Workshop NanoRomania, Iasi, iunie 2009 (poster)
15. A. Apetrei, **L. Mereuța**, T. Luchian *Activity of antimicrobial peptides in reconstituted planar lipid membranes under the influence of membrane dipole moment modulatory agents*, International Workshop NanoRomania, Iasi, 2-5 iunie 2009 (premiul I) (lucrare poster)
16. **L. Mereuța**, A. Apetrei, Y. Park, K.-Soo Hahm, T.Luchian, *Mechanisms of modulation of α -helical antimicrobial peptides activity in reconstituted planar membranes*, Asia-Pacific Peptide Symposium in November Korea 2009 (lucrare poster)
17. **L. Mereuța**, T. Luchian, Y. Park, K.-Soo Hahm, *Membrane activity of the Helicobacter pylori HP (2–20) antimicrobial peptide analogue - HPA3*, AMP2010, Australia-Croatia Workshop on Antimicrobial Peptides (Split, 9-13 August 2010) (lucrare poster)
18. **L. Mereuța**, Y. Park, K.-Soo Hahm, T. Luchian, *The role played by lipids packing upon the mechanisms of transmembrane translocation of α -helical antimicrobial peptides*, ESF-EMBO Symposium Molecular Perspectives on Protein-Protein Interactions, 14-19 November 2010, Hotel Eden Roc, Sant Feliu de Guixols, Spain (lucrare poster)



19. **L. Mereuta**, T. Luchian, *The impact of asymmetric alterations of a lipid membrane dipole potential and curvature, on alamethicin kinetic and transport features*, Gordon Research Conference on Antimicrobial Peptides 05/15/2011 - 05/20/2011, Lucca (Barga) Italy (lucrare poster)
20. A. Asandei, **L. Mereuta**, Tudor Luchian, “A single molecule approach of the interaction between ampicillin and a hybrid α -haemolysin protein pore” „International Conference on Global Research and Education, interAcademia 2011, 26-29 September 2011, Sucevita, Romania (lucrare poster)
21. I. Șchiopu, **L. Mereuță**, A. Apetrei, T. Luchian, “Tryptophan anchor position determines antimicrobial peptide activity and translocation” Third International Symposium on Antimicrobial Peptides AMP 2012, 13-15 iunie 2012 Villeneuve d'Ascq, France, (lucrare poster)
22. A. Apetrei, I. Schiopu, **L. Mereuta**, T. Luchian The 8th General Conference of Balkan Physical Union, 5-7 iulie 2012, Universitatea Ovidius din Constanta *Electrophysiology study of amyloid beta channel formation and activity in reconstructed planar lipid membranes*, (lucrare poster)
23. I. Șchiopu, **L. Mereuță**, A. Apetrei, T. Luchian The 8th General Conference of Balkan Physical Union, 5-7 iulie 2012, Universitatea Ovidius din Constanta *Electrophysiology and fluorescence studies of the key role played by the position of aromatic amino acids in antimicrobial peptide activity and translocation*, (lucrare poster)
24. Irina Schiopu, **Loredana Mereuta**, Alina Asandei, Tudor Luchian *Copper(II) binding to a histidine - containing chimera peptide: a single protein nanopore study* ESF-FEBS Conference on Biological Surfaces and Interfaces, 29 iunie - 6 iulie 2013, San Feliu de Guixols, Cataloni, Spania (**poster**).
25. Tudor Luchian, **Loredana Mereuta**, Irina Schiopu, Alina Asandei, Sorana Iftemi and Aurelia Apetrei, Nanoscopic Interrogation of Molecular Interactions with Protein Nanopores, 3rd Ed. of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, IC-ANMBES 2014, June 13th-15th, 2014, Brasov, Romania (**invited keynote presentation**)
26. Irina Schiopu, Alina Asandei, Sorana Iftemi, **Loredana Mereuta**, Liliana Chiribasa, Tudor Luchian, Single-Molecule Probing of Cu²⁺ Induced Folding on Human versus Rat Amyloid A β (1-16) Fragments, 3rd Ed. of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, IC-ANMBES 2014, June 13th-15th, 2014, Brasov, Romania (**poster presentation**)
27. **Loredana Mereuta**, Alina Asandei, Daniela Ciumac, Tudor Luchian, Different Steps in Translocation of Peptides through a Protein Nanopore, 3rd Ed. of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, IC-ANMBES 2014, June 13th-15th, 2014, Brasov, Romania (**poster presentation**)
28. Alina Asandei, Sorana Iftemi, **Loredana Mereuta**, Irina Schiopu and Tudor Luchian, Investigating the Affinity of Various Physiologically Relevant Metals to Human A β (1-16) Peptides via Nanopore Sensing Techniques, 3rd Ed. of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, IC-ANMBES 2014, June 13th-15th, 2014, Brasov, Romania (**poster presentation**)
29. Alina ASANDEI, **Loredana MEREUTA**, Tudor LUCHIAN, Single-molecule investigation of peptide conformational changes with a protein nanopore, Gordon Research Conferences frontiers of science - Membrane Protein Folding, 21-26 Iunie, 2015, Boston, SUA, (**poster presentation**)
30. Alina Asandei, Mauro Chinappi, Hee-Kyoung Kang, Chang Ho Seo, **Loredana Mereuta**, Yoonkyung Park, Tudor Luchian, pH-Dependent Interaction of Asymmetrically Charged Peptides with a Protein Nanopore, The 41st FEBS Congress, 3 – 8 Septembrie, 2016, Ephesus / Kuşadası, Turcia, (**poster presentation**)
31. Andrei Ciucă, Alina Asandei, Aurelia Apetrei, Irina Șchiopu, **Loredana Mereuță**, Chang Ho Seo, Yoonkyung Park, Tudor Luchian, Uni-molecular study of the pH- and salt-dependent PAMAM dendrimers- α -hemolysin nanopore interactions, 19th IUPAB congress and 11th EBSA congress, July 16-20, Edinburgh, UK (**poster presentation**)

