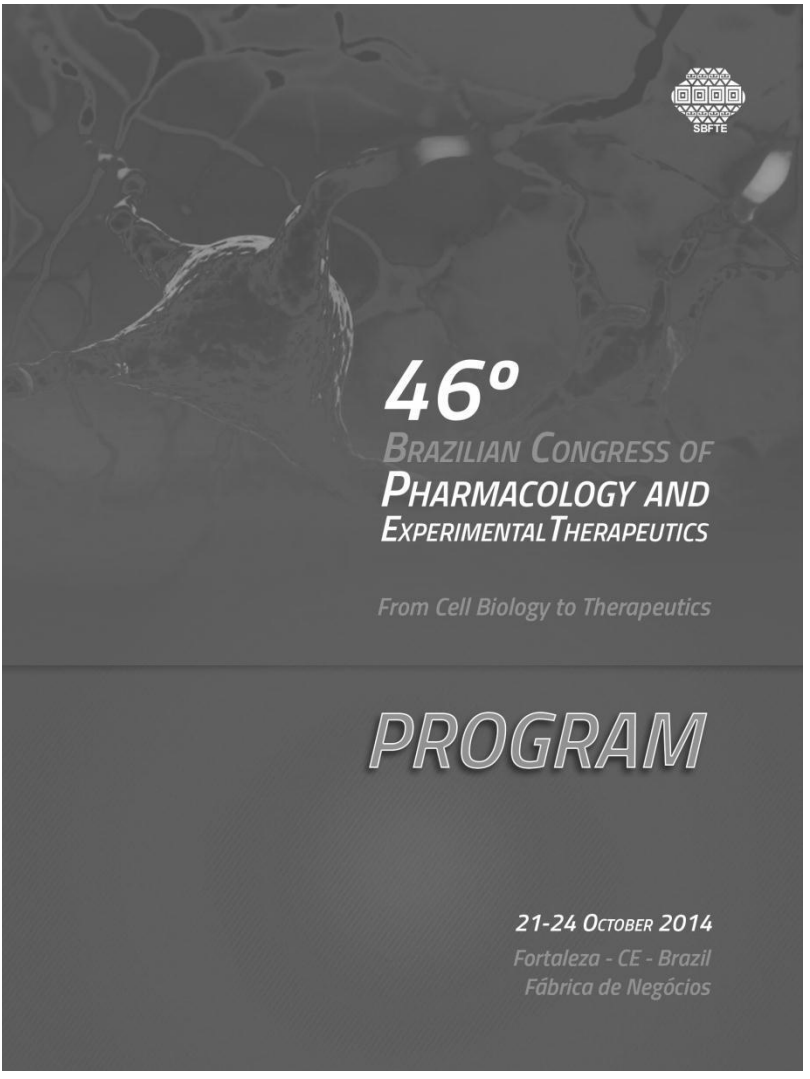

PROGRAM

Fábrica de Negócios
Fortaleza CE
Brazil
October 21-24, 2014

Enterprise Support

Biolab Sanus Farmacêutica

Exhibitors

Solução Integrada Comercial Ltda (AVS Projetos)
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Organization

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Review, Supervision, Layout
Sandra Helena Rocha da Cruz

Message of the president

Dear Colleague,

On behalf of the Brazilian Society of Pharmacology and Experimental Therapeutics I would like to welcome you to our 46th annual meeting. This year, the theme of the meeting is "From cell biology to Therapeutics". What a big task!!! We do look forward to discussing with our invited speakers, attendees and students.

This meeting is the result of significant work by the organizing committee with the Board of Directors, the Council, Executive Secretariat and Eventus. I very much thank all my colleagues for their efforts and dedication to the success of the event.

We are in debt to CNPq, CAPES, FAPERJ and the Ministry of Health (DECIT) for their financial support to our meeting. Special thanks also go to Biolab-Sanus Farmacêutica that supports the *José Ribeiro do Valle Award*.

Finally, I must thank the Abstract and Poster reviewers who have spent their time and effort to ensure that our standards are met. Do excuse any mistakes that may and will occur during the meeting. In this regard, we very much appreciate your feedback, comments, criticisms and suggestions to the email sbfte@sbfte.org.br. We are always working to get things better.

I wish you an excellent Congress and a very nice stay in Fortaleza.

Enjoy the meeting and take your time to make new friends and meet old friends.

Mauro M. Teixeira
President SBFTE

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Useful information

Secretariat

Congress Secretariat will be open from 8h to 18h.

Posters

Posters Sessions will happen on October 22 and 23 from 18h30-20h30 and October 24 from 09h50-11h50. Please display your poster from 08h00 at the day of your presentation and take it out after your presentation.

Certificates

The Certificates will be sent to the participants and lecturers in pdf

Media Desk

Media desk will be open from 8h to 18h. Please, leave your material at Media Desk at least two hours before your presentation. All rooms have *data show*. If you need any other equipment, please inform Media Desk as soon as possible. Lecturers presenting at 8h00 in the morning should leave your material at the day before

Badges

The use of badge is required for all activities and circulation areas

Abstracts

Abstracts presented at the poster session will be available at SBFTE site: http://www.sbfte.org.br

Schematic Scientific Program

21/10/2014 Tuesday

	Platina Room
09h00-12h00	Meeting of the Deliberative Council (only for Members of the Council and Society Board)
13h30-16h30	SBFTE Permanent Forum of Graduate Programs in Pharmacology (only for Heads of Pharmacology Graduate Programs, Council and Society Board)
14h00	Venue Secretariat and SBFTE Secretariat Opening
	Ruby Room
18h00-18h30	Opening ceremony
18h30-19h30	Opening Conference
20h00-22h00	Cocktail

09h00-12h00

Room Platina

Meeting of SBFTE Board and Deliberative Council
(only for Members of the Council and Society Board)

13h30-16h30

Room Platina

SBFTE Permanent Forum of Graduate Programs in Pharmacology
(only for Heads of Pharmacology Graduate Programs, Council and Society Board)

14h00

Venue Secretariat and SBFTE Secretariat Opening

18h00-18h30

Room Ruby
Opening ceremony

18h30-19h30

Room Ruby
Opening Lecture

Why intermittent energetic challenges are good for the brain
Mark P. Mattson (Johns Hopkins University School of Medicine, EUA)
Chairperson: Mauro M. Teixeira (UFMG)

20h00-22h00

Cocktail

Schematic Scientific Program

Wednesday (22/10/14)

	Ruby Room	Topazio Room	Ametista Room
08h00-08h50 Courses (Class 1)	Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates	Essential biostatistical concepts to Pharmacology	Drug-receptor interaction: Dimerization, alosterism and functional selectivity
09h00-09h50 Conference	Knowledge based drug discovery	Mutualism between gut and microbiota: An essential interaction for health and disease	
09h50-10h20	Coffee break		
10h20-12h00 Symposia	Inflammation and infection in the gut	Medicinal Plants: From traditional knowledge to therapeutics	Vascular Pharmacology and Therapeutics
12h00-13h00 Coordinated sessions	Molecular Pharmacology	Neuropharmacology	Natural Products
13h00-15h30	Lunch		
13h00-14h30			SBFTE Permanent Forum of Graduate Programs in Pharmacology Meeting with Society Council Board (only for Pharmacology Graduate Program Representative Members with Society and Council Board Members)
14h30-15h20		SBFTE Jovem – Meet the Pharmacologist	
15h30-16h20 Conference	*Rocha e Silva Memorial Lecture* Pharmacology: a new approach to anti-inflammatory therapy		
16h30-18h30 Symposia	New approaches on drug development	Therapeutical targets for inflammation resolution	Purinergic Signaling in Brain Diseases: From Cell Biology to Therapeutics
18h30-20h30	Poster Session 1 with coffee break		

Courses

08h00-08h50

Ruby Room

Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates

Chairperson: Roberto César Pereira Lima Júnior (UFC)

- Class 1: *Glimpse the main cancer issues and animal models for the study of cancer and toxicity of anticancer agents*
  Roberto César Pereira Lima Júnior (UFC)

Topazio Room

Essential biostatistical concepts to Pharmacology

Chairperson: Janaína Menezes Zanoveli (UFPR)

- Class 1: *Fundamentals of Biostatistics*
  Janaína Menezes Zanoveli (UFPR)

Ametista Room

Drug-receptor interaction: dimerization, alosterism and functional selectivity

Chairperson: François G. Noel (UFRJ)

- Class 1: *Dimerization of receptors: Functional and pathophysiological implications*
  Maria Christina W. de Avellar (Unifesp)

Conference

09h00-09h50

Ruby Room

Knowledge based drug discovery

Rainer Fischer (Fraunhofer Institute, Germany)
Chairperson: Claudia d Ó Pessoa (UFC)

Topazio Room

Mutualism between gut and microbiota: An essential interaction for health and disease

Claudio Fiocchi (Cleveland Clinic, USA)
Chairperson: Marcellus Loyola Ponte e Souza (UFC)

09h50-10h20 Coffee break

Symposia

10h20-12h00

Ruby Room

Inflammation and infection in the gut

Chairperson: Armênio Aguiar dos Santos (UFC)

- *Anti-inflammatory action of terpenes isolated from plants in experimental colitis in mice*
  João Batista Calixto (UFSC)
- *Gastrointestinal motility disorders during the intestinal inflammation- importance, mechanisms and pharmacological approaches*
  Marcellus Henrique Loiola Ponte de Souza (UFC)
- *Function of intestinal mucosa in the enteric infections: Molecular biology, genetic biomarkers and pharmacological approaches*
  Aldo A. M. Lima (UFC)

Topazio Room

Medicinal Plants: From traditional knowledge to therapeutics

Chairperson: Letícia V. Costa Lotufo (UFC)

- *Traditional knowledge inspired discovery of natural product-based therapeutics for cancer and neurological disorders*
  Leslie Gunatilaka (University of Arizona)
- *Peptides from Brazilian Plant species: Studies of its function and prospection as new templates for anticancer and neglected solitodiseases*
  Vanderlan da Silva Bolzani (UNESP)
- *Biflorin: a molecule with antimetastatic potential*
  Manoel Odorico de Moraes (UFC)

Ametista Room

Vascular Pharmacology and Therapeutics

Chairperson: Virginia Soares Lemos (UFMG)

- *Calcium handling in vascular smooth muscle cells*
  Lusiane Maria Bendhack (USP)
- *The impact of immune system activation on vascular function*
  Rita de C. A. Tostes (USP)
- *nNOS as a target for the treatment of vascular dysfunction in hypertension and atherosclerosis*
  Virginia Soares Lemos (UFMG)

Coordinated sessions

12h00-13h00

Ruby Room

Molecular Pharmacology

Chairperson: François G. Noel (UFRJ)

Rangel Leal Silva

- 01.024 *Zymosan promotes NLRP3/ASC/Capsase-1 inflammasome activation by a phagocytosis-independent mechanism*. Silva RL[1], Lopes AHP[1], Zamboni DS[2], Cunha FQ[1], Cunha TM[1] [1]FMRP-USP – Pharmacology, [2]FMRP-USP – Cell Biology

Camila André Pereira

- 01.029 *Chronic treatment with fluoxetine modulates vascular sympathetic responses by mechanisms that involve inhibition of norepinephrine synthesis/reuptake and increased nitric oxide generation*. Pereira CA[1], Ruginsk SG[2], Mestriner FLAC[1], Antunes-Rodrigues J[2], Resstel LB[1], Tostes RC[1] [1]FMRP-USP – Farmacologia, [2]FMRP-USP – Fisiologia

Roberta Tesch

- 01.011 *Analysis of message-address concept of adenosine receptor system by molecular modeling studies.* Tesch R[1], Sant'Anna CMR[2], Fraga CAM[1] [1]ICB-UFRJ – Farmacologia e Química Medicinal, [2]ICE-UFRRJ – Química

Thais Emanoelle Tavares Pompeu

- 01.002 *Evaluation of the intrinsic efficacy of N-phenylpiperazines as atypical antipsychotic candidates on D2L receptor.* Pompeu TET[1], Hermans E[2], Menegatti R[3], Fraga CAM[4], Noël F[1] [1]UFRJ – Farmacologia Bioquímica e Molecular, [2]UCLouvain – Neuroscience, [3]UFG, [4]LASSBio-UFRJ

Topazio Room

Neuropharmacology

Chairperson: Danielle S. Macedo (UFC)

Sara Cristina Hott

- 02.053 *Bed nucleus of the stria terminalis noradrenergic system modulates contextual fear conditionig*: *involvement of CRF1 receptors and NMDA-NO pathway*. Hott SC, Gomes FV, Uliana DLM, Resstel LBM FMRP-USP – Pharmacology

Karine Roversi

- 02.024 *Influence of trans fat supplementation crossover two generations of rats on an amphetamine-induced mania-animal model*. Roversi Kr[1], Trevizol F[2], Dias VT[1], Roversi K[2], Burger ME[2] [1]CCS-UFSM – Farmácia, [2]UFSM – Farmacologia

Rita de Cássia de O. Lima

- 02.019 *Administration of 2-araquidonoilglicerol (2AG) in medial pre-frontal cortex induced anxiolytic-like effects in rats*. Lima RCO, Almeida-Santos AF, Aguiar DC ICB-UFMG – Farmacologia

Iris Cristina Maia Oliveira

- 02.036 *Antipsychotic and antidepressant-like effects of Riparin I in the corticosterone-induced depression model in mice*. Oliveira ICM1, Vasconcelos AV, Vidal LMT, Castro LA, Lopes IS, Rodrigues GC, Lima AEL, Sousa PB, Pontes MCD, Sousa FCF UFC – Physiology and Pharmacology

Amestista Room

Natural Products

Chairperson: Fernanda Regina de Castro Almeida (UFPI)

Renato Ivan Ávila

- 09.067 *Mucoadhesive formulation containing Bidens pilosa L. (Asteraceae) reduces intestinal injury against 5-fluorouracil-induced mucositis in mice*. Ávila RI[1], Ávila PHM[1], Santos Filho EX[1], Bastos CCC[1], Batista AC[2], Serpa RC[3], Marreto RN[1], Lima EM[1], Mendonça EF[2], Valadares MC[1] [1]FARMATEC-UFG – Farmacologia e Toxicologia Celular, [2]FO-UFG – Patologia Bucal

Lorena Neris Barboza

- 09.019 *Prolonged diuretic activity and sparing-calcium effect of Tropaeolum majus L. – evidence in the prevention of osteoporosis*. Barboza LN[1], Prando TBL[2], Silva GR[2], Lourenço ELB[2], Gasparotto Júnior A[3] [1]UFPR – Farmacologia, [2]Unipar – Farmacologia e Toxicologia de Produtos Naturais, [3]UFGD – Farmacologia

Dalton Dittz

- 09.106 *Cellular mechanisms in antimetastatic action of protease from V. cundinamarcensis latex on murine melanoma cells*. Dittz D[1], Tatsumi G[1], Salas CE[2], Lopes MTP[1] – [1]UFMG – Farmacologia, [2]UFMG – Bioquímica

Nathalia Ribeiro Pinho de Sousa

- 09.120 *Silymarin protects against irinotecan-induced non-alcoholic steatohepatitis through the inhibition of protein nitrosylation and toll-like receptor 4 immunoexpression*. Assis-Júnior EM[1], Sousa NRP[1], Moreira LS[1], Malveira LRC[1], Wong DVT[1], Melo AT[1], Pereira VBM[1], Wanderley CWS[1], Soares BM[1], Almeida PRC[2], Ribeiro RA[1], Lima-Júnior RCP[1] [1]UFC – Physiology and Pharmacology, [2]UFC – Pathology and Forensic Medicine

13h00-15h30 Lunch

SBFTE Permanent Forum of Graduate Programs in Pharmacology Meeting with Society Council Board (only for Pharmacology Graduate Program Representative Members with Society and Council Board Members)

13h00-14h30

Ametista Room

SBFTE Jovem

14h30-15h20

Topazio Room

Meet the pharmacologist

Chairperson: Erick J. R. Silva (Unesp-Botucatu)

- David Newman (NCI-NIH)
- François Noel (UFRJ)
- João B. Calixto (UFSC)
- Leslie Gunatilaka (University of Arizona)
- Manassés C. Fonteles (UFC/UECE)
- Maria Christina W. Avellar (Unifesp-EPM)
- Regina P. Markus (USP)

Conference

15h30-16h20

Ruby Room

Rocha e Silva Memorial Lecture

Resolution pharmacology: A new approach to anti-inflammatory therapy

Mauro Perretti (The William Harvey Research Institute, UK)

Chairperson: Mauro M. Teixeira (UFMG)

Symposia

16h30-18h30

Ruby Room

New approaches on drug development

Chairperson: Norberto Peporine Lopes (USP)

- *Mass spectrometry on drug development: from the structural elucidation to imaging generation*
  Norberto Peporine Lopes (USP)
- *Discovery, design and mechanism of next generation proteasome inhibitors for cancer chemotherapy*
  Daniela Barretto Barbosa Trivella (LNBio)
- *Target validation, hit identification and hit to lead optimization of adenosine kinase inhibitors.*
  Lucio Holanda G. de Freitas Junior (LNBio)

Topazio Room

Therapeutical targets for inflammation resolution

Chairperson: Patrícia Machado Rodrigues e Silva (Fiocruz)

- *High dietary fat intake compromises blood brain barrier structural and immunological integrity – a link to cerebrovascular disease*?
  Egle Solito (The William Harvey Research Institute, UK)
- *Role of annexin A1 on PPAR expression*
  Sandra Helena Poliselli Farsky (USP)

- *Crosstalk between glucocorticoid-induced proteins GILZ and Annexin A1in the context of resolution of acute inflammation.*
  Lirlândia Pires de Sousa (UFMG)
- *Regulatory effect of Annexin-1 on allergic lung inflammation induced by house dust mite (HDM) in mice.*
  Patrícia Machado Rodrigues e Silva (Fiocruz)

Amestista Room

Purinergic signaling in brain diseases: From cell biology to therapeutics

Chairperson: Rui Daniel Schroder Prediger (UFSC)

- *Control by caffeine of mood and memory processes – role of adenosine A_{2A} receptors*
  Rodrigo A. Cunha (University of Coimbra, Portugal)
- *A coffee break for age-related cognitive deficits*
  Lisiane O. Porciúncula (UFRGS)
- *Adenosine A2A receptors as target to manage non-motor symptoms of Parkinson's disease*
  Rui Daniel Schroder Prediger (UFSC)
- *ATP P2Y1 receptors control cognitive deficits and neurotoxicity induced by brain ischemia*
  Geanne Matos de Andrade (UFC)

Poster Session 1 – with coffee break

18h30-20h30

01. Cellular and Molecular Pharmacology (01.001-01.016)
02. Neuropharmacology (02.001-02.020)
04. Inflammation (04.001-04.041 and 04.057)
05. Pain and Nociception (05.001-05.018)
06. Cardiovascular and Renal (06.001-06.021)
08. Respiratory, Urinary and Reproductive Pharmacology (08.001-08.010)
09. Natural Products and Toxinology (09.001-09.052)
10. Cancer and Cell Proliferation (10.001-10.015)

Schematic Scientific Program

Thursday (23/10/14)

	Ruby Room	Topazio Room	Ametista Room
08h00-08h50 Courses (Class 2)	Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates	Essential Biostatistical Concepts to Pharmacology	Drug-receptor interaction: Dimerization, alosterism and functional selectivity
09h00-09h50 Conferences	Therapeutic potential of toxins: from bench discovery to "drugable" compound	Neuroinflammation and chronic pain	
09h50-10h20	Coffee break		
10h20-12h00 Symposia	Mechanisms of toxicity and resistence in cancer chemotherapy	Pain mechanisms and development of analgesic strategies	Membrane bound and soluble guanylate cyclases as therapeutical targets
12h00-13h00 Coordinated sessions	Molecular Cancer	Inflammation	Pain
13h00-15h30	Lunch		
14h00-15h20	SBFTE General Assembly		
15h30-16h20 Conference	Sertoli cell proliferation and function in vertebrate: a view on cellular and signaling mechanisms	Structure- and ligand-based drug design approaches to drug discovery	
16h30-18h30 Symposia	GPCRs: Structure, Signaling and Drug Discovery	Purinergic signaling as an emerging potential target to control inflammatory responses	José Ribeiro do Valle Award
18h30-20h30	Poster Session 2 with coffee break		

Courses

08h00-08h50

Ruby Room

Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates

Chairperson: Roberto César Pereira Lima Júnior (UFC)

- Class 2: *Syndecan-1 and Manganese: Possible partners in cancer cell migration and metastasis via Integrin activation*
  Mauro Sérgio Gonçalves Pavão (UFRJ)

Topazio Room

Essential Biostatistical concepts to Pharmacology

Chairperson: Janaína Menezes Zanoveli (UFPR)

- Class 2: *Data analysis: Parametric tests*
  Leandro José Bertoglio (UFSC)

Ametista Room

Drug-receptor interaction: Dimerization, alosterism and functional selectivity

Chairperson: François G. Noel (UFRJ)

- Class 2: *Allosteric modulators: Concept, identification and implication for new drugs discovery*
  François G. Noel (UFRJ)

Conference

09h00-09h50

Ruby Room

Therapeutic potential of toxins: from bench discovery to "drugable" compound

Jan Tytgat (University of Leuven, Belgium)

Chairperson: Yara Cury (Butantan Institute)

Topazio Room

Neuroinflammation and chronic pain

Ru-Rong Ji (Duke University, USA)

Chairperson: Waldiceu A. Verri

09h50-10h20 Coffee break

Symposia

10h20-12h00

Ruby Room

Mechanisms of toxicity and resistence in cancer chemotherapy

Chairperson: Ronaldo de A. Ribeiro (UFC)

- *Gastrointestinal toxicities during irinotecan cancer chemotherapy: Mechanisms and mediators*
  Ronaldo de Albuquerque Ribeiro (UFC)
- *Studying cancer resistance in cell culture*
  Guido Lenz (UFRGS)
- *The oncogenic factor TBX2 confers cisplatin resistance in cancer cells through a novel role in the DNA repair pathway*
  Sharon Prince (University of Cape Town, South Africa)

Topazio Room

Pain mechanisms and development of analgesic strategies

Chairperson: Waldiceu A. Verri Jr (UEL)

- *Capturing the affective dimensions of chronic pain in preclinical models*
  Tamara King (University of New England, USA)
- *Neuroimmune activation in the spinal cord enhances kynurenine pathway and accounts for the genesis of neuropathic pain*
  Guilherme Rabelo de Souza (USP)
- *Exploring new targets and mechanisms of orofacial neuropathic pain*
  Juliana Geremias Chichorro (UFPR)

Ametista Room

Membrane bound and soluble guanylate cyclases as therapeutical targets

Chairperson: Nilberto Robson Falcão do Nascimento (UECE)

- *G protein- and cytokine-mediated pathways to natriuretic peptide stimulated secretion*
  Adolfo de Bold (University of Ottawa)
- *Molecular mechanisms underlying the renal effects of uroguanylin*
  Manassés C. Fonteles (UECE / UFC)
- *Role of guanylate cyclase agonists in the regulation of gastrointestinal function and treatment of gastrointestinal diseases*
  Mark G. Currie (Ironwood Pharmaceuticals, USA)
- *Membrane bound and soluble guanylate cyclases as therapeutical targets*
  Gilberto de Nucci (Unicamp)

Coordinated sessions

12h00-13h00

Ruby Room

Molecular Cancer

Chairperson: Letícia V. Costa Lotufo (UFC)

Luciana Pimenta

- 09.045 *Crotoxin, a toxin from rattlesnake venom, inhibits the angiogenic function of macrophages in co-culture model*. Pimenta LA, Pereira JF, Kato EE, Cirillo MC, Sampaio SC IBu – Pathophysiology

Michele Oliveira Hütten

- 10.001 *XIAP silencing and p53 superexpression cooperate in glioma cell death*. Hütten MO, Silva AO, Lenz G UFRGS

Luciana Silva do Amaral

- 10.011 *Role of GSK3-β signaling on telocinobufagin-induced cell death*. Amaral LS, Cunha-Filho GA, Noël F, Quintas LEM ICB-UFRJ

André Avelino dos Santos Junior

- 10.016 *Role of Purinergic P2 receptors on proliferation and viability of esophageal cancer cells lines*. Santos Jr AA1, Paccez JD2, Pinto LF3, Zerbini LF2, Morrone FB1 – 1PUCRS – Biologia Celular e Molecular, 2ICGEB – Cancer Genomics, 3INCa

Topazio Room

Inflammation

Chairperson: Marcelo N. Muscará (USP)

Davidson Furtado Dias

- 04.007 *Arginase contributes to lung fibrotic response in silicotic mice*. Dias DF, Ciambarella BT, Carvalho VF, Martins MA, Silva PMR IOC-Fiocruz

Kamila Maria Oliveira Sales

- 04.054 *Dyspeptic symptoms, gastric emptying, ghrelin and leptin serum levels in inflammatory bowel diseases patients*. Sales KMO[1], Cavalcanti RF[1], Santos AA[1], Braga LLBCB[1], Oliveira RB[3], Castro M[2], Souza MHLP[1] [1]UFC – Physiology and Pharmacology, [2]FMRP-USP

Elizabeth Soares Fernandes

- 04.057 *TRPV1 antagonism by capsazepine modulates innate immune response in mice infected with Plasmodium berghei Anka*. Fernandes ES[1,2], Brito CXL[1], Teixeira SA[3], Barboza R[4], dos Reis AS[3], Azevedo-Santos APS[5], Muscará M[3], Costa SKP[3], Marinho CRF[3], Brain SD[2], Grisotto MAG[1,6] – [1]Ceuma, [2]King's College – Cardiovascular Division, [3]USP, [4]Unifesp, [5]UFMA, [6]Instituto Florence

Andressa de Freitas

- 04.070 *Role of the aryl hydrocarbon receptor in the pathogenesis of sepsis*. Freitas A, Donate PB, Castanheira FVS, Borges VF, Nascimento DC, Talbot J, Alves-Filho JCF, Cunha FQ FMRP-USP – Pharmacology

Ametista Room

Pain

Chairperson: Mariana Lima Vale (UFC)

Flavia Viana Santa-Cecilia

- 05.025 *NOD1 and NOD2 contribute to the genesis of neuropathic pain and are involved in glial cells activation*. Santa-Cecília FV, Ferreira DW, Fonseca MD, Cunha FQ, Zamboni DS, Cunha TM FMRP-USP – Pharmacology

Beatriz Stein Neto

- 05.037 **Aldehyde dehydrogenase 2 activation reduces neuropathic pain and 4-hydroxinonenal adducts in spinal cord**. Netto BS1, Ferreira JC2, Chen CH3, Mochly-Rosen D3, Cury Y1, Zambelli VO1 1IBu – Dor e Sinalização, 2ICB-USP – Anatomia, 3Stanford University – Chemistry and Systems Biology

Gabriela Trevisan

- 05.019 *Transient receptor potential ankyrin 1 blockage reduced hyperalgesia in a model of trigeminal neuralgia*. Trevisan G[1], Nassini R[2], Di Siena G[2], Materazzi S[2], Fusi C[2], Rossato MF[3], Ferreira J[4], Geppetti P[2] [1]UNESC – Ciências da Saúde, [2]UniFi – Ciências da Saúde, [3]UFSM – Química, [4]UFSC – Farmacologia

Leandro Francisco Silva Bastos

- 05.014 **Essential role played by tumor necrosis factor alpha in urate crystal-induced inflammation and hypernociception in mice**. Bastos LFS[1], Oliveira THC[1], Amaral FA[1], Dias ACF[2], Oliveira VLS[1], Tavares LD[2], Costa VV[1], Galvão I[1], Soriani FM[3], Sachs D[4], Ryffel B[5], Souza DG[2], Teixeira MM[1] [1]UFMG – Biochemistry and Immunology, [2]UFMG – Microbiology, [3]UFMG – General Biology, [4]UNIFEI – Pharmacology, [5]CNRS – Molecular Immunology and Embryology

13h00-15h30 Lunch

SBFTE General Assembly

Ruby Room

14h00-15h20

Conference

15h30-16h20

Ruby Room

Sertoli cell proliferation and function in vertebrate: a view on cellular and signaling mechanisms

Luiz Renato de França (INPA)

Chairperson: Maria Christina W. de Avellar (Unifesp)

Topazio Room

Structure- and ligand-based drug design approaches to drug discovery

Adriano D. Andricopulo (USP)

Chairperson: Mauro M. Teixeira (UFMG)

Symposia

16h30-18h30

Ruby Room

GPCRs: Structure, Signaling and Drug Discovery

Chairperson: Claudio M. da Costa Neto (USP)

- *Structural basis of GPCR activation*
  Xavier Deupi (Paul Scherrer Institut, Switzerland)
- *Biased agonism in alpha-1 adrenergic receptor subtypes.*
  Andre Sampaio Pupo (UNESP-Botucatu)
- *New findings in angiotensin receptors signaling: Relevance to drug discovery.*
  Claudio M. da Costa-Neto (USP)
- *Functional selectivity and assembly of GPCRs signaling complexes: New paths toward drug discovery.*
  Michel Bouvier (Université de Montréal, Canada)

Topazio Room

Purinergic signaling as an emerging potential target to control inflammatory responses

Chairperson: Robson Coutinho-Silva (UFRJ)

- *P2X7 receptor a valuable target in Nervous System from development to neurodegeneration*
  María Teresa Miras-Portugal (University Complutense of Madrid, Spain)
- *Purinergic system in the M1 and M2 activation.*
  Rafael Fernandes Zanin
- Implications of P2X7 receptors in renal diseases
  Maurilo de Nazaré de Lima Leite Júnior (UFRJ)
- Purinergic signaling in vascular dysfunction
  Claudia Lucia Martins Silva (UFRJ)

Ametista Room

José Ribeiro do Valle Award

Chairperson: Mauro M. Teixeira (UFMG)

Zelia Menezes

- **04.001 Microbiota is important to 5-fluorouracil-induced intestinal mucositis in mice**. Menezes-Garcia Z[1], Arifa RDN[1], Acúrcio LB[1], Lima RL[1], Brito CB[1], Teixeira MM[2], Souza DG[1] [1]UFMG – Microbiologia, [2]UFMG – Imunologia e Bioquímica

Jessica Barbosa do Nascimento Viana

- **01.003 LDT3 and LDT5: Pharmacological evaluation in human alpha-1 adrenoceptors**. Nascimento-Viana JB[1], Alcántara-Hernández R[2], García-Sáinz JA[2], Romeiro LAS[3], Noël F[1], Silva CLM[1] [1]UFRJ – Farmacologia Bioquímica e Molecular, [2]UNAM – Fisiología Celular, [3]UnB – Desenvolvimento de Estratégias Terapêuticas

Priscila de Souza

- 06.043 **Impaired vascular function in sepsis-surviving rats: evidence for endothelial dysfunction mediated by angiotensin II, increased ROS/RNS Generation and augmented activity of RHO-kinase**. de Souza P[1], Scheschowitsch K[2], da Silva LM[1], Guarido KL[2], Werner MF[1], Assreuy J[2], da Silva-Santos JE[2] [1]UFPR – Pharmacology, [2]UFSC – Pharmacology

Jhimmy Talbot

- 04.108 **Smoking-induced rheumatoid arthritis aggravation is dependent of aryl hydrocarbon receptor activation and is influenced by genetic polymorphism**. Talbot J[1], Liew FY[2], Peres RS[1], Pinto LG[1], Oliveira RDR[1], Silva JR[1], Lima KWA[1], França RFO[1], Ryffel B[3], Cunha TM[1], Alves-Filho JCF[1], Louzada-Júnior P[1], Cunha FQ[1] [1]FMRP-USP – Pharmacology, [2]University of Glasgow, [3]CNRS

Kátia Maciel Lima

- 04.022 **cAMP elevating agents induce resolution of acute inflammation dependent on annexin A1**. Lima KM[1], Caux TR[2], Vago JP[1], Tavares LP[3], Aribada RG[2], Carmo AAF[1], Galvão I[3], Costa BRC[2], Soriani FM[4], Perretti M[5], Silva PMR[6], Pinho V[1], Teixeira MM[3], Sousa LP[2] [1]UFMG – Morfologia, [2]UFMG – Análises Clinicas e Toxicológicas, [3]UFMG – Bioquímica e Imunologia, [4]UFMG – Biologia Geral, [5]QMUL, [6]Fiocruz – Fisiologia e Farmacodinâmica

Poster Session 2 with coffee break

18h30-20h30

01. Cellular and Molecular Pharmacology (01.010 e 01.017-01.031)
02. Neuropharmacology (02.021-02.040)
04. Inflammation (04.042-04.082)
05. Pain and Nociception (05.019-05.036)
06. Cardiovascular and Renal (06.022-06.042)
07. Endocrine and Gastrointestinal (07.001-07.019)
09. Natural Products and Toxinology (09.053-09.104)
11. Clinical Pharmacology, Pharmacokinetics, Pharmacogenomics and Preclinical Toxicology (11.001-11.015)

Schematic Scientific Program

Friday (24/10/14)

	Ruby Room	Topazio Room	Ametista Room
08h00-08h50 Courses (Class 3)	Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates	Essential Biostatistical Concepts to Pharmacology	Drug-receptor interaction: Dimerization, alosterism and functional selectivity
09h00-09h50	*Drugs and Drug Leads from Nature*		
09h50-11h50	Poster Session 3 with Coffee-Break		
12h00-13h00 Conference	From Chemistry to Pharmacology and back to Chemistry: the history of a therapeutic cannabinoid		
13h00-13h30	Closing ceremony and Awards		

Courses

08h00-08h50

Ruby Room

Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates

Chairpersons: Roberto César Pereira Lima Júnior (UFC)

- Class 3: *Prospection of new anticancer candidates: Traditional approaches and trends*
  Diego Veras Wilke (UFC)

Topazio Room

Essential Biostatistical Concepts to Pharmacology

Chairperson: Janaína Menezes Zanoveli (UFPR)

- Class 3: *Data analysis – nonparametric tests*
  Carlos Fernando de Mello (UFSM)

Ametista Room

Drug-receptor interaction: Dimerization, alosterism and functional selectivity

Chairperson: François G. Noel (UFRJ)

- Class 3: *Functional Selectivity: Concept, quantification, and opportunities for discovery of new drugs*
  André Sampaio Pupo (UNESP)

Conference

09h00-09h50

Ruby Room

Drugs and Drug Leads from Nature

David Newman (National Cancer Institute, USA)

Chairperson: Letícia V. Costa Lotufo (UFC)

Poster Session 3 with Coffee-Break

09h50-11h50

02. Neuropharmacology (02.041-02.059)
03. Psychopharmacology (03.001-03.022)
04. Inflammation (04.083-04.123)
05. Pain and Nociception (05.037-05.053)
06. Cardiovascular and Renal (06.043-06.062)
07. Endocrine and Gastrointestinal (07.004)
09. Natural Products and Toxinology (09.105-09.155)
10. Cancer and Cell Proliferation (10.016-10.029)
11. Clinical Pharmacology, Pharmacokinetics, Pharmacogenomics and Preclinical Toxicology (11.016-11.029)

Closing Conference

12h00-13h00

Ruby Room

From Chemistry to Pharmacology and back to Chemistry: the history of a therapeutic cannabinoid

Francisco S. Guimarães (USP)

Chairperson: Fernando de Q. Cunha (USP)

Closing ceremony and Awards

13h00-13h30

01. Cellular and Molecular Pharmacology

01.001 Biological evaluation and toxicological profile of the new antibacterial prototypes against bovine mastitis. Silva AR[1], Nunes ELC[2], Silva GCCS[1], Cardoso EA[1], Santana SS[3], Gomez JAG[3], Vargas MD[3], Castro HC[2], Lione VOF[1] [1]UFRJ-LaBioFar – Fármacos e Medicamentos, [2]LABiEMol-UFF, [3]IQ-UFF – Química Inorgânica

01.002 Evaluation of the intrinsic efficacy of N-phenylpiperazines as atypical antipsychotic candidates on D2L receptor. Pompeu TET[1], Hermans E[2], Menegatti R[3], Fraga CAM[4], Noël F[1] [1]UFRJ – Farmacologia Bioquímica e Molecular, [2]UCLouvain – Neuroscience, [3]UFG, [4]LASSBio-UFRJ

01.003 LDT3 and LDT5: Pharmacological evaluation in human alpha-1 adrenoceptors. Nascimento-Viana JB[1], Alcántara-Hernández R[2], García-Sáinz JA[2], Romeiro LAS[3], Noël F[1], Silva CLM[1] [1]UFRJ – Farmacologia Bioquímica e Molecular, [2]UNAM – Fisiología Celular, [3]UnB – Desenvolvimento de Estratégias Terapêuticas

01.004 Pharmacological evaluation of new N-phenylpiperazine derivatives for the treatment of benign prostatic hyperplasia: intrinsic activity determination for 5-HT1A and muscarinic receptors. Carvalho AR[1], Nascimento-Viana JB[1], Romeiro LAS[2], Noël F[1], Silva CLM[1] [1]UFRJ – Farmacologia Bioquímica e Molecular, [2]LADETER-UnB – Desenvolvimento de Estratégias Terapêuticas

01.005 Immunotherapy against pythiosis: Molecular profile, genetic diversity and evolution of Brazilian isolates of *Pythium insidiosum* based on COX II gene. Ribeiro TC[1], Weiblen C[1], Azevedo MI[2], Monteiro DU[1], Emmanouilidis J[1], Machado VS[1], Pereira DIB[3], Botton SA[1], Santurio JM[1] [1]UFSM, [2]UFRGS, [3]UFPel

01.006 Pharmacological and molecular evidence on the relevance of kinin receptors in a mouse glioma model. Nicoletti NF[1], Senécal J[2], Pesquero JB[3], Campos MM[1], Couture R[3], Morrone FB[1] [1]INTOX-PUCRS – Biologia Celular e Molecular, [2]INTOX-PUCRS, [2]UdeM, [3]Unifesp – Biofísica