310 puncte

Participări la manifestări științifice naționale (raportor pe secțiuni/paneluri, 2 puncte pentru fiecare activitate):

1. **L. Mereuță**, T. Luchian, *Investigation of lipid membranes dipole potential changes via the inner field compensation method*, A XXXV- a Conferință Națională “ Fizica și tehnologiile educaționale moderne”, Iași, 26-27 Mai 2006, Revista Științifică “V. Adamachi”, Vol. XV- Nr. 2, Aprilie-Iunie 2006, (premiul III) (prezentare orală)
2. T. Luchian, **L. Mereuta**, A. Asandei, A. Apetrei, *Single-molecule biophysics of pharmacological molecules interaction with protein pores and lipids*, Conferinta Nationala de Fizica – Iasi 23-25 septembrie 2010 (prezentare orală)
3. **L. Mereuta**, A. Asandei, T. Luchian, *A signal from the other side: the influence of membrane electrostatic asymmetry on*



- alamethicin kinetic and transport features*’ 11-th National Conference of Biophysics, november 10-12, 2011, Sibiu, Romania (prezentare orală)
4. A. Asandei, **L. Mereuță**, T. Luchian, *Single Molecule Investigations of the pH-dependent Interaction Between Ampicillin and a Hybrid α -Haemolysin Protein Pore* 11-th National Conference of Biophysics, november 10-12, 2011, Sibiu, Romania (prezentare orală)
 5. **L. Mereuță**, I. Schiopu, A. Asandei, A. Apetrei, T. Luchian Conferința “Diaspora in Cercetarea Stiintifica si Invatamantul Superior din Romania”, Bucuresti, 25-28 Septembrie 2012, *Interrogation of chemical kinetics, one molecule at a time*, (prezentare orală)
 6. **L. C. Mereuță**, A. Cernescu, T. Luchian, *Optimal generation of propagable action potentials through excitable media at electrical resonance conditions*, First Conference of Neuroscience National Society, Bucharest, 2004, (premiul III the best poster)
 7. **L. Mereuță**, C. Petrea, C. Ioniță, T. Luchian *Compound action potential alterations induced by heavy metals on the nerve-striate muscle system, monitored via extracellular measurements*, Rev. Med. Chir. Soc. Med. Nat., Iasi-2005-vol. 109, nr. 2 (poster)
 8. **L. Mereuță**, *Electrophysiological investigation of phloretin interaction with artificial membranes*, A XXXV- a Conferință Națională “Fizica și tehnologiile educaționale moderne”, Iași, 26-27 Mai 2006, Aprilie-Iunie 2006 (lucrare poster)
 9. A. Asandei, R. Chiriac, **L. Mereuță**, T. Luchian, *Ergosterol-induced modulation of transport and kinetic activity of alamethicin in artificial lipid membranes*, A IX-a Conferința Nationala de Biofizica 11-13 Mai 2007, Bucuresti (lucrare poster)
 10. R. Chiriac, A. Asandei, L. Mereuță, Tudor Luchian, *pH modulation of ion transport through alamethicin channels formed in phosphatidylcholine artificial membranes*, A IX-a Conferința Nationala de Biofizica 11-13 Mai 2007, Bucuresti (lucrare poster)
 11. **L. Mereuță**, T. Luchian, Y. Park, K.-Soo Hahm, *Investigation of interactions between reconstituted planar lipid membranes and antimicrobial peptide HPA3*, National Conference of Biophysics (CNB 2009) Cluj-1-3 October, (premiul I) (lucrare poster)
 12. **L. Mereuță**, T. Luchian, *The impact of lipid dipole potential on membrane activity of selected antimicrobial peptides*, Conferința Nationala de Fizica – Iasi 23-25 septembrie 2010 (lucrare poster)
 13. Daniela Ciurac, **Loredana Mereuță**, Aurelia Apetrei and Tudor Luchian, *Physicochemical characteristics of the medium which guide peptide translocation through protein pores*, 12th National Conference on Biophysics "CNB 2013", IAȘI, ROMANIA | JUNE 13-16, 2013 (poster)
 14. Irina Schiopu, **Loredana Mereuță**, Alina Asandei, Tudor Luchian, *Analysis of copper ion induced peptide folding through a nanopore sensing technique*, 12th National Conference on Biophysics "CNB 2013", IAȘI, ROMANIA | JUNE 13-16, 2013 (prezentare orală)
 15. Isabela Dragomir, Andreea Filip, Aurelia Apetrei, **Loredana Mereuță**, *A lipid-protein system useful for the study of biomolecules at the single-molecule level*, 43th National Conference FTEM, 16-17 May 2014, Iasi, Romania (poster presentation).
 16. Andreea Filip, **Loredana Mereuță**, *Biosenzori moleculari utilizati în detectia unor peptide antimicrobiene*, FARPHYS 2014, 25 October 2014, Iasi, Romania (poster presentation).
 17. Alina ASANDEI, **Loredana MEREUTA**, Tudor LUCHIAN, *Braking of peptide passage across nanopores with oppositely charged aminoacids at the peptide termini*, CNB 2015, 13th National Conference of Biophysics with International Participation, 4-6 Iunie 2015, Timisoara, Romania, (poster presentation)
 18. Alina ASANDEI, **Loredana MEREUTA**, Tudor LUCHIAN, *Study of Peptide Conformational Changes at Single-Molecule Level using a protein nanopore*. 14th National Conference of Biophysics, 2-4 Iunie 2016, Cluj-Napoca, Romania, (poster presentation)
 19. Irina Șchiopu, Alina Asandei, **Loredana Mereuță**, Sorana Ifemi, Tudor Luchian, *Effect of Copper on Amyloid like peptides misfolding*, 14th National Conference of Biophysics, June 2-4, 2016, Cluj-Napoca, Romania (poster presentation)