01.007 Melatonin inhibits P2Y1 receptor-mediated leukocyte adhesion to endothelial cell. Cardoso TC, Silva CLM ICB-UFRJ

01.008 Protective effect of 4,4'-bischloro-diphenyl diselenide against inhibition of thioredoxin reductase by methylmercury. Leite GO[1], Lugokenski TH[2], Rocha JBT[3], Wagner C[2,1] [1]UFSM – Farmacologia, [2]Unipampa, [3]UFSM – Bioquímica Toxicológica

01.009 Novel digoxin derivatives not mimic the cellular effects of digoxin. Silva NP[1], Noël F[1], Barbosa LAO[2], Quintas LEM[1] [1]ICB-UFRJ, [2]CCS-UFSJ

01.011 Analysis of message-address concept of adenosine receptor system by molecular modeling studies. Tesch R[1], Sant'Anna CMR[2], Fraga CAM[1] [1]ICB-UFRJ – Farmacologia e Química Medicinal, [2]ICE-UFRRJ – Química

01.012 Red propolis from State of Alagoas induced anti-hypertensive effect in SHR. Herculano EA[1], Costa CDF[2], Silva JCG[2], Beiriz RV[2], Tenório EP[2], Moura MT[2], Nascimento TG[2], Ribeiro EAN[2], Araújo-Júnior JX[1] [1]UFAL – Chemistry Biotechnology, [2]UFAL – Pharmacy and Nursing

01.013 Pharmacological evaluation of marinobufagin derivatives: Search for functional selectivity among cardiotonic steroids. Rendeiro MM, Noël F, Cunha-Filho GSA, Touza NA, Quintas LEM ICB-UFRJ

01.014 Expression and purification of an acidic phospholipase A2 from *Bothrops pauloensis* snake venom. Borges IP, Isabel TF, Gimenes SNC, Homsi-Brandeburgo MI, Rodrigues RS, Silva FH, Rodrigues VM UFU

01.015 Purified polysaccharides of *Genipa americana* leaves: Anticoagulant, antiplatelet and antithrombotic activities. Madeira JC[1], Nogueira FC[2], Souza ROS[1], Pereira LP[1], Assreuy AMS[1], Pereira MG[2] [1]ISCB-UECE, [2]FECLESC-UECE

01.016 Cardiovascular effects of LQM 001 a derivative aminoguanidinic. Costa CDF[1], Herculano EA[1], Lima RR[1], Bernadino AC[1], Beiriz RV[1], Silva JCG[1], Araújo-Júnior JX[2], Ribeiro EAN[1] [1]UFAL – Pharmacy and Nursing, [2]UFAL – Chemistry Biotechnology

02. Neuropharmacology

02.001 TRPA1 receptor: a novel approach in Alzheimer's disease. Bicca MA[1], Santos ECS[1], Loch-Neckel G[1], Leal PC[2], Calixto JB[1] [1]UFSC – Farmacologia, [2]UFSC – Química

02.002 Effect of aflatoxin B1 on EEG recordings and Na^+, K^+-ATPase activity after pentylenetetrazol administration in rats. Braga ACM[1], Trombetta F[1], Poersch AB[1], Schiefelbein N[2], Lima C[1], Ribeiro LR[1], Furian AF[1] [1]UFSM – Fisiologia e Farmacologia, [2]UFSM – Ciência e Tecnologia dos Alimentos

02.003 Chronic *trans* fat consumption facilitate the development of hyperactive behavior. Pase CS, Roversi Kr, Trevizol F, Kuhn FT, Burger ME UFSM

02.004 N-acetilcysteine protects the rat brain against aspartame-induced oxidative stress. Finamor IA[1], Pês TS[1], Ourique GM[1], Londero EP[1], Scheid T[2], Llesuy SF[3], Partata WA[2], Pavanato MA[1] [1]UFSM, [2]UFRGS, [3]UBA

02.005 Intrahippocampal infusion of spermidine improves memory persistence: Involvement of protein kinases A and C. Gais MA, Signor C, Girardi BA, Porto GP, Muller M, Rubin M, Mello CF UFSM

02.006 Neuromotor impairment and anxiogenic effects in adolescent and adult female rats treated with ethanol following a binge drinking pattern. Fernandes LMP, Santana LNS, Lopes KS, Silva ML, Luz DA, Barros MA, Barros MA, Fontes-Júnior EA, Lima RR, Maia CSF ICS-UFPA

02.007 Pharmacological Evaluation about the derivate pyrimidinone 4A in the Central Nervous System in a classical model of anxiety. Aquino CQA[1], dos Anjos JV[2], Carvalho MS[3], Gavioli EC[3], Soares Rachetti VP[3] [1]UFRN – Biofísica e Farmacologia, [2]UFPE – Química Fundamental, [3]UFRN – Biofísica e Farmacologia

02.008 Spermidine-induced improvement of reconsolidation of memory involves calcium-dependent protein kinase in rats Girardi BA[1], Signor C[2], Muller M[1], Gais MA[1], Schoffer AP[1], Rubin MA[3] [1]UFSM – Farmacologia, [2]UFSM – Bioquímica, [3]UFSM – Farmacologia/Bioquímica

02.009 Effects of 5-HT3 receptors antagonist ondansetron on anxiety-like behaviour generated by withdrawal from alcohol. Freire BTS[1], Silva CMV[1], Gavioli EC[1], Soares-Rachetti VP[1] UFRN – Biofísica e Farmacologia

02.010 Effect of cyclooxygenase-2 inhibitors on pentylenetetrazol (PTZ)-induced seizures in mice. Temp FR, Santos AC, Marafiga JR, Jesse AC,

Milanesi LH, Hessel AT, Lenz QF, Rambo LM, Mello CF UFSM – Fisiologia e Farmacologia

02.011 Methylprednisolone improves the neuromuscular transmission at 50 Hz only after being transported into the nerve motor. Ambiel CR[1], Dal Belo CA[2], Corrado AP[3], Correia-De-Sá P[4], Alves-Do-Prado W[5] [1]UEM – Ciências Fisiológicas, [2]Unipampa – Farmacologia, [3]FMRP – Farmacologia, [4]UP – Imuno-Fisiologia e Farmacologia, [5]UEM – Farmacologia e Terapêutica

02.012 Central effects of aqueous extract of yellow and purple passion fruit leaves in mice. Ayres ASFSJ[1], Lima LA[1], Soares TC[2], Ayres DDJ[1], Rachetti VPS[1], Zucolotto SM[2], Gavioli EC[1] [1]UFRN – Biofísica e Farmacologia, [2]UFRN – Farmácia

02.013 Effects of topiramate on anxiety related behaviors in ethanol abstinent rats. Ayres DDJ, Soares-Rachetti VP, Gavioli EC, Ayres ASFSJ UFRN – Biofísica e Farmacologia

02.014 Agmatine reverses reserpine-induced orofacial dyskinesia in mice: Role of oxidative stress, nitric oxide and glutamate NMDA receptors. Cunha AS[1], Matheus FC[2], Santos DB[3], Colle D[3], Moretti M[4], Cunha MP[3], Rodrigues AL[3], Farina M[3], Prediger RD[1] [1]UFSC – Farmacologia, [2]UFSC – Farmacologia, [3]UFSC – Bioquímica, [4]UFSC – Farmacologia / Bioquímica

02.015 Behavioral impairment induced by different doses of reserpine in mice: Relationship with tyrosine hydroxylase levels. Freitas CM[1], Busanello A[1], Leal CQ[2], Peroza LR[3], Schaffer LF[1], Krum BN[2], Fachinetto R[1,3] [1]UFSM – Farmacologia [2]UFSM – Farmácia [3]UFSM – Bioquímica Toxicológica

02.016 Is there a central site that modulates peripheral inflammation in the rat? Frade TIC[1], Bakhle YS[2], Francischi JN[1] [1]ICB-UFMG – Farmacologia, [2]Imperial College

02.017 Riparina III effect of the reversal of anhedonia and abandonment in animals exposed to chronic stress. Vasconcelos AS, Oliveira ICM, Rodrigues GC, Oliveira SC, Vidal LMT, Chaves RC, Castro LA, Lopes IS, Pontes MCD, Sousa FCF UFC – Fisiologia e Farmacologia

02.018 Inosine attenuates inflammatory and nociceptive responses in a murine multiple sclerosis model. Junqueira SC[1,2], Lieberknecht V[1,2], Albert TB[2], Peña MC[1], Coelho IS[1], Mack JM[3], Rodrigues ALS[1], Calixto JB[4], Santos ARS[1], Dutra RC[1,2,3] [1]UFSC – Neurociências, [2]LAIF-UFSC-Araranguá, SC; [3]UFSC – Farmacologia, [4]CIEnP

02.019 Administration of 2-araquidonoilglicerol (2AG) in medial pre-frontal cortex induced anxiolytic-like effects in rats. Lima RCO, Almeida-Santos AF, Aguiar DC ICB-UFMG –Farmacologia

02.020 Treatment with cilostazol reverts the cognitive impairment caused by chronic cerebral hypoperfusion in rats. Godinho J, Bacarin CC, Ferreira EDF, Zaghi GGD, Oliveira RMW, Milani H UEM – Farmacologia e Terapêutica

04. Inflammation

04.001 Microbiota is important to 5-fluorouracil-induced intestinal mucositis in mice. Menezes-Garcia Z[1], Arifa RDN[1], Acúrcio LB[1], Lima RL[1], Brito CB[1], Teixeira MM[2], Souza DG[1] [1]UFMG – Microbiologia, [2]UFMG – Imunologia e Bioquímica

04.002 Effect of high dose intravenous immunoglobulin (IVIG) therapy in the treatment of severe dengue. Rocha RPF[1], Costa VV[1], Fagundes CT[2], Valadão DF[1], Avila TV[1], Cisalpino D[1], Souza PR[1], Ribeiro LS[1], Queiroz CMJ[3], Silva TA[3], Dias ACF[1], Verri WA[4], Teixeira MM[5], Souza DG[1] [1]ICB-UFMG – Microbiologia, [2]UFMG –

Microbiologia / Trinity Biomedical Sciences, [3]FO-UFMG – Patologia Oral, [4]UEL – Patologia, [5]UFMG – Bioquímica e Imunologia

04.003 Expression of inducible nitric oxide synthase (iNOS) in heart and kidney of mice with collagen-induced arthritis (CIA). Zochio GP[1], Carlos CP[2], Girol AP[3], Taipeiro EF[4], Chies AB[1] [1]FAMEMA – Farmacologia, [2]FACERES – Medicina, [3]FIPA – Imunohistoquímica, [4]FAMEMA – Bioquímica Básica

04.004 *In vitro* and *in vivo* immunomodulatory mechanisms involved in the anti-inflammatory activity of subfraction 4 (SF4) of *Echinodorus macrophyllus* (Kunth.) Mich (Alismataceae). Silva GP[1], Fernandes DC[1], Vigliano MV[1], Pinto FA[1], Santos MS[1], Martino TM[1], Caxito ML[1], Justo MG[1], Sabino KCC[1], Coelho MGP[1] [1]UERJ – Bioquímica

04.005 Role of advanced glycation end-products on glucocorticoid-induced mastocytopenia and mast cells hyporeactivity. Santoro TT, Torres RC, Silva PMR, Martins MA, Carvalho VF IOC-Fiocruz – Inflamação

04.006 Epigenetics alterations is involved in reduced inflammatory response in intrauterine undernourishment. Ballico MM[1], Carvalho MHC[1], Câmara NOS[2], Landgraf RG[3], Landgraf MA[1] [1]ICB-USP – Farmacologia, [2]ICB-USP – Imunologia, [3]Unifesp – Inflamação e Farmacologia Vascular

04.007 Arginase contributes to lung fibrotic response in silicotic mice. Dias DF, Ciambarella BT, Carvalho VF, Martins MA, Silva PMR IOC-Fiocruz

04.008 Intrauterine undernourishment reduced leptin receptor and toll-like receptor-4 expression and modulate acute lung inflammation. Balbino AM[1], Torres TC[1], Fernandes L[1], Landgraf MA[2], Landgraf RG[1] [1]Unifesp-Diadema – Inflamação e Farmacologia Vascular, [2]ICB-USP – Farmacologia

04.009 Involvement of adenosine receptors in inflammation induced by copper in zebrafish larvae. Cruz FF[2,1], Leite CE[1], Maboni LO[3], Pereira TCB[2], Bogo MR[3,2], Bonan CD[3], Campos MM[4,1], Battastini AMO[5], Morrone FB[2,6] [1]PUCRS – Toxicologia e Farmacologia, [2]PUCRS – Medicina e Ciências da Saúde, [3]PUCRS – Biociências, [4]PUCRS – Odontologia, [5]UFRGS – Bioquímica, [6]PUCRS – Farmácia

04.010 Protease inhibitors promote resolution of the acute inflammation associated with increased intact form of annexin-A1. Vago JP[1], Lima GLN[1], Caux TR[2], Tavares LP[1], Lima KM[1], Ribeiro ALC[1], Pinho V[1], Perretti M[4], Teixeira MM[5], Sousa LP[1] [1]FF-UFMG – Análises Clínicas e Toxicológicas, [2]ICB-UFMG – Morfologia, [4]QMUL, [5]ICB-UFMG – Bioquímica e Imunologia, ICB

04.011 Purinergic signaling involving NTPDase 2 and P2Y1 receptors contributes to endothelial leukocyte-adhesion in schistosomal inflammation. Oliveira SDS[1], Oliveira NF[1], Savio LEB[2], Meyer-Fernandes JR[3], Ornelas FGI[4], Ferreira ZS[5], Coutinho-Silva R[2], Silva CLM[1] [1]ICB-UFRJ, [2]IBCCF-UFRJ, [3]IBqM-UFRJ, [4]IB-USP, [6]UFRJ

04.012 High doses of inhaled corticosteroid and periodontal disease alter NTPDase activity in blood serum of rats. Medeiros LF[1], Scarabelot VL[2], Cavagni J[2], Detanico BC[2], Rozisky JR[1], Daudt LD[2], Gaio EJ[2], Battastini AMO[3], Ferreira MBC[1], Rosing CK[2], Torres ILS[1] [1]UFRGS – Farmacologia, [2]UFRGS, [3]UFRGS – Bioquímica

04.013 Inflammatory effects in isolated intestine during ischemia and reperfusion in rats. Ricardo-da-Silva FY[1], Thaís Fantozzi E[1], Bernardez-Amorim MB[1],

Breithaupt-Faloppa AC[2], Oliveira-Filho RM[1], Vargaftig BB[1], Tavares-de-Lima W[1] [1]ICB-USP – Farmacologia, [2]FMUSP-HC-InCor

04.014 ***In vivo*** **PCB126 exposure impairs leukocyte activation by gpcr-induced pathway**. Shimada ALB, Cruz W, Rodrigues S, Azevedo R, Dorr F, Fock R, Pinto E, Farsky S FCF-USP – Análises Clínicas e Toxicológicas

04.015 Involvement of TLR2/MYD88/NF-KB pathway regulating the expression of IL-18 in the pathogenesis of irinotecan-induced intestinal mucositis. Wong DVT[1], Batista GLP[1], Borges VF[2], Wanderley CWS[1], Bem AXC[1], Gonzales RH[1], Andrade CL[1], Teixeira MA[1], Brito GAC[3], Lima-Júnior RCP[1], Cunha FQ[2], Ribeiro RA[1] [1]UFC – Physiology and Pharmacology, [2]FMRP-USP, [3]UFC – Morphology

04.016 Kinin B1 receptor lack influences bone healing in a mouse model of femur critical-size defect in streptozotocin-induced type-1 diabetes. Cignachi NP[1], Pesquero JB[2], Oliveira RB[1], Etges A[3], Campos MM[4] [1]PUCRS – Odontologia, [2]Unifesp – Biofísica, [3]UFPel – Odontologia, [4]INTOX-PUCRS

04.017 Lipoxin A4 protects mice during severe malaria by modulation of HO-1 and ICAM-1 expression. Pádua TA[1], Souza MC[1], Torres ND[1], Costa MF[2,1], Candea ALP[1], Costa T[2,1], Seito LN[1], Penido C[2,1], Estato V[3], Antunes B[3], Silva L[4], Pinheiro AA[4], Caruso-Neves C[4], Tibiriçá E[3], Carvalho L[5], Henriques MG[1,2] [1]Farmanguinhos-Fiocruz – Applied Pharmacology, [2]INCT-IDN-CDTS-Fiocruz, [3]IOC-Fiocruz – Cardiovascular Investigation, [4]IBCCF-UFRJ, [5]IOC-Fiocruz – Malaria Research

04.018 Endogenous LXA_4 contributes to tolerance to experimental severe malaria. Torres ND[1], Souza MC[1], Padua TA[1], Costa MS[1], Candea ALP[1], Costa TEMM[1], Seito LN[1], Penido C[2], Estato V[3], Antunes B[3], Antunes B[3], Tibiriçá E[3], Tibiriçá E[3], Carvalho L[4], Henriques MG[1] [1]Farmanguinhos-Fiocruz – Farmacologia Aplicada, [2]CDTS-Fiocruz, [3]IOC-Fiocruz – Investigação Cardiovascular, [4]IOC-Fiocruz – Malária

04.019 Effect of acute melatonin administration in a model of chronic orofacial pain. Scarabelot VL[1], Oliveira C[2], Medeiros LF[1], Marques PR[2], Cioato SG[2], Adachi LS[2], Souza A[3], Quevedo A[1], Caumo W[2], Torres ILS[4] [1]UFRGS – Fisiologia, [2]UFRGS – Medicina, [3]UFRGS, [4]ICBS-UFRGS – Farmacologia

04.020 Targeting the sphingosine pathway to resolution of inflammatory response induced by LPS. Perez D, Athayde RM, Reis AC, Menezes PVA, Teixeira MM, Sousa LP, Pinho V UFMG

04.021 Effect of pipecolyl xylidide (PPX), a non-anesthetic bupivacaine metabolite in a short-term A/J murine model of asthma marked by resistance to steroid therapy. Cotias AC[1], Serra MF[1], Rodrigues VC[1], Olsen PC[1], Pão CRR[1], Costa JCS[2], Cordeiro RSB[1], Silva PMR, Silva PMR[1], Martins MA[1] [1]IOC-Fiocruz – Inflamação, [2]Farmanguinhos-Fiocruz

04.022 cAMP elevating agents induce resolution of acute inflammation dependent on annexin A1. Lima KM[1], Caux TR[2], Vago JP[1], Tavares LP[3], Aribada RG[2], Carmo AAF[1], Galvão I[3], Costa BRC[2], Soriani FM[4], Perretti M[5], Silva PMR[6], Pinho V[1], Teixeira MM[3], Sousa LP[7] [1]UFMG – Morfologia, [2]UFMG – Análises Clinicas e Toxicológicas, [3]UFMG – Bioquímica e Imunologia, [4]UFMG – Biologia Geral, [5]QMUL, [6]Fiocruz – Fisiologia e Farmacodinâmica, [7]FaFar-UFMG – Análises Clinicas e Toxicológicas

04.023 Healing activity of a protein fraction of latex *Himatanthus drasticus* (HdLP) for topical use in an experimental model of cutaneous ulcers. Paiva YTCN[1],

Souza TFG[1], Vasconcelos MS[2], Carmo LD[1], Moreno LMC[1], Figueiredo IST[1], Fonseca SGC[3], Ramos MV[2], Teixeira MDA[1], Alencar NMN[1] [1]UFC – Farmacologia e Bioquímica, [2]UFC – Bioquímica e Biologia Molecular, [3]UFC – Farmácia

04.024 Lymphatic system influence on acute lung injury after intestinal ischemia/reperfusion in female rats. Fantozzi ET[1], Breithaupt-Faloppa AC[2], Ricardo-da-Silva FY[1], Bernardez-Amorim MB[1], Oliveira-Filho RM[1], Tavares-de-Lima W[1] [1]ICB-USP – Pharmacology, [2]FMUSP-HC-InCor

04.025 Lung inflammatory process after brain death in rats: sexual dimorfism. Breithaupt-Faloppa AC[1], Ferreira SG[1], Kudo GK[1], Armstrong Jr R[1], Tavares-de-Lima W[2], Sannomiya P[1], Moreira LP[1] [1]FMUSP-HC-InCor – Cardiovascular Surgery, [2]ICB-USP – Pharmacology

04.026 Pravastatin and rosuvastatin *in vivo* or *in vitro* inhibit platelet adhesion to fibrinogen. Goulart G, Naime ACA, Lopes Pires ME, Monteiro FP, Marcondes S Unicamp – Farmacologia

04.027 Treatment with *Saccharomyces boulardii* ameliorated the function gastrintestinal and reverted the inflammatory events in experimental intestinal mucositis induced by 5-fluorouracil. Xavier AF[1], Justino PFC[1], Morais CM[1], Nogueira AF[1], Malveira CB[1], Girão DKFB[1], Souza EP[2], Lima MAS[3], Mendes TS[2], Lima RF[1], Souza MHLP[1], Ribeiro RA[1], Soares PMG[2] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Morfologia, [3]UECE – Ciências Fisiológicas

04.028 Anti-inflammatory activity of the aqueous extract of the bark of *Chrysobalanus icaco Linnaeus*. Oliveira TB, Guerra ASHS, Mota FVB, Carvalho JA, Silva BIM, Silva TG UFPE – Antibióticos

04.029 The polyphenol resveratrol prevents the allergic pulmonary eosinophilic inflammation in obese mice via AMPK activation and insulin resistance amelioration. André DM, Calixto MC, Alexandre EC, Sollon CS, Anhê GF, Antunes E Unicamp – Farmacologia

04.030 Down-modulation of activated human neutrophil by LMW-Fucoidan: Role of microparticle. Moraes JA[1], Frony AC[1], Barcellos-de-Souza P[1], Boisson-Vidal C[2], Barja-Fidalgo TC[1] [1]UERJ – Biologia Celular, [2]INSERM U765

04.031 Effect of Helicobacter pylori urease (HPU) in endothelial cells. Souza MJ[1], Moraes JA[1], Nascimento-Silva V[1], Helal-Neto E[1], Morgado-Diaz J[2], De-Freitas-Júnior J[2], Uberti A[3], Scopel-Guerra A[3], Morandi V[1], Carlini CR[3], Barja-Fidalgo TC[1] [1]UERJ – Biologia Celular, [2]InCA, [3]UFRGS

04.032 PKC and PKG activate NADPH oxidase and increase reactive oxygen species generation in platelets of rats treated with lipopolysaccharide. Lopes-Pires ME, Naime ACA, Antunes E, Marcondes S Unicamp – Farmacologia

04.033 Evaluation of anti-edema activity of microspheres of poly-ε-caprolactone containing usnic acid. Barbosa JAP[1], Silva CVNS[2], Bezerra TO[1], Santana MAN[3], Silva TG[1], Magalhães NSS[2], Santos NPS[4], Maia MBS[5] [1]UFPE – Antibióticos, [2]LIKA-UFPE – Bioquímica, [3]UFPE – Histologia, [4]UFPE – Biotecnologia, [5]UFPE – Fisiologia

04.034 δPKC and AKT stimulate NO/CGMP/PKG pathway in platelets of rats treated with lipopolysaccharide. Frade JO, Lopes-Pires ME, Antunes E, Marcondes S FCM-Unicamp – Pharmacology

04.035 Gamma delta T lymphocyte modulation by lipoxygenase-derived mediators. Negreiros C[1], Cascabulho C[2], Pons A[2], Henriques MG[1], Costa MF[3],

Penido C[1] [1]Farmanguinhos-Fiocruz – Farmacologia Aplicada, [2]Fiocruz – Inovações em Terapias, Ensino e Bioprodutos

04.036 PDTC inhibits UVB-induced skin inflammation and oxidative stress in hairless mice and exhibits antioxidant activity *in vitro*. Ivan ALM[1], Campanini MZ[1], Martinez RM[1], Ferreira VS[1], Steffen VS[1], Vicentini FTMC[2], Vilela FMP[2], Martins FS[2], Zarpelon AC[3], Cunha TM[4], Fonseca MJV[2], Baracat MM[1], Georgetti SR[1], Verri WA[3], Casagrande R[1] [1]UEL – Ciências Farmacêuticas, [2]FCFRP-USP – Ciências Farmacêuticas, [3]UEL – Ciências Patológicas, [4]FMRP-USP – Farmacologia

04.037 Carvacrol/beta-cyclodextrin inclusion complex reduces muscle inflammation in rats. Souza ACA[1], Santana D[1], Abreu FF[1], Moraes J[1], Araújo AA[2], Quintans Júnior LJ[3], De Santana JM[4], Camargo EA[1] [1]LAFAPI-UFS – Fisiologia, [2]UFS – Farmácia, [3]UFS – Fisiologia, [4]LAPENE-UFS – Fisioterapia

04.038 Complement activation on platelets in experimental cerebral malaria. Rodrigues FG[1], Campos MHA[1], Assis FA[1], Val CH[1], Brant F[1], Silva BC[2], Arifa RDN[3], Rachid MA[2], Machado FS[1], Teixeira AL[4], Teixeira MM[1] [1]ICB-UFMG – Biochemistry and Immunology, [2]ICB-UFMG – Pathology, [3]ICB-UFMG – Microbiology, [4]UFMG – Internal Medicine

04.039 Intestinal mucositis induced by association of irinotecan and 5-fluorouracil in C57BL/6 mice: involvement of TNF-α and IL-6. Pereira VBM[1], Wong DVT[1], Melo AT[1], Assis-Júnior EM[1], Brito GAC[2], Ribeiro RA[1], Lima-Júnior RCP[1] [1]UFC – Physiology and Pharmacology, [2]UFC – Morphology

04.040 5-FU increases the ligature-induced alveolar bone loss in rats. Calcia TBB[1], Araújo VMA[1], Melo IM[2], Guimarães MV[2], Nogueira GHC[1], Ribeiro RA[1], Lima V[1] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Clínica Odontológica

04.041 Anti-inflammatory activity of Camphor on acute inflammatory response. Silva-Filho SE[1], Silva-Comar FMS[1], Rocha BA[1], Aguiar RP[1], Ames FQ[1], Freitag AF[1], Spironello RA[1], Rodrigues PJ[1], Cardia GFE[1], Bersani-Amado CA[1], Cuman RKN[1] [1]UEM – Farmacologia e Terapêutica

04.057 TRPV1 antagonism by capsazepine modulates innate immune response in mice infected with *Plasmodium berghei* Anka. Fernandes ES[1,2], Brito CXL[1], Teixeira SA[3], Barboza R[4], dos Reis AS[3], Azevedo-Santos APS[5], Muscará M[3], Costa SKP[3], Marinho CRF[3], Brain SD[2], Grisotto MAG[1,6] [1]Ceuma, [2]King's College – Cardiovascular Division, [3]USP, [4]Unifesp, [5]UFMA, [6]Instituto Florence

05. Pain and Nociception

05.001 Local administration of mangiferin prevents hyperalgesia in models of inflammatory pain. Rocha LW, Parada CA Unicamp – Biologia Estrutural e Funcional

05.002 Beneficial effects of docosahexaenoic acid supplementation on cyclophosphamide-induced alterations in mice. Freitas RDS[1,2], Costa KM[1], Campos MM[1,2,3] [1]PUCRS – Medicina e Ciências da Saúde, [2]INTOX-PUCRS, [3]PUCRS – Faculdade de Odontologia

05.003 Melatonin treatment entrains the rest-activity circadian rhythm in rats with chronic inflammation. Torres ILS[1], Laste G[1], Vidor L[1], de Macedo IC[3], Rozisky JR[1], Rozisky JR[1], Medeiros LF[1], Souza A[1], Souza A[1], Meurer L[2], Meurer L[2], Souza ICC[3], Caumo W[1] [1]UFRGS – Farmacologia, [2]HCPA, [3]UFPel

05.004 Antinociceptive and anti-inflammatory activities of LQFM008 molecule. Silva DPB[1], Florentino IF[1], Oliveira LP[1], Menegatti R[2], Costa EA[1]

[1]DCiF-ICB-UFG – Natural Products, [2]FF-UFG – Medicinal Pharmaceutical Chemistry

05.005 Involvement of kinins on pain induced by treatment with paclitaxel. Oliveira SM[1], Brusco I[2], Bastos C[2], Dalla Pozza CC[2], Rigo F[3], Trevisan G[4], Tonello R[2], Ferreira J[5] [1]UFSM – Bioquímica e Biologia Molecular, [2]UFSM, [3]UFMG, [4]UNESC, [5]UFSC

05.006 Effects of simvastatin on acute and neuropathic pain models in rats. Corso CR[1], Martins DF[2], Werner MFP[1] [1]UFPR – Farmacologia, [2]UNESC – Ciências da Saúde

05.007 The involvement of opioid system on analgesia induced by environmental enrichment on injured rats. Kimura LF[1], Mattaraia VGM[2], Picolo G[1] [1]IBu – Dor e Sinalização, [2]IBu – Biotério Central

05.008 Ovariectomy as a pre-clinical model of spontaneous scratching behaviour in mice. Machado GDB[1,2], Canevese FF[1,2], Pereira PJS[3,2], Campos MM[4,2,3] [1]PUCRS – Medicina, [2]INTOX-PUCRS, [3]PUCRS – Biologia Molecular e Celular, [4]PUCRS – Odontologia

05.009 Tingenone, a pentacyclic triterpene, induces peripheral antinociception due to NO/cGMP pathway activation in mice. Veloso CC[1], Rodrigues VG[2], Ferreira RCM[1], Duarte LP[2], Klein A[1], Duarte ID[1], Romero TRL[1], Perez AC[1] [1]UFMG – Farmacologia, [2]UFMG – Química

05.010 Antinociceptive effect of monoterpene geraniol not involves opioid system. La Rocca V[1], Fonseca DV[1], Nóbrega FFF[2], Almeida RN[1] [1]UFPB – Psicofarmacologia, [2]CDSA-UFCG

05.011 Melatonin analgesia is associated with improvement of the descending endogenous pain-modulating system in fibromyalgia: A Phase II, randomized, double-dummy, controlled trial. Deitos A, Zanette SA, Vercelino R, Laste G, Rozisky JR, Schwertner A, Machado CB, Xavier F, Souza ICC, Torres ILS, Caumo W HCPA-UFRGS

05.012 Antinociceptive and anti-inflammatory activity of *Eugenia brasiliensis* in mice. Simões RR[1], Dal-Secco D[2], Frederico MJ[2], Costa AF[2], Syracuse S[2], Siebert DA[3], Alberton MD[3], Santos ARS[2] [1]UFSM, [2]UFSC, [3]FURB

05.013 4-methyl-(4')-methyl-naphthalimide, a cyclic imide with important effects against inflammatory and cancer pain in mice. Silva GF, Buzzi FC, Correa R, Cechinel Filho V, Quintão NLM Univali – Ciências da Saúde

05.014 Essential role played by tumor necrosis factor alpha in urate crystal-induced inflammation and hypernociception in mice. Bastos LFS[1], Oliveira THC[1], Amaral FA[1], Dias ACF[2], Oliveira VLS[1], Tavares LD[2], Costa VV[1], Galvão I[1], Soriani FM[3], Sachs D[4], Ryffel B[5], Souza DG[2], Teixeira MM[1] [1]UFMG – Biochemistry and Immunology, [2]UFMG – Microbiology, [3]UFMG – General Biology, [4]UNIFEI – Pharmacology, [5]CNRS – Molecular Immunology and Embryology

05.015 Antinociceptive activity of *Citrus limon* (L.) Burm. f. essential oil in mice. Monteiro-Silva JF[1], Oliveira LMS[1], Almeida EKC[1], Silva NKGT[1], Viana MDM[1], Silva-Neto GJ[1], Vieira ACS[1], Sant'Ana AEG[2], Alexandre-Moreira MS[1], Campesatto EA[1] [1]UFAL – Pharmacology and Immunity, [2]IQB-UFAL – Natural Resources

05.016 Mechanisms involved in the antinociceptive effect of 5-(1-(3-fluorophenyl)-1H-pyrazol-4-YL)-2H-tetrazole (LQFM-021)-new pyrazole derivative. Florentino IF[1], Oliveira LP[1], Silva DPB[1], Menegatti R[2], Costa EA[1] [1]ICB-UFG, [2]FF-UFG

05.017 The antipsychotic aripiprazole induces antinociceptive effects in animal models through partial agonism at

dopamine D2 receptors. Almeida-Santos AF, Ferreira RCM, Aguiar DC, Romero TR, Moreira FA UFMG – Pharmacology

05.018 Role of spinal cord PI3K, MAP kinases, and glial cells in superoxide anion-induced pain in mice. Carvalho TT[1], Calixto-Campos C[1], Mizokami SS[1], Pinho-Ribeiro FA[1], Manchope MF[1], Casagrande R[2], Verri WA[1] [1]UEL – Ciências Patológicas, [2]UEL – Ciências Farmacêuticas

06. Cardiovascular and Renal

06.001 Venous return related-pharmacotherapy is more prevalent in wheelchair non-athletes than athletes. Paiva RCA, Garbeloti EJR, Restini CBA UNAERP

06.002 Antihypertensive effect of the methanolic fraction of the essential oil of *Alpinia zerumbet* in Wistar rats. Cunha GH[1], Marques LARV[2], Fechine FV[2], Moraes MO[2], Moraes MEA[2] [1]UFC – Enfermagem, [2]UFC – Farmacologia Clínica

06.003 Loss of platelet antiaggregation activity in senescent endothelial cells and its recovery by polyphenols. Silva GC[2,1], Abbas M[2], Ribeiro TP[2], Burban M[2], Toti F[2], Braga FC[3], Côrtes SF[1], Schini-Kerth VB[2] [1]UFMG – Farmacologia, [2]UMR-CNRS, [3]UFMG – Farmácia

06.004 Effect of the NAD(P)H oxidase inhibitor apocynin on oxidative stress induced by chronic ethanol consumption in the rats corpus cavernosum. Leite LN[1], Hipolito UV[2], Tirapelli CR[2] [1]FMRP-USP, [2]EERP-USP

06.005 Volume replacement during septic shock: are there significant differences in the CLP model? Guarido KL, da Silva Santos JE UFSC – Farmacologia

06.006 Bufalin induces vasoconstriction at pharmacological concentration in rabbit aorta and mesenteric rings by stimulation of the α-adrenergic-PKC pathway. Oliveira IMB, Freire MSS, Farias VX, Santos CF, Nascimento NRF, Fonteles MC ISCB-UECE

06.007 Influence of perivascular adipose tissue (PVAT) on vascular contractility in mice aortas. Nobrega N, Reis D, Facine LM, Miranda CAS, Bonaventura D UFMG – Farmacologia

06.008 Vasorelaxant, hypotensive and radical-scavenging activities of Jabuticaba (*Myrciaria cauliflora*). Andrade DML[1], Reis CF[1], Castro PFS[1], Amaral NO[2], Borges LL[1], Stefany GR[1], Gil ES[1], Pedrino GR[2], Conceição EC[1], Rocha ML[1] [1]FF-UFG, [2]ICB-UFG

06.009 Analysis of renal disorders *in vivo* and *in vitro* on diabetic rats. Costa LLM[1], Alves RS[2], Seabra-Filho FT[1], Cancio KS[1], Marques KF[1], Pereira JM[1], Monteiro HSA[1], Alves NTQ[1] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Análises Clínicas e Toxicológicas

06.010 Role of TNF-α in chronic ethanol consumption-induced oxidative stress: involvement of perivascular adipose tissue. Simplicio JA[1], Cunha TM[1], Tirapelli CR[2] [1]FMRP-USP – Pharmacology, [2]EERP-USP – Pharmacology

06.011 Reactivity of rat, guinea-pig, rabbits and human aortic rings to ouabain, bufalin and digoxin. Martins ICMT, Oliveira IMB, Freire MSS, Santos CF, Nascimento NRF, Fonteles MC ISCB-UECE

06.012 Pinitol attenuates experimental diabetic nephropathy. Cortez LUAS, Paz IA[1] Sousa LGF, Santos CF, Nascimento NRF, Fonteles MC ISCB-UECE

06.013 Treatment with doxycycline prevents the renal function impairment in rats subjected to kidney ischemia-reperfusion. Cortês AL, Gonsalez SR, Melo PA, Lara LS ICB-UFRJ

06.014 The vascular effects of d-pinitol in mouse small mesenteric arteries. Moreira LN[1], Côrtes SF[1], Lemos VS[2] [1]UFMG –

Pharmacology, [2]UFMG – Physiology and Biophysics

06.015 Increased resting tension abolishes the endothelial anti-contractile effect induced by phenylephrine in renal hypertensive (2K-1C) rat aorta. Silva BR, Grando MD, Bendhack LM FCFRP-USP

06.016 Are the chronotropic effects of A1 adenosine receptors altered in hypertension? Câmara H, Rodrigues JQD, Silva Júnior ED, Godinho RO, Jurkiewicz A Unifesp – Farmacologia

06.017 Cardioprotection evaluation of ipriflavone in spontaneously hypertensive rats. Castro QJT[1], Mosqueira VCF[1], Pereira SC[1], Souza ACM[1], Guimarães HN[2], Leite R[1], Grabe-Guimarães A[1] [1]CiPharma-UFOP, [2]DEE-UFMG

06.018 Treatment with enalapril improves renal function in nephrectomized rats. Pereira JM, Costa PHS, Rodrigues FAP, Alves NTQ, Silva PLB, Coelho YP, Bona MD, Vasconcelos MJS, Alves RS, Monteiro HSA UFC – Farmacologia

06.019 The Ca^{2+} ionophore-induced relaxation involves NO-synthase and cyclooxygenase (COX) activation in renal hypertensive (2K-1C) but only NO-synthase in 2K rat aortas. Feitoza PR[1], Silva BR, Bendhack LM FCFRP-USP – Física e Química

06.020 Nitroxyl donor Angeli's salt-induced relaxation of rat veins compared to nitric oxide donors. Zuchi FC, Paulo M, Bendhack LM FCFRP-USP – Physics and Chemistry

06.021 Effects of sildenafil treatment in experimental renovascular hypertension. Gomes IBS[1], Dias AT[2], Froussard J[3], Cintra A[3], Freitas FP[2], Balarini CM[4], Gava AL[5], Meyrelles SS[5], Vasquez EC[6] [1]UFES – Ciências Farmacêuticas, [2]UFES, [3]EMESCAM, [4]UFPB, [5]UFES – Ciências Fisiológicas, [6]UVV – Ciências Farmacêuticas

08. Respiratory, Urinary and Reproductive Pharmacology

08.001 Ipriflavone in a self-emulsifying drug delivery system (SEDDS) improves female sexual function in young and menopausal senescent hyepertensive rats. Martins TA, Mendes JC, Mosqueira VCF, Grabe-Guimarães A, Rodovalho GV, Leite R CiPharma-UFOP

08.002 Ipriflavone chronic treatment improves apomorphine induced genital vasocongestive arousal in ovariectomized and senescent hypertensive female rats. Mendes JC, Lopes IM, Martins TA, Mosqueira VCF, Grabe-Guimarães A, Rodovalho GV, Leite R CiPharma-UFOP

08.003 Relaxant activity of new pde4 inhibitors on guinea pig airway smooth muscle. Martins IRR[1], Nunes IKC[2], Lima LM[2], Barreiro EJL[2], Silva BA[1] [1]DCF-UFPB, [2]LASSBio-UFRJ

08.004 Administration of ketamine reduced depressive-like behavior induced by ovariectomy in rats. Oliveira C[1,3,4], Moreira SFS[3,4,5], Scarabelot VL[2,3,4], Marques PR[1,3,4], Medeiros LF[2,3,4], Nunes EA[2,3,4], Kuo J[3,4], Macedo IC[2,3,4], Muchale AV[3,4], Caumo W[1,3], Torres ILS[1,2,3,4] [1]UFRGS – Medicine, [2]UFRGS – Physiology, [3]UFRGS – Pharmacology [4]HCPA – Animal Experimentation [5]ICS-FM–UFPA.

08.005 Resveratrol prevents the reproductive damage induced by sodium valproate on male rats. Dalenogare JF, Ourique GM, Saccol EMH, Pês TS, Glanzner WG, Pavanato MA, Barreto KP UFSM – Fisiologia e Farmacologia

08.006 Relaxing effects of the new nitric oxide donor in isolated trachea from rats with experimental asthma. Castro PFS[1,2], Batista AC[3], Silva RS[4], Rocha ML[1] [1]FF-UFG, [2]Universo, [3]FO-UFG, [4]FCFRP-USP

08.007 Effect of subcutaneous serotonin injection on male rat sexual behavior *in*

vivo. Barbosa EC, Lumbard B, Linder AE UFSC – Farmacologia

08.008 Strength training changes trachea rectivity by modulating prostanoids pathway on rat Wistar. Brito AF[1], Silva AS[2], Souza AA[2], Ferreira PB[1], Félix GS[2], Sampaio RS[1], Tavares RL[2], Souza ILL[1], Pereira RA[2], Araujo LCC[3], Miranda Neto M[2], Miranda Neto M[2], Silva BA[4] – [1]UFPB – Produtos Naturais e Sintéticos Bioativos, [2]UFPB – Treinamento Físico Aplicado ao Desempenho e à Saude, [3]UFPB – Biologia Celular e Molecular, [4]UFPB – Ciências Farmacêuticas

08.009 JME-173, non-anesthetic analogue of mexiletine, exerts spasmolytic action at least in part by inhibiting calcium influx in the airway smooth muscle. Carvalho KIM[1], Santos-Filho OA[1], Joca HC[2], Cruz JS[2], Silva ET[3], Costa JCS[3], Silva PMR[1], Martins MA[1] [1]IOC-Fiocruz, [2]LAMEX-UFMG, [3]Farmanguinhos-Fiocruz

08.010 Effects of chronic administration of tamsulosin and tadalafil, alone or in combination, in rats with bladder outlet obstruction induced by chronic nitric oxide deficiency. Santos LCO, Sales LC, Sousa PRR, Silva BGB, Pamplona TL, Marinho LB, Santos JMS, Segundo SAS, Silva Júnior JVM, Cerqueira JBG, Maia RR, Gonzaga-Silva LF, Regadas RP UFC – Cirurgia e Fisiologia e Farmacologia

09. Natural Products and Toxinology

09.001 Neutralization of Bothrops snake venoms from Ecuador by antibothropic antivenom manufactured by Instituto Vital Brazil. Strauch MA[1], da Cunha LER[1], Brazil LM[1], Castanheira PNS[1], Castanheira PNS[1], Meirelles LGR[1], Tavares MSH[2], Machado MM[2], Melo PA[2] [1]IVB, [2]UFRJ – Farmacologia das Toxinas

09.002 Silvercatfish central nervous system depression by the essential oil of *Curitiba prismatica*. Garlet QI[1], Silva LL[1], Amaral L[2], Schindler B[2], Watzlawick LF, Longhi SJ[2], Baldisserotto B[1], Heinzmann BM[3] [1]UFSM – Farmacologia, [2]UFSM – Engenharia Florestal, [3]UFSM – Farmácia Industrial

09.003 *In vitro* trypanocidal activity of betulinic acid and semi-synthetic derivatives. Bocalon LG, Tozatti MG, Marçal MG, Ferreira DS, Esperandim VR, Januário AH, Pauletti PM, Silva MLA, Cunha WR Unifran – Ciências Exatas e Tecnológicas

09.004 Possible participation of prostaglandins in gastroprotection of ethyl acetate fraction of *Neoglaziovia variegata* (Arruda) Mez. in rats and mice. Lopes KL[1], Machado FDF[1], Oliveira IS[1], Silva-Freitas FV[1], Lima GS[1], Oliveira FA[1], Almeida JRGS[2], Oliveira RCM[1] [1]NPPM-UFPI, [2]NEPLAME-UNIVASF

09.005 Effects of *Tityus serrulatus* scorpion venom on endothelial cells. Rigoni VLS[1,2], Vieira RP[3], Silva JLV[4], Zamuner SF[4], Kwasniewski FH[5], Zamuner SR[1] [1]Uninove – Medicina, [2]Unifesp – Biofísica, [3]Uninove – Ciências da Reabilitação, [4]Uninove – Saúde, [5]UEL – Ciências Patológicas

09.006 Neurotoxicity of acanthoscurria juruenicola spider venom in vertebrate neuromuscular preparations *in vitro*. de Moraes DS[1], Sutti R[2], Silva PI[3], Bertani R[4], Hyslop S[1], Rodrigues-Simioni L[1], Rocha-e-Silva TAA[2] [1]Unicamp – Farmacologia, [2]FCMSCSP – Ciências Fisiológicas, [3]IBu – Toxinologia aplicada, [4]IBu – Ecologia e Evolução

09.007 Effect of ethanolic extract from leaves of *Casearia sylvestris* SW. and its fraction rich in diterpenes on carrageenan-induced pleurisy in rats. Castro RC[1], Carmo EGB[2], Bosquesi CL[3], Pierri EG[1], Santos AG[1] [1]FCF-Unesp-Araraquara – Princípios Ativos Naturais e Toxicologia, [2]UNIRP, [3]UNIFEV

09.008 Red propolis attenuates ischemic-reperfusion acute kidney injury. Costa MFB[1], Meneses GC[1], Lima DB[1], Libório AB[2], Martins AMC[1] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Medicina Clínica

09.009 Anti-inflammatory activity of anethole via reduction of macrophage-derived cytokines. Ponte EL[1], Martin TM[1], Marques-Domingos GFO[1], Murata GM[2], Gorjão R[3], Curi R[2], Assreuy AMS[1] [1]ISCB-UECE, [2]ICB-USP, [3] ICAF-Unicsul

09.010 Quercetin improves antioxidant response in the gills of silver catfish. Pês TS, Gressler LT, Saccol EH, Londero EP, Ourique GM, Baldisserotto B, Pavanato MA UFSM – Physiology and Pharmacology

09.011 Vasorelaxation induced by synthetic derivative of the isoquinoline alkaloids in rat aorta is mediated by the endothelium. Travassos RA[1], Sarmento DM[2], Nascimento GJ[1], Albuquerque JSS[1], Cordeiro MB[2], Rodrigues LC[1], Braga VA[1], Araújo DAM[1] [1]CBiotec-UFPB, [2]CCS-UFPB

09.012 Study of association of antibiotics with essential oil *Ocimum basilicum* or linalool on multiresistant bacteria. Silva VA[1], Freitas AFR[1], Lima MA[1], Pessôa HLF[1], Sarmento FQ[1], Coutinho HDM[2], Coutinho HDM[2], Sousa JP[1], Lima EO[1] [1]UFPB, [2]URCA

09.013 Effects of silymarin on oxidative stress parameters and monoamine oxidase activity. Dotto MM[1], Oliveira DR[2], Schaffer LF[3], Busanello A[3], Peroza LR[2], Barbosa CP[1], Fachinetto R[4] [1]UFSM – Farmácia, [2]UFSM – Bioquímica Toxicológica, [3]UFSM – Farmacologia, [4]UFSM –Bioquímica Toxicológica e Farmacologia

09.014 Amides from *Piper* as a diuretic – behind the ethnopharmacological uses of *Piper glabratum* Kunth. Prando TBL[1], Baciquete TF[1], Gasparotto FM[1], Araújo V[1], da Silva GR[1], Lourenço ELB[1], Gasparotto Júnior A[2] [1]Unipar – Farmacologia e Toxicologia de Produtos Naturais, [2]UFGD – Farmacologia e Toxicologia de Produtos Naturais

09.015 Ethno-guided investigation of the diuretic effects of native medicinal species. Prando TBL[1], Gasparotto FM[1], Jacomassi E[1], Quindere JR[1], Barbosa LN[2], Lourenço ELB[1], Gasparotto Júnior A[3] [1]Unipar – Farmacologia e Toxicologia de Produtos Naturais, [2]UFPR – Farmacologia, [3]UFGD – Farmacologia e toxicologia de Produtos Naturais

09.016 BPMP-II, a novel *Bothrops pauloensis* venom PI metalloproteinase: inhibition of endothelial cell adhesion and *in vitro* angiogenesis. Achê DC[1], Gomes MSR[2], Naves-de-Souza DL[1], Almeida-Silva M[1], Homsi-Brandeburgo MI[1], Yoneyama KAG[1], Rodrigues RS[1], Borges MH[3], Lopes DS[1], Rodrigues VM[1] – [1]UFU – Genetics and Biochemistry, [2]UESB – Chemical and Physical, [3]FUNED

09.017 Primitive ants dinoponera quadriceps venoms have neurotoxic and cardiotonic actions dependent histamine release. Cabral PHB[1], Nascimento NRF[2], Fonteles MC[2], Santos CF[2], Quinet YP[2], Bindá AH[1], Eleuterio EO[2] [1]UFC – Farmacologia, [2]ISCB-UECE

09.018 Involvement of the nitric oxide in the vasorelaxant effect of the water soluble fraction of *Terminalia fagifolia* Mart. & Zucc. in rat aorta. Carvalho EF[1], Nunes AF[1], Nunes PHM[2], Santos RF[1], Chaves MH[3], Oliveira AP[1], Oliveira RCM[1] [1]UFPI – Medicinal Plants, [2]UFPI – Biophysic and Physiology, [3]UFPI – Chemistry

09.019 Prolonged diuretic activity and sparing-calcium effect of *Tropaeolum majus* L. – evidence in the prevention of osteoporosis. Barboza LN[1], Prando TBL[2], Silva GR[2], Lourenço ELB[2], Gasparotto Júnior A[3] [1]UFPR – Farmacologia, [2]Unipar – Farmacologia e Toxicologia de Produtos Naturais, [3]UFGD – Farmacologia

09.020 Effects of PhTx3-3 AND PhTx3-6 toxins obtained from the Brazilian spider *Phoneutria nigriventer* on glioma cells. Nicoletti NF[1,2], Erig TC[3], Campos MM[1,2,4], Gomez MV[5], Morrone FB[1,2,3] [1]INTOX-PUCRS, [2]PUCRS – Biologia Celular e Molecular, [3]PUCRS – Farmácia, [4]PUCRS – Odontologia, [5]UFMG – Neurociências

09.021 Healing potential of the ointment *Jacaranda decurrens* Cham. in skin injury in mice. Serra MB, Abreu IC, TORRES NA, Sodré TP, Silva SN, Rocha AO, Ferreira FS, Lima NFM, Borges MOR, Borges ACR UFMA – Farmacologia.

09.022 *Cimicifuga racemosa* attenuates inflammatory osteolysis in a rat model of periodontitis. Medeiros AC[1], Oliveira JM[2], Bastos BM[1], Bastos JM[3], Parente ATPP[1], Filho SMP[1], Teixeira AH[2], Aguiar LMV[1], Pereira KMA[3], Benevides NBB[4], Filho GC[1], Pinto VPT[7], Silva AAR[3], Dutra PGP[3], Brito GAC[5], Chaves HV[3], Bezerra MM[1] [1]UFC-Sobral – Medicine, [2]Renorbio-UFC, [3]UFC-Sobral – Dentistry, [4]UFC – Biochemistry and Molecular Biology, [4]UFC – Morphology

09.023 Effects of McLTP1 from *Morinda citrifolia* (noni) in proteolytic activity by *Bothrops insularis*. Lopes PL[1], Marinho AD[1], Alves NTQ[1], Jorge RJB[1], Silveira JAM[1], Costa PHS[1], Silva PLB[1], Pimentel MD[1], Vasconcelos MJS[1], Oliveira HD[2], Campos DCO[2], Monteiro HSA[1] [1]UFC – Farmacologia e Fisiologia, [2]UFC – Bioquímica e Biologia Molecular

09.024 Evaluation of acute toxicity of *Pedilanthus tithymaloides* (L.) *Poit.* in mice. Moura APG[1], Meireles DRP[1], Fernandes HMB[1], Xavier AL[1], González TL, López V de la P, Tavares JF[1], Silva MS[1], Sobral MV[1] DCF-UFPB

09.025 Antioxidant activity of pequi leaves. Duavy SMP[1], Seeger RL[2], Ramos A[2], Costa JGM[1], Barbosa NBV[2] [1]URCA, [2]UFSM

09.026 Evaluation of antidiarrheal and antispasmodic activities of total glycoalkaloids fraction from *Solanum crinitum* Lam. (Solanaceae). Ferreira SRD[1], Moreno GTA[1], Oliveira FRMB[1], Souza ILL[2], Silva TMS[3], Correia ACC[4], Cavalcante FA[5] [1]UFPB, [2]UFPB, [3]DCM-UFRPE, [4]ICBS-UFAL, [5]DFP-UFPB

09.027 Protective effects of *Euterpe oleracea* Mart. (An Amazon Plant) on experimental metabolic syndrome in C57/BL6 mice. Costa CA[1], Oliveira PRB[1], Rocha APM[2], Carvalho LCRM[1], de Bem GF[1], Santos IB[1], Souza MAV[1], Cunha PJ[3], Soares de Moura R[1], Resende AC[1] [1]UERJ, [2]UNIRIO, [3]UFPA

09.028 Antidepressant-like effect of *Ilex paraguariensis* in rats. Reis EM[1], Neto FWS[2], Cattani VB[2], Peroza LR[3], Busanello A[1], Leal CQ[4], Lehmen T[4], Libardoni M[4], Bressan GN[4], Boligon AA[5], Athayde ML[5], Fachinetto R[1,3] [1]UFSM – Farmacologia, [2]UNICRUZ – Farmácia, [3]UFSM – Ciências Biológicas / Bioquímica Toxicológica, [4]UFSM – Farmácia, [5]UFSM – Farmácia Industrial

09.029 Effect of low level laser (LLL) in the expression of myod and myogenin in myoblast differentiation submitted to *Bothrops jararacussu* snake venom (BjssuV). Silva LMG[1], Silva CAA[2], Zamuner SF[1], Cogo JC[3], Zamuner SR[1] [1]Uninove – Medicina, [2]Uninove – Ciências da Reabilitação, [3]Univap – Fisiologia

09.030 Essential oil from *Xylopia frutescens* Aubl. blocks Ca_V1 and inhibits Ca^{2+} mobilization to relax guinea pig ileum. Souza ILL, Araujo LCC, Vasconcelos LHC, Silva MCC, Ferreira PB, Costa VCO, Tavares JF, Cavalcante FA, Silva BA UFPB

09.031 Phytochemical characterization of green tea leaves (*Camellia sinensis* (L.) Kuntze). Parente JM, Medeiros MAS UNIFOR

09.032 Tocolytic effect of essential oil from *Lippia microphylla* Cham. involves positive modulation of K^+ channels on rat. Silva MCC, Vasconcelos LHC, Souza ILL, Araujo LCC, Ferreira PB, Sampaio RS, Tavares JF, Cavalcante FA, Silva BA UFPB

09.033 Further evidence on the protective effects of P/Q- and N-type voltage-gated calcium channel blockers in the mouse model of cyclophosphamide-induced hemorrhagic cystitis. Silva RBM[1], Sperotto NDM[2], Pereira TCB[1], Bogo MR[3], Morrone FB[2], Gomez MV[4], Campos MM[5] [1]PUCRS – Medicine and Health Sciences, [2]PUCRS – Applied Pharmacology, [3]PUCRS – Genomics and Molecular Biology, [4]UFMG, [5]INTOX-PUCRS

09.034 Effects of garcinielliptona FC on the locomotor activity of mice: preclinical study for the development of new drugs. Silva APSCL[1], Oliveira GAL[1], Medeiros SC[1], Sousa GF[2], Silva Filho JCCL[3], Costa Júnior JS[2], David JM[4], Freitas RM[1] [1]UFPI, [2]IFPI, [3]UNOPAR, [4]UFBA

09.035 Strength training changes aorta reactivity by modulating oxide nitric pathway on Wistar rat. Ferreira PB, Brito AF, Silva AS, Souza AA, Félix GS, Sampaio RS, Tavares RL, Souza ILL, Pereira RA, Araujo LCC, Miranda Neto M, Silva BA UFPB

09.036 Study of neurotoxic effects of intrahippocampal injection of three isolated toxins from venom of the scorpion *Tityus bahiensi*. Freitas LA[1], Kuniyoshi AK[2], Carvalho DC[2], Paulo MEFV[1], Sobral ACM[1], Portaro FCV[2], Dorce VAC[1], Nencioni ALA[1] [1]IBu – Farmacologia, [2]IBu – Imunoquímica

09.037 Antiulcerogenic effect of riparin II on ethanol-induced gastric lesions in mice: role of prostaglandins, nitric oxide and $KATP^+$ channels. Carvalho AMR[1], Vasconcelos LF[1], Rocha NFM, Rios ERV, Dias ML[1], Bastos MVR[1], Vidal LMT[1], Barbosa Filho JM[2], Gutierrez SJC[3], Sousa FCF[1] [1]UFC – Physiology and Pharmacology, [2]UFPB – Pharmaceutics Technology, [3]UFPI – Biochemistry and Pharmacology

09.038 Antinociceptive effect of Riparin III: Role of glutamate and mechanical hypernociception induced carrageenan. Vasconcelos LF[1], Rocha NFM, Carvalho AMR[1], Rios ERV, Dias ML[1], Vidal LMT[1], Costa FL[1], Gutierrez SJC[2], Barbosa Filho JM[3], Sousa FCF[1] [1]UFC – Physiology and Pharmacology, [2]UFPI – Biochemistry and Pharmacology, [3]UFPB

09.039 Relevance of C-terminal amidation of Ts1 on its modulation of voltage-gated sodium channels. Cremonez CM[1], Peigneur S[2], Waelkens E[3], Tytgat J[2], Arantes EC[1] [1]FCFRP-USP – Física e Química, [2]KU Leuven – Toxicology and Pharmacology, [3]KU Leuven – Protein Phosphorylation and Proteomics

09.040 Antiproliferative activity of a new compound isolated from *Bauhinia acuruana*. Silva PBN[1], Silva TG[2], Gois RWS[3], Santiago GMP[3], Militão GCG[1] [1]UFPE – Fisiologia e Farmacologia, [2]UFPE – Antibióticos, [3]UFC – Farmácia

09.041 Effects of polyanions on some activities of *Bothrops leucurus* venom. Cons BL[1], Tomaz MA[1], Ricardo HD[1], Strauch MA[2], Monteiro-Machado M[1], Tavares-Henriques MS[1], Cruz JMT[1], Saturnino-Oliveira J[3], Melo PA[1] [1]UFRJ – Farmacologia das Toxinas e Substâncias Antagonistas, [2]IVB, [3]UFS – Morfologia

09.042 Trypanocidal effect of *Bothropoides insularis* venom. Canuto JA[1], Bezerra GF[1], Lima DB[1], Mello CP[1], Bandeira ICJ[1], Pereira TP[1], Tessarolo LD[1], Menezes RRPPB[2], Sampaio TL[2], Toyama MH[3], Martins AMC[1] [1]UFC – Clinical and Toxicological Analysis, [2]UFC – Physiology and Pharmacology, [3]UFC

09.043 Antiobesity effect of hancornia speciosa gomes (Apocynaceae) in mice. Pereira AC[1], Silva JF[2], Pereira ABD[3], Barbosa LCO[1], Braga FC[3], Lemos VS[2], Côrtes SF[1] [1]ICB-UFMG – Farmacologia, [2]ICB-UFMG – Fisiologia e Biofísica, [3]UFMG – Farmácia

09.044 Anti-inflamatory potencial of crotoxin: A natural inhibitor of functions and signaling pathways in bone marrow neutrophils. Neves CL[1], Lima TS[1], Sampaio SC[1], Zambelli VO[2], Cirillo MC[1] [1]IBu – Pathophysiology, [2]IBu – Pain and Signaling

09.045 Crotoxin, a toxin from rattlesnake venom, inhibits the angiogenic function of macrophages in co-culture model. Pimenta LA, Pereira JF, Kato EE, Cirillo MC, Sampaio SC IBu – Pathophysiology

09.046 Effects of prolonged administration of *Echinaceae purpurea* against acute and chronic infection with different strains (RH and ME-49) of *Toxoplasma gondii* in mice. Cosmo ML[1], Lima DA[2], Santos PS[2], Lourenço ELB[1], Gasparotto Júnior A[3] – [1]Unipar – Ciência Animal, [2]Unipar – Curso de Farmácia, [3]UFGD – Ciência Animal

09.047 Crude venom from scorpion *Tityus bahiensis* is able to change offspring development when injected in female rats during lactation. Martins AN, Nencioni ALA, Fusco CBP, Frare EO, De Paulo MEFV, Dorce VAC IBu – Farmacologia

09.048 Effect of lectin from *Abelmoschus esculentus* (Malvaceae) on free radicals and oxidative stress on ethanol-induced gastropathy in mice: involvement of alpha-2 adrenoceptor. Matos SO[1], Ribeiro KA[2], Maciel LM[3], Pereira Filho SM[3], Pinto IR[2], Monteiro DAM[1], Lacerda JTJG[4], Gadelha TS[4], Gadelha CAA[4], Chaves HV[1,5], Aguiar LMV[3,2], Pereira KMA[1], Benevides NMB[5], Pinto VPT[3,2], Cristino Filho G[3,2], Bezerra MM[3,2], Silva AAR[1,2] [1]UFC – Dentistry, [2]UFC – Biotechnology, [3]UFC – Medicine, [4]UFPB – Molecular Biology, [5]UFC – Biochemistry and Molecular Biology

09.049 Cinnamaldehyde reduces the production of virulence factors in Pseudomonas aeruginosa. Ferro TAF[1], dos Santos JS[1], Pinto BLS[1], Araujo JMM[1], Souza EB[1], Mendes SJ[1], Figueiredo PMS[1], Neto VM[1], Fernandes ES[1,2] [1]Ceuma, [2]King's College – Cardiovascular Division

09.050 A novel cytotoxic *ent*-kaurane diterpene from the stem bark of *Annona vepretorum* (Annonaceae). Dutra LM[1], Bomfim LM[2], Rocha SLA[2], Nepel A[3], Soares MBP[2], Barison A[3], Costa EV[1], Bezerra DP[2] [1]UFS – Chemistry, [2]Fiocruz-Bahia – Tissue Engineering and Immunopharmacology, [3]UFPR – Chemistry

09.051 Gastric ulcer healing promoted by hydroalcoholic extract and ethyl acetate fraction of green tea (*Camellia sinensis* (L.) Kuntze) in rats. Borato DG[1], Scoparo CT[2], Maria-Ferreira D[1], da Silva LM[1], Souza LM[2], Iacomini M[2], Werner MFP[1], Baggio CH[1] [1]UFPR – Pharmacology, [2]UFPR – Biochemistry and Molecular Biology

09.052 Antinociceptive effect of beta-caryophyllene in paclitaxel-induced peripheral neuropathy. Segat GC[1], Costa R[2], Manjavachi MN[1], Setim C[1], Calixto JB[1] [1]UFSC – Farmacologia, [2]UFRJ – Farmácia

10. Cancer and Cell Proliferation

10.001 XIAP silencing and p53 superexpression cooperate in glioma cell death. Hütten MO, Silva AO, Lenz G UFRGS

10.002 *In vitro* effects of the guaraná (*Paullinia cupana*) hydroalcoholic extract in association with different chemotherapeutics used in the treatment of breast cancer. Azzolin VF, Hertz E, Cadoná F, Machado AK, Barbisan F, Cruz IBM UFSM – Biogenômica

10.003 Preliminary investigation of cytotoxic potential of semi-synthetic

chalcone against human cancer cells. Maranhão SS, Soares BM, Meira AS, Moraes MO, Cavalcanti BC, Pessoa CO UFC – Fisiologia e Farmacologia

10.004 Antitumor effects of the mesoionic compound sydnone-1 in walker-256 carcinosarcoma model. Galuppo LF[1], Martins GG[1], Lívero F[1], Cadena SMSCC[2], Beltrame OC[3], Dittrich RL[3], Echevarria A[4], Acco A[1] [1]UFPR – Pharmacology, [2]UFPR – Biochemistry and Molecular Biology, [3]UFPR – Veterinary Medicine, [4]UFRJ – Chemistry

10.005 *In vitro* evaluation of a novel series of quinoxaline-derived chalcones in oral squamous cell carcinoma: relevance of a-ring methoxylation. Mielcke TR[1], Erig TC[2], Mascarello A[3], Chiaradia LD[3], Nunes RJ[3], Campos MM[4] [1]PUCRS – Medicine and Health Sciences, [2]PUCRS – Pharmacy, [3]UFSC – Chemistry, [4]INTOX-PUCRS – Medicine and Health Sciences

10.006 Inhibition of proliferation due to cell cycle arrest caused by sublethal concentrations of extract and fraction from *Casearia sylvestris* (Salicaceae). Felipe KB[1], Kviecinski MR[1], Ourique F[1], Bucker NF[1], Farias MS[1], Grinvícius VMAS[1], Gatti FM[2], Rossi MH[2], Castro LSEPW[1], Pedrosa RC[1], Mota NS[1] [1]UFSC – Bioquímica, [2]CPDSA-Instituto Biológico

10.007 Comparative analysis of toxicological parameters in mice with melanoma treated and untreated with cisplatin. Ferreira NH, Furtado RA, Oliveira PF, Acésio NO, Souza LDR, Magalhães GM, Nassar EJ, Tavares DC Unifran

10.008 Cytotoxic action of secretions from Amazon amphibians. Machado KC[1], Lima DJB[2], Debiasi BW[3], Oliveira SFC[1], Machado KC[1], Noronha JC[3], Rodrigues DJ[3], Sinhorin AP[3], Pessoa C[2], Vieira-Júnior GM[3], Ferreira PMP[1] [1]UFPI, [2]UFC, [3]UFMT

10.009 Cytotoxic activity of lapachol analogues on HL60 with or without antioxidant co-treatment. Costa AM[1], Gomes SLS[2], Costa PRR[2], Silva AJM[3], Costa-Lotufo LV[1], Pessoa CO[1], Moraes MO[1], Militão GCG[4] [1]UFC – Fisiologia e Farmacologia, [2]CCS-UFRJ – Química Bioorgânica, [3]CCS-UFRJ – Catálise Orgânica, [4]UFPE – Fisiologia e Farmacologia

10.010 Genetic profile analysis and *in vitro* drug sensibility from primary culture obtained from glioblastoma. Kipper FC[1], Becker R[1], Mendonça LC[1], Vanacôr CN[2], Confortin G[2], Marc A[2], Paglioli-Neto E[2], Morrone FB[3], Lenz G[1] [1]UFRGS – Biofísica e Centro de Biotecnologia, [2]HSL-PUCRS – Neurocirugia, [3]PUCRS – Farmácia

10.011 Role of GSK3-β signaling on telocinobufagin-induced cell death. Amaral LS, Cunha-Filho GA, Noël F, Quintas LEM ICB-UFRJ

10.012 C-terminus of protein S100A9 inhibits adhesion, proliferation and migration of endothelial cell on extracellular matrix components. Moraes NF[1], Melo RL[2], Sampaio SC[1], Giorgi R[1] [1]IBu – Fisiopatologia, [2]IBu – Proteômica Funcional

10.013 Bioprospecting anticancer compounds from the octocoral *Stragulum bicolor* (Anthozoa, Subclass: Octocorallia) on the Ceará coast. Santos EA[1], Jimenez PC[2], Torres MCM[1], Gomes BA[1], Sousa TS[1], Pessoa ODL[1], Cutignano A[3], Nuzzo G[3], Fontana A[3], Costa-Lotufo LV[1] [1]UFC, [2]Unifesp, [3]CNR-Italia

10.014 Evaluation of the toxicity of the association of cerium oxide and zinc oxide nanoparticles after nine days of treatment. Batista TM[1], Xavier A[1], Brito MT[1], Sousa TKG[1], Mangueira VM[1], Beltrão DM[1], Moura APG[1], Santos CCL[2], Keyson D[2], Souza AG[2], Farias IAP[3], Sampaio FC[3], Albuquerque AJR[3], Sobral MV[1] [1]UFPB – Ciências Farmacêuticas, [2]UFPB – Química, [3]UFPB – Biotecnologia

10.015 Screening of antitumor activity of the synthetic piperinic derivatives in Ehrlich ascites carcinoma model. Sousa TKG[1], Mangueira VM[1], Batista TM[1], Fernandes HMB[1], Meireles DRP[1], Guimarães ARBV[1], Souza HDS[2], Lira BF[2], Filho PFA[2], Sobral MV[1] [1]UFPB – Ciências Farmacêuticas, [2]UFPB – Química

01. Cellular and Molecular Pharmacology

01.010 Evaluation of cytotoxicity and expression of genes after human melanoma cells treatment with biflorin. Ralph ACL[1], Souza LGSS[2], Lemos TLG[2], Montenegro RC[3], Smith MC[4], Calcagno DQ[5], Vasconcellos MC[1] [1]UFAM – Pharmaceutical Sciences, [2]UFC – Organic and Inorganic Chemistry, [3]ICB-UFPA – [4]Unifesp – Morphology and Genetic, [5]UFPA – Oncology

01.017 Report of a novel GPCR signaling pathway: Evidences from site-directed mutagenesis at the angiotensin II AT1 receptor. Parreiras-e-Silva LT[1], Reis RI[1], Duarte DA[1], Prando EC[1], Maria AG[1], Santos GA[1], Beautrait A[2], Oliveira EB[1], Schertler GF[3], Deupi X[3], Bouvier M[2], Costa-Neto CM[1] [1]FMRP-USP – Biochemistry and Immunology, [2]UdeM – Immunology and Cancer, [3]PSI – Biomolecular Research

01.018 Study of monastrol-kinesin interactions by quantum biochemistry calculations. Bezerra EM[1], Diniz-Filho J[2], Pessoa CO[2], Meira AS[2], Freire VN[3], Costa RF[4] [1]UFC – Análise Clinica e Toxicologia, [2]UFC – Fisiologia e Farmacologia, [3]UFC – Física, [4]UFERSA – Física

01.019 SRC-MAP kinase pathway activation by bufalin promotes epithelial to mesenchymal transition in LLC-PK1 cells. Martins-Ferreira J, Cunha-Filho G, Quintas LEM, Noël F ICB-UFRJ

01.020 Role of prostaglandin D_2 and their receptors in immunomodulatory functions of eosinophils. Luna-Gomes T[1], Bozza PT[2], Bandeira-Melo C[1] [1]IBCCF-UFRJ, [2]IOC-Fiocruz

01.021 Trypanocidal effect *Dinoponera quadriceps* venom. Lima DB[1]; Mello CP[1], Tessarolo LD[1], Menezes RRPPB[2], Torres AFC[1], Pereira TP[1], Bandeira ICJ[1], Sampaio TL.[1], Costa MFB[2], Fernandes LC[1], Quinet YP[3], Martins AMC[1] [1]UFC – Clinical and Toxicological Analysis, College of Pharmacy, [2]UFC – Physiology and Pharmacology, [3]ICB-UECE

01.022 The absence of 5-lipoxygenase impairs alveolar bone loss in an experimental periodontal disease by *Aggregatibacter actinomycetemcomitans*. Madeira MFM[1], Queiroz-Júnior CM, Correa JD[2], Machado FS[3], Soriani FM[4], Cunha TM[5], Garlet GP[6], Teixeira MM[7], Silva TA[2], Souza DG[8] [1]UFMG – Patologia Oral/Microbiologia, [2]UFMG – Patologia oral, [3]UFMG – Bioquímica, [4]UFMG – Genética/Imunofarmacologia, [5]USP – Farmacologia, [6]USP – Ciências Biológicas, [7]UFMG – Bioquímica/Imunofarmacologia, [8]UFMG – Microbiologia

01.023 Evaluation of the effects of lectins in pancreatic acinar cells stimulated by bile salts and alcohol: involvement of cell death. Pantoja PS[1], Damasceno SRB[2], Franco AX[2], Morais CM[2], Girao DKFB[2], Oliveira TB[2], Mendes TS[2], Lima FRF[2], Mendonça VA[1], Silva KES[1], Lima MAS[1], Souza MHLP[2], Soares PMG[2] [1]UFC – Biomedical Sciences, [2]UFC – Physiology and Pharmacology

01.024 Zymosan promotes NLRP3/ASC/Capsase-1 inflammasome activation by a phagocytosis-independent mechanism. Silva RL[1], Lopes AHP[1], Zamboni DS[2], Cunha FQ[1], Cunha TM[1] – [1]FMRP-USP – Pharmacology, [2]FMRP-USP – Cell Biology

01.025 Cardiovascular effects *in vitro* of a selective and potent agonist for the BK potassium channel. França PL[1], Barenco TS[1], Maciel L[2], Nascimento JH[2], Bendhack LM[3], Suarez-Kurtz G[4], Ponte CG[1] [1]NCB-IFRJ, [2]IBCCF-UFRJ – Eletrofisiologia

Cardíaca, [3]FCFRP-USP – Farmacologia, [4]InCA – Farmacologia

01.026 Antioxidant activity of novel derivative of ferulic acid on *Saccharomyces cerevisiae* model. Rêgo SC[1], Taimo MRD[2], Gomes Júnior AL[2], Mata AMOF[1], Alencar MVOB[2], Araruna Júnior AA[3], Santos JSB[1], Freitas RM[2], Cavalcante AACM[2] [1]UNINOVAFAPI, [2]UFPI, [3]FSA

01.027 Extracellular cAMP induces contraction of airway smooth muscle via adenosine formation and activation of adenosine receptors. Pacini ESA, Godinho RO Unifesp-EPM – Farmacologia

01.028 Cyclic AMP – adenosine pathway modulates skeletal muscle contraction induced by electrical stimulation of peripheral nerve. Duarte T[1], Godinho R O[1] [1]Unifesp-EPM – Farmacologia

01.029 Chronic treatment with fluoxetine modulates vascular sympathetic responses by mechanisms that involve inhibition of norepinephrine synthesis/reuptake and increased nitric oxide generation. Pereira CA[1], Ruginsk SG[2], Mestriner FLAC[1], Antunes-Rodrigues J[2], Resstel LB[1], Tostes RC[1] [1]FMRP-USP – Farmacologia, [2]FMRP-USP – Fisiologia

01.030 The role of TLRs and NLRs in carrageenan-induced TNFα and IL-1β production by macrophage. Lopes AHP[1], Silva RL[1], Talbot J[1], Cunha FQ[1], Zamboni DS[2], Couillin I[3], Ryffel R[3], Cunha TM[1] [1]FMRP-USP – Farmacologia, [2]FMRP-USP – Biocel, [3]CNRS – Immunologie et Neurogénétique Expérimentales et Moléculaires

01.031 Investigation of antitumoral effect of new pyrimidobenzimidazoles in human melanoma cell lines. Azevedo JG[1], Amaral SS[1], Maria-Engler SS[2], Lenz G[3], Wink MR[1] [1]UFCSPA, [2]USP, [3]UFRGS

02. Neuropharmacology

02.021 Resveratrol inhibits monoamine oxidase A and B *in vitro*. Barbosa CP[1], Busanello A[2], Freitas CM[3], Reinheimer JB[1], Barbosa NBV[3], Fachinetto R[2,3] [1]UFSM – Farmácia, [2]UFSM – Farmacologia, [3]UFSM – Bioquímica Toxicológica

02.022 Reserpine effects on dopaminergic neurons morphology. Reckziegel P[1], Aschner M[2], Fachinetto R[3] [1]UFSM – Farmacologia, [2]Albert Einstein College – Molecular Pharmacology, [3]UFSM – Fisiologia e Farmacologia

02.023 Pharmacological evaluation of a newly synthesized piperazine derivative-LQFM104 with antidepressant activity. Rodrigues ORL[1], Galdino PM[2], Menegatti R[3], Costa EA[1] [1]ICB-UFG – Ciências Fisiológicas, [2]UFSC – Farmacologia, [3]UFG – Farmácia