38 puncte

Total I. 19 = 348

TOTAL I. = 5737.18



II. ACTIVITATEA DIDACTICĂ (30%)

II. 1. Tratatate și manuale universitare (30 puncte la 100 pagini / nr de autori)

- **Loredana Mereuta**, ‘*Biofizica Sistemelor Senzoriale*’ 2015, Editura Universității „Alexandru Ioan Cuza”- Iasi, 178 pagini

53.4 puncte

II. 3. Materiale suport curs, seminar, lucrări practice și programe analitice detaliate (10 puncte pentru fiecare activitate)

Materiale suport pentru cursuri sustinute la disciplinele:

1. Biofizica sistemelor senzoriale
2. Actiunea campului electromagnetic asupra sistemelor complexe

20 puncte

Materiale suport pentru lucrari practice noi sustinute la disciplinele:

- Neurobiofizica:
1. Studiul teoretic si experimental al unei molecule medicamentoase (diazepam) cu actiune specifica asupra SNC
 2. Modelarea matematica a parametrilor structurali si energetici ai unui produs farmaceutic utilizat in patologia sistemului nervos central
- Biofizica sistemelor senzoriale
3. Masurarea parametrilor fizico-chimici ai amestecurilor apa-alcool si influenta lor asupra energiilor de interactiune cu molecule medicamentoase
 4. Simularea spectrului electronic al unui produs farmaceutic (rifampin) si compararea cu spectrul inregistrat experimental
 5. Analiza corelatiilor existente intre pH si modalitatile gustative.
 6. Sinapsele chimice si electrice. Inregistrarea activitatii electrice a tesuturilor excitabile-electromiograma.
- Biofizica Generala
7. Studiarea proceselor de permeabilitate ionica prin membrane artificiale.
 8. Analiza fenomenelor de transport prin nanopori generati de peptide antimicrobiene.
 9. Analiza fenomenelor de transport prin porini (OmpF) si nanopori proteici (α -Hemolizina)
 10. Trasarea diagramelor current-tensiune pentru nanopori proteici inserati in membrane lipidice artificiale.
 11. Simularea activitatii stochastice a canalelor ionice. Prelucrarea numerica si interpretarea fizica a curentilor electrici mediati de canale ionice.
 12. Monitorizarea în timp real a diferenței de potențial de dipol a unei membrane lipidice artificiale.
 13. Analiza funcției de transfer a unui sistem biofizic cu ajutorul zgomotului alb
 14. Determinarea parametrilor esentiali (structura secundara, hidrofobicitate, sarcina electrica, moment hidrofof, etc.) pentru activitatea membranara a unor peptide antimicrobiene, cu ajutorul unor programe de simulare adecvate.

140 puncte

Total II. 3 = 160 puncte

Total II = 213.4 puncte