02.024 Influence of trans fat supplementation crossover two generations of rats on an amphetamine-induced mania-animal model. Roversi Kr[1], Trevizol F[2], Dias VT[1], Burger ME[2] [1]UFSM – Farmácia, CCS, [2]UFSM – Farmacologia

02.025 Screening effects of reserpine in *Caenorhabditis elegans*. Ferrari MC[1], Reckziegel P[2], Aschner M[3], Fachinetto R[2,4] [1]UFSM – Curso de Farmácia, Centro de Ciências da Saúde, [2]UFSM – Farmacologia, [3]Albert Einstein – Molecular Pharmacology, [4]UFSM – Fisiologia e Farmacologia

02.026 Na^+, K^+-ATPase activator delays pentylenetetrazol-induced myoclonic seizures in a mice model of temporal lobe epilepsy. de Souza TL[1], Funck VR[1], de Oliveira CV[1], Grauncke ACB[1], Grigoletto J[1], Larrick JW[2], Ribeiro LR[1], Furian AF[3], Oliveira MS[1] [1]UFSM – Physiology and Pharmacology, [2]Panorama Research, [3]UFSM – Food Science and Technology

02.027 Increased nitration and alterations of Na^+,K^+-ATPase activity in a mice model of temporal lobe epilepsy. Grauncke ACB[1], Funck VR[1,2], de Oliveira CV[1,2], de Souza TL[1], Grigoletto J[1], Ribeiro LR[1,2], Furian AF[1,2,3], Oliveira MS[1,2] [1]UFSM – Physiology and Pharmacology, [2]UFSM – Pharmacology, [3]UFSM – Department of Food Science and Technology

02.028 *In vitro* modulation of neuromuscular transmisson induced by riluzole. Rangel DL[1], Lucho AP[1], Perin AP[1], Porciúncula L[2], Rocha-e-Silva TAA[3], Rodrigues-Simioni L[4], Dal Belo CA[1], Vinade L[1] [1]Unipampa, [2]UFRGS, [3]FCMSCSP, [4]Unicamp

02.029 Cognitive and emotional benefits of simvastatin and pravastatin in an animal model of Parkinson's disease. Schamne MG[1], dos Santos AFC[2], Latyki C[2], Ferro MM[3], Moretti M[1], Prediger RD[1], Miyoshi E[2] [1]LEXDON-UFSC – Farmacologia, [2]UEPG – Ciências Farmacêuticas, [3]UEPG – Biologia Geral

02.030 Neuromuscular activity of Jack Bean Urease (JBU) on the nervous system of the cockroach *Nauphoeta cinerea*. Freitas TC[1], Perin AP[2], de Almeida CGM[2], Heberle MA[2], Breda RV[3], Salamoni SD[3], Dal Belo CA[2], da Costa JC[3], Carlini CR[1] [1]UFRGS – Biofísica, [2]LANETOX/Unipampa, [3]InsCer-PUCRS

02.031 Determination of amino-peptidergic striatum after the of use 6-styryl-2-pyrone the model convulsion by bicuculline. Nonato DTT[1], Nascimento FLF[1], Maia MLCL[1], Aragão GF[1], Filho JMB[2], Vasconcelos SMM[3], Chaves EMC[1] – [1]ISCB-UECE, [2]UFPB – Tecnologia Farmacêutica, [3]UFC – Farmacologia

02.032 Nociceptive threshold by combined use of alcohol and tobacco smoke in rats. Bandiera S[1], Nunes EA[1], Santos CF[2], Pulcinelli R[2], Schneider R[3], Torres ILS[1,2] Gomez R[1,2,3] [1]UFRGS – Fisiologia, [2]UFRGS – Farmacologia, [3]UFRGS – Neurociências

02.033 From blood to brain: Can graphene oxide nanoparticle cross the blood-brain barrier? Mendonça MCP[1], Soares ES[2], Ceraglioli H[3], Ferreira M[4], Catharino R[4], Cruz-Höfling MA[5] [1]Unicamp – Pharmacology, [2]Unicamp – Biochemistry and Tissue Biology, [3]Unicamp – Semiconductors, Instruments and Photonics, [4]Unicamp – Medicine and Experimental Surgery, [5]Unicamp – Pharmacology

02.034 Effects of Atorvastatin (Citalor®) on the behavioral sequelae after chronic cerebral hypoperfusion in middle-aged rats. Zaghi GGD, Godinho J, Ferreira EDF, Oliveira RMW, Milani H UEM

02.035 *Hoodia gordonii*: Involvement with monoamine system. Citó MCO[1], Santos LKX[1], Fernandes ML, Melo FHC, Silva MIG, Sousa FCF [1]UFC – Fisiologia e Farmacologia

02.036 Antipsychotic and antidepressant-like effects of Riparin I in the corticosterone-induced depression model in mice. Oliveira ICM[1], Vasconcelos AV, Vidal LMT, Castro LA, Lopes IS, Rodrigues GC, Lima AEL, Sousa PB, Pontes MCD, Sousa FCF UFC – Physiology and Pharmacology

02.037 Catecholaminergic inputs to the retrotrapezoid nucleus. Oliveira LM[1], Moreira TS[2], Takakura AC[1] [1]USP – Farmacologia, [2]USP – Fisiologia

02.038 Trans fat supplementation crossover two generations modifies lipid profile in brain areas and predisposes to amphetamine preference. Kuhn FT, Bürger ME, Roversi Kr, Schuster AJ, Metz VG, Rosa HZ UFSM – Fisiologia e Farmacologia

02.039 Infusion of neuropeptide Y into dorsal hippocampus disrupts the memory reconsolidation for contextual fear conditioning. Linartevichi VF, Lima TCM UFSC – Farmacologia

02.040 Potential anxiolytic-like effect of riparin I in corticosterone-induced depression model in mice. Vidal LMT, Oliveira ICM, Vasconcelos AS, Castro LA, Rodrigues GC, Alencar RN, Lima AEL, Sousa FCF UFC – Fisiologia e Farmacologia

04. Inflammation

04.042 *In vivo* assays of ibuprofen intercalated in layered double hydroxide carrier. Lima AB[1], Dias D[1], Anicete M[2], Nascimento JLM[3], Bastos GNT[1] [1]UFPA – Neuroinflamação, [2]UFPA – Planejamento e Desenvolvimento de Fármacos, [3]UFPA – Neuroquímica Molecular e Celular

04.043 Evaluation of 15-deoxy-delta-12,14 Prostaglandin J_2 treatment on asthma changes triggered by house dust mite in A/J mice. Coutinho DS[1], Anjos-Valotta EA[2], Silva PMR[1], Martins MA[1] [1]IOC-Fiocruz – Inflamação, [2]UEZO

04.044 Imunnomodulatory effect of low-intensity exercise after traumatic injury of the sciatic nerve in mice. Bobinski F[1], Teixeira JM[2], Sluka KA[3], Santos ARS[1] – [1]UFSC – Neurobiology of Pain and Inflammation, [2]Unicamp – Structural and Functional Biology, [3]UIOWA –Physical Therapy and Rehabilitation Science

04.045 Thymol isolated of *Thymus vulgaris* essential oil inhibit *in vivo* leukocyte behavior during acute inflammatory response. Aguiar RP[1], Bastos RL[1], Silva-Comar FMS[1], Silva-Filho SE[1], Wiirzler LAM[1], Rocha BA[1], Ames FQ[1], Bersani-Amado CA[1], Cuman RKN[1] [1]UEM – Farmacologia e Terapêutica

04.046 The role of D6 receptor in pulmonary fungal infections: Insights in chemokine signalling in a model of aspergillosis. Moura TR[1], Machado ALC[1], Sucupira PHF[1], Rachid MA[2], Teixeira MM[3], Russo RC[4], Soriani FM[1] [1]UFMG – Biologia Geral, [2]UFMG – Patologia, [3]UFMG – Bioquímica e Imunologia, [4]UFMG – Fisiologia

04.047 Staphylococcal enterotoxin type A (SEA) and B (SEB) exhibits an inhibitory effect on mice bone marrow neutrophils adhesion *in vitro*. Ferreira Duarte AP[1], Pinheiro Torres AS[1], De Souza IA[1], Mello GC[2], Antunes E[2], Anhê F G[2] [1]FMJ – Biologia e Fisiologia, [2]Unicamp – Farmacologia

04.048 Closed-spring placement promotes induced tooth movement with maximum at fourth day. Araújo VMA[1], Soares KA[2], Melo IM[3], Guimarães MV[3], Calcia TBB[1], Kurita BM[3], Lima V[1] [1]UFC – Physiology and Pharmacology, [2]UFC / UFRJ – Morphology, [3]UFC –Pharmacy, Dentistry and Nursing

04.049 Protective effect of rutin on experimental acute pancreatitis in mice. Abreu FA[1], Santana MS[1], Souza ACA[1], Oliveira JP[1], Teixeira SA[2], Muscará M[2], Costa SKP[2], Camargo EA[1] [1]UFS – Physiology, [2]ICB-USP

04.050 Friedelin attenuates allergic airway inflammation in allergen-induced mouse asthma. Ferro JNS, Aquino FLT, Silva JPN, Santos SL, Conserva LM, Barreto EO UFAL

04.051 Free heme activates mice mesothelial cells: role of NADPHox in inflammatory response. Candea ALP[1], Simões RL[2], Vergara FMF[1], Pereira-Ribeiro C[2], Arruda MA[2], Barja-Fidalgo TC[2], Henriques MGMO[1] [1]Farmanguinhos-Fiocruz – Farmacologia Aplicada, [2]UERJ – Farmacologia Celular e Molecular

04.052 The role of *Aspergillus fumigatus* phosphatase-calcineurin in the modulation of immune response in a model of

aspergillosis. Machado ALC[1], Rocha WV[1], Moura TR[1], Teixeira MM[2], Rachid MA[3], Soriani FM[1] [1]UFMG – Biologia Geral, [2]UFMG – Bioquímica e Imunologia, [3]UFMG – Patologia

04.053 Effect anti-inflammatory of crude extract *Cecropia obtusa* in a rheumatoid arthritis model in mice. Beck VR[1], Fiuza TL[2], Hamann F[3], Rigo F[4], Rubin M[2], Sauzem PD[5] [1]UFSM – Farmacologia, [2]UFSM – Bioquímica Toxicologica, [3]UFSM – Farmácia, [4]Santa Casa BH, [5]Unipampa

04.054 Dyspeptic symptoms, gastric emptying, ghrelin and leptin serum levels in inflammatory bowel diseases patients. Sales KMO[1], Cavalcanti RF[1], Santos AA[1], Braga LLBCB[1], Oliveira RB[3], Castro M[2], Souza MHLP[1] [1]UFC – Physiology and Pharmacology, [2]FMRP-USP

04.055 Plasmin induces macrophage recruitment and reprogramming. Ribeiro ALC[1], Carmo AAF[2], Costa BRC[1], Vago JP[2], Garcia CC[3], Teixeira MM[3], Sousa LP[1] [1]UFMG – Análises Clínicas e Toxicológicas, [2]UFMG – Biologia Celular, [3]UFMG – Bioquímica e Imunologia

04.056 Anti-inflammatory effects of cinnamaldehyde treatment in sepsis. Mendes SJF[1], Sousa FIAB[1], Ferro TAF[1], Silva BLR[1], Pereira ICP[1], Falcai A[1], Grisotto MAG[1], Brain SD[2], Fernandes ES[1,2] [1]Ceuma, [2]King's College

04.058 *Matricaria recutita* reduces ligature-induced alveolar bone loss via TNF-alpha inhibition. Lassance Cunha E, Guimarães MV, Melo IM, Araujo VMA, Wong DVT, Ribeiro RA, Brasil T, Lima V UFC – Fisiologia e Farmacologa

04.059 Suppression by the flavonol quercetin of chronic lung inflammatory response caused by silica particles in mice. Guimarães FV, Ferreira TPT, Arantes ACS, Azevedo RB, Martins MA, Silva PMR IOC-Fiocruz

04.060 The role of FcγR2b and FcγR3a in the gut inflammation after intestinal ischemia and reperfusion. Brito CB, Arifa RDN, Lima RL, Menezes-Garcia Z, Souza DG UFMG – Microbiologia

04.061 *Punica granatum* controls inflammation in arthritic chronic assay in rats. Almeida EKC, Monteiro Silva JF, Oliveira LMS, Viana MDM, Silva Neto GJ, Vieira ACS, Campesatto EA UFAL – Physiology and Pharmacology

04.062 Nanoencapsulation improves the anti-inflammatory activity of curcumin in rats. Rocha BA[1], Rebecca ESW[1], Ames FQ[1], Gil APM[1], Aguiar RP[1], Silva-Filho SE[1], Leimann FV[2], Gonçalves OH[2], Cuman RKN[1], Bersani-Amado CA[1] [1]UEM – Pharmacology and Therapeutics, [2]UTFPR – Food Technology

04.063 Anastrozole increased inflammatory response without enhance alveolar bone loss in ovariectomized rats submitted to periodontitis. Melo IM[1], Araújo VMA[2], Guimarães MV[1], Calcia TBB[2], Forte TCM[1], Ribeiro RA[2], Lima V[2] [1]UFC – [1]FFOE-UFC, [2]UFC – Physiology and Pharmacology

04.064 Characterization of leukocytes in adipose tissue of mice after acute and chronic consumption of refined carbohydrate-containing diet. Silveira ALM[1], Oliveira MC[1,2], Nunes LR[1,2], Rodrigues DF[1,2], Lana JP[1,2], Batista NV[1], Ferreira AVM[1], Teixeira MM[1] [1]ICB-UFMG – Biochemistry and Immunology, [2]EECC-UFMG – Nutritionl

04.065 Effect of c-Jun NH_2-terminal kinase (JNK) inhibitor SP600125 on experimental silicosis in mice. Leite MLM[1], Arantes ACS[1], Lagente V[2], Cordeiro RSB[1], Martins MA[1], Silva PMR[1], Ferreira TPT[1] [1]IOC-Fiocruz, [2]Université de Rennes

04.066 Effect of a protein fraction isolated from the latex *Calotropis procera* (Ait.) R. Br in the inflammatory response

in vitro. Rangel PFG[1], Rabelo LFA[1], Figueiredo TSI[1], Souza GFT[1], Alencar NMN[1], Ramos VM[2] [1]UFC – Physiology and Pharmacology, [2]UFC – Biochemistry and Molecular Biology

04.067 Anti-inflammatory activity of *Citrus limon* (L.) Burm. f. essential oil in rodents. Oliveira LMS[1], Monteiro-Silva JF[1], Almeida EKC[1], Silva NKGT[1], Viana MDM[1], Silva-Neto GJ[1], Vieira ACS[1], Sant'Ana AEG[2], Alexandre-Moreira MS[1], Campesatto EA[1] [1]UFAL – Physiology and Pharmacology, [2]UFAL – Natural Resources

04.068 NO and alpha-TNF aggravate the effects of pilocarpine in animal seizure model. Rios ERV[1,2], Rocha NFM[1], Vasconcelos LF[1], Carvalho AMR[1], Dias ML[1], Fonteles MMF[1,3] [1]UFC – Fisiologia e Farmacologia, [2]FAMETRO – Farmácia, [3]UFC – Farmácia

04.069 Protective effect of complex metallic cis-[RuCl(qui)(bpy)2]PF6 against naproxen- induced gastric damage in mice. Albuquerque-Teixeira AE[1], Santana APM[1], Pires FG[1], Silva FON[2], Lopes LGF[2], Souza MHLP[1] [1]UFC – Physiology and Pharmacology, [2]UFC – Organic and Inorganic Chemistry

04.070 Role of the aryl hydrocarbon receptor in the pathogenesis of sepsis. Freitas A, Donate PB, Castanheira FVS, Borges VF, Nascimento DC, Talbot J, Alves-Filho JCF, Cunha FQ FMRP-USP – Pharmacology

04.071 Evaluation of antiedematogenic activity of limonene epoxide in mice. Almeida AAC[1], Brito TV[2], Reis AL[2], Freitas RM[1] [1]UFPI – Neuroquímica Experimental, [2]UFPI – Fisiofarmacologia Experimental

04.072 Effect of low-level laser on mRNA expression of inflammatory mediators and kinin receptors in the subplantar muscle of mice paw subjected to *Bothrops moojeni* venom. Nadur-Andrade N[1], Silva Jr JA[2], Dale CS[3], Zamuner SR[2] [1]Uninove – Ciências da Reabilitação, [2]Uninove – Medicina, [3]USP – Morfology

04.073 Effect of fish oil on the acute inflammatory response in rats. Ames FQ, Arruda LLM, Rocha BA, Gil APM, Aguiar RP, Silva-Comar FMS, Silva-Filho SE, Cuman RKN, Bersani-Amado CA UEM – Pharmacology and Therapeutics

04.074 Effect of low level laser on C2C12 muscle cells subjected to injury by BthTX-I myotoxin islalated from Bothrops jararacussu snake venom. Santos AS[1], Zamuner SR[1], Hyslop S[2] [1]Uninove, [2]Unicamp

04.075 Hypertension and periodontal disease are factors that change osteogenic gene expressions in rats. do-Amaral CCF, Brito VGB, Landim de Barros T, Chaves-Neto AH, Oliveira SHP FOA-Unesp – Ciências Básicas

04.076 Phytocannabinoid, beta-caryophyllene, modulates inflammatory response induced by *Mycobacterium bovis bacillus* Calmette-Guérin in pulmonary and pleurisy model of infection. Andrade-Silva M, Correa L, Candé A, Rosas EC, Henriques MG [1]Farmanguinhos-Fiocruz – Farmacologia Aplicada

04.077 Local administration of gold nanoparticles prevents pivotal pathological changes in murine models of atopic asthma. Serra MF[1], Gomes LC[1], Barreto EO[2], Santos RV[2], Santos CEA[2], Hickmann J[2], Cotias AC[1], Pão CRR[1], Trindade SG[3], Schimidt V[3], Giacomelli C[3], Carvalho VF[1], Silva PMR[1], Cordeiro RSB[1], Martins MA[1] [1]Fiocruz – Inflamação, [2]UFAL, [3]UFSM – Química

04.078 Methyl gallate inhibits inflammatory mediators and neutrophils migration in zymosan-induced arthritis. Correa LB, Pádua TA, Andrade-Silva M, Seito LN,

Henriques MG, Rosas EC CDTS-Fiocruz – Farmacologia Aplicada

04.079 Evaluation of anti-inflammatory activity of essential oil *Hyptis martiusii* Benth (cidreira brava) by peritonitis carrageenan-induced model. Rodrigues LB[1], Ramos AGB[1], Lacerda Neto LJ[1], Cesário FRAS[1], Oliveira CDM[1], Tintino SR[1], Sales VS[1], Pereira AOB[2], Menezes IRA[1], Rodrigues CKS[1] [1]URCA – Biological Chemistry, [2]UFPE – Fisiologia e Farmacologia

04.080 Evaluation of anti-inflammatory and antinociceptive activity of the ethanol extract from *Psychotria carrascoana*. Aguiar MA[1], Filho JMSR[1], Freitas LBN[1], Araújo BQ[1], Nascimento RRG[2], Pimenta ATA[2], Lima MAS[2], Leal LKAM[1] [1]UFC – Estudos Farmacêuticos e Cosméticos, [2]UFC – Química Orgânica e Inorgânica

04.081 Skin pre-exposition with Staphyloccoccal enterotoxin A (SEA) potentiates mice allergic dermatitis. Cabral-Melo A[1], Trabulsi V[1], Ferreira-Duarte AP[1], Pinheiro-Torres SA[1], Mello GC[2], Antunes E[2], DeSouza IA[1] [1]FMJ – Biologia e Fisiologia, [2]FCM-UNICAMP – Farmacologia

04.082 Pharmacological evaluation of a new series of sulfonamide derivatives in the control of LPS-induced lung injury in mice. Souza ET[1], Carvalho VF[1], Ferreira TPT[1], Nunes IKC[2], Ciambarella BT[1], Barreiro EJL[2], Martins MA[1], Lima LM[2], Silva PMR[1] [1]IOC-Fiocruz – Inflammation [2]LASSBio-UFRJ

05. Pain and Nociception

05.019 Transient receptor potential ankyrin 1 blockage reduced hyperalgesia in a model of trigeminal neuralgia. Trevisan G[1], Nassini R[2], Di Siena G[2], Materazzi S[2], Fusi C[2], Rossato MF[3], Ferreira J[4], Geppetti P[2] [1]UNESC – Ciências da Saúde, [2]UniFi – Ciências da Saúde, [3]UFSM – Química, [4]UFSC – Farmacologia

05.020 The jararhagin a snake venom metalloproteinase induces mechanical hyperalgesia, paw edema and neutrophil recruitment in mice. Ferraz CR[1], Calixto-Campos C[1], Manchope MF[1], Casagrande R[2], Moura-da-Silva AM[3], Baldo C[4], Verri WA[1] [1]UEL – Departamento Patologia, [2]UEL – Departamento de Ciências Farmacêuticas, [3]IBu – Laboratório de Imunopatologia, [4]UEL – Departamento Bioquímica e Biotecnologia

05.021 Supraspinal kynurenine pathway contributes to the maintenance of neuropathic pain. Santana DAR, Santanna MB, Fonseca MDM, Souza GR, Cunha TM FMRP – Pharmacology

05.022 Antinociceptive and anti-inflammatory effects of hydroalcoholic extract of *Licania rigida* in mice. Lima MJA, Vasconcelos FL, Silva MGP, Vasconcelos AG, Melo CTV NUBEM-INTA,

05.023 Quercetin reduces Ehrlich cells-induced cancer pain in mice: Inhibition of neutrophil recruitment, oxidative stress, cytokines production and activating an opioid receptor-dependent analgesic pathway. Calixto-Campos C[1], Carvalho TT[1], Zarpelon AC[1], Hohmann MSN[1], Corrêa M[1], Casagrande R[2], Verri WA[1] [1]UEL – Ciências Patológicas, [2]UEL – Ciências Farmacêuticas

05.024 Effect of infrared light emitting diodes infrared on neuropathic pain in rats. Pigatto GR[1], Agne JE[2], Bauermann LF[1], Ferreira J[3], Santos GT[3], Freitas RB[1] [1]UFSM – Departamento de Fisiologia e Farmacologia, [2]UFSM – Fisioterapia e Reabilitação, [3]UFSM – Química

05.025 NOD1 and NOD2 contribute to the genesis of neuropathic pain and are involved in glial cells activation. Santa-Cecília FV, Ferreira DW, Fonseca MD,

Cunha FQ, Zamboni DS, Cunha TM FMRP-USP – Pharmacology

05.026 Antinociceptive effect of a new compound derived from pyrazole. Oliveira LP[1], Florentino IF[1], Silva DPB[1], Oliveira TS[2], Ghedini PC[2], Menegatti R[3], Costa EA[1] [1]DCiF-ICB-UFG – Pharmacology of Natural Products, [2]DCiF/ICB/UFG – Biochemistry and Molecular Pharmacology, [3]FF-UFG – Medicinal Pharmaceutical Chemistry

05.027 Chemokine decoy receptor D6 did not modulate the induction and maintenance of neuropathic pain. Quadros AU, Violante VD, Alves-Filho JCF, Cunha FQ, Cunha TM FMRP-USP – Pharmacology

05.028 Nitroxyl inhibits Ehrlich cells-induced cancer pain in mice: Activation of THE cGMP/PKG/ATP-sensitive potassium channel signaling pathway and inhibition of TNF-α and IL-1β production. Longhi-Balbinot DT[1], Calixto-Campos C[1], Medeiros DC[1], Zarpelon AC[1], Corrêa M[1], Miranda KM[2], Verri WA[1] [1]UEL – Patologia, [2]UA – Chemistry and Biochemistry

05.029 Central MU, delta and kappa opioid receptors mediate the protective effect of a sulfated polysaccharide isolated from the red seaweed solieria filiformis on temporomandibular joint nociception in rats. Araújo IWF[1], Santos RS[2], Rivanor RLC[3], Monteiro VS[3], Pachêco JMS[4], Vieira LV[5], Freitas AR[5], Val DR[6], Clemente-Napimoga JT[7], Brito GAC[8], Bezerra MM[4], Chave HV[4], Benevides NMB[3] [1]UFC – Curso de Engenharia de Pesca, [2]UFC – Medicina, [3]UFC – Bioquímica, [4]UFC – Ciências da Saúde, [5]UFC – Odontologia, [6]RENORBIO-UFPE, [7]FOP-Unicamp, [8]UFC – Ciências Morfofuncionais

05.030 IL-1B and HO-1-independent anti-nociceptive action of strontium ranelate in zymosan-induced temporomandibular joint inflammatory hypernociception in rats. Teixeira SC[1], Alves SM[2], Lemos JC[1], Aguiar LMV[2], Pereira KMA[2], Brito GAC[3], Benevides NMB[3], Filho GC[3], Pinto VPT[4], Bezerra MM[4], Chaves HV[2] [1]UFC – Medicina, [2]UFC – Ciências da Saúde, [3]UFC, [4]UFC – Biotecnologia

05.031 Participation of the NO/cGMP/K⁺ATP pathway and muscarinic receptor in the antinociceptive action of quercetin. Lopes EM, Piauilino CA, Araújo JM, Freitas FFBP, Reis Filho AC, Gomes BS, Almeida FRC, Brito SMRC UFPI – Medicinal Plants

05.032 Sulfated polyssacharides from the red seaweed solieria filiformis reduces mechanical hyper-nociception in the rat temporomandibular joint during zymosan-induced arthritis. Santos AO[1], Araújo IWF[2], Santos RS[3], Abreu SC[3], Val DR[4], Pereira KMA[1], Brito GAC[5], Cristino Filho G[1], Pinto VPT[1], Clemente-Napimoga JT[6], Bezerra MM[1], Chaves HV[1], Benevides NMB[7] – [1]UFC – Ciências da Saúde, [2]UFC – Engenharia de Pesca, [3]UFC – Medicina, [4]RENORBIO-UFPE, [5]UFC – Ciências Morfofuncionais, [6]FOP-Unicamp, [7]UFC – Bioquímica

05.033 Analgesic and anti-inflammatory effects and mechanisms of action of pimaradienoic acid. Zarpelon AC[1], Possebon MI[1], Mizokami SS[1], Hohmann MSN[2], Staurengo-Ferrari L[1], Carvalho TT[1], Ambrosio SR[3], Arakawa NS[2], Casagrande R[2], Verri WA[1] [1]UEL – Patologia, [2]UEL – Ciências da Saúde, [3]Unifran – Ciências Exatas e Tecnológicas

05.034 Vanillic acid inhibits inflammatory pain in mice: Effect on oxidative stress, cytokine production and NFkB. Zarpelon AC[1], Calixto-Campos C[1], Carvalho TT[1], Hohmann MSN[1], Pinho-Ribeiro FA[1], Fattori V[1], Manchope MF[1], Casagrande R[2], Verri WA[1] [1]UEL – Patologia, [2]UEL – Ciências Farmacêuticas

05.035 Spinal cord BDNF levels increase after dexamethasone treatment in male rats with chronic inflammation. Souza ICC[1], Laste G[2], Rozisky JR[2], Macedo IC[2],

Souza VS[2], Caumo W[2], Torres ILS[3] [1]UFPel – Morfologia, [2]UFRGS, [3]UFRGS – Farmacologia

05.036 Differential modulation of nociception after mild dorsal periaqueductal gray stimulation: influence of aversive context. Souza AS, Mujica EMM, Bottamedi M, Tonussi CR UFSC – Farmacologia

06. Cardiovascular and Renal

06.022 NCX2121-induced relaxation is due to intracellular NO release and reduction in TXA_2 production. Paula TD[1], Silva BR[1], Grando M D[1], Pernomian L[2], Bendhack LM[1] [1]FCFRP-USP-USP – Física e Química, [2]FMRP-USP – Farmacologia

06.023 Endothelial NO-Synthase is involved in decreased epinephrine-induced contraction in renal hypertensive rat aorta by beta-adrenoceptor activation. Bocalon AC, Silva BR, Grando MD, Bendhack LM FCFRP-USP – Física e Química

06.024 The synergism between ischemic postconditioning and lysophosphatidic acid (LPA) on renal function of rats subjected to kidney ischemia-reperfusion. Gonsalez SR, Monteiro SH, Leal AC, Costa RS, Souza P H M, Einicker-Lamas M, Lara LS UFRJ – Farmacologia

06.025 Beneficial effects of aldosterone mediated by GPER (G protein-coupled estrogen receptors) activation are decreased in mesenteric arteries of diabetic animals.

Ferreira NS[1], Cau SBA[2], Manzato CP[1], Silva MAB[1], Carneiro FS[1], Tostes RC[1] [1]FMRP-USP – Pharmacology, [2]UFJF – Basic Health Sciences

06.026 Chronic treatment with red wine modulates the purinergic neurotransmission and decrease oxidative stress and blood pressure in rats SHR and diabetic-STZ. Musial DC, Bomfim GHS, Miranda-Ferreira R, Rocha KKHR, Jurkiewicz A, Jurkiewicz NH Unifesp – Farmacologia

06.027 Impaired vascular reactivity in rats fed with moderately high fructose chow involves changes in nitric oxide production and calcium mobilization. Silva RCF[1], de Souza P[1], Da Silva-Santos JE[2] [1]UFPR, [2]UFSC

06.028 Pinitol ameliorates pressure natriuresis in diabetic rats. Sousa LGF, Cortez LUAS, Regis SRS, Fonteles MC, Nascimento NRF, Santos CF UECE – Ciências Fisiológicas

06.029 Potential vasodilatory and anti-inflammatory effects of a new thienylacylhydrazone derivative LASSBio-788. Motta NAV[1], Fumian MM[1], Brito GB[1], Barreiro EJL[2], Kummerle AE[3], Brito FCF[1] [1]LAFE-UFF, [2]UFRJ – Avaliação e Síntese de Substâncias Bioativas, [3]UFRRJ – Química

06.030 Serotonin and venous hyporeactivity in endotoxemic rats. Carioletti GH[1], Nardi GM[2], Linder AE[1] [1]UFSC – Farmacologia, [2]UNOESC

06.031 Effects of early weaning on nutrition and cardiovascular parameters of rats in different life stages. Barros RBM, Marques EB, Rocha NN, Scaramello CBV UFF – Neurociências

06.032 PK 11195 Translocator Protein 18 Kd ligand improves parameters commonly evaluated in experimental sepsis. Quibem LA[1], Ribeiro JT[1], Arruda TB[1], Linder AE[2], da Silva-Santos JE[2], Nardi GM[1] [1]UNOESC – Farmacologia, [2]UFSC – Farmacologia

06.033 Serotonergic antagonists in septic shock. Lobo KL[1], Nardi GM[2], Linder AE[1] [1]UFSC – Pharmacology, [2]UNOESC – Biological and Health Sciences

06.034 Endothelium-dependent dilatory effect of estrone, an equine estrogen, in rat thoracic aorta. Oliveira TS, Oliveira LM, Peixoto LF, Filgueira FP, Ghedini PC

UFG – Farmacologia Bioquímica e Molecular

06.035 Morphometric and biochemistry evaluation in protective effect on myocardial of the hydroalcoholic extract of red propolis in infarcted rats with isoproterenol. Clementino-Neto J, Tenório EP, Ferreira AKB, Beiriz RV, Moura MTD, Oliveira JMS, Nascimento TG, Ribeiro EAN ESENFAR-UFAL

06.036 Ethanol withdrawal induces oxidative stress: Role of AT1 receptors. Gonzaga NA[1], Tirapelli CR[2] [1]FMRP-USP – Farmacologia, [2]EERP-USP – Enfermagem Psiquiátrica e Ciências Humanas

06.037 Evaluation of the antiacoagulant agent curcumin in bleeding models by transection of the tail in mice. Macêdo AJR, Neta MJCN, Campêlo JAC, Rosa LD, Feitosa ML INTA – Farmácia

06.038 Apocynin prevents oxidative stress induced by chronic ethanol consumption in the rat mesenteric bed. Hipolito UV[1], Leite LN[2], Tirapelli CR[1] [1]EPCH-USP, [2]USP – Farmacologia

06.039 Cardiovascular effects induced by tetrahydrofurfuryl nitrate (NTHF), a new nitric oxide donor, in spontaneously hypertensive rats. Silva TAF[1], Furtado FF[2], Machado NT[1], Queiroz TM[3], Alustau MC[1], Assis VL[3], Vasconcelos WP[1], Oliveira-Filho AA[1], Veras RC[1], Santos AF[3], Athayde-Filho PF[3], Medeiros IA[1] [1]DCF-CCS-UFPB, [2]ETSC-CFP-UFCG, [3]CCS-UFPB

06.040 Functional and molecular analyses of heart in different experimental models of sepsis in rats. Gonçalves RPM, Assreuy J, da Silva-Santos JE UFSC – Farmacologia

06.041 β-citronellol evokes vago-vagal bradycardiac and hypotensive reflex in normotensive rats. Veras HRF, Silva CMS, De Siqueira RJB, Lahlou S, Magalhães PJC UFC Physiology and Pharmacology

06.042 Ethyl acetate fraction from the inflorescences of *Mimosa caesalpiniifolia* reduces intracellular calcium in smooth muscle. Santos MEP[1], Silva-Filho JC[1], Moura LHP[1], Arcanjo DDR[1], Citó AMGL[2], Paulo M[3], Restini CBA[4], Bendhack LM[3], Oliveira AP[1] [1]UFPI – Plantas Medicinais, [2]UFPI – Química, [3]FCFRP-USP, [4]FMRP-USP

07. Endocrine and Gastrointestinal

07.001 Protective effect of epiisopiloturine hydrochloride, a semisynthetic imidazole alkaloid isolated from *Pilocarpus microphyllus* leaves, on naproxen-induced gastrointestinal damage in rats. Nicolau LAD[1], Carvalho NS[1], Pacífico DM[1], Quaresma MP[1], Lucetti LT[2], Aragão KS[2], Leite JRA[1], Souza MHLP[2], Medeiros JVR[1] [1]UFPI, [2]UFC

07.002 Phytochemical screening and gastroprotective effect OF *Maytenus erythroxylon* Reissek (Celastraceae) against cold restrain stress induced ulcers in mice. Formiga RO[1], Sousa CGBL[1], Silva AKM[1], Souza SS[1], Silva Filho RN[2], Quirino ZGM[3], Batista LM[1] [1]CCS-DCF-UFPB, [2]UFPB, [3]CCAE-DEMA-UFPB

07.003 Does hydrogen peroxide (H_2O_2) have a dual effect on the C57Bl/6 isolated ileum? Cesário TAM, Carbonel AAF, Simões MJ, Lungato L, D'Almeida V, Rigoni VLS, Nouailhetas VLA Unifesp

07.005 Polysaccharide extracted from *Caesalpinia ferrea* prevents alendronate-induced gastric damage in rats. Pacífico DM[1], Silva OR[2], Pereira MG[2], Araújo S[1], Quaresma MP[1], Nicolau LAD[3], Araújo TSL[1], Medeiros JVR[1], Soares PMG[2] [1]LAFFEX-UFPI, [2]LAFICA-UFC, [3]NPPM-UFPI

07.006 Antidiarrheal activity of cashew gum, a complex heteropolysaccharide of *Anacardium occidentale* L., in rats. Araújo TSL, Sousa NA, Pacífico DM, Carvalho NS, Araújo S, Sousa FBM, Quaresma MP, Barbosa AL, Medeiros JVR LAFFEX-UFPI

07.007 Antidiarrheal activity of *Cissampelos sympodialis* Eichl. (Menispermaceae). Sales IRP[1], Sousa CGBL[2], Formiga RO[2], Nascimento RF[1], Lúcio ASSC[1], Barbosa-Filho JM[2], Batista LM[2] [1]UFPB – Produtos Naturais e Sintéticos Bioativos, [2]UFPB – Ciências Farmacêuticas

07.008 Gastroprotective effect of 1,4-cineole in ethanol-induced gastric lesions by macroscopic and microscopic analysis. Chaves Filho AJM, Feitosa ML, Venâncio ET, Lima CNC, Fonteles MMF, Florenço FC UFC – Physiology and Pharmacology

07.009 Intestinal anti-inflammatory effect of *Combretum duarteanum* Cambess (Combretaceae) leaves in TNBS colitis model (Acute Model). Lima GRM, Machado FDF, Nascimento RF, Silva AKM, Tavares JF, Batista LM UFPB – Ciências Farmacêuticas

07.010 Enteric neuropathy induces changes in enteric nervous system and in nNOS expression in female diabetic rats. Da Silva LM[1], Maria-Ferreira D[1], Da Silva RCMVAF[1], Crestani S[2], Vicentino-Vieira SL[3], Da Silva Santos JE[2], Sant'Ana DMG[3], Baggio CH[1], Werner MFP[1] [1]UFPR – Farmacologia, [2]UFSC – Farmacologia, [3]UEM – Ciências Morfológicas

07.011 Gastroprotective properties of cashew gum, a complex heteropolysaccharide of *Anacardium occidentale*, in naproxen-induced gastrointestinal damage in rats. Carvalho NS[1], Silva MM[1], Nicolau LAD[2], Silva RO[3], Soares PMG[3], Silva DA[1], Leite JRSA[1], Medeiros RJV[1] [1]UFPI – Biotechnology, [2]UFPI – Pharmacology, [3]UFC – Pharmacology

07.012 Actions of nitric oxide (NO) or hydrogen sulfide (H_2S) donors and possible interactions between the two systems in gastric functions in rodents. Lucetti LT[1], Medeiros JVR[2], Santana APM[1], Tavares BM[1], Soares PMG[3], Vale ML[1], Ribeiro RA[1], Souza MHLP[1] – [1]UFC – Fisiologia e Farmacologia, [2]UFPI – Biologia, [3]UFC – Morfologia

07.013 Regulation of nodal, Cripto and Smad 4 expression during decidualization and by steroid hormones in human endometrial stromal cells. Dela Cruz C[1,2], Kaya HS[2], Taylor RN[3], Reis FM[1], Bagchi MK[2] [1]UFMG – Obstetrícia e Ginecologia, [2]UI – Molecular and Integrative Physiology, [3]WFBMC

07.014 Inhibition of intestinal transit induced by clozapine in mice: Role of cholinergic, serotonergic and endocannabinoid systems. Marques AC, Viana AFC, Arruda BR, Rao VS, Santos FA UFC – Fisiologia e Farmacologia

07.015 Intestinal anti-inflammatory effect of ethyl acetate phase of *Maytenus obtusifolia*. Machado FDF, Lima GRM, Paulo LL, Souza SS, Tavares JF, Batista LM UFPB

07.016 Acute toxicity and gastroprotective effect of rosmarinic acid in gastric ulcer model induced by ethanol/HCl in mice. Nascimento RF, Sales RPS, Paulo LL, Machado DFM, Barbosa-Filho JM, Batista ML UFPB – Ciências Farmacêuticas

07.017 Chronic aerobic exercise changes the contractile reactivity of rat ileum. Araujo LCC[1], Souza ILL[2], Vasconcelos LHC[2], Cavalcante FA[3,2], Silva BA[4,1,2] [1]UFPB – PPgBCM, [2]UFPB – PPgPNSB, [3]DFP-UFPB, [4]DCF-UFPB

07.018 Gastroprotective activity of the geopropolis of *Melipona Fasciculata* Smith (Tiúba). Sousa AKA[1], Melo DNS[1], Barroso WA[2], Pessoa DLR[1], Freire SMF[1], Borges ACR[1], Dutra RP[1], Borges MOR[1] [1]UFMA, [2]USP

07.019 Gastroprotective effect of baicalein against ethanol/HCL-induced gastric damage in mice. Ribeiro ARS, Thomazzi SM UFS – Fisiologia

09. Natural Products and Toxinology

09.053 Action of clathrodin and analogues: small molecule modulators of voltage-gated ion channels. Peigneur S[1], Zula A[2], Zidar N[2], Chan-Porter F[3], Kirby R[3], Rogers M[3], Madge D[3], Ilas J[2], Kikelj D[2], Tytgat J[1] [1]KULeuven – Toxicology & Pharmacology, [2]University of Ljubljan – Pharmacy, [3]Xention Ltd

09.054 High-mobility group box-1 protein in adenine-induced chronic renal failure and the influence of gum arabic thereon. Ali B H[1], Al Za'abi M[1], Al Shukaili A[2], nemmar A – [1]Sultan Qaboos – Pharmacology, [2]Sultan Qaboos University – Microbiology and Immunology

09.055 Effects of (-)-myrtenol on human gastric epithelial cell viability and migration. Viana AFSC[1], Santos VG[2], Silva ACA[2], Lopes MTP[2], Sousa DP[3], Oliveira RCM[4], Santos FA[1] [1]UFC – Pharmacology, [2]UFMG – Pharmacology, [3]UFPB, [4]UFPI – Medicinal Plants

09.056 Efficacy of lectin from *Abelmoschus esculentus* on zymosan-induced temporomandibular joint inflammatory hypernociception in rats. Freitas RS[1], Fernandes MEF[2], Vieira FTA[3], Lacerda JTJG[4], Gadelha TS[4], Pereira KMA[5], Brito GAC[6], Cristino Filho G[1], Pinto VPT[1], Bezerra MM[1], Pinto IR[1], Gadelha CAA[4], Chaves HV[3] [1]UFC-Sobral – Biotecnologia, [2]UFC-Sobral – Odontologia, [3]UFC-Sobral – Medicina, [4]UFPB – Biologia Celular e Molecular, [5]UFC-Sobral – Ciências da Saúde, [6]UFC – Ciências Morfofuncionais

09.057 Analysis of phenolic contents and harpagoside of crude extract and ethyl acetate fraction of *Harpagophytum procumbens* by HPLC/DAD and its inhibitory activity on monoamine oxidase. Schaffer LF[1], Busanello A[1], Peroza LR[2], Boligon AA[3], Dotto MM[4], Athayde ML[3], Sudati JH[5], Fachinetto R[1], Wagner C[5] – [1]UFSM – Farmacologia, [2]UFSM – Bioquímica Toxicológica, [3]UFSM – Ciências Farmacêuticas, [4]UFSM – Farmácia, [5]Unipampa

09.058 Effects of long-term administration of *Senna occidentalis* seeds on the hematopoietic tissue of rats. Teles AVFF, Górniak SL FMVZ-USP – Pathology

09.059 Antimicrobial activity of *Nectandra lanceolata* essential oil. Pires LC[1], Garlet QI[2], Spall S[1], Gressler LT[3], Júnior GB[3], Silva DT[4], Vargas APC[5], Heinzmann BM[6] [1]UFSM – Farmácia, [2]UFSM – Farmacologia, [3]UFSM – Medicina Veterinária, [4]UFSM – Engenharia Florestal, [5]UFSM – Medicina Veterinária Preventiva, [6]UFSM – Farmácia Industrial

09.060 Resin from *Protium heptaphyllum* inhibits adipogenesis through the PPAR-γ signaling Pathway in 3T3-L1 cells. Melo KM, Marinho Filho JDB, Araujo AJ, Rao VS, Santos FA UFC – Physiology and Pharmacology

09.061 Heparin antagonizes the cytotoxic and some enzymatic activities of *Apis mellifera* bee venom. El-kik CZ[1], Gaban GA[1], Fonseca TF[1], Tavares-Henriques MS[1], Calil-Elias S[2], Melo PA[1] [1]UFRJ – Farmacologia, [2]UFF – Farmacologia

09.062 *Ex vivo* effect of *Terminalia tanibouca* ethanolic extract on the gastric wall mucus of mice. Nunes PHM[1], Sousa PMB[2], Barros RM[3], Brito KS[1], Martins MCC[1,3] [1]UFPI, [2]UESPI, [3]UNINOVAFAPI

09.063 Fish oil reduces CFA inflammatory pain by modulating PGE2, TNF-α and resolvins levels. Lobo BWL[1], Teixeira MS[1], Silva NLC[2], Silva LL[2], Lima CKF[2], Miranda ALP[2], Ramos MFS[1], Dellamora-Ortiz GM[1] [1]DEFARMED-FF-UFRJ, [2]BioTecFar-UFRJ-FF

09.064 Evaluation of the antispasmodic effect of *Cardiospermum corindum* L. (Sapindaceae) on rat ileum. Silva VA[1], Freire IS[1], Rigoni VLS[2], Costa AEA[2], Silva FL[3], Barbosa-Filho JM[3], Nouailhetas VLA[2], Silva JLV[1] [1]Uninove – Farmácia-Bioquímica, [2]Unifesp –Biofísica, [3]UFPB

09.065 Cytotoxic activity of BTAHF, a new hemorrhagic P-I class SVMP isolated FROM *Bothriopsis taeniata* snake venom, on C2C12 myoblasts and myotubes cell lines. Torres-Huaco FD[1,2], Bustillo S[3], Leiva LC[3], Marangoni S[1] [1]IB-Unicamp – Bioquímica, [2]FCM-Unicamp – Farmacologia, [3]UNNE – Bioquímica

09.066 Neuropharmacological characterization of hexanic extract isolated from *Prasiola crispa* antarctic algae. Lorensi GH[1], Oliveira RS[1], Almeida CGM[1], Correa MS[1], Pereira AB[1], Ramos BCJ[2], Teixeira VL[2], Dal Belo CA[1] [1]Lanetox-Unipampa, [2]ALGAMAR-UFF

09.067 Mucoadhesive formulation containing *Bidens pilosa* L. (Asteraceae) reduces intestinal injury against 5-fluorouracil-induced mucositis in mice. Ávila RI[1], Ávila PHM[1], Santos Filho EX[1], Bastos CCC[1], Batista AC[2], Serpa RC[3], Marreto RN[1], Lima EM[1], Mendonça EF[2], Valadares MC[1] [1]FARMATEC-UFG – Farmacologia e Toxicologia Celular, [2]FO-UFG – Patologia Bucal

09.068 Effect of monoterpene 1.8-cineole in the gastric ulcer healing. Caldas GFR[1], Silva ELV[1], Araújo AV[2], Neto JCS[3], Wanderley AG[1,4] [1]UFPE – Pharmaceutical Sciences, [2]CAV-UFPE – Nutrition, [3]UFPE – Histology and Embryology, [4]UFPE – Physiology and Pharmacology

09.069 Fixed oil from the pulp of *Caryocar coriaceum* Wittm. (Pequi) delays the onset of convulsive behavior induced by pentylenetetrazol in mice. Ribeiro LR[1], de Oliveira CC[2], de Oliveira CV[1], Grigoletto J[1], de Souza TL[1], Grauncke ACB[1], Furian AF[3], de Menezes IRA[4], Oliveira MS[1] [1]UFSM – Physiology and Pharmacology, [2]URCA – Nursing, [3]UFSM – Food Science and Technology, [4]URCA – Biological Chemistry

09.070 Protective effect of lectin from *Mucuna pruriens* (*Mp*) seeds on ethanol-induced gastropathy depends on alpha-2 adrenoceptors and prostaglandins. Pinto IR[1], Maciel LM[2], Monteiro DAM[3], Matos SO[3], Ribeiro KA[1], Freitas RS[1], Gadelha TS[4], Lacerda JTJG[4], Gadelha CAA[4], Benevide NMB[5], Brito GAC[6], Pinto VPT[1,2,8], Bezerra MM[2,1,8], Pereira Filho SM[2], Cristino Filho G[2,1,7], Silva AAR[3,1] [1]UFC – Biotechnology, [2]UFC – Medicine, [3]UFC – Dentistry, [4]UFPB – Molecular Biology, [5]UFC – Biochemistry and Molecular Biology, [6]UFC – Morphology, [7]UFC – Health Sciences

09.071 Gastroprotective effect of ethanolic extract chloroform fraction of *Croton argyrophyllus* Kunth. Oliveira DF, Estevam CS, Araújo SA, Batista JS UFS – Fisiologia

09.072 Antiophidic activity of solanidane and iminosolanidane alkaloids from *Solanum campaniforme*. Jorge RJB[1], Torres MCM[2], Ximenes RM[3], Alves NTQ[1], Santos JVA[1], Marinho AD[1], Toyama MH[4], Braz-Filho R[5], Silveira ER[2], Silveira JAM[1], Costa PHS[1], Pessoa ODL[2], Monteiro HSA[1] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Química Orgânica e Inorgânica, [3]UFPE – Antibióticos, [4]Unesp – Química de Macromoléculas, [5]Faperj/UENF/UFRRJ

09.073 A rapid method to isolate bufadienolides from toad *Rhinella schneideri* venom by flash column chromatography. Cunha-Filho GA[1], Costa PRR[2], Texeira Jr E[2], Barcellos J[2], Martins-Ferreira J[1], Quintas LE[1], Noël F[1] [1]ICB-UFRJ, [2]IPPN-UFRJ

09.074 Isolation and biochemical characterization of A γ-type phospholipase A2 inhibitor from *Crotalus durissus* collilineatus snake serum. Gimenes SNC[1],

Ferreira FB[1], Silveira ACP[1], Rodrigues R S[1], Yoneyama KAG[1], dos Santos JI[2], Fontes MRM[2], Brites VLC[3], Santos ALQ[4], Borges MH[5], Lopes DS[1], Rodrigues VM[1] [1]UFU – Genética e Bioquímica, [2]Unesp – Física e Biofísica, [3]UFU – Biologia, [4]UFU – Medicina Veterinária, [5]FUNED

09.075 Neuroprotective efficacy of eugenol in Huntington's disease: Behavioral alterations and oxidative stress. Nobrega RF[1], Teixeira HAP[1], Linard-Medeiros CFB[2], Silva JL[2], Sereniki A[2], Sales VAW[1], Melo VCS[1], Melo THC[1], Silva JBR[2], Lagranha C[3], Wanderley AG[1], Lafayette SSL[1] [1]UFPE – Fisiologia e Farmacologia, [2]UFPE – Ciências Farmacêuticas, [3]CAV-UFPE

09.076 Evaluation of the antifungal activity of the essential oil of *Tagetes minuta* L. against *Candida albicans*. Cunha JA[1], Bolzan LP[2], Oliveira AM[3], Fausto V[2], Vaucher RA[2], Silva DT[4], Baldisserotto B[1], Heinzmann B[1] [1]CCS-UFSM – Farmacologia, [2]UNIFRA, [3]UFSM – Farmácia, [4]UFSM – Engenharia Florestal

09.077 Antiophidic properties of a polysaccharide isolated from brazilian marine algae. Rodrigues-Silva AC[1], Fuly AL[1], Duarte MER[2], Noseda MD[2], Ferreira LG[2], Sanchez EF[3] – [1]UFF – Biologia Molecular e Bioquímica, [2]UFPR, [3]FUNED

09.078 Antidepressant-like effect of the lectin from the marine red alga *Solieria filiformis* (Kützing) P.W. Gabrielson. Abreu TM[1], Martins AB[1], Monteiro VS[1], Rivanor RLC[1], Teles FB[1], Souza RB[1], Danziato PM[1], Dantas RC[1], Vasconcelos SMM[2], Júnior JERH[2], Benevides NMB[1] [1]UFC – Biochemistry and Molecular Biology, [2]UFC – Physiology and Pharmacology

09.079 Evaluation of synthetics derivatives in neutralization some toxic activities of *Bothrops jararacussu* venom. Pires AMG[1], Rodrigues- Silva AC[1], Fuly AL[1], Ferreira SB[2], Sanchez EF[3] [1]UFF – Biologia Molecular, Celular e Bioquímica, [2]UFRJ – Química, [3]FUNED

09.080 Acetone extract of NP01 stimulates the healing activity in skin pressure ulcer and acts as a potent anti-inflammatory. Gomes MF, Santos GCQ, Castro LD, Bastos AC, Mota AS, Nascimento JLM, Bastos GNT UFPA

09.081 Nanoemulsion-based formulation increases antiedematogenic activity for hidroalcoholic extract from *Casearia sylvestris*. Lenfers B[1], Batisti AP[2], Martins TC[1], Benevides MLACS[3], Custodio KM[4], Kanis LA[5], Santos ARS[1], Martins DF[5], Piovezan AP[5] [1]UFSC – Neurobiology of Pain and Inflammation, [2]UNISUL – Naturology, [3]UNISUL – Medicine, [4]UNISUL – Pharmacy, [5]UNISUL – Health Sciences.

09.082 The extract MS2AP improves the anti-inflammatory process and the tissue repair in pressure ulcer model. Santos GCQ, Gomes MF, Castro LD, Mota AS, Nascimento GS, Bastos AC, Nascimento JLM, Bastos GNT UFPA

09.083 The effect of *Syzygium cumini* (L.) Skeels (jambolão) in a model of polycystic ovaries induced in rats. Soares CR, Sena GM, Silva SN, Benevides ROA, Silveira WF, Mendes EG, Abreu IC, Cartágenes MSS, Borges MOR, Pedrosa MCG, Borges ACR UFMA – Ciências Fisiológicas

09.084 Effect of Glycine max(L.) (soy isoflavones) in model in rats induced ovarian polycystic. Sena GM, Soares CR, Silveira WF, Mendes EG, Borges ACR, Borges MOR, Freire SMF, Cartágenes MSS, Abreu IC, Silva SN UFMA – Farmacologia

09.085 Lectin from the green seaweed *Caulerpa cupressoides* down regulates inflammatory hypernociception in the temporomandibular joint arthritis in rats. Rivanor RLC[1], Fernandes MEF[2], Val DR[3], Freitas AR[4], Lemos JC[5], Pereira KMA[4], Rodrigues JAG[1], Araújo IWF[6], Bezerra MM[5],

Chaves HV[4], Benevides NMB[1] [1]UFC – Bioquímica e Biologia Molecular, [2]UFC – Odontologia, [3]RENORBIO-UFPE, [4]UFC-Sobral – Odontologia, [5]UFC-Sobral – Medicina, [6]UFC – Engenharia de Pesca

09.086 Antispasmodic activity of crude ethanolic extract from *Xylopia frutescens* Aubl. aerial parts on guinea pig ileum. Moreno GTA[1], Ferreira SRD[1], Oliveira FRMB[1], Vasconcelos LHC[2], Correia ACC[3], Silva MS[2,4], Tavares JF[2,4], Cavalcante FA[2,5] [1]UFPB, [2]UFPB, [3]ICBS-UFAL, [4]DCF-UFPB, [5]DFP-UFPB

09.087 *Hypericum perforatum* inhibits inflammatory pain in mice. Mizokami SS[1], Staurengo-Ferrari L[1], Fattori V[1], Colombo BB[1], Casagrande R[2], Verri WA[1] – [1]UEL – Ciências Patológicas, [2]UEL – Ciências Farmacêuticas

09.088 Hepatoprotective effect of the aqueous extract of *Simarouba amara* Aublet (Simaroubaceae) stem bark against carbon tetrachloride (CCL4) – induced hepatic damage in rats. Maranhão HML[1], Martins AOBPB[1], Vasconcelos CFB[1], Rolim LA[1], Silva-Neto JC[2], Silva Filho RC[3], Costa-Silva JH[3], Fernandes MP[3], Araújo AV[4], Wanderley AG[1,5] [1]UFPE – harmaceutical Sciences, [2]UFPE – Histology and Embryology, [3]CAV-UFPE – Physical Education and Sports, [4]CAV-UFPE – Nutrition, [5]UFPE – Physiology and Pharmacology

09.089 *In vitro* antioxidant activity of a semisynthetic derivative of the natural riparins. Araújo EJF[1], Oliveira JS[1], Lima FCA[2], Freitas RM[1], Gutierrez SJC[1] [1]UFPI, [2]UESPI

09.090 Role of the ethyl acetate fraction of *Platonia insignis* Mart. in NO-synthase and lipid peroxidation in gastric lesions induced by absolute ethanol. Lima GS[1], Oliveira IS[1], Silva-Freitas FV[1], Lira KL[1], Nicolau LAD[1], Nunes PHM[2], Chaves MH[3], Medeiros JVR[1], Oliveira RCM[1,2] [1]NPPM-UFPI, [2]UFPI – Biophysics and Physiology, [3]UFPI – Department of Chemistry

09.091 *In vitro* antioxidant capacity of a new ester phenylpropanoid. Machado KC[1], Oliveira GLS[1], Sousa EBVS[2], Sousa EBVS[2], Machado KC[1], Sousa DP[2], Freitas RM[1] [1]UFPI, [2]UFPB

09.092 Parameters of quality and identity of geoprópolis of *Melipona fasciculata* Smith. Rocha AO, Ferreira FS, Serra MB, Mesquita LSS, Mesquita JWC, Cunha MS, Batista MC, Dutra RP, Ribeiro MNS UFMA

09.093 Antioxidant potential of *Passiflora edulis*. Ferreira FS, Mesquita LSS, Rocha AO, Mesquita JWC, Serra MB, Cunha MS, Batista MC, Dutra RP, Ribeiro MNS UFMA

09.094 Effects of synthetic natriuretic peptide of *Crotalus durissus cascavella* venom in isolated perfused rat kidney system. Silveira JAM[1], Marinho AD[1], Jorge ARC[1], Costa PPC[1], Jorge RJB[1], Morais GB[2], Evangelista JSAM[2], Monteiro HSA[1] – [1]LAFAVET-UFC – Physiology and Pharmacology, [2]UFC-HISTOVESP – Veterinary

09.095 Vasodilatory activity and mechanism of action of the ethanolic extract and fractions of aerial parts of *Stachytarpheta schottiana* (Verbenaceae). Moreira AP, Moura GR, Muzitano MF, Barros CM, Carmo PL, Raimundo JM UFRJ-Macaé

09.096 Snake venom PLA_2 activity inhibition by different protocols on neuromuscular junction. Schezaro-Ramos R[1], Collaço RCO[1], Randazzo-Moura P[2], Cogo JC[3], Rodrigues-Simioni L[1] [1]FCM-Unicamp – Farmacologia, [2]PUC-SP – Farmacologia, [3]UniVaP – Estudos da Natureza

09.097 Involvement of monoaminergic system in the antidepressive-like effect of

chloroformic fraction of *Lafoensia pacari* A. ST.-HIL. ethanolic extract. Galdino PM[1,2], Carvalho AAV[1], Florentino IF[1], Martins JLR[1], Rodrigues ORL[1], Gazola AC[3], Reginatto FH[3], Paula JR[4], Torres LMB[5], Costa EA[1], de Lima TCM[2] [1]ICB-UFG – Farmacologia de Produtos Naturais, [2]CCB-UFSC – Farmacologia, [3]CCS-UFCS – Ciências Farmacêuticas, [4]FF-UFG – Produtos Naturais, [5]IBot

09.098 Effects of Morus nigra (mulberry) leaves tea on arterial blood pressure in adult rats. Rodrigues BB[1], Oliveira RE[1], Araujo-Alves MA[1], Silva MTB[2], de Andrade CR[1] – [1]INTA-NUBEM – Bioprospecção e Experimentação Molecular Aplicada, [2]CCS-UFPI – Educação Física

09.099 Biochemical characterization of a PLA_2 Btae TX-I isolated from *Bothriopsis taeniata* snake venom: A pharmacological and morphological study. Romero-Vargas FF[1], Rocha T[2], Cruz-Höfling MA[3], Rodrigues-Simioni L[4], Marangoni S[1] [1]Unicamp – Biochemistry, [2]San Francisco University – Multidisciplinary Research Laboratory, [3]Unicamp – Histology and Embryology, [4]Unicamp – Pharmacology

09.100 Proteolytic fraction FROM *Vasconcellea cundinamarcensis* latex stimulates the bone neoformation probably involving the proliferation and differentiation of osteoblasts. Santos VG[1], Braga AD[1], Reis IDG[2], Freitas KM[1], Salas CE[3], Silva GAB[2], Lopes MTP[1] [1]UFMG – Pharmacology, [2]UFMG – Morphology, [3]UFMG – Biochemistry and Immunology

09.101 Effect of the extract of *Euterpe oleracea* Mart. (Açai) on cardiovascular and renal disorders in animals with spontaneous hypertension (SHR) associated with Diabetes Mellitus Type 1. Cordeiro VSC[1], Carvalho LCRM[1], Costa CA[1], Bem GF[1], Santos IB[1], Oliveira PRB[1], Okinga A[1], Souza MAV[1], Sousa JP[2], Soares de Moura R[1], Resende AC[1] [1]UERJ – Cardiovascular Pharmacology and Medicinal Plants, [2]UFPA – Pharmacy

09.102 Evaluation of the acute toxicity of essential oil from the leaves of *Tagetes minuta* L. in silver catfish (*Rhamdia quelen*). Oliveira AM[1], Cunha JA[2], Sutili FJ[2], Pinheiro CG[3], Garlet QI[2], Baldisserotto B[2], Heinzmann B[2] [1]CCS-UFSM – Farmácia, [2]CCS-UFSM – Farmacologia, [3]UFSM – Engenharia Florestal

09.103 Safety and efficacy of the lectin from *Mucuna pruriens* (*Mp*) seeds on free radicals and oxidative stress on ethanol-induced gastropathy in mice. Maciel LM[1], Pinto IR[2], Assis EL[3], Matos SO[3], Pereira Filho SM[1], Monteiro DAM[3], Ribeiro KA[2], Chaves HV[3,4], Gadelha TS[5], Gadelha CAA[5], Lacerda JTJG[5], Viana AFSC[6], Vasconcelos AS[6], Sousa FCF[6], Pinto VP[1,2,4], Cristino Filho G[1], Aguiar LMV[1,2,7], Bezerra MM[1,2,4], Silva AAR[3,2] [1]UFC-Sobral – Medicine, [2]UFC – Biotechnology, [3]UFC-Sobral – Dentistry, [4]UFC – Health Sciences, [5]UFPB – Molecular Biology, [6]UFC – Pharmacology, [7]UFC

09.104 Effect of polysaccharides plant extracts against epimastigote forms of *Trypanossoma cruzi*. Souza ROS[1], Sousa PL[1], Menezes RRPPB[1], Pereira MG[2], Martins AMC[1] [1]FF-UFC – Cultivo Celular, [2]ISCB-UECE

11. Clinical Pharmacology, Pharmacokinetics, Pharmacogenomics and Preclinical Toxicology

11.001 Effect of standardized extract of propolis (EPP-AF) on the *in vivo* activity of P-glycoprotein: clinical study in healthy volunteers.

Vale GT[1], Lanchote VL[2], Coelho EB[3] [1]FMRP – Farmacologia, [2]FCFRP-USP – Toxicologia, [3]FMRP – Clínica Médica

11.002 Bacteria drug resistance in intensive care units: a systematic review. Luedy TA, Costa LS, Rodrigues CDM, Lima ISP, Júnior AGT, Lima MAP, Meireles CB, Linhares EHPCM, Simplício GN, Costa TR, Ferreira LFP UFCA

11.003 Biochemical and hematological effects of acute administration to crude fraction from the leaves of *Celtis iguanaea* in female rats. Guex CG[1], Silva ARH[1], Noda JM[1], Pigatto GR[1], Rovani BT[1], Freitas RB[2], Froeder ALF[2], Athayde ML[2], Bauermann LF[1] [1]UFSM – Fisiologia e Farmacologia, [2]UFSM – Farmácia Industrial

11.004 Preclinical toxicological test for *Marrubium vulgare* on weaned calves. Schlemper V, Bernardo FD, Schlemper SRM, Franciscato C, Ambrosini F, Barichello D, Soares EL UFFS – Medicina Veterinária

11.005 Juvenile Arthritis Rheumatoid therapeutics: A review of the last decade. Meireles CB, Simplício GN, Linhares EHPCM, Luedy TA, Costa TR, Ferreira LFP, Rodrigues CDM, Costa LS, Lima ISP, Júnior AGT UFCA

11.006 Evaluation of acute toxicity of CEO_2 nanoparticles in mice. Beltrão DM[1], Xavier AL[1], Abrantes RA[1], Santos CCL[2], Keyson D[2], Sousa AG[2], Farias IAP[3], Albuquerque AJR[3], Sampaio FC[3], Sobral MV[1] [1]UFPB – Ciências Farmacêuticas, [2]UFPB – Química, [3]UFPB – Biotecnologia

11.007 Pharmacogenetic and pharmacogenomic effect of ala16val polymorphism – SOD2 cytotoxicity caused by methotrexate in human peripheral blood mononuclear cells (PBMCS). Machado AK[1], Barbisan F[1], Motta JR[2], Rogalski F[2], Teixeira C[2], Jung I[1], Dornelles E[3], Cruz IBM[2] [1]UFSM – Pharmacology, [2]UFSM – Biogenomics, [3]UFSM – Toxicological Biochemistry

11.008 Evaluation of rabbit vaginal permeability test applied to fenticonazole. Campos RM[1], Pissinati L[1], Rojas-Muscoso JA[1], Chen LS[2], Porto M[1], Gagliano TJD[3], De Nucci G[1] [1]Unicamp – Pharmacology, [2]Galeno Research Unit, [3]IBCCF-UFRJ

11.009 Correlations among antiangiogenic factors and trace elements in hypertensive disorders of pregnancy. Rezende V, Palei AC, Barbosa Jr F, Tanus-Santos JE, Sandrim V FMRP-USP – Farmacologia

11.010 Toxic effects of OMC administration during development of rats in lactational period. Barbosa E[1], Savignon T[2], Ferraris FK[1], Chaves AS[1], Muylaert FF[1], Rodrigues SA[1], Amendoeira FC[1] [1]INCQS-DFT-Fiocruz – Farmacologia, [2]INCQS-DFT-Fiocruz – Fisiopatologia

11.011 Does omeprazole association modulate digoxin pharmacokinetic in patients with heart failure? Souza FC, Barros RBM, Rocha RG, Baptista TM, Silva TA, Scaramello CBV UFF

11.012 Evaluation of streptokinase in biopharmaceutical formulations by *in vitro* bioassays. Cardoso Jr CDA[1], Schramm VG[1], Freitas GW[1], Walter ME[1], Xavier B[2], Dalmora SL[1] [1]UFSM – Ciências Farmacêuticas, [2]UFSM – Farmácia

11.013 Haloperidol-loaded polymeric nanocapsules prevents hepatotoxicity and DNA damage in rats. Roversi Kr[1], Benvegnú DM[2], Burger ME[1] [1]UFSM – Fisiologia e Farmacologia, [2]UFFS – Bioquímica e Farmacologia

11.014 Inosine prevents MeHg induced neurotoxicity, hepatotoxicity and dyslipidemia in mice. Macedo-Júnior SJ[1], Durli-Júnior I[2], Santos ARS[3], Cardozo AM[4] [1]UFSC – Farmacologia, [2]Petlabor – Análises Clínicas Veterinárias, [3]UFSC – Ciências Fisiológicas, [4]UFSC – Patologia

11.015 Non-clinical toxicity and evaluation of the gastroprotective effect of

bioproducts from *Psychotria carrascoana*.

Almeida AC[1], Freitas LBN[1], Pierdoná TM[2], Filho JMSR[1], Nascimento RRG[3], Pimenta ATA[3], Lima MAS[1], Leal LKAM[1] [1]UFC – Farmácia, [2]UFC – Fisiologia e Farmacologia, [3]UFC – Química Orgânica e Inorgânica

02. Neuropharmacology

02.041 Intranigral 6-hydroxydopamine and intraperitoneal rotenone exposures cause hypolocomotion and anxiolytic-like effect in male Wistar rats. Vieira JCF, Bassani TB, Zanoveli JM, Vital MABF UFPR – Farmacologia

02.042 The effects of a single acute dose of carvacrol on monoamine levels in mice striatum. Melo FHC[1], Fernandes ML[1], Citó MCO[1], Santos LKX[1], Fernandes CEL[2], Sousa FCF[1], Aguiar JAC[1], Lopes IS[1] [1]UFC – Fisiologia e Farmacologia, [2]UECE – Ciências Biológicas

02.043 Acute postnatal administration of methylmalonate provokes memory deficit in mice: involvement of inflammatory and apoptotic markers. Funghetto MP[1], Gabbi P[2], Ribeiro LR[2], Cardoso AS[1], Haupental F[1], Fighera M R[3] [1]UFSM – Bioquímica do Exercício, [2]UFSM – Farmacologia, [3]UFSM – Neuropsiquiatria

02.044 Repeated intranasal administration of the fungicide Ziram induces motor deficits in adult mice: support for the olfactory vector hypothesis of Parkinson's disease. Mack JM[1], Schmitz AE[2], Scarpa P[1], Souza LF[2], Dafre AL[2], Prediger RDS[1] [1]UFSC – Farmacologia, [2]UFSC – Bioquímica

02.045 Tactile stimulation and neonatal isolation modify oxidative status during cocaine abstinence in young rats. Antoniazzi CTD, Roversi Kr, Dias VT, Bürger ME UFSM – Fisiologia e Farmacologia

02.046 Chronic ethanol intoxication exacerbates the losses generated by cerebral ischemia. Fontes-Júnior EA[1], Oliveira GB[1], Fernandes LMP[1], Leal WG[2], Rodrigues Lima R[2], Maia CSF[1], Crespo-Lopez ME[2] [1]UFPA – Farmácia, [2]UFPA – Ciências Biológicas

02.047 Control of breathing automaticity by activation of the retrotrapezoid nucleus/parafacial region in adult anesthetized rats. Lucena EV[1], Takakura AC[2], Moreira TS[1] [1]USP – Physiology and Biophysics, [2]USP – Pharmacology

02.048 Antidepressant like activity of citronellyl acetate in mice: involvement of noradrenergic and serotonergic system. Santos LKX, Citó MCO, Fernandes ML, Melo FHC, Aguiar JAC, Sousa PB, Lopes IS, Santos APX, Sousa FCF UFC – Pharmacology and Physiology

02.049 7-fluoro-1,3-diphenylisoquinoline reverses motor and non-motor symptoms induced by MPTP in mice: Role of neuroinflammation. Sampaio TB[1], Sari MHM[2], Pesarico AP[2], Mantovani A[2], Prediger RD[1], Nogueira CW[2] [1]UFSC – Pharmacology, [2]UFSM – Chemistry

02.050 Antidepressant-like effects of piroxicam in the rat forced swim test are associated with serotonin. Santiago RM[1], Bassani TB[1], Zaminelli T[1], Boschen S[1], Lima MMS[2], Da Cunha C[1], Andreatini R[1], Vital MABF[1] [1]UFPR – Farmacologia, [2]UFPR – Fisiologia

02.051 Neuroanatomical evidences of the control of expiratory activity by the retrotrapezoid nucleus. Silva JN[1], Moreira TS[2], Takakura AC[1] [1]USP – Farmacologia, [2]USP – Fisiologia

02.052 Noradrenergic degeneration contributes to the rapid onset of L-DOPA induced dyskinesia in rats. Lopes SC[1], Oliveira PA[1], Lopes MW[2], Leal RB[2], Takahashi RN[1], Prediger RD[1] [1]UFSC – Farmacologia, [2]UFSC – Bioquímica

02.053 Bed nucleus of the stria terminalis noradrenergic system modulates contextual fear conditionig: involvement of CRF1 receptors and NMDA-NO pathway. Hott SC, Gomes FV, Uliana DLM, Resstel LBM FMRP-USP – Pharmacology

02.054 Protective effect of riparin III on oxidative stress in a corticosterone-induced stress model in mice. Capibaribe VCC, Vasconcelos AS, Oliveira ICM, Vidal LMT[1], Pontes MCD, Castro LA, Lopes IS, Sousa PB, Lima AEL, Sousa FCF UFC – Fisiologia e Farmacologia

02.055 Investigation of the effect of meropenem in astrocyte culture. Lima CNC[1], Venancio ET[1], Filho AJMC[1], Feitosa ML[1], Lopes KS[2], Sousa A[1], Lima KA[1], Macedo DS[1], Martins AMC[2], Fonteles MMF[1,2] [1]UFC – Farmacologia e Fisiologia, [2]UFC – Farmácia

02.056 Evaluation of sedative, anxiolytic, and anticonvulsant activity of the essential oil of *Piper tuberculatum* in mice. Rodrigues CKS[1], Sales VS[1], Figueirêdo FRSDN[1], Nascimento EP[1], Delmondes GA[1], Cruz LP[1], Tintino SR[1], Silva RER[1], Amaro EN[1], Rodrigues LB[1], Monteiro AB[1], Cesário FRAS[1], Lemos ICS[1], Menezes IRA[1], Barbosa R[1], Felipe CFB[2], Kerntopf MR[1] [1]URCA – Biological Chemistry [2]UFPB – Molecular Biology

02.057 Gene expression of myoinositol co-transporters in nervous tissue during the development of experimental diabetes. Uchoa PN[1], Fonteles MC[1], Nascimento NRF[1], Santos CF[1], Bindá AH[2], Farias VX[1], Prata MMG[2], Britto LRG[3], Lessa LMA[1] [1]ISCB-UECE, [2]UFC – Fisiologia e Farmacologia, [3]ICB-USP

02.058 Anxiolytic-like effects of lipossomal formulation containing nimodipine: possible involvement of serotoninergic transmission. Viana HKMMV[1], Almeida VPA[1], Rodrigues JBR[1], Moreno LCGAI[2], Santos-Magalhães NS[2], Freitas RM[1], Rolim HML[1] [1]UFPI, [2]UFPE

02.059 Involvement of dopaminergic system in antidepressant like activity of monoterpene citronellyl acetate. Silva FCC, Santos LKX, Citó MCO, Fernandes ML, Melo FHC, Sousa FCF UFC – Fisiologia e Farmacologia

03. Psychopharmacology

03.001 N-acetylcysteine prevents alcohol withdrawal-induced increases in corticosterone and leptin in rats. Schneider RJ[1], Santos CF[2], Clarimundo V[2], Dalmaz C[3,1], Elisabetsky E[2,1], Gomez R[2,1] [1]UFRGS – Neurociências, [2]UFRGS – Farmacologia, [3]UFRGS – Bioquímica

03.002 Acute treatment with the cathinone derivative methedrone produces marked behavioral and biochemical changes in mice. Pail PB[1], Costa KM[2], Leite CE[3], Campos MM[4] [1]PUCRS – Cellular and Molecular Biology, [2]PUCRS – Medicine and Health Sciences, [3]INTOX-PUCRS, [4]PUCRS – Dentistry

03.003 Extinction of cocaine-induce conditioned place preference: Temporal characterization. Oliveira-Lima AJ[1], Marinho EAV[1], Malpezzi Marinho ELA[2], Jesus PF[3], Hollais AW[3], Aramini TCF[3], Santo R[3], Berro LF[4], Oliveira LC[3], Yokoyama TS[3], Wuo-Silva R[3], Patti CL[3], Frussa-Fillho R[3] [1]UESC – Ciências da Saúde, [2]UESC – Ciências Biológicas, [3]Unifesp – Farmacologia, [4]Unifesp – Psicofarmacologia

03.004 Antidepressant-like effect of the extract of *Cecropia obtusa* in mice: Involvement of the monoaminergic system. Schöffer AP[1], Veroneze MH[2], Girardi BA[1], Rubin MA[1] – [1]UFSM – Farmacologia, [2]UFSM –Bioquímica Toxicológica

03.005 Arcaine impairs the consolidation and expression of morphine-induced conditioned place preference in mice.

Rubin MA, Tomazi L, Schoffer AP, Girardi BA, Mello CF UFSM – Pharmacology

03.006 Anxiolytic effects of cannabidiol administration into the medial infralimbic prefrontal cortex of rats tested in the elevated plus-maze. Marinho ALZ[1], Vila-Verde C[1], Guimarães FS[1] [1]FMRP-USP – Pharmacology

03.007 HU-474, a cannabidiol analogue, attenuates prepulse inhibition impairment induced by MK-801 in mice. Silva NR[1], Gomes FV[1], Pedrazzi JFC[2], Del Bel EA[3], Mechoulam R[4], Zuardi AW[2], Crippa JAS[2], Hallak JEC[2], Guimarães FS[1] [1]USP – Pharmacology, [2]USP – Neurosciences and Behavioral Sciences, [3]USP – Morphology, Physiology and Stomatology, [4]HUJI – Medicinal Chemistry and Natural Products

03.008 Role of neuronal nitric oxide synthase neurons located in the medial prefrontal cortex on restraint-induced long lasting anxiety in rats. Vila-Verde C, Marinho ALZ, Sonego AB, Guimarães FS FMRP-USP – Pharmacology

03.009 Effects of *Euterpe oleracea* Mart. (acai frozen pulp) subchronic administration on elevated plus maze behavior testing in Wistar male rats. Kuo J[1], Machado FS[1], Wohlenberg MF[1], Frusciante M[1], Oliveira AS[1], Kneib L[1], Hilger D[1], Medeiros N[1], Dani C[1], Salvador M[2], Funchal CS[1] [1]IPA, [2]UCS – Biotechnology

03.010 Evaluation of the effects of intra-dorsal periaqueductal gray administration of dolasetron in the elevated plus-maze and forced swimming test in rats. Garcia JB, Guimarães RAM, Gavioli EC, Soares-Rachetti VP UFRN – Biophysics and Pharmacology

03.011 Antinociceptive activity of two analogues structural eugenol. Fonseca DV[1], Salgado PRR[1], Muniz VM, Santos AKFS, La Rocca V, Carvalho FL, Salvadori MGSS, Barbosa Filho JM, Almeida RN CCS-UFPB

03.012 Activation of CB1 receptor in dorsomedial hypothalamus (DMH) induces antiaversive effect in rats. Bastos JR[1], Viana TG[2], Aguiar DC[2], Moreira FA[2] [1]UFMG – Neurociências, [2]UFMG – Farmacologia

03.013 Effects of ayahuasca on the development of ethanol-induced behavioral sensitization and on a counter-conditioning strategy in mice. Marinho EAV[1], Oliveira-Lima AJ[1], Santos R[2], Hollais AW[2], Wuo-Silva R[2], Yokoyama TS[3], Malpezzi-Marinho ELA[4], Ribeiro-Barbosa PC[5], Berro LF[6], Frussa-Filho R[2] [1]UESC – Ciências da Saúde, [2]Unifesp – Farmacologia, [3]Unifesp – Fisiologia, [4]UESC – Ciências Biológicas, [5]UESC – Filosofia e Ciências Humanas, [6]Unifesp – Psicobiologia

03.014 Evaluation of the effect of pregabalin on anxiety-like behaviors in female rats. Souza AF, Mendes CRM, Soares-Rachetti VP, Gavioli EC UFRN – Biofísica e Farmacologia

03.015 Reciprocal roles for CB1 and CB2 cannabinoid receptors in cocaine-induced hyperlocomotion Gobira PH, Moreira FA UFMG – Farmacologia

03.016 Involvement of alpha-1B-adrenoceptors in the anti-immobility effects of imipramine in the tail suspension test. Ribeiro ASR, Pupo AS IBB-Unesp-Botucatu – Pharmacology

03.017 5-HT2C receptors of the dorsal periaqueductal gray and the anxiety-modulating effects of antidepressant drugs. Costa HHV[1], Vicente MA[2], Casarotto PC[1], Zangrossi HJr[1] [1]FMRP-USP, [2]FCFar-Unesp

03.018 Arachidonoyl serotonin, a dual blocker of fatty acid amide hydrolase and transient receptor potential vanilloid type-1 channels, reduces the expression of

contextual fear conditioning via CB1 receptors. Oliveira AC, Gobira PH, Moreira FA UFMG – Pharmacology

03.019 Effects of resveratrol on fluphenazine-induced vacuous chewing movements in male and female rats. Busanello A[1], Freitas CM[2], Leal CQ[3], Bressan GN[3], Barbosa CP[3], Krum BN[3], Reis EM[1], Barbosa NVB[2], Fachinetto R[1] [1]UFSM – Farmacologia, [2]UFSM – Bioquímica Toxicológica, [3]UFSM – Farmácia

03.020 Antidepressant-like effect of *Croton zehntneri* essencial oil (OECz) in mice. Custódio FR, Oliveira PLN, Liberato FR, Melo CTV NUBEM-INTA

03.021 Analysis of prescriptions with potential drug interactions in Hospital of Pediatrics Professor Heriberto Ferreira Bezerra (HOSPED), Natal RN. Pinto MNDS[1], Carvalho MDS[1], Cabral CHK[2] [1]DBF-UFRN – Biophysics and Pharmacology, [2]HOSPED-UFRN

03.022 Investigation of behavioral changes of pentoxifylline in rats. Garantizado CR[1], Cavalcante ALC[2], Lima FAVL[3], Calou IBF[4], Siqueira RMP[1] [1]FAMETRO – Farmácia, [2]UNIFOR – Medicina, [3]UFC – Farmacologia, [4]UFPI

04. Inflammation

04.083 Obesity increases CD16 expression in monocytes: The role of adipose tissue secreted molecules. Martins MR[1], Matheus ME[2], Andrade IR[1], Silva SV[1], Reis MC[1], Souza AAP[2], Silva CC[2], Bouskela E[1], Barja-Fidalgo TC[1] [1]UERJ, [2]UFRJ

04.084 Differential effect of lidocaine on acute and late phases of silicosis in mice. Lacerda L, Ciambarella BT, Ferreira TPT, Martins MA, Silva PMR Fiocruz – Farmacodinâmica

04.085 Platelet-activating factor receptor deficient mice develop more severe experimental colitis. Lima R L[1], Arifa RDN[1], Menezes-Garcia Z[1], Brito CB[1], Dourado LPA[1], Teixeira M M[2], Souza D G[1] – [1]ICB-UFMG – Microbiologia, [2]ICB-UFMG – Imunologia e Bioquímica

04.086 Gedunin impairs toll-like receptor 4/MD-2 signaling. Borges P[1], Moret K[1], Monteiro C[2], Batista P[3], Caffarena E[3], Henriques MG[1], Penido C[1] [1]Farmanguinhos-Fiocruz – Farmacologia Aplicada, [2]IOC-Fiocruz – Imunofarmacologia; [3]Fiocruz – Biofísica Computacional e Modelagem Molecular, [4]Fiocruz – Farmacologia Aplicada

04.087 Role of nitric oxide in hypoxia signaling during colonic inflammation. Caria CRP, Moscato CH, Tomé RBG, Pedrazzoli Jr J, Rocha T, Ribeiro ML, Gambero A USF – Clinical Pharmacology and Gastroenterology

04.088 Proteinase-activated receptor (PAR)-2 plays a role in the recruitment of leukocytes in experimental lung inflammation. Matos NA, Klein A ICB-UFMG – Farmacologia

04.089 Effect of low level laser therapy combined with physical training in experimental arthritis. Silva MP, Sanches IC, Angelis KD, Zamuner SR Uninove – Rehabilitation Sciences

04.090 Non-clinical evaluation of anti-inflammatory activity and toxicity of standardized dry extract and fractions from *Amburana cearensis* (Cumaru). Amaral HHS[1], Pierdoná TM[2], Araujo EVO[1], RIBEIRO RG[3], Santos GBM[3], Silveira ER[3], Viana GSB[2], Leal LKAM[1] [1]CEFAC-UFC – Farmácia, [2]UFC – Fisiologia e Farmacologia, [3]UFC – Química Orgânica e Inorgânica

04.091 Role of enzyme 5-lipoxygenase in experimental model of septic arthritis. Boff D, Oliveira SLV, Martins MM, Amaral AF UFMG – Bioquimica e Imunologia

04.092 Strontium ranelate does not interfere on the process of induced tooth

movement in rats. Soares KA[1], Araújo VMA[2], Guimarães MV[2], Melo IM[2], Silva SRL[2], Farina M[1], Lima V[2] [1]ICB-UFRJ, [2]UFC – Physiology and Pharmacology

04.093 Involvement of central ETA and CB1 receptors and arginine-vasopressin release in sepsis induced by cecal ligation and puncture in rats. Leite MCG[1], Lomba LA[1], Brito HO[1], Bastos-Pereira AL[1], Fraga D[2], Zampronio AR[1] [1]UFPR – Inflamação, [2]UFMS

04.094 Adenosine A2A receptor role upon adipose tissue inflammation control in an experimental model of obesity. de Oliveira CC[1], Gotardo EMF[2], Caria CRP[2], Nakamitsu PFZ[1], Gambero A[2] [1]Unicamp – Farmacologia, [2]USF – Imunofarmacologia e Biologia Molecular

04.095 Polysaccharides *Caesalpinia ferrea* decreases acute inflammation in 5-fluorouracil-induced intestinal mucositis in mice. Alcântara JR[1], Morais JAV[2], Sampaio LP[2], Franco AX[2], Costa DVS[2], Martins CS[2], Morais PAF[2], Soares PMG[2], Souza EP[2] – [1]UECE, [2]UFC – Morfologia

04.096 Experimental alcoholic pancreatitis: new therapeutic approaches from natural products.

Girão DKFB[1], Fiorio BC[2], Franco AX[1], Morais CM[1], Justino PFC[1], Oliveira TB[1], Bonfim SR[1], Loiola AN[1], Barbalho JVM[1], Morais JAV[1], Mendes WO[1], Morais PAF[1], Souza MHLP[1], Lima RF[1], Criddle DN[3], Soares PMG[1] [1]UFC, [2]UECE, [3]University of Liverpool

04.097 Acute pancreatitis induced by taurolithocholic acid cause inflammatory and functional changes in the lung. Oliveira TB[1], Morais CM[1], Justino PFC[1], Fiorio BC[1], Damasceno SRB[1], Morais PAF[1], Menezes KLS[1], Loiola AN[1], Morais JAV[1], Mendonça VA[1], Xavier AF[1], Ribeiro RA[1], Souza MHLP[1], Barbalho JVM[1], Girão DKFB[1], Criddle DN[2], Soares PMG[3] [1]UFC – Farmacologia, [2]University of Liverpool, [3]UFC – Morfologia

04.098 P and L-selectins inhibition prevents the development of ifosfamide-induced hemorrhagic cystitis in mice. Dornelas-Filho AF[1], Fernandes C[1], Teixeira MA[1], Wanderley CWS[1], Pinto FMM[1], Wong DVT[1], Silva RO[1], Sousa NRP[1], Almeida PRC[2], Ribeiro RA[1], Lima-Júnior RCP[1] [1]UFC – Physiology and Pharmacology, [2]UFC – Pathology and Forensic Medicine

04.099 Protective effect of N-acetylcysteine on irinotecan-induced experimental steatohepatitis. Leal RMLV[1], Aragão KS[2], Lopes CDH[2], Prado LD[1], Pereira VBM[2], Lima-Júnior RCP[2], Almeida PRC[4], Ribeiro RA[2] [1]HHJ-ICC, [2]UFC – Physiology and Pharmacology, [34]UFC – Pathology and Forensic Medicine

04.100 Evaluation of safety and efficacy of the dry extract capsule of *Amburana cearensis* A C Smith in human neutrophils. Rocha TM, Lopes AA, Magalhães HIF, Silveira ER, Viana GSB, Leal LKAM

04.101 Paradoxical effect of protease-activated receptor (PAR)-2 and 4 on macrophage phagocytosis *in vitro*. Barra A, Siqueira MVA, Matos NA, Freitas KM, Lopes MTP, Klein A ICB-UFMG – Farmacologia

04.102 Anti-inflammatory effects of Hypnea cervicornis aglutinin in rat experimental arthritis. Bringel PHSF[1], Almeida LM[1], Simplício CAN[2], Nascimento KS[2], Assreuy AMS[1], Castro RR[1] [1]ISCB-UECE, [2]UFC – Engenharia de Pesca

04.103 Ferulic acid ethyl esther diminished knee incapacitation induced by carrageenan in rats. Cunha FVM, Santos RRL, Sousa Neto BP, Gomes BS, Sousa DP, Oliveira FA NPPM-UFPI

04.104 Anti-inflammatory potential *in vitro* of isolated mixture of furan diterpenes of *Pterodon polygalaeflorus*. Leal NRF, Velozo

LSM, Sousa TV, Vigliano MV, Coelho MGP UERJ

04.105 Suppressor of cytokine signaling 2 (SOCS2) protein is involved in the mechanisms that control lung inflammation during infection with the pathogenic fungus *Paracoccidioides brasiliensis*. Santos PC[1], Ribeiro LS[2], Tavares CF[3], De Paula TP[1], Werneck SMC[1], Machado FS[2], Teixeira MM[2], Cisalpino PS[1], Souza DG[1] [1]UFMG – Microbiologia, [2]UFMG – Bioquímica e Imunologia, [3]TBSI – Biochemistry and Immunology

04.106 Role of phosphoinositide 3-kinase gamma and platelet activating factor receptor signaling in an experimental model of fever. Ribeiro LS[1], Santos PC[2], Machado RR[3], Souza DG[2], Teixeira MM[1] [1]UFMG – Bioquímica e Imunologia, [2]UFMG – Microbiologia, [3]UFMG – Produtos Farmacêuticos

04.107 Role of IL-1 and TNF receptors in ifosfamide-induced hemorrhagic cystitis in mice. Leite CA[1], Mota JM[2], Mello PH[3], Cunha FQ[3], Ribeiro RA[1] [1]UFC – Physiology and Pharmacology, [2]FMRP-USP – Clinics, [3]FMRP-USP – Pharmacology

04.108 Smoking-induced rheumatoid arthritis aggravation is dependent of aryl hydrocarbon receptor activation and is influenced by genetic polymorphism. Talbot J[1], Liew FY[2], Peres RS[1], Pinto LG[1], Oliveira RDR[1], Silva JR[1], Lima KWA[1], França RFO[1], Ryffel B[3], Cunha TM[1], Alves-Filho JCF[1], Louzada-Júnior P[1], Cunha FQ[1] [1]FMRP-USP – Pharmacology, [2]University of Glasgow, [3]CNRS

04.109 Fructose 1,6-bisphosphate, an intermediate of glycolysis, promotes anti-inflammatory effects in experimental arthritis via adenosine 2a receptor. Veras FP, Peres RS, Pinto LG, Saraiva ALL, Cunha FQ, Alves-Filho JCF FMRP-USP – Pharmacology

04.110 *Hypnea musciformis* polysaccharides in TNBS-induced colitis. Dias GJJ, Brito TV, Barbosa ALR UFPI – Experimental Physiopharmacology

04.112 Eosinophil deficiency improves psoriatic like skin lesions in mice. Dourado LPA[1], Rocha RPF[1], Silva RC[2], Oliveira VLS[2], Dias ACF[2], Souza DG[1], Teixeira MM[2], Amaral FA[2] [1]UFMG – Departamento de Microbiologia, [2]UFMG – Departamento de Bioquímica e Imunologia

04.113 TNF receptors in murine melanoma progression – possible role on T regulatory cells (TREGS) and tumor associated macrophages (TAMS). Melo PH, Mota JMSC, Leite CAVG, Prado DS, Cunha FQ, Alves JCF FMRP-USP – Pharmacology, FMRP-USP – Clinics

04.114 Anti-inflammatory and antioxidant activity of dry extract capsules of *Amburana cearensis* A C Smith. Albuquerque AA[1], Lopes AA[1], Leal LKAM[1], Araruna SM[1], Silveira ER[2], Viana GSB[3] [1]UFC – Farmácia, [2]UFC – Química Orgânica e Inorgânica, [3]UFC – Fisiologia e Farmacologia

04.115 Diet induced obese mice developed lung insulin resistance via protein nitration and inhibition of key proteins in the insulin signaling. Calixto MC, André DM, Sollon C, Anhê GF, Antunes E Unicamp

04.116 Irinotecan-induced alterations in the myenteric plexus. Gomes AS[1], Costa DVS[1], Barreto Júnior JEF[2], De Sá ISLB[2], Andrade MN[2], Aguiar BF[2], Portela VS[2], Alcântara JR[3], Martins CS[1], Moura Neto LI[4], Brito GAC[1] [1]UFC – Morfologia, [2]UFC – Faculdade de Medicina, [3]UECE – Nutrição, [4]UFC – Enfermagem

04.117 Ethanol extracts from chemotypes of *Myracrodruon urundeuva* reduce proinflammatory response of activated human neutrophils. Araujo EVO[1], Milet

RRC[2], Pierdoná TM[3], Rocha TM[4], Silveira ER[5], Leal LKAM[4] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Estudos Farmacêuticos e Cosméticos, [3]UFC – Fisiologia e Farmacologia, [4]UFC – Farmácia, [5]UFC – Química Orgânica e Inorgânica

04.118 Pretreatment of lipopolysaccharide-injected rats with pravastatin increases the number of circulating platelets by mechanisms envolving augment of plasma thrombopoietin levels. Naime ACA[1], Lopes-Pires ME[1], Latuf P[2], Vassalo J[2], Lima CSP[3], Landucci ECT[1], Antunes E[1], Marcondes S[1] [1]Unicamp – Farmacologia, [2]Unicamp – Anatomia Patológica, [3]Unicamp – Clínica Médica

04.119 The effects of alpha-bisabol-loaded nanocapsules in model of acute pulmonary inflammation LPS-induced in mice. D'Almeida APL[1], Ciambarella BT[1], Souza ET[1], Marques S[1], Terroso T[2], Pohlmann AR[2], Guterres SS[2], Silva PMR[1], Cordeiro RSB[1], Martins MA[1], Bernardi A[1] [1]IOC-Fiocruz, [2]UFRGS – Farmácia

04.120 Toll-like receptor-7 agonist resiquimod decreases established allergen-induced asthma changes in mice: impact on eosinophil survival. Ghilosso-Bortolini R, Ciambarella BT, Olsen PC, Azevedo C, Cotias AC, Dias DF, Arantes ACS, Silva PMR, Martins MA IOC-Fiocruz

04.121 Early pro- and anti-inflammatory responses to LPS-induced epididymitis in rats. Silva EJR[1], Mirim AFMN[1], Avellar MCW[1] [1]Unifesp-EPM – Farmacologia

04.122 The atypical chemokine receptor d6 plays a protective role during experimental sepsis. Castanheira FVS[1], Sonego F[1], Kanashiro S[1], Borges VF[1], Melo PH[2], Russo RC[3], Cunha TM[1], Alves-Filho JCF[1], Cunha FQ[1] [1]FMRP-USP – Farmacologia, [2]FMRP-USP – Imunologia, [3]UFMG – Fisiologia e Bioquímica

04.123 Treadmill exercise induces neutrophil recruitment into muscle tissue in a reactive oxygen species-dependent manner. An intravital microscopy study. Silva AN[1], Bernardes PTT[1], Rezende BM[1], Gomes EC[1], Pinho V[1], Marques PE[1], Lima PMA[2], Coimbra CC[2], Menezes GB[1], Teixeira MM[3] [1]UFMG – Morfologia, [2]UFMG – Fisiologia e Biofísica, [3]UFMG – Bioquímica e Imunologia

05. Pain and Nociception

05.037 Aldehyde dehydrogenase 2 activation reduces neuropathic pain and 4-hydroxinonenal adducts in spinal cord. Netto BS[1], Ferreira JC[2], Chen CH[3], Mochly-Rosen D[3], Cury Y[1], Zambelli VO[1] [1]IBu – Dor e Sinalização, [2]ICB-USP – Anatomia, [3]Stanford University – Chemistry and Systems Biology

05.038 Evaluation of antinociceptive and anti-inflammatory effects of LQFM-023 – New derivative of PDE3 inhibitors. Lino RC[1], Melo GS[2], Pazini F[3], Menegatti R[3], Costa EA[4] [1]ICB-UFG / UEG – Pharmacology of Natural Products, [2]UEG – Pharmacy, [3]FF-UFG – Pharmaceutical Medicinal Chemistry, [4]ICB-UFG – Pharmacology of Natural Products

05.039 Antinociceptive activity of the novel compound isolated from Peperomia. Queiroz APS[1], Freitas MCC[2], Lima AB[1], Silva MN[3], Arruda MSP[2], Do Nascimento JLM[4], Bastos GNT[1] [1]UFPA – Neuroinflamação, [2]UFPA – Extração, [3]UFPA – Cromatografia Líquida, [4]UFPA – Neuroquímica

05.040 Therapeutical efficacy of fish oil extract on experimental model of neuropathic pain. Silva RV[1], Lima CKF, Moreira CC, Santos EAP, Lobo BW, Miranda ALP FF-UFRJ – Fármacos e Medicamentos

05.041 Involvement of dorsal and ventral regions of the anterior pretectal nucleus

in descending modulation of neuropathic pain. Rossaneis AC[1], Prado WA[2] [1] UEL – Ciências da Saúde, [2]FMRP-USP – Farmacologia

05.042 Spinal TLR9 is involved in the genesis of chronic inflammatory and neuropathic pain states. Ferreira DW, Fonseca MDM, Santa-Cecília FV, Cunha FQ, Cunha TM FMRP – Farmacologia

05.043 IFN-γ mediates the induction of indolamine (2,3)-dioxygenase (IDO) in the spinal cord that account for the genesis of neuropathic pain. Fonseca MDM, Santana DAR, Souza GR, Cunha FQ, Cunha TM FMRP-USP – Farmacologia

05.044 Investigation of the antinociceptive activity of riparin – IV using different animal models. Dias ML, Carvalho AMR, Rios ERV, Rocha NFM, Vasconcelos LF, Barbosa Filho JM, Brito GAC, Silva-Alves KS, Costa FL, Leal-Cardoso JH, Sousa FCF UFC

05.045 α-phellandrene administration reduces inflammatory pain in rats: Preliminar evaluation. Santos WC[1], Macedo EMA[1], Piauilino CA[1], Reis-Filho AC[1], Sousa DP[2], Oliveira FA[1], Almeida FRC[1] [1]CCS-UFPI – Plantas Medicinais, [2]UFPB – Ciências Farmacêuticas

05.046 Antinociceptive effects of essential oil of *Piper rivinoides* Kunth. Costa NF[1], Siqueira AM[1], Nascimento DD[1], Souza SP[2], Valverde SS[2], Castro-Faria-Neto HC[1], Frutuoso VS[1] [1]IOC-Fiocruz – Immunofarmacology, [2]Farmanguinhos-Fiocruz – Natural Products

05.047 Polysaccharide extracts of *Ximenia americana* barks ameliorate abdominal hipernociception in cerulein-induced acute pancreatitis. Silva KES[1], Assreuy AMS[1], Pires AF[1], Girão DKFB[2], França FV[3], Criddle DN[4], Pereira MGP[3], Soares PMG[2] [1]ISCB-UECE, [2]UFC – Morfologia, [3]FECLESC-UECE, [4]University of Liverpool

05.048 Antinociceptive properties of physalins from *Physalis angulate*. Lima MS[1], Evangelista AF[2], Santos GGL[2], Ribeiro IM[3], Tomassini TCB[3], Soares MBP[2,4], Villarreal CF[1,2] [1]FF-UFBA, [2]CPqGM-Fiocruz, [3]FarManguinhos-Fiocruz, [4]CBTC-HSR

05.049 Neryl acetate is effective in attenuate acute pain in animal model in comparison with nerol. Araujo JM[1], Lopes EM[1], Vasconcelos ALM[1], Freitas FFBP[1], Reis Filho AC[1], Reis Filho AC[1], Reis Filho AC[1], Sousa DP[2], Sousa DP[2], Sousa DP[2], Almeida FRC[1], Almeida FRC[1] [1]UFPI – Plantas medicinais, [2]UFPB – Ciências Farmacêuticas

05.050 Riparin B, an alkaloid obtained from *Aniba riparia*, acting in the reduction of acute pain. Santiago RF[1], Fontenele AM[1], Braúna IS[1], Brito TV[1], Cruz Júnior JS[1], Batista JA[1], Fernandes HB[1], Dias JM[1], Freitas RM[2], Medeiros JVR[1], Barbosa ALR[1] [1]UFPI – Plantas Medicinais, [2]UFPI – Pharmacy

05.051 Effect of transplantation of bone marrow mesenchymal stem cells in murine model of diabetic peripheral neuropathy. Evangelista AF[1], Silva DN[2], Soares MBP[1,2], Villarreal CF[1,3] [1]CPqGM-Fiocruz – Engenharia Tecidual e Imunofarmacologia, [2]CBTC-HSR, [3]FF–UFBA

05.052 Heme oxygenase-1/carbon monoxide pathway peripherically activated reduces inflammatory hypernociception in the temporomandibular joint dependent from ATP-sensitive K^+ channel but not from NO/cGMP/protein kinase G pathway. Freitas HC[1], Alves SM[2], Maciel GF[3], Val DR[4], Gondim DV[5], Pereira KMA[2], Brito GAC[5], Napimoga JTC[6], Filho GC[2], Pinto VPT[2], Bezerra MM[2], Chaves HV[2] – [1]UFC – Medicina, [2]UFC – Ciências da Saúde, [3]UFC – Odontologia, [4]RENORBIO-UFPE, [5]UFC – Ciências Morfofuncionais, [6]Unicamp – Odontologia

05.053 LASSBio-1141: A neuro-immune modulator effective in a model of neuropathic pain. Lima CKFL[1], Silva RV[1], Yekkirala AS[2], Lacerda RB[3], Barreiro EJL[4], Fraga CAM[4], Cunha TM[5], Woolf CJ[2], Miranda ALP[1] [1]LEFEx-UFRJ – Farmácia, [2]Harvard Medical School, [3]UFRRJ – Química, [4]LASSBio-UFRJ – Farmácia, [5]FMRP-USP

06. Cardiovascular and Renal

06.043 Impaired vascular function in sepsis-surviving rats: evidence for endothelial dysfunction mediated by angiotensin II, increased ROS/RNS Generation and augmented activity of RHO-kinase. de Souza P[1], Scheschowitsch K[2], da Silva LM[1], Guarido KL[2], Werner MF[1], Assreuy J[2], da Silva-Santos JE[2] [1]UFPR – Pharmacology, [2]UFSC – Pharmacology

06.044 LASSBio-1425 – antiatherogenic and anti-inflammatory activity of a new phtalimide derivate. Fumian MM[1], Motta NAV[1], Leite TRS[1], Maia RC, Barreiro EJL[2], Brito FCF[1] [1]UFF – Fisiologia e Farmacologia, [2]UFRJ – Síntese e Avaliação de Substâncias Bioativas

06.045 *In vitro* tolerance induced by sodium nitrite in mice aorta. Araújo NF, Bonaventura D UFMG – Farmacologia

06.046 Bufalin induced vasoconstriction at pharmacological concentrations involves adrenergic pathway in guinea pig vascular segments. Amorim LS[1], Oliveira IMB[1], Freire MSS[1], Siqueira RJB[2], Santos CF[1], Nascimento NRF[1], Fonteles MC[1] [1]UECE – Fisiofarmacologia Cardiovascular e Renal, [2]UFC

06.047 Pravastatin and rosuvastatin reduce fibrinogen receptor activation and platelet adhesion to fibrinogen of high fat-fed rats. Goulart G[1], Araujo HN[2], Lopes Pires ME[1], Monteiro PF[1], Antunes E[1], Delbin MA[3], Marcondes S[1] [1]Unicamp – Pharmacology, [2]Unesp-Rio Claro – Physical Education, [3]Unicamp – Structural Biology and Functional

06.048 Vasorelaxant effect of the beta-phenylethylamine on rat isolated aortic rings. Nóbrega FC, Brito TS, Lima FJB, Magalhães PJC UFC – Physiology and Pharmacology

06.049 Chronic treatment with apocynin improves the resistance vessel relaxations to acetylcholine and increases the nitric oxide concentration in endothelial cells of SHR. Potje SR, Graton ME, Troiano JA, Perassa LA, Antoniali C Unesp – Basic Sciences

06.050 Uroguanylin stimulates distal potassium secretion via PKG pathway. Gonzaga JLD, Godinho AN, Fonteles MC, Lessa LMA UECE – Fisiofarmacologia Cardiorenal

06.051 Alpha-1 antagonism of molecules that contains pirimidone rings (6-oxo-2,4-diaryl-1,6-dihydro-pyrimidine-5-carbonitriles). Costa CP[1], Wanderley AG[1], Anjos JV[2], Araújo AV[3] [1]UFPE – Physiology and Pharmacology, [2]UFPE – Fundamental Chemistry, [3]CAV-UFPE

06.052 Increased nitric oxide generation after low level laser therapy (LLLT) in rat myocardial infarct (MI) model. Manchini M[1], Santana E[1], Serra A[1], Antonio E[2], Craijonas R[3], Girardi A[3], Tucci P[2], Silva JA Jr[1] [1]Uninove – Ciências Médicas, [2]Unifesp – Fisiologia Cardiovascular, [3]FMUSP-HC-InCor

06.053 Uroguanylin inhibits H-ATPase activity and surface expression in renal distal tubules by a PKG dependent pathway. Godinho AN[1], Lima VS[1], Crajoinas RO, Carraro-Lacroix LR[2], Dias JLG[1], Dariolli R[3], Girardi ACC[3], Fonteles MC[1], Malnic G[2], Lessa LMA[1] [1]ISCB-UFC, [2]ICB-USP – Physiology and Biophysics, [3]FMUSP-HC-InCor

06.054 Cardiac intracellular Ca^{2+} handling and β-adrenergic activity in rats submitted to neonatal leptin treatment. Marques EB[1], Silva RM[1], Pinto LMO[2], Nascimento JHM[2], Scaramello CBV[1] [1]UFF – Farmacologia Experimental, [2]IBCCF-UFRJ

06.055 Dipeptidyl-peptidase IV activity in Bothrops alternatus snake venom and renal tissue of rats. Fernandes PCL, Torres-Huaco FD, Hyslop S Unicamp – Farmacologia

06.056 Electrolyte disorder in the acute renal failure induced by gentamicin in rats. Bona MD, Rodrigues FAP, Coelho YP, Prata MMG, Oliveira DMN, Pereira JM, Costa PHS, Silva PLB, Monteiro HSA, Havt A UFC – Fisiologia e Farmacologia

06.057 Effect of chronic salt intake in cardiovascular and metabolic parameters in Dahl rats. Farah V[1], Arnold A, Araujo IC, Pereira J, Silva I, Brandão M, Sacchi J, Oliveira R, Fiorino P, Fonteles MC Mackenzie University

06.058 The A1 and P2Y1 receptor are the receptor involved in the cardiac arrest produced by ATP? Rodrigues JQD, Silva Júnior ED, Câmara H, Godinho RO, Jurkiewicz A Unifesp – Farmacologia

06.059 Uroguanylin inhibits proximal bicarbonate reabsorption in Dahl salt rats. Lessa LMA, Martins ICMT, Godinho AN, Nascimento NRF, Fonteles MC ISCB-UFC

06.060 Reversibility of oxidative and glomerular damage in an experimental model of renal injury by gentamicin. Coelho YP, Rodrigues FAP, Prata MMG, Alves NTQ, Oliveira DMN, Pereira JM, Silva PLB, Costa PHS, Monteiro HSA, Bindá AH UFC – Physiology and Pharmacology

06.061 Apocynin modulates phenylephrine and acetylcholine reactivity in aortic rings of spontaneously hypertensive rats (SHR). Graton ME[1], Potje SR[1], Troiano JA[1], Perassa LA[1], Antoniali C[1] [1]FOA-Unesp – Basic Sciences

06.062 Chronic candesartan treatment prevents erectile dysfunction in streptozotocin induced diabetic rats. Neves NCV[1,2,3], Damasceno EC[1], Felipe-Batista K[1], Guimarães HN[4], Grabe-Guimarães A[1], Leite R[1] [1]UFOP – Farmácia, [2]ICB-UFMG, [3]FASAR – Bioquímica e Farmacologia, [4]UFMG – Engenharia

07. Endocrine and Gastrointestinal

07.004 Molecular analysis of the effects of roscovitine on hepatic stellate cells of murine. Della Porta L[1], Ramalho FS[1], Oliveira CAF[2], Figueiredo SS[1], Augusto MJ[1], Ramalho LNZ[1] [1]USP – Patologia e Medicina Legal, [2]USP – Engenharia de Alimentos

09. Natural Products and Toxinology

09.105 Wound repair, inflammatory and oxidative stress aspects, promoted by proteolytic fraction from *Vasconcellea cundinamarcensis* latex on UVB-induced model. Freitas KM, Teixeira LCR, Lage FDO, Lopes MTP UFMG – Farmacologia

09.106 Cellular mechanisms in antimetastatic action of protease from *V. cundinamarcensis* latex on murine melanoma cells. Dittz D[1], Tatsumi G[1], Salas CE[2], Lopes MTP[1] [1]UFMG – Farmacologia, [2]UFMG – Bioquímica

09.107 Pharmacological analysis of the hemodynamic response to *Bothrops atrox* snake venom in anesthetized rats. Rodrigues MAP, Dias L, Stroka A, Rennó AL, Inoue BR, Panunto PC, Hyslop S Unicamp – Farmacologia

09.108 Calcium mobilization induced by *Bothriopsis bilineata smaragdina* venom (Forest viper) and its toxin Bbil-TX (Asp49 PLA_2) on neuroblastoma cell line and mouse triangularis sterni nerve-muscle preparation. Floriano RS[1], Carregari VC[2], Marangoni S[2], Hyslop S[3], Rowan EG[4],

Rodrigues-Simioni L[3] – [1]UNIP-Sorocaba – Health Sciences / FCM-Unicamp, – Pharmacology, [2]IB-Unicamp – Department of Biochemistry, [3]FCM-Unicamp – Pharmacology, [4]SIBS-University of Strathclyde

09.109 Effect of *Euterpe oleracea* Mart. (Açaí) extract and exercise training on the changes caused by Type 2 Diabetes. Bem GF, Costa CA, Santos IB, Oliveira RB, Cordeiro VSC, Carvalho LCRM, Souza MAV, Ribeiro JH, Okinga A, Rocha APM, Ognibene DT, Resende AC, Moura RS UERJ – Farmacologia e Psicobiologia

09.110 Hypotensive effect and vascular reactivity induced by (-)-borneol/β-ciclodextrin in L-NAME hypertensive rats. Silva-Filho JC[1], Souza FM[1], Azevedo PSS[1], Santos MEP[1], Mendes MB[1], Arcanjo DDR[1], Rocha MS[2], Lima SG[2], Oliveira AP[1], Santos MRV[3] – [1]NPPM-UFPI, [2]UFPI – Química, [3]UFS – Fisiologia

09.111 Local and systemic effects of BdipTX-I, a new phospholipase A_2 Lys-49 isolated from *Bothrops diporus* snake venom. Teixeira LF[1], Carvalho LH[1], Castro OB[1], Bastos JSF[1], Néry NM[1], Oliveira GA[2], Kayano AM[2], Calderon LA[2], Soares AM[2], Zuliani JP[1,2] [1]Fiocruz-RO – Imunologia Celular, [2]CEBio-UNIR – Medicina / Fiocruz-RO

09.112 Protective effect of *p*-cymene against NSAIDs and stress-induced gastric ulcers in mice. Paulo LL[1], Formiga RO[2], Lima GRM[1], Sales IRP[1], Castello Branco MVS[1], Batista LM[1] [1]UFPB – Produtos Naturais e Sintéticos Bioativos, [2]CCS-UFPB

09.113 Anthelmintic potential of a natural compound against *Schistosoma mansoni*. Coelho ML, Costa LM, Moraes J, Freitas RM. UFPI

09.114 Potential anti-allergic action of three medicinal plants used in Amazon region: Effects on histamine release. de Oliveira DM[1,2], Di Stasi LC[3], Paracampo NENP[4], Lameira OA[5], Crespo-Lopez ME[1] [1]ICB-UFPA – Farmacologia Molecular, [2]ISPA-UFRA – Farmacologia, [3]IBB-Unesp-Botucatu – Fitoterápicos, [4]EMBRAPA – Agroindústria, [5]EMBRAPA – Biotecnologia

09.115 Evaluation of antioxidant potential *in vitro* and quantification of phenolic compounds found in extracts of pequis pulp. Lima LAR, Ferreira JAN, Sousa ACP, Calou IBF, Portela JVF, Cerqueira GS, Lima A – CSHNB-UFPI – Nutrição

09.116 Study of anticholinesterasic activity of a mixture of CIS and trans nerolidol. Carvalho RBF[1], Almeida AAC[1], Mata AMOF[2], Freitas RM[1], Nunes LCC[1] [1]UFPI, [2]UNINOVAFAPI

09.117 Effects of *Myracrodruon urundeuva* All. essential oil against *Leishmania amazonensis* and its cytotoxicity in macrophages. Carvalho CES, Júnior EPCS, Brito ML, Oliveira JMG, Silva RM, Citó AMGL, Carvalho FAA – UFPI

09.118 Effects of a grape skin extract of *Vitis vinifera* (ACH09) on hepatic metabolic disorders in C57BL/6 mice fed a high-fat diet. Santos IB, da Costa GF, de Bem GF, Costa CA, Carvalho LCRM, Okinga A, Rocha APM, Cordeiro VSC, Oliveira RB, Moura RS, Resende AC UERJ – Farmacologia e Psicobiologia

09.119 Evaluation of the anti-leishmania and anti-trypanosoma activity of ethanol extract of leaves from *Anonna squamosal*. Cesário FRAS[1], Monteiro AB[1], Rodrigues LB[1], Rodrigues CKS[1], Sales VS[1], Figueiredo FRSDN[1], Amaro EN[1], Delmondes GA[1], Cruz LP[1], Cunha FB[1], Nascimento EP[1], Costa JGM[1], Kerntopf MR[1], Coutinho HDM[1], Menezes IRA[1], Felipe CFB[2], Tintino SR[1], Gomes MCV[4], Coronel C[4] [1]URCA – Biological Chemistry, [2]UFPB – Molecular Biology, [4]FMB – Desarrollo de La Investigación Científica

09.120 Silymarin protects against irinotecan-induced non-alcoholic steatohepatitis through the inibition of protein nitrosylation and toll-like receptor 4 immunoexpression. Assis-Júnior EM[1], Sousa NRP[1], Moreira LS[1], Malveira LRC[1], Wong DVT[1], Melo AT[1], Pereira VBM[1], Wanderley CWS[1], Soares BM[1], Almeida PRC[2], Ribeiro RA[1], Lima-Júnior RCP[1] [1]UFC – Physiology and Pharmacology, [2]UFC – Pathology and Forensic Medicine

09.121 Hypotensive effect of ethanol extract from *Lippia origanoides* H.B.K. in normotensive rats. Carvalho GD[1], Miranda VC[1], Coelho AG[2], Mendes MB[1], Arcanjo DDR[1], Citó AMGL[2], Oliveira AP[1] [1]NPPM-UFPI, [2]UFPI – Química

09.122 Antinociceptive and toxicological analysis of an Amazon oil: Pp-oil. Mota AS[1], De Lima AB[1], Gomes MF[1], Dias DCR[1], Santos GCQ[1], Nascimento GS[1], Silveira TS[2], Albuquerque TLF[1], Do Nascimento JLM[3], Da Silva JKR[4], Maia JGS[4], Ribeiro AF[5], Bastos GNT[1] [1]UFPA – Neuroinflamação, [2]UEPA, [3]UFPA – Neuroquímica Molecular e Celular, [4]UFPA, [5]UNIFESSPA

09.123 Effect of low level laser on tend endothelial cells subjected to injury by *Bothrops jararaca* venom. Zamuner SF[1], Franco ATB[1], Silva LM[1], Teixeira CFP[2], Zamuner SR[1] [1]Uninove, [2]IBu

09.124 Effect of diosgenin on cardiac oxidative stress in female ovariectomized rats. Morais ICPS[1], Moura IJL[2], Nicolau LAD[1], Arcanjo DDR[2], Carvalho CES[1], Piauilino CA[1], Santos MEP[1], Carvalho EF[1], Medeiros JR[3], Oliveira AP[1] [1]NPPM-UFPI, [2]UFPI, [3]UFPI-Parnaíba

09.125 *Canavalia brasiliensis* lectin relaxes resistance and capacitance vessels in normoglycemic and diabetic rats. Laranjeira EPP[1], da Silva DHM[1], Bringel PHSF[1], Cajazeiras JB[2], Cavada BS[2], Soares PMG[3], Assreuy AMS[1], Pires AF[1] [1]ISCB-UECE, [2]UFC – Bioquímica e Biologia Molecular, [3]UFC – Morfologia

09.126 Evaluation of antinociceptive activity by central mechanisms of protein extract of the green seaweed Caulerpa racemosa (Forsskål) J. Agardh in mice. Ribeiro NA, Servente P, Maia CY, Benevides NMB UFC – Biochemistry and Molecular Biology

09.127 Monoterpene nerol induces vasorelaxant effect by inhibiting calcium influx in rat aorta. Branco NC[1], Carvalho EF[1], Nunes AF[1], Santos RF[1], Sousa DP[2], Oliveira AP[1], Oliveira RCM[1] [1]NPPM-UFPI, [2]UFPB – Pharmaceutical Science

09.128 *Platonia insignis* Mart. ethanolic extract as a potential anti-leishmania agent: Effects on *Leishmania amazonensis* promastigotes and cytotoxicity in macrophages. Sobrinho Júnior EPC, Carvalho CES, Brito LM, Costa ICG, Chaves MH, Carvalho FAA UFPI

09.129 Hydrogel of polyacrylamide-co-methycellulose containing extract *Calendula officinalis* L. Castro LD, Bandeira ES, Gomes MF, Queiroz Santos GC, Ribeiro-Costa RM, Bastos GNT[1] UFPA

09.130 Prospection of antitumor sulfated polysaccharides obtained of algae from the Brazilian coast. Assef ANB[1], de Oliveira CF[2], do Carmo LD[1], de Souza TG[1], Alencar NMN[1], Moreira TA[2], Faria CN[2], da Silva KT[2], da Costa BB[2], Cinelli LP[2], Costa-Lotufo LV[1], Wilke DV[1] [1]UFC – Fisiologia e Farmacologia, [2]UFRJ-Macaé – Glicofármacos

09.131 Galetin 3,6-dimethyl ether activates K^+ channels and reduces Ca^{2+} cytosolic levels on guinea pig ileum. Vasconcelos LHC[1], Correia ACC[2], Souza ILL[1], Paredes-Gamero EJ[3], Buri MV[3], Rigoni VLS[3], Santos BVO[1,4], Cavalcante FA[1,5], Silva BA[1,4] [1]UFPB, [2]ICBS-UFAL, [3]DB-Unifesp, [4]DCF-UFPB, [5]DFP-UFPB

09.132 Sulfated polysaccharides from *Dictyota caribaea* inhibit sarcoma 180 tumor growth. Assef ANB[1], Celestino RCA[2], Cinelli LP[3], Carmo LD[1], Souza TFG[1], Alencar NMN[1], Santos GRC[4], Mourão PAS[4], Costa-Lotufo LV[1], Wilke DV[1] [1]UFC – Fisiologia e Farmacologia, [2]UFRJ-Macaé, [3]UFRJ-Macaé – Glicofármacos, [4]UFRJ – Bioquímica Médica

09.133 Antihistaminic activity of *Schinus terebinthifolius Raddi* (Anacardiaceae) Bark extract. Silva JL[1], Neto PAN[2], Sobrinho TJSP[2], Júnior ED[3], Costa-Silva JH[4], Araújo AV[5], Wanderley AG[2,1] [1]UFPE – Fisiologia e Farmacologia, [2]UFPE – Pharmaceutical Sciences, [3]Unifesp – Pharmacology, [4]UFPE – Physical Education and Sports Science, [5]UFPE – Nutrition

09.134 Involvement of K^+ channels on spasmolytic effect of the new derivative of norlapachol on guinea pig ileum. Silva ACL[1], Vasconcelos LHC[1], Galvão JLFM[1], Ferreira PB[1], David CC[2], Câmara CA[2], Cavalcante FA[3], Silva BA[4] [1]UFPB, [2]DCM-UFRPE, [3]DFP-UFPB, [4]DCF-UFPB

09.135 Antitumor agents from *Actinomadura* sp. recovered from marine sediment collected at St. Peter and St. Paul Archipelago (SPSPA). Nunes LF[1,2], Ferreira EG[1], Pires K[1,3], Costa JFT[4], Torres MCM[4], Jimenez PC[1,5], Silveira ER[4], Pessoa ODL[4], Costa-Lotufo LV[1,6] [1]LABOMAR-UFC – Ciências do Mar, [2]UECE, [3]IFSC, [4]UFC – Química Orgânica e Inorgânica, [5]Unifesp – Ciências do Mar, [6]UFC – Fisiologia e Farmacologia

09.136 A role for the nitric oxide-cGMP pathway in the hemodynamic and vascular responses to *Lachesis muta* (South American bushmaster) snake venom. Dias L[1], Rodrigues MAP[1], Inoue BR[1], Rennó AL[1], Panunto PC[1], Rodrigues RL[1], Melgarejo AR[2], Hyslop S[1] [1]FCM-Unicamp – Farmacologia, [2]IVB – Zoologia Médica

09.137 Study of potential analgesic/anti-inflammatory ethanolic extract from different parts of the species *Plectranthus neochilus*. Trindade S, Azeredo JA, Cevada BA, Calheiros AS, Bozza PT, Castro-Faria-Neto HC, Frutuoso VS IOC-Fiocruz – Imunofarmacologia

09.138 Assessment of cytotoxicity of polar and nonpolar fractions obtained from the latex of the plant *Synadenium umbellatum* in C6/36 cells. Ferreira PAB, Silva TFB, Penha JR, Pereira AS, Moreli ML, Gaban L, Ramos CDL UFG

09.139 Viscoelastic properties of cells exposed to synthetic natriuretic peptide of *Crotalus durissus cascavella* venom. Neto JO[1], Ferreira MZJ[2], Silveira JAM[3], Monteiro HSA[3], Alencar AM[4], Evangelista JSAM[1] – [1]FV-UFC – Histology of Snake Venoms and Toxic Plants, [2]FEEC-Unicamp – Micro-Wave and Optics, [3]UFC – Farmacology of Venoms and Toxins, [4]IF-USP – Molecular Physiology and Microreologia

09.140 Spasmolytic action of *Solanum paniculatum* L. on guinea pig ileum involves modulation positive of K^+ channels. Pereira JC[1], Vasconcelos LHC[1], Souza ILL[1], Ferreira PB[1], Sampaio RS[1], Araujo LCC[1], Silva TMS[2], Cavalcante FA[3,1], Silva BA[1] [1]UFPB, [2]DCM-UFRPE, [3]DFP-UFPB

09.141 Evaluation of antibacterial and antifungal activity of chromatographic fractions obtained from the latex of *Synadenium umbellatum* Pax plant. Martins TMM[1], Gaban L[2], Braoios A[3], Ramos CDL[4] [1]LSC, [2]UFG – Patologia, [3]UFG – Microbiologia, [4]UFG – Farmacologia

09.142 Effect of centuroides Margaritatus scorpion venom on cardiac hemodynamics in anesthetized rats. Silva APG[1], Bindá AH[2], Valencia JMB, Vidal JTB[3], Cabral PHB[2], Nascimento NRF[1], Fonteles MC[1], Santos CF[1] [1]ISCB-UECE, [2]UFC – Farmacologia, [3]UniCauca – Farmacologia

09.143 Evaluation of the leishmanicide activity and toxicity of bixin concentrate obtained of *Bixa Orellana L.* Vilar DA[1], Soares MSAV[1], Brito MT[2], Gonzaga JCO[3], Guimarães ARBV[3], Néris PLN[2], Oliveira MR[2], Barbosa Filho JMB[2], Sobral MV[2] – [1]UFRN – Desenvolvimento e Inovação Tecnológica de Medicamento, [2]UFPB – Produtos Naturais e Sintéticos Bioativos, [3]UFPB – Farmácia

09.144 Vasorelaxant effect of gallic acid in rat thoracic aorta. Oliveira LM, Oliveira TS, Bastos AM, Costa EA, Filgueira FP, Ghedini PC UFG – Ciências Fisiológicas

09.145 *Bothrops fonsecai* snake venom toxicity and the use of commercial antivenom as a pharmacological tool. Collaço RCO[1], Tamascia ML[1], Silva IRF[1], Cogo JC[2], Rocha T[3], Hyslop S[1], Sanny CG[4], Randazzo-Moura P[5], Rodrigues-Simioni L[1] – [1]Unicamp – Farmacologia, [2]Univap – Estudos da Natureza, [3]USF, [4]OSU – Health Sciences, [5]PUC-SP – Farmacologia

09.146 Spasmolytic effect of galetin 3,6-dimethyl ether involves histaminergic receptor antagonism and Ca^{2+} influx blockade on guinea pig ileum. Medeiros MM[1], Vasconcelos LHC[1], Souza ILL[1], Silva MCC[1], Araujo LCC[1], Ferreira PB[1], Santos BVO[2], Cavalcante FA[3], Silva BA[2] [1]UFPB, [2]DCF-UFPB, [3]DFP-UFPB

09.147 Study of the gastroprotective activity of *Mauritia flexuosa* oil in acute model of ethanol-induced gastric ulcer in mice. Queiroz BCSH, Gomes AF, Sousa JA, Sousa GS, Neto BM FSA – Farmacia

09.148 Functional chromatography as a strategy of target-directed prospection of bioactive natural compounds. Jimenez PC[1], Torres MCM[2], Pessoa ODL[2], Yeh K[3], Chapman E[3], La Clair JJ[4], Costa-Lotufo LV[5] [1]Unifesp – Ciências do Mar, [2]UFC – Química Orgânica e Inorgânica, [3]University of Arizona – Pharmacy, [4]Xenobe Research Institute, [5]UFC – Fisiologia e Farmacologia

09.149 Cardiovascular actions of a cysteine-rich protein isolated from *Bothrops jararaca* snake venom. Tamascia ML, Silva IRF, Mocoso JAR, Antunes E, Hyslop S FCM-Unicamp – Pharmacology

09.150 Pharmacological evaluation of standardized extract from *Cocos nucifera* L. (Palmae) *in vitro* and *in vivo*. Freitas RB[1], Freitas LBN[1], Lima EBC[2], Vasconcelos SMM[2], Leal LKAM[1] [1]CEFAC-UFC –, [2]UFC – Fisiologia e Farmacologia

09.151 Anti-inflammatory activity of the extract of *Croton adamantinus* Müll. Arg. (Euphorbiaceae). Santos SM, Mendes RFV, Muniz RP, Silva METM, Domingos RF, Guerra ASHS, Oliveira TB, Silva TG, Albuquerque JFC, Ximenes RM UFPE – Antibióticos

09.152 Effects of synthetic natriuretic peptide of *Crotalus durissus cascavella* venom in blood pressure and heart rate of rats. Lima DEV[1], Silveira JAM[2], Rodrigues FAP[2], Costa PPC[2], Morais GB[1], Evangelista JSAM[1], Monteiro HSA[2] [1]UFC – Histology of Snake Venoms and Toxic, [2]LAFAVET-UFC – Physiology and Pharmacology

09.153 Study on the renal effects of the *Tityus stigmurus* venom. Maia GMP[1], Marinho AD[2], Morais ICO[3], Jorge RJB[2], Silva NA[4], Martins RD[4], Sousa PCP[2], Silveira JAM[2], Jorge ARC[2], Monteiro HSA[2] [1]UFC – Histology of Snake Venoms and Toxic Plants, [2]LAFAVET-UFC – Pharmacology of Venoms and Toxins, [3]LCC-UFC – Clinical and Toxicological Analyses, [4]UFPE – Zoology

09.154 Cytotoxicity assessment of extracts obtained from actinomycetes recovered from the sediment of Paracuru Beach, Ceará, Brazil. Vasconcelos IMB[1], Guimarães LA[1], Ferreira EG[1], Jimenez PC[1],

Freitas HPS[2], Sousa TS[2], Pessoa ODL[2], Lotufo LVC[5] [1]UFC – Ciências do Mar, [2]UFC – Química Orgânica e Inorgânica, [3]UFC – Fisiologia e Farmacologia

09.155 Cytotoxic effect and induction of apoptosis by venom of *Bothropoides pauloensis* in MDCK cell line. Macambira KDS[1], Marinho AD[2], Morais ICO[2], Jorge RJB[2], Menezes RRPPB[3], Sousa PCP[2], Silveira JAM[2], Lima DB[3], Martins AMC[3], Evangelista JSAM[1], Monteiro HSA[2] [1]HISTOVESP-UFC – Histology of Snake Venoms and Toxic Plants, [2]LAFAVET – Pharmacology of Venoms and Toxins, [3]LCC-UFC – Clinical and Toxicological Analyses

10. Cancer and Cell Proliferation

10.016 Role of Purinergic P2 receptors on proliferation and viability of esophageal cancer cells lines. Santos Jr AA[1], Paccez JD[2], Pinto LF[3], Zerbini LF[2], Morrone FB[1] – [1]PUCRS – Biologia Celular e Molecular, [2]ICGEB – Cancer Genomics, [3]INCa

10.017 Cytotoxic potential of compounds isolated from *Hyptis carvalhoi*. Moura AF[1], Araújo AJ[1], Lima KSB[2], Silveira ER[2], Moraes MO[1], Costa-Lotufo LV[1] [1]UFC – Fisiologia e Farmacologia, [2]UFC – Química Orgânica e Inorgânica

10.018 Nor-β-Lapachone PLGA microparticules: development, characterization and cytotoxicity activity. Feitosa ACS[1], Costa MP[1], Oliveira FCE[1], Silva Júnior EN[2], Dias GG[2], Sales FAM[3], Freire VN[3], Pessoa CO[1], Caetano EWS[4] [1]UFC – Fisiologia e Farmacologia, [2]UFMG – Química, [3]UFC – Física, [4]IFCE

10.019 Evaluation of the effects of thalidomide-loaded biodegradable devices in solid Ehrlich tumor. Pereira BG[1], Fialho SL[1], de Freitas MAA[2], De Souza CM[3], Cassali GD[3], Silva-Cunha A[2] [1]FUNED – Pharmaceutical and Biotechnological Development, [2]UFMG – Pharmacy, [3]UFMG – General Pathology

10.020 Much more than cell cycle arrest: the multitude of mechanisms induced by vincristine in glioma cells. Thome MP, Filippi-Chiela EC, Bueno e Silva MM, Lenz G UFRGS

10.021 Antileukaemic and antioxidant properties of eugenol-derived isozaxolines. Mendonça DS[1], Putarov NB[2], Carvalho EM[3], Aguiar AP[2], Sampaio ALF[1] [1]Farmanguinhos-Fiocruz – Farmacologia Molecular, [2]IME – Síntese Orgânica, [3]Farmanguinhos-Fiocruz – Síntese

10.022 Cytotoxicity evaluation of amazon plant extracts in cancer cell lines. Ramos INF[1], Barreto LH[1], Pinto LC[1], Soares BM[1], Uchoa AV[1], Pinheiro ACV[2], Silva MN[2], Burbano RMR[1], Montenegro RC[1] [1]UFPA – Citogenética Humana, [2]UFPA – Cromatografia Líquida

10.023 Lepidotrichilins A and B, new protolimonoids with cytotoxic activity from *Trichilia lepidota* (Meliaceae). Freitas WR[1], Terra WS[2], Vieira IJC[3], Filho RB[3], Kanashiro MM[1], Torres MCM[4] [1]UENF – Biologia do Reconhecer, [2]IFF-Cabo Frio, [3]UENF – Ciências Químicas, [4]UFC – Química

10.024 Characterization of cytotoxic activity of compounds derived from major constituents of the cashew nut shell liquid in human oral squamous cell carcinoma. Araujo LAN[1], Alves WG[1], Matos NS[1], Romeiro LAS[1], Silveira D[1], Santos ML[2], Motoyama AB[1] [1]University of Brasilia – Health Sciences, [2]UnB – Chemistry

10.025 Anti-angiogenic activity of Bothropstoxin I from *Bothrops jararacussu* (jararacuçu) snake venom: Inhibition by a KDR fragment. Sousa NC, Lorenzetti R, Hyslop S Unicamp – Farmacologia

10.026 Caulibugulone A induces apoptosis by mitochondrial pathway with ROS

production: a potential antineoplastic candidate. Silva MF[1], Freitas WR[1], Andreão A[2], Miranda PCML[3], Kanashiro MM[1] [1]UENF – Biology of Recognizing, [2]IFES-Aracruz, [3]Unicamp – Chemistry

10.027 Cytotoxic activity of (-)-chlorizidine A and derivatives. Guimarães LA[1], Jimenez PC[2], Rocha DD[1], Pinheiro DP[1], Hughes CC[3], Fenical W[3], La Clair JJ[4], Costa-Lotufo LV[1] [1]UFC, [2]Unifesp, [3]University of California, [4]Xenobe Research Institute

10.028 Evaluation of the antitumoral activity and toxicity *in vivo* of the cerium oxide and zinc oxide nanoparticles association. Xavier AL[1], Brito MT[1], Pita JCLR[1], Santos CCL[2], Farias IAP[3], Albuquerque AJR[3], Keyson D[2], Sampaio FC[3], Antônio GS[2], Abrantes RA[4], Cruz RMD[4], Gonzaga JCO[4], Sobral MV[1] [1]UFPB – Natural Products and Bioactive Synthetics, [2]UFPB – Chemistry, [3]UFPB – Biotechnology, [4]UFPB – Pharmacy

10.029 Fractionation guided by cytotoxicity of extract from *Palythoa caribaeorum*. Costa AM[1], Pinto SCL[2], Pessoa ODL[2], Wilke DV[1], Costa-Lotufo LV[1], [1]UFC – Fisiologia e Farmacologia, [2]UFC – Química Orgânica e Inorgânica

11. Clinical Pharmacology, Pharmacokinetics, Pharmacogenomics and Preclinical Toxicology

11.016 Infection by *Paracoccidiodes brasiliensis* associated to use of adalimumab in arthritic patient: a case report. Caldas LM, Brito IRV, Vieira CJAB, Yamasawa RH, Borges VM, Bueno AN HUAV-Unifenas

11.017 *In silico* drug discovery approach for new candidates on the treatment of Paracoccidioidomycosis disease. Marschalk C[1], Seixas FAV[2], Cotica ESK[3] [1]LNBio-CNPEM-Unicamp, [2]UEM – Biochemistry, [3]UEM – Micology

11.018 Active pharmacovigilance and study of a new oral anticoagulant dabigatran in Brazilian public hospital specializing in cardiology. Martins LB[1], Almeida FVS[2], Scaramello CBV[1] [1]UFF, [2]INC

11.019 Characterization of CYP2E1 polymorphisms in patients receiving treatment for TB. Santos EA[1], Gonçalves JCS[1], Fleury MK[2], Silva JRL[3], Estrela RCE[1] [1]FF-UFRJ – Fármacos e Medicamentos, [2]FF-UFRJ – Análises Clínicas e Toxicológicas, [3]UFRJ – Medicina

11.020 Evaluation of acute toxicity and determination of DL_{50} of a new derivative of ferulic acid. Araruna Júnior AA[1], Rêgo SC[2], Mata AMOF[2], Osório MS[2], Taimo MRD[3], Alencar MVOB[3], Gomes Júnior AL[3], Freitas RM[3], Cavalcante AACM[4] [1]FSA, [2]Uninovafapi, [3]UFPI, [4]UFRGS

11.021 Evaluation of amoxicillin generic brands by *in vitro* antibacterial activity method. Ignácio L[1], Silva MTG[2], Batista TGFM[2], Ferraris FK[1], Amendoeira FC[1] [1]INCQS-Fiocruz – Farmacologia, [2]INCQS-Fiocruz – Microbiologia de Produtos

11.022 Evaluation of acute toxicity of HSE-07 in mice. Mangueira VM[1], Batista TM[1], Sousa TKG[1], Brito MT[1], Beltrão DM[1], Moura APG[1], Souza HDS[2], Souza RPF[2], LIRA BF[2], Sobral MV[1] [1]UFPB – Ciências Farmacêuticas, [2]UFPB – Química

11.023 Behavioral evaluation in mice treated with Artemether encapsulated in nanocapsules. Vidal AT, Souza ACM, Amancio GCS, Mosqueira VCF, Grabe-Guimarães A Cipharma-UFOP

11.024 Comparative bioavailability study between two sublingual formulations of ketorolac (Tablets 10 mg and 30 mg) and an intramuscular formulation of ketorolac (injectable solution of 30 mg/mL) in healthy volunteers of both sexes. Leite WS, Leite ALAS, Nascimento DF, Sales LC, Freire LM, Sena KS, Linhares AL, Gadelha

EC, Pontes AV, Rocha MBS, Frota Bezerra FA, Moraes MO, Moraes MEA UFC – Fisiologia e Farmacologia

11.025 Pre-clinical monitoring of artemether-nanocapsules cardiotoxicity in rats. Vidal-Diniz AT[1], Grabe-Guimarães A[2], Richard S[3], Guimarães HN[4], Andrade RP[2], Borges RP[2], Mosqueira VCF[1] [1]UFOP, [2]UFOP – Farmácia, [3]Université Montpellier – Physiologie & Médecine, [4]UFMG – Engenharia Elétrica

11.026 Evaluation of biochemical and hematological parameters of the acute administration of carvacryl acetate in mice. Oliveira RAM[1], Oliveira GLS[1], Saldanha GB[2], Sousa DP[3], Freitas RM[1] [1]UFPI, [2]UFBA, [3]UFPB

11.027 The relative bioavailability / bioequivalence of two formulations of metformin 850 mg tablets coated in healthy volunteers of both sexes on fed condition. Sales LC, Leite ALAS, Nascimento DF, Freire LM, Sena KS, Leite WS, Linhares AL, Gadelha EC, Pontes AV, Rocha MBS, Frota Bezerra FA, Moraes MO, Moraes MEA UNIFAC-UFC – Fisiologia e Farmacologia – Unidade de Farmacologia Clínica ()

11.028 Preliminary studies of the LASSBio-1425, a potential anti-atherogenic compound, on the male gamete of rat. Mannarino LA[1], Fumian MM[1], Ribas JAS[1], Maia RC[2], Barreiro EJL[2], Brito FCF[1], Marostica E[1] [1]UFF – Physiology and Pharmacology, [2]UFRJ – LASSBio

11.029 Urodynamic effects of the combination of tamsulosin and daily tadalafil in men with lower urinary tract symptoms secondary to benign prostatic hyperplasia: a randomized, placebo-controlled clinical trial. Sousa PRR[1], Sales LC[1], Santos LCO[1], Silva BGB[1], Marinho LB[1], Pamplona TL[1], Santos JMS[1], Segundo SAS[1], Silva Júnior JVM[1], Cerqueira JBG[1], Maia RR[1], Gonzaga-Silva LF[1], Regadas RP[1] [1]UFC – Cirurgia / Fisiologia e Farmacologia

Histórico Prêmio José Ribeiro do Valle

O Prêmio José Ribeiro do Valle, concedido anualmente pela Sociedade Brasileira de Farmacologia e Terapêutica Experimental, foi instituído em 1998 em parceria com a *Eli Lilly do Brasil*. Esta parceria vigorou até 2006 e, a partir de 2009, o prêmio passou a ser patrocinado pela Biolab-Sanus Farmacêutica. Este prêmio objetiva identificar e premiar jovens investigadores (até 35 anos) coautores principais dos cinco melhores trabalhos submetidos para apresentação no Congresso Brasileiro de Farmacologia daquele ano e inscritos ao prêmio. Os finalistas apresentam seus trabalhos na forma de Comunicação Oral e são arguidos, em sessão pública especial, realizada durante o congresso, por Comissão Julgadora (3 membros) constituída por pesquisadores seniores, especialistas nas diferentes áreas da Farmacologia. Nestes 16 anos da vigência do prêmio, os seguintes concorrentes obtiveram o primeiro lugar:

1998 – Maria Martha Campos (UFSC – Orientador: João Batista Calixto)

1999 – José Eduardo da Silva Santos (UFSC – Orientador: Jamil Assreuy)

2000 – Ana Paula Villela Dantas (ICB-USP Orientador: Maria Helena Catelli de Carvalho)

2001 – Liliam Fernandes (ICB-USP Orientador: Maria Helena Catelli de Carvalho)

2002 – Isaias Glezer (ICB-USP Orientador: Cristoforo Scavone)

2003 – Juliano Ferreira (UFSC – Orientador: João Batista Calixto)

2004 – João Alfredo de Moraes (UERJ – Orientador: Thereza Christina Barja-Fidalgo)

2005 – Tiago Chiavegatti (Unifesp – Orientador: Rosely O. Godinho)

2006 – Ana Leticia G. Cabral Maragno (FMRP-USP – Orientador: Marcelo Damário Gomes)

2007 – Maria Fernanda de Paula Werner (UFSC – Giles A. Rae)

2008 – Ana Luiza Andrade de Paula Lopes (Unifesp – Orientador: Rosely O. Godinho)

2009 – Silvio Manfredo Vieira (FMRP-USP – Orientador: Fernando de Q. Cunha)

2010 – Vanessa Olzon Zambelli (Instituto Butantan – Orientador: Yara Cury)

2011 – Tatiana Paula Teixeira Ferreira (Fiocruz -- Patrícia Machado Rodrigues e Silva)

2012 – Maíra Assunção Bicca (UFSC – Orientador: João Batista Calixto)

2013 – Jaqueline Raymondi Silva (FMRP-USP – Orientador: Fernando de Q. Cunha)

A SBFTE, por meio deste prêmio, prima pelo reconhecimento do trabalho cientifico realizado por jovens pesquisadores e incentivo à ciência brasileira.

Courses:

Cancer: basic concepts, toxicity of chemotherapy, molecular basis of metastization and strategies of prospection of new anticancer candidates. O mini-curso consistirá de três aulas expositivas, cada uma com 50 min de duração, objetivando facilitar a compreensão do aluno acerca de aspectos gerais relacionados ao câncer, tais como: epidemiologia, complexidade biológica, modelos de estudo da toxicidade dos quimioterápicos antineoplásicos, mecanismos moleculares relacionados à metastastização e modelos de prospeção de novos fármacos antitumorais. Bibliografia básica recomendada: Weinberg, RA, *Biologia celular do câncer*, ed. Artmed, 864p., 2008; - Hannahan D & Weiberg, RA, 2000. The hallmarks of cancer, *Cell*, 100(1): 57-70; - Hannahan D & Weiberg, RA, 2011. Hallmarks of cancer: the next generation, Cell, 144(5):646-674.

Essential Biostatistical Concepts to Pharmacology. *Fundamentals of Biostatistics.* The class is designed primarily to address basic and fundamental importance in the understanding of Biostatistics applied in the area of Pharmacology, defining statistical terms emphasizing the importance of studying the Biostatistics and why this topic is so relevant in scientific circles. Among the basic topics that will be covered in this Introductory class are: 1. The understanding of Probability and Normal Curve addressing the definitions of terms such as parametric and nonparametric; 2. The understanding of the meaning and of the importance of Descriptive and Inferential statistics on data collection to final analysis; 3. The knowledge of the types of measurement scales and adopted measures (measures of Central tendency and Dispersion) in obtaining the experimental data and its applicability in the correct choice of statistical tests and 4. Discussion and relevance of statistical significance (p value) and biological significance. *Data analysis*: *Parametric tests.* This talk intends to present/discuss key aspects regarding parametric statistics, namely: 1) assumptions and logic of Student t-test and analysis of variance (ANOVA); 2) one-way, two-way and repeated-measures ANOVA; and 3) post-hoc tests. *Data analysis – nonparametric tests*: In this class we will discuss the main applications of nonparametric statistical analysis. At the end of the class we expect that the audience will be able to argue and answer two questions: 1. When do I choose a nonparametric test? 2. Which nonparametric test should I choose? In addition, It will be discussed how nonparametric data (measures of central tendency and variability) should be presented in a scientific article. The program of class will be 1. Nonparametric tests: the only choice for nominal variables; 2. nonparametric measures of central tendency and variability; 3. Discussion about the power of parametric and nonparametric tests and assumptions of parametric tests; 4. The experimental design as a determinant of nonparametric test; 5. Frequent experimental designs and respective nonparametric tests. Apoio financeiro: CNPq, UFSM, Fapergs

Drug-receptor interaction: dimerization, allosterism and functional selectivity. The concepts of receptor and drug-receptor interaction are essential to understand

important aspects of Pathophysiology and Pharmacodynamics. Therefore, this issue is constantly debated in events sponsored by our scientific Society (SBFTE) trough courses that offer an opportunity to reach an audience of young people, graduate and undergraduate students. This year, our course aims to address less basic, more modern, aspect of this topic by addressing the questions of homologous or heterologous receptor dimerization, allosteric modulation and functional selectivity. After discussing the phenomena, and their pathophysiological implications, we will also discuss the strategies for identifying / quantifying them as well as their relevance, opportunities and challenges for the process of drug discovery.

Conferences

Why intermittent energetic challenges are good for the brain. Mark P. Mattson, Krisztina Marosi, Ruiqian Wan, Ryan Wu and Aiwu Cheng. Laboratory of Neurosciences, National Institute on Aging Intramural Research Program, Baltimore, MD. 21224. Humans evolved in environments where food was not available ad libitum, and so possess robust adaptive physiological and behavioral responses to periods of food scarcity. Emerging research in this Laboratory and elsewhere has shown that intermittent fasting (IF; e.g., fasting for a period of 24 hours twice weekly) and vigorous exercise can increase numbers and strength of synapses and can enhance brain function (cognitive and sensory – motor performance) and mood. We find that the general mechanism by which IF and exercise benefit neurons is by challenging them by increasing their activation state and energy demand, which results in a coordinated engagement of signaling pathways that promote neuroplasticity and cellular stress resistance. The pathways activated by exercise and IF include those involving brain-derived neurotrophic factor (BDNF), mitochondrial biogenesis, DNA repair and removal of oxidatively damaged proteins and organelles (autophagy). Peripheral changes in energy metabolism that occur during fasting and exercise may also contribute to their beneficial effects on the brain. In this regard, the depletion of glycogen stores in the liver triggers the mobilization of fatty acids from fat cells and the production of ketone bodies. Ketone bodies such as beta-hydroxybutyrate provide an alternative energy source for neurons and may also activate signaling pathways that enhance the ability of the brain to cope with stress. Our studies in animal models of chronic neurodegenerative disorders (Alzheimer's and Parkinson's diseases) and acute brain injury (stroke and severe epileptic seizures) demonstrate robust neuroprotective and neurorestorative effects of IF diets. IF protects the brain by bolstering antioxidant defenses and protein chaperone levels, and by suppressing inflammation. The implications of these findings for strategies for optimizing brain function and reducing the risk of neurodegenerative disorders will be described. Acknowledgement: Supported by the intramural research program of the National Institute on Aging.

Mutualism between gut and the microbiota: An essential interaction for health and disease. Claudio Fiocchi. Department of Gastroenterology and Hepatology, Digestive Disease Institute. Department of Pathobiology, Lerner Research Institute. The Cleveland Clinic Foundation, Cleveland, Ohio, USA

Microorganisms, comprehensively called the microbiome, represent a vital component of the world we live in, and they play a role in essentially all aspects of human physiology and pathophysiology. Therefore, qualitative or quantitative changes in the microbiome have a major impact on metabolism, nutrition, immunity and numerous other aspects of human physiology, ultimately determining whether health or disease will prevail. These events are particularly important in the gastrointestinal tract, where the bulk of microbes reside. A healthy intestine is considered to be in a state of "physiological inflammation" manifested by the rich infiltration of immune cells found all along the intestinal mucosa. This results primarily from exposure to the mother's microbiota at the time of birth and the subsequent ingestion of foreign antigens. The mucosal immune system establishes a state of tolerance towards the gut microbiota, not by ignoring it, but by mounting an active and highly specialized response mediated by both innate and adaptive immune cells. This response – termed "immune tolerance" - occurs early in life and, if properly regulated in timing, amount and type, prevents an excessive reaction against luminal microorganisms that could cause tissue damage, while at the same allows the formation of effective defenses against exogenous or endogenous danger signals. Modern life style has had a fundamental impact on the gut microbiota through the widespread use of antibiotics, drugs, and food additives (xenobiotics). Equally important, if not even more, are the drastic dietary modifications that humans have introduced in the last century, a period of time when a "westernized" diet, rich in fats, sugars and calories, has been adopted by increasingly affluent societies. Microbes and humans have evolved together for several millennia and have mutually benefitted from this interaction. However, the type of nutrition humans have adopted after the industrial revolution has reshaped the composition of the gut microbiota, imposing adaptations by the mucosal immune system that may result not only in localized inflammation, but dysregulated immune responses at the systemic level. In the intestine these immune abnormalities appear to be largely responsible for increasingly common inflammatory conditions, such as ulcerative colitis and Crohn's disease. Equivalent abnormalities at the systemic level likely contribute to several of the chronic inflammatory and autoimmune conditions currently affecting humanity, including rheumatoid arthritis, asthma, psoriasis and several others. Most current therapies are still targeting immune cells and inflammatory mediators as a way to control inflammation, but other approaches are emerging that aim at re-establishing the natural equilibrium between the gut microbiota and the host. Among the latter are probiotics, prebiotics and synbiotics, but evidence is emerging indicating the dietary interventions may be the most effective and safest ways to restore the makeup of the gut microbiome and therefore health.

Therapeutic potential of toxins: from bench discovery to "drugable" compound.

Jan Tytgat. Toxicology and Pharmacology, University of Leuven (KU Leuven), Campus Gasthuisberg, O&N2, PO Box 922, Herestraat 49, 3000 Leuven, Belgium

Throughout millions of years of evolution, nature has supplied various organisms with a massive arsenal of venoms to defend themselves against predators or to hunt prey. Several invertebrates from

marine and terrestrial origin are a good example and comprise animals such as cone snails, sea anemones, spiders and scorpions. They have proven to be among the most prolific and versatile peptide engineers known in nature indeed. Venom peptide toxins have been shown to often specifically interact with voltage-gated ion channels or other membrane-bound cellular receptors, and impair their normal functioning. Because of their key role in the initiation and propagation of electrical signals in excitable tissue, it is not surprising that several isoforms of voltage-activated sodium and potassium channels (Navs and Kvs, respectively), but also nicotinic acetylcholine receptors (nAChR), are specifically targeted by many of these venom peptide toxins. Moreover, since several voltage-activated ion channels are also crucially involved in (human) channelopathies, a new opportunity has opened to consider peptide toxins, and their derivatives, as "drugable" compounds with therapeutic potential, or in other words to design toxin-based drugs with high selectivity, efficacy and as little undesirable side effects as possible.

In this lecture, evidence will be given of naturally occurring peptide toxins from several invertebrate venomous species (including gastropoda and arachnida), particularly interacting with specific Navs, Kvs or nAChR, followed by a peptide-mimetic strategy one can follow to refine and miniaturize such peptides to become lead compounds. As one example, we endeavored to characterize a set of entirely hypothetical peptides, whose sequences were inspired by the pharmacophore of mu-family type conopeptides on the one hand, and a spider toxin on the other hand, on a collection of membrane-bound targets from vertebrates and invertebrates.

Acknowledgements: This work was supported by the following grants: G.0433.12 and G.A071.10N (FWO-Vlaanderen), IUAP 7/10 (Inter-University Attraction Poles Program, Belgian State, Belgian Science Policy), OT/12/081 (KU Leuven, Belgium) and FP7 MAREX project (EU).

Neuroinflammation and chronic pain. Ru-Rong Ji Departments of Anesthesiology and Neurobiology, Duke University Medical Center, Durham, North Carolina, 27710

Chronic pain, such as neuropathic pain, cancer pain, and inflammatory pain is a rising health problem in the world. Current analgesics primarily target pain transduction and transmission in neurons and have limited success in controlling disease progression. Accumulating evidence suggests that neuroinflammation drives chronic pain by inducing and maintaining peripheral sensitization in the peripheral nervous system (PNS) and central sensitization in the central nervous system (CNS). Neuroinflammation can be characterized by infiltration of immune cells, activation of glial cells, and production of inflammatory mediators in the PNS and CNS. Compared with systemic inflammation, neuroinflammation in the PNS and CNS is better associated with chronic pain states. Activation of glial cells such as microglia and astrocytes in the spinal cord results in the production of pro-inflammatory cytokines (TNF-□, IL-1□) and chmokines (CCL2 and CXCL2), via activation of MAP kinase pathways (p38, JNK, and ERK) to promote chronic pain. Mechanistically, these pro-inflammatory cytokines and chemokines can powerfully modulate synaptic transmission in the pain circuitry, by enhancing excitatory synaptic transmission and suppressing inhibitory

synaptic transmission in spinal cord dorsal horn neurons. On the other hand, neuroinflammation also generates anti-inflammatory and pro-resolution lipid mediators such as resolvins (RvE1, RvD1, RvD2) and protectins (protectin D1). Resolvins and protectin not only act on immune and glial cells to promote the resolution of neuroinflammation but also act on neurons to normalize synaptic plasticity. As a result of these regulations on both glia and neurons, inflammatory and neuropathic pain in animal models can be effectively reduced by resolvins and protectin. Thus, targeting excessive neuroinflammation with pro-resolution mediators may offer new therapeutics for the treatment of chronic pain.

Drugs and Drug Leads from Nature. David J. Newman. Natural Products Branch, Developmental Therapeutics Program, DCTD, NCI-Frederick, P. O. Box B, Frederick, Maryland, 21702, USA

For at least the last 4000 years, humans have used "natural substances" as medicinal agents to treat diseases of both humans and animals. In the last 60 or so years, the use of single chemical compounds, sometimes from Nature has become the "rule", and in the last 30 or so years, it appeared that synthetic chemical agents had superseded Nature as the source of medicinal agents for treatment of disease. However, this is actually not the case in all disease areas as will be shown during this presentation.

In the areas of infectious and parasitic diseases and cancer, over 50% of all approved drugs, those approved by regulatory authorities, in the last 60 plus years (for infections) and from 1935 (for cancer), have come either directly or indirectly from the chemical structures of natural products.

Many examples will be presented covering a variety of diseases of man (and some animals) showing that even today, in the era of high throughput screening and massive synthetic libraries of drug candidates, that materials from Nature are still of very significant value. It will also become evident that the sources of a significant number of modern natural products are not the "large organisms" from which they were first isolated, but are from a biodiversity that is not yet fully appreciated, the microbial world. Funding: Directly from the US Government via the annual budget of the National Institutes of Health

From chemistry to pharmacology and back to chemistry: the history of a therapeutic cannabinoid. Francisco Silveira Guimarães. Department of Pharmacology, Medical School of Ribeirão Preto and Center for Interdisciplinary Research on Applied Neurosciences (NAPNA), University of São Paulo, Brazil

The chemical structure identification of active principles present in plants is a crucial step in the development of new drugs. At the beginning of the 1960s, Raphael Mechoulam and co-works identified delta-9-tetrahydrocannabinol (THC) as the main substance responsible for the subjective effects of *Cannabis sativa* derivatives. They also recognized that another major cannabinoid present in the plant is cannabidiol (CBD). Although structurally similar, these two compounds produce some very distinct effects. CBD has no abuse potential and can antagonize the psychotomimetic and anxiogenic effects produced by high doses of THC. These latter observations suggested that CBD could have antipsychotic and anxiolytic properties, a proposal that has been confirmed by preclinical and clinical studies. In addition, the therapeutic potential of CBD has largely increased in the last 10 year. Several mechanisms have been proposed

to explain its unique pharmacological profile, including blockade of anandamide metabolism/uptake, facilitation of 5HT1A-mediated neurotransmission and activation of TRPV1 receptors. More recently, studies form ours and other laboratories have been investigating CBD interference on brain cellular changes. Chronic administration of this drug increases hippocampal neurogenesis and prevents microglia activation induced by repeated treatment with an NMDA non-competitive receptor antagonist (MK801). These two mechanisms could help to explain the anxiolytic and antipsychotic effects of this drug.

The translation of this potential therapeutic profile into the clinic has been hampered by the need of using large p.o. doses of CBD, reflecting its low and variable bioavailability in humans. To overcome this problem, we are now back to chemistry. In collaboration with Mechoulam's group we are testing chemical modifications of the CBD molecule aimed at increasing the drug potency. One of these compounds, HU-474, has already been shown to be at least 30-fold more potent than CBD in animal models of psychiatric disorders, suggesting that this could be a promising pathway to the development of new therapeutic compounds. Financial support. Fapesp and CNPq

Symposia

Traditional knowledge inspired discovery of natural product-based therapeutics for cancer and neurological disorders. Leslie Gunatilaka. Natural Product Center, School of Natural Resources & the Environment, College of Agriculture & Life Sciences, University of Arizona, Tucson, Arizona 85706, United States

Traditional medicines in many parts of the world make use of medicinal plants to treat a variety of diseases including cancer and neurological disorders that increasingly burden modern day society. In our studies directed towards discovery and development of natural product-based drugs to treat these diseases, we have screened extracts derived from plants of the Southwest United States and herbal supplements available in the United States in a panel of cell-based and functional assays including gene-expression and the heat-shock induction assays targeting androgen receptor-induced genes and the heat-shock response, respectively. Of those tested, extracts derived from two plants of the family Solanaceae, *Withania somnifera* (winter cherry; Indian ginseng; Ashwagandha) and *Physalis crassifolia* (yellow nightshade ground cherry) proved to be promising. Detailed chemical and biological investigations of these were undertaken because *Withania* and *Physalis* species are employed in traditional medicines in Asia and South America to treat cancer and neurological disorders. Bioactivity-guided fractionation of extracts derived from these two plants led to the isolation and identification of several steroidal lactones belonging to the withanolide class. Given their potential as lead molecules for drug discovery and development, we have developed a soil-less aeroponic technique for cultivation of these plants and efficient production of active withanolides in large quantities for animal and structure-activity relationship (SAR) studies. Our studies suggest the potential of withanolides as anticancer and anti-neurodegenerative agents and the possibility of modulating their biological activities by modification of the withanolide structural scaffold that may lead to natural product-based therapeutics for cancer and neurological disorders. This work was supported by

the grants from U.S. National Cancer Institute/National Institutes of Health, U.S. Department of Agriculture, and Arizona Biomedical Research Commission.

nNOS as a target for the treatment of vascular dysfunction in hypertension and atherosclerosis. Virginia Soares Lemos – Universidade Federal de Minas Gerais

Endothelium-dependent vasodilation is mainly attributed to endothelial nitric oxide synthase (eNOS)-derived NO production. However, we have shown that neuronal nitric oxide synthase (nNOS) is constitutively expressed in the endothelium of the mouse aorta and mesenteric artery. Moreover, we have shown that nNOS-derived H_2O_2 contributes in a significant way to the vascular relaxation. Reduced NO availability has been described as key mechanism responsible for endothelial dysfunction in atherosclerosis and hypertension. Recently, we have shown that endothelial nNOS-derived H_2O_2 production is impaired and contributes to endothelial dysfunction in $ApoE^{-/-}$ mice aorta and DOCA-Salt hypertensive mice mesenteric arteries. Therefore, the present study provides evidence for an important role of nNOS in vascular function. Additionally, these results point to a new mechanism for endothelial dysfunction in atherosclerosis and hypertension and may represent a novel target to expand the therapeutic strategy in vascular diseases. Financial Support: CNPq and FAPEMIG

Mass spectrometry on drug development: from the structural elucidation to imaging generation Norberto Peporine Lopes (USP)

The structural elucidation of increasingly small quantities of organic compounds is a routinely required task of the chemist, especially in natural product, synthetic organic, biogeochemical, and medicinal chemistry research laboratories. Among the analytical tools available, there is a wide variety of spectroscopic and spectrometric techniques. In recent years, developments in these techniques have allowed the analyst to obtain valuable structural information of a given compound at low concentrations (at high sensitivity) and in an increasingly short time period.

Each analytical method provides different, complementary structural information about a given compound. When it comes to mass spectrometry (MS), it is possible to obtain data regarding the molecular weight and/or the molecular formula of compounds, the presence of heteroatoms, and the presence of functional groups, depending on the characteristics of the mass spectrometer. Tandem mass spectrometry (MS/MS) is also able to provide additional structural information through fragmentation of the compound of interest. Therefore, MS and MS/MS are powerful tools for the structural elucidation of a wide range of organic compounds. In this talk we present an overview of the basic decomposition reaction for natural products and the perspective for the tissues imaging generation and search for a new activity metabolites.

Discovery, design and mechanism of next generation proteasome inhibitors for cancer chemotherapy. Daniela Barretto Barbosa Trivella[1] [1]National Center for Research in Energy and Material (CNPEM), Brazilian Biosciences National Laboratory (LNBio) – Campinas, SP Brazil

The proteasome complex is a validated target against cancer. Two drugs, carfilzomib and bortezomib, are currently available on the market. However, there still problems, such as resistance, toxicity, and distribution with these inhibitors. Therefore, the discovery and development of next generation proteasome inhibitors are necessary. In this talk we will

introduce new strategies to the discovery of next generation proteasome inhibitors, going from natural product screening of focused libraries, to the rational design of new molecules. New mechanisms of proteasome inhibition will be presented, using a set of biochemical data and crystal structures. Financial Support: FAPESP

High dietary fat intake compromises blood brain barrier structural and immunological integrity – a link to cerebrovascular disease? Egle Solito William Harvey Research Institute, Barts and The London, Queen Mary's School of Medicine and Dentistry, London, UK Metabolic syndrome describes a cluster of conditions associated with increased prevalence and severity of cardiovascular disease/ischemic stroke, many of which are linked with dietary fat intake. Disturbances in blood-brain barrier (BBB) integrity contribute to the onset and progression of neurodegenerative conditions including Alzheimer's disease (AD) and vascular dementia (VaD). Whilst aging is positively associated with the risk of both AD and VaD, this may reflect the effects of chronic modulators of vascular function such as diet. Importantly, metabolic imbalance has recently been related to detrimental alterations in BBB integrity and function (1). Consequently, we investigated the effects of orchestrated dietary misbalance induced by a High Fat Diet (HFD) on the BBB and its immunoresponsiveness. C57Bl/6 mice were put under HFD for 10 weeks and BBB permeability was assessed *in vivo*. Data showed higher permeability in HFD animals compared with those receiving a normal diet, with peripheral inflammation (modelled by LPS treatment) triggering higher cerebrovascular albumin leakage. Immunologically, HFD animals presented a misbalanced Th1:Th2 cell ratio together with higher T cell migration through an inflamed brain endothelium measured *in vitro*. We have previously shown the protein annexin A1 (ANXA1) to be an important mediator of BBB tightness (2), and the effects of HFD were significantly more pronounced in ANXA1 null mice. More importantly, HFD induced a clear down regulation in ANXA1 expression in both cerebrovascular endothelium and in T cells, resembling an early aging phenotype. These data thus impact on our understanding of the pathophysiological changes occurring during HFD, but, as ANXA1 is modulated by both HFD and aging, identification a possible new approach for therapeutic exploitation. *(We are grateful to ARUK and QMUL-for financial support)* References: (1) Takechi R, Pallebage-Gamarallege MM, et al. (2012) Neurodegener Dis. 2013;12:125-35. (2) Cristante E, McArthur S, Solito E. (2013) Proc Natl Acad Sci U S A. 2013-Future Article-110(3):832-41.

Crosstalk between glucocorticoid-induced proteins GILZ and Annexin A1 in the context of resolution of acute inflammation. Lirlândia P. Sousa* Departamento de Análises Clínicas e Toxicológicas - Faculdade de Farmácia, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.

Resolution of inflammation is an active and continuous process with production and activation of biochemical mediators and signaling pathways to ensure rapid and successful restoration of tissue homeostasis. During the resolving phase of inflammation, multiple pro-resolving molecules are produced to temper the inflammatory response and guarantee the return to homeostasis. One of the most important endogenous pro-resolution pathways is that mediated by glucocorticoids (GCs) produced by the

adrenal glands. By exploiting pharmacologically these physiological effects, GCs are among the most important drugs that have been developed for the treatment of many inflammatory diseases. However, metabolic side effects of GCs limit their therapeutic application. Thus, there is a growing interest in the understanding the effects of GC-induced proteins that may allow dissociation of GC anti-inflammatory effects from their adverse metabolic effects. Our group we have explored the pro-resolving ability of two GC induced proteins named Annexin A1 (AnxA1) and GC-induced leucine zipper (GILZ), which have shown anti-inflammatory properties in several experimental models of inflammation. In this presentation, we will discuss the role of endogenous GILZ on the natural and induced resolution of acute inflammation. Moreover, since GILZ mediates AnxA1 anti-inflammatory activity in macrophages we will discuss the relationship between GILZ and AnxA1 in the resolution of neutrophilic inflammation. Financial Support: Fapemig, CNPq, CAPES and PRPq-UFMG

Control by caffeine of mood and memory processes – role of adenosine A_{2A} receptors. Paula M. Canas[1], Daniel Rial[1], Ana Patrícia Simões[1], Nélio Gonçalves[1], João Pedro Lopes[1], Samira G.Ferreira[1], Henrique B.Silva[1], Nuno J.Machado[1], Francisco Queiroz[1], Cristina Lemos[1], Manuella P.Kaster[2], Geanne Matos[3], Lisiane O.Porciúncula[4], Luisa V.Lopes[5], Angelo R.Tomé[1], Ricardo J.Rodrigues[1], Paula Agostinho[1,6], Rodrigo A. Cunha[1,6] [1]CNC-Center for Neuroscience and Cell Biology, Univ.Coimbra, Portugal; [2]Federal Univ.Santa Catarina, Brazil; [3]Federal Univ.Ceará, Brazil; [4]Federal Univ.Rio Grande do Sul, Brazil; [5]Instituto Medicina Molecular, Univ.Lisbon, Portugal; [5]Fac.Medicine, Univ.Coimbra, Portugal

Adenosine assists encoding information salience through a combined activation of inhibitory A_1 and facilitatory A_{2A} receptors ($A_{2A}R$). This brain modulation system is imbalanced in stressful conditions, with increased $A_{2A}R$ density and decreased A_1R density. Neuroprotection is afforded by repeated caffeine consumption (adenosine receptor antagonist), which prophylactically prevents depression, suicide ideation and memory deficits, namely in aging and Alzheimer's disease (AD). In animal models of AD, $A_{2A}R$ blockade prevents memory deficits and synaptic plasticity in hippocampal circuits and this neuronal $A_{2A}R$ activation depends on ATP-derived adenosine. Neuronal $A_{2A}R$ also control memory and mood deficits upon chronic stress and $A_{2A}R$ blockade can actually therapeutically revert these installed aberrant phenotypes. Likewise, the blockade of $A_{2A}R$ can also therapeutically revert the memory deficits characteristic of a triple transgenic mouse model of AD. The mood/memory normalizing impact of neuronal $A_{2A}R$ blockade is further highlighted by the prevention of fear memory and amygdalar synaptic plasticity. Notably, the density of $A_{2A}R$ is increased in animal models of brain disease, as well as in aged humans and the over-expression of $A_{2A}R$ or the over-activation of $A_{2A}R$ is sufficient to trigger memory deficits. Overall these findings unveil a critical role of $A_{2A}R$ controlling synaptic plasticity to impact on dysfunction and damage of brain circuits, with a potential therapeutic interest to manage mood and memory impairments. Supported by DARPA, FCT, QREN, NARSAD, CAPES, CNPq-Ciência sem Fronteiras

A coffee break for age-related cognitive deficits. Lisiane O. Porciúncula (UFRGS)

Chronic consumption of caffeine has been associated with prevention of age

cognitive decline and mnemonic deficits in experimental models of dementia. On the other hand, some data revealed behavioral alterations and modifications in synaptic proteins and behavioral by caffeine intake during brain development.

Adenosine A2A receptors as target to manage non-motor symptoms of Parkinson's disease Rui D. S. Prediger[1,3], Adalberto A. Castro[2,3], Daniel Rial[1,3], Pedro Garção[3] , Angelo R. Tomé[3], Paula Canas[3], Attila Köfalvi[3], Carla I. Tasca[2], Rodrigo A. Cunha[3] [1]Departamento de Farmacologia, [2]Departamento de Bioquímica, Universidade Federal de Santa Catarina, Florianópolis - SC, Brazil. [3]CNC - Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal. Growing body of evidence indicates that cognitive (mainly working and procedural memory) deficits precede the classical motor symptoms in Parkinson's disease (PD). Non-motor features of PD respond poorly to dopaminergic medication and represen t a major unmet clinical need. Convergent epidemiological and pre - clinical data suggest that the blockade of adenosine A 2A receptors (A2AR) by caffeine or selective antagonists may confer neuroprotection against the underlying dopaminergic neuron degenerat ion, and influence the onset and progression of PD. In the current study we tested if the pharmacological or genetic blockade of A2AR could alleviate the cognitive symptoms observed in an animal model of PD based on the intranasal (i.n.) administration of MPTP. C57BL6 m ice infused with MPTP displayed working and procedural memory deficits without the emergence of alterations in motor performance, which were associated with a significant reduction of tyrosine hydroxylase (TH) density in the prefrontal cortex (PFC), striatum and substantia nigra. Moreover, the release of both glutamate and dopamine in the PFC, but not in the striatum, was impaired in MPTP - treated mice. Electrophysiological studies also indicated marked impairments on neuroplasticity events fol lowing i.n. MPTP administration. The genetic deletion or pharmacological blockade of A2AR prevented these behavioral and neurochemical impairments induced by MPTP administration. These findings indicate that a denosine A2A receptors emerge as promising ther apeutic target for the management of cognitive symptoms associated to early phases of PD, possibly acting through the modulation of the frontocortical dopamine and glutamate neurotransmission. Financial support : CNPq (Brazil), CAPES (Brazil), FAPESC (Braz il), FC

ATP P2Y1 receptors control cognitive deficits and neurotoxicity induced by brain ischemia. Geanne Matos de Andrade. Federal University of Ceará:

ATP is a pleiotropic cell-to-cell signaling molecule in the brain that functions through activation of the P2 receptors (P2R), encompassing ionotropic P2XR or metabotropic P2YR. ATP fulfills a major role as a danger signal, and the genetic or pharmacological blockade of P2 receptors (P2R) has been shown to afford protection in animal models of diverse brain diseases such as ischemia, traumatic brain injury, mood disorders or addiction. This neuroprotection has been claimed to involve different subtypes of P2R and to result mainly from the control of neuroinflammation and astrogliosis rather than a direct protection against neuronal damage. Previous studies have implicated different P2R, namely P2Y1R, in the control of ischemic brain damage, but it remains to be defined if P2Y1R antagonists also alleviate the behavioral impairments associated with brain

ischemia. In this work, we investigated if the P2Y1R-mediated neuroprotection against ischemia-induced cognitive deficts mainly involve a control of neurons, astrocytes or microglia. Adult male mice subject to permanent middle cerebral artery occlusion (pMCAO) displayed an infarcted cortical area, decreased neurological score with decreased working and reference memory performance, accompanied by neuronal damage, astrogliosis and microgliosis. All of these changes were attenuated by intracerebroventricular pre-treatment with the generic P2R antagonist PPADS (0.5–1.0 nmol/μL). In contrast, the selective P2Y1R antagonist MRS2500 (1.0–2.0 nmol/μL) afforded equivalent behavioral benefits but only prevented neuronal damage but not astrogliosis or microgliosis upon pMCAO. These results indicated that P2Y1R-associated neuroprotection mainly occurred through neuronal mechanisms, whereas other P2R were also involved in the control of astrocytic reactivity upon brain injury. Financial support: CNPq, CAPES

Studying cancer resistance in cell culture. Andrew O. Silva, Franciele C. Kipper and Guido Lenz Dept. de Biofísica e Centro de Biotecnologia, Universidade Federal do Rio Grande do Sul (UFRGS) The predictive power of cell culture in establishin g the best therapeutic regimen for patients is very low. Here we set out to test treatment protoco ls of six gliomas cell lines and primary glioma cultures to better mimic therapeutic respons es. For this, we treated these cells with clinically relevant regimen of chemotherapeutic age nt for 5 days and followed the number of cells for at least 30 days. We established the mech anisms activated by cells in response to Temozolomide (TMZ, 50μM), the main agent used for g lioma treatment. This includes cell cycle arrest, senescence, autophagy, apoptosis and necrosis. TMZ lead to sharp reduction in the number of cells for up to 12 days, followed by a recuperation of the cell proliferation to a similar rate of the untreated cells. Thereafter we combined TMZ with eleven different agents that could be used in glioma treatment and establis hed that combination with vinblastine and mebendazole lead to a complete absence of cells aft er 30 days in the cell lines that were partially sensitive to TMZ but not to TMZ resistant cell lines. This agents alone, despite inducing acute cytotoxicity, lead to the appearance of resistance. Interestingly, these combinations also were successful in primary glioma cultures. With this we expect to find better combinations and regimens to overcome resist ance and provide better clinically relevant information based on the long term sensiti vity of cultures to chemotherapeutic agents. Financial support: FAPERGS, CNPq e CAPES.

The oncogenic factor TBX2 confers cisplatin resistance in cancer cells through a novel role in the DNA repair pathway S. Wansleben, E. Davis, J. Peres and S. Prince Department of Human Biology, Faculty of Health Sciences, University of Cape Town, Observato ry, 7925, Cape Town, South Africa.

The emergence of drug resistant tumours which are able to escape cell death pose a major problem in the treatment of cancers. T umours develop resistance to DNA damaging chemotherapeutic agents by acquiring the ability to repair their DNA. Co mbination therapies that induce DNA damage and disrupt the DNA damage repair process may therefore prove to be more effective against such tumours. The developmentally important transcription factor TBX2 has been suggested as a novel an ti - cancer drug

target as it is overexpressed in several cancers and possesses strong anti - senescence and pro - proliferative functions. Importantly, we recently showed that when TBX2 is silenced we are able to reverse several features of transformation in bo th breast cancer and melanoma cell s . Overexpression of TBX2 has also been linked to drug resistance and we have shown that its ectopic expression results in genetically unstable polyploidy cells with resistance to cisplatin. Whether the overexpression of e ndogenous TBX2 levels is associated with cisplatin resistance in TBX2 - driven cancers has however not been shown. To address this we have silenced TBX2 in a cisplatin resistant breast cancer cell line and we show that knocking down TBX2 sensitizes the cells to cisplatin by disrupting the ATM - CHK2 - p53 signalling pathway. Cell cycle analyses demonstrate that when TBX2 is knocked down there is an abrogation of an S - phase arrest but a robust G2/M arrest that correlates with a reduction in phosphorylated CHK2 and p53 levels. This prevents DNA repair resulting in TBX2 deficient cells enter ing mitosis with damaged DNA and consequently undergo ing mitotic catastrophe. These results suggest that targeting TBX2 in combination with chemotherapeutic drugs such as cisplati n could improve the efficacy of current anti - cancer treatments

Capturing the affective dimensions of chronic pain in preclinical models. Tamara King, Ph.D. Assistant Professor, Department of Biomedical Sciences, College of Osteopathic Medicine, Center for Excellence in the Neurosciences, University of New England, Biddeford, Maine, USA

Pain in humans is a multidimensional experience with cognitive, motivational, and sensory components. Animal models with apparent relevance to clinical conditions have been developed and have formed the basis of our understanding of mechanisms associated with pain syndromes. While our knowledge of the neurobiology underlying pain has been immensely aided by the use of animal models, there has been increasing concern that these models are not sufficiently “predictive” to gain insight into mechanisms relevant to the human experience of pain. Most preclinical studies of pain have emphasized output measures that rely on reflexive responses to evoked stimuli. However, reflexive behaviors can often be observed in decerebrated animals, and therefore do not sufficiently capture important affective and motivational aspects of pain. In addition, evidence indicates that there are important mechanistic differences between evoked behavioral responses indicating hypersensitivity (e.g. tactile allodynia) and ongoing pain. Such divergence would serve to diminish potential translation between preclinical measures of evoked hypersensitivity and reports of persistent, underlying pain within the clinic. For these reasons, investigators involved in preclinical pain research have developed a number of novel strategies aimed at capturing features of pain that might have increased translational relevance. Such approaches are generally intended to measure features of pain without the need for an evoked reflexive withdrawal response. This presentation will highlight some of the recent advances in how “pain” is measured in the preclinical setting. Dr. King receives research support from a COBRE provided by the NIGMS (grant number P20GM103643 to Ian Meng) supporting The Center of Biomedical Research Excellence for the

Study of Pain and Sensory Function as well as from the Maine Cancer Foundation.

Neuroimmune activation in the spinal cord enhances kynurenine pathway and accounts for the genesis of neuropathic pain. Guilherme Rabelo de Souza - Ribeirao Preto Medical School-University of Sao Paulo (FMRP-USP)

There are growing bodies of evidence showing that after peripheral nerve injury innate and adaptive immune system activation in the spinal cord plays a crucial role in the induction and maintenance of neuropathic pain states. However, the mechanisms triggering these processes and the interaction between immune and neuronal systems that contribute to the genesis of neuropathic pain are not totally elucidated. In this talk, it will be present a novel mechanism that links immune system activation and central sensitization of spinal cord neurons after peripheral nerve injury. This mechanism is represented by IFN-gamma triggering spinal induction of kynurenine metabolic pathway that in turn enhances pain sensitivity.

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Exploring new targets and mechanisms of orofacial neuropathic pain. Juliana Geremias Chichorro. Departamento de Farmacologia, Universidade Federal do Paraná, Curitiba, PR, Brasil.

Neuropathic orofacial pain is a general term employed to describe a number of clinical syndromes, which may be spontaneous or triggered by local trauma or systemic disorders. Trigeminal neuralgia (TN) is a form of neuropathic orofacial pain characterized by severe, brief, stabbing recurrent episodes of pain within the distribution of one or more branches of the trigeminal nerve. International guidelines suggest that carbamazepine and oxcarbazepine are the first-line drugs for pain control in TN, but none of the medical and surgical procedures currently available provides reliable and permanent pain relief. Thus, further knowledge into the mechanisms underlying this condition and new effective treatment strategies are clearly warranted. As the most accepted cause of TN is vascular-induced sensory nerve root compression, Vos and Maciewicz (1991) developed a rat model of trigeminal neuropathic pain produced by chronic constriction of the infraorbital nerve (CION), a branch of the trigeminal nerve. This model reproduces important aspects of TN, including signs of spontaneous pain, mechanical and thermal hyperalgesia. Our group has been used this model to investigate mechanisms and strategies to control orofacial neuropathic pain. We demonstrated that selective deletion of C fibers by trigeminal intraganglionar injection of resiniferatoxin prevented the development of heat and cold hyperalgesia induced by CION. The development of heat hyperalgesia after CION was also prevented by daily administration of vitamins of the B complex (B1, B6 or B12, alone or in combination). Additionally, daily treatment with B vitamins, alone or in combination provided a synergistic effect with a single sub-therapeutic dose of carbamazepine to alleviate heat hyperalgesia. Moreover, in vitro experiments of calcium imaging on HEK 293T cells transfected with TRPV1 receptors demonstrated that previous incubation of cells with B vitamins, alone or in combination, caused a significant reduction in the calcium influx induced by capsaicin, suggesting that B vitamins may cause desensitization of TRPV1 receptors. In line with this observation, heat hyperalgesia induced by capsaicin in naïve rats was markedly reduced by

previous B vitamins treatment. Altogether, these results suggest that TRPV1 receptors may represent the target for B vitamins-induced analgesia and that B vitamins could be an alternative or be used as adjuvant to control some aspects of pain in patients suffering from trigeminal neuralgia. Protocols approved by CEUA/BIO/UFPR # 456 and 471. Financial Support: CAPES, CNPq, DAAD, Fundação Araucária.

G protein- and cytokine-mediated pathways to natriuretic peptide stimulated secretion. Adolfo J. de Bold, OC, PhD, University of Ottawa Heart Institute and Department of Pathology and Laboratory Medicine, University of Ottawa, Ottawa, Ontario, Canada K1H 8M5.

The cardiac natriuretic peptide (NP) hormones ANF and BNP are secreted continuously at baseline levels from the heart atria until hemodynamic or neuroendocrine stimuli cause such secretion to increase either acutely or chronically over baseline. NP secretion has some noteworthy peculiarities. Using double label pulse chase studies we have shown that it is the newly synthesized hormone over that in the storage pool that is secreted upon stimulation of NP secretion. In addition, monensin, an ionophore that impairs protein sorting and transport in the trans-Golgi network, completely prevents stimulated, but not baseline, secretion of NP. These finding suggest a constitutive-like type of NP release whereby secretion is based on exocytosis of vesicles budding from immature granules. Secretion brought about by atrial muscle stretch is a pertussis toxin-sensitive process thus involving Gi/o signaling unlike stimulated secretion by secretagogues such as andothelin-1 that is known to involve Gq signaling. These are separate processes because the latter stimulation proceeds unimpaired in pertussis toxin pre-treated atria. Using pharmacological inhibitors of proximal effectors of Gαq including phospholipase C and protein kinase C inhibitors we found that basal ANF secretion was dramatically increased by the inhibitors. This is in line with earlier experiments showing that Ca^{+2}-free perfusion in the isolated atria causes a very strong, reversible increase in ANF secretion in a manner that is contrary to most other endocrine cells. Expression of the G protein subunit Gαo-1 is prominent in the atria as shown by immunocytochemistry and by differential expression profile analysis between rat atria and ventricles using oligonucleotide arrays. A conditional, heart-specific knockout of Gαo in mice changed the atrial phenotype most notoriously by a change in the number and electron density of atrial granules. Cytokines such as IL-1β and TNFα selectively increase the expression and secretion of BNP through gene promoter effects both in vitro and in vivo in inflammation thus differentiating ANF and BNP that otherwise share biological properties, storage site and receptor. Overall, the control of secretion of NP is varied and appears tailored to respond uniquely to different challenges. (Supported by the Canadian Institutes of Health Research and the Ontario Heart and Stroke Foundation).

Molecular mechanisms underlying the renal effects of uroguanylin. Manassés Claudino Fonteles. Universidade Estadual do Ceará and Universidade Federal do Ceará, Fortaleza, Ceará.

Uroguanylin (UGN) is the member of guanylin family of peptides with the most pronounced effects in sodium balance homeostasis. This peptide is synthesized in the intestine and modulates electrolyte transport in the kidney by stimulating

diuresis, natriuresis and kaliuresis. We have demonstrated that UGN modulates sodium, bicarbonate and potassium transport in nephron segments. Our studies have shown that UGN inhibits NHE3-mediated bicarbonate reabsorption in proximal tubules and distal hydrogen secretion via H^+-ATPase and stimulates potassium secretion in distal tubule via maxi-K channels. The signaling mechanisms underlying UGN inhibitory effect on NHE3 activity is mediated by activation of both cGMP/PKG and cAMP/PKA signaling pathways which in turn leads to NHE3 phosphorylation and reduced NHE3 surface expression. Regarding the inhibition of H+-ATPase mediated by UGN in distal tubules, our data have shown that this effect is dependent on cGMP/PKG pathway that leads to reduced surface expression of H+-ATPase B1-subunit. Finally, our studies have demonstrated that cGMP/PKG pathway is also involved in stimulation of maxi-K channels by UGN, leading to increased potassium secretion. Therefore our studies shed light upon mechanisms by which guanylin peptides are intricately involved in the maintenance of salt and water homeostasis. Financial support: CNPq and FUNCAP

Role of guanylate cyclase agonists in the regulation of gastrointestinal function and treatment of gastrointestinal diseases
Mark G. Currie (Ironwood Pharmaceuticals, USA)

Guanylate Cyclase C (GCC) is expressed almost exclusively in the intestinal epithelium of the small and large intestine on the luminal surface. The activity of this receptor is regulated by the endogenous hormones, guanylin and uroguanylin which are secreted into the intestinal lumen and then act locally to activate the GCC receptor. Our goal has been to develop an understanding of the utility of guanylate cyclase agonists for the treatment of intestinal diseases, including irritable bowel sydrome with constipation (IBS-C) and chronic constipation (CC). These two conditions affect millions of patients and are associated with marked pain and discomfort. In the current talk, we will focus on the actions of linaclotide, a synthetic 14-amino acid peptide GCC agonist, on animal models of abdominal pain and intestinal transit and the relationship of these actions for the treatment of intestinal dysfunction in IBS-C and CC patients by examining the effect of linaclotide treatment on the abdominal symptoms associated with IBS-C, including abdominal pain.

Functional selectivity and assembly of GPCRs signaling complexes: New paths toward drug discovery. Michel Bouvier, Department of Biochemistry, Institute for Research in Immunology and Cancer, Université de Montréal, Canada

In recent years, it has become clear that G protein-coupled receptors (GPCRs) are not uni-dimensional switches that turn 'on' or 'off' a single signaling pathway. Instead, each receptor can engage multiple signaling partners to form dynamic complexes that can engage various downstream effector systems that may or may not involve G protein activation. Individual ligands can have differential efficacies toward specific subsets of the signaling effector repertoire that can be engaged by a given receptor. This phenomenon, known as ligand-biased signaling or functional selectivity, opens new opportunities for the development of new drugs with increased selectivity profiles and less undesirable effects. In an effort to better understand the structural and molecular basis of GPCR functional selectivity, we developed a diversity of biosensors based

on bioluminescence resonance energy transfer (BRET) that allow real-time monitoring of the interactions between GPCRs and multiple effectors as well as their downstream signaling events. To date we generated more than 30 BRET-based sensors that monitor various aspects of signaling. Their use revealed unexpected new signaling complexes and provide a new tool-set to monitor signal transduction from the membrane to the nucleus and open new avenues for the screening and profiling of drug candidates with favorable functional selectivity. Both orthosteric and allosteric ligands of receptors were found to have a high level of functional selectivity. Examples for the β-adrenergic, angiotensin, opioids and chemokine receptors will be discussed. At the molecular level, site-directed mutagenesis revealed that specific domains of receptors paly crucial role for the activation of selective pathways. Mutant form of receptor can change the relative signaling selectivity of both balanced and biased ligands thus providing insights into the rational design of biased ligands with desired signaling properties.

P2X7 receptor a valuable target in Nervous System from development to neurodegeneration. Mª Teresa Miras-Portugal. Department of Biochemistry. Universidad Complutense of Madrid, Spain.

P2X7 receptors are abundant at isolated presynaptic terminals from the mammalian central nervous system and exhibit increased activity in some neurodegenerative diseases, as occurs in Huntington disease *(Diaz-Hernandez et al. FASEB J. 2009; 23:1893-906)*. In neuronal cells, P2X7R induces exocytotic neurotransmitter release and at the same time cytoskeletal reorganization to favors vesicular dynamics and synaptic plasticity *(Gutierrez-Martin J Biol Chem. 2011; 286:11370-81)*. P2X7R is located at the end of growing axons in cultured hippocampal neurons and their inhibition promotes axonal growth, the same result is obtained by small hairpin RNA interference to knockdown the receptor. Besides, P2X7R over-expression significantly reduces axonal length (Diaz-Hernandez et al. J. Cell Sci. 2008; 121:3717-28; Puerto et al *J. Cell. Sci.* 2012; 125:176-88).

The effect of P2X7 receptor can be observed *in vivo*, in animal models of epilepsy where it expression has been reported to be altered in the hippocampus following *status epilepticus*. Animals treated with antagonists of the $P2X_7$ receptor also displayed less hippocampal damage and neuroinflammatory changes, including reduced microglial responses and interleukin-1β levels. In summary, P2X7 receptor plays an important role in the pathophysiology of *status epilepticus* and represent novel target for seizure control and neuroprotection (Engel et al. *FASEB J. 2*012; 26:1616-28; Jimenez-Pacheco et al. *Epilepsia* 2013, 54: 1551-61).

Finally, P2X7 signaling participates in the processing of the Amyloid precursor protein (APP) to generate the Aβ42 peptide that is at the origin of the senile plaques characteristic of Alzheimer's disease (AD). Nonpathogenic and pathologic forms of APP processing, mediated by α-secretase and β-secretase respectively, remain poorly understood. The *in vivo* approach to AD was possible with transgenic J20 mice model, expressing human APP mutant protein. This animal exhibits prominent amyloid plaques by the six months of life. *In vivo* inhibition of the P2X7R in J20 mice induced a significant decrease in the number of hippocampal amyloid plaques.

This reduction is mediated by increasing the proteolytic processing of APP through α-secretase. The *in vivo* findings demonstrate for the first time the therapeutic potential of P2X7R antagonism in the treatment of familiar Alzheimer's disease *(Diaz-Hernandez et al. Neurobiol Aging.2012; 33:1816-28)*

Purinergic system in the M1 and M2 activation. Rafael F. Zanin 1 , Elizandra Braganhol 1 , Letícia S. Bergamin 1 , Fernanda B. Morrone 2 , Jean Sévigny 3 , Maria Rosa C. Schetinger 4 , Angela T. S. Wyse 1 and Ana Maria O. Battastini 1 . 1 Departamento de Bioquímica, ICBS, UFRGS, Porto Alegre, RS, Brasil; 2 Faculdade de Farmácia, PUCRS, Porto Alegre, RS, Brasil, 3 Centre de Recherche en Rheumatologie et Immunologie, Centre Hospitalier Universitaire de Québec; and Département de Microbiologie - Infectiologi e et d'Immunologie, Faculté de Médecine, Université Laval, Québec, QC, Canada. 4 Departamento de Química, CCBE, UFSM, RS, Brasil.

Macrophages are key elements in the inflammatory process, exhibiting a spectrum of activation ranging from M1/pro - inflammatory to M2/anti - inflammatory phenotypes. Extracellular ATP can act as a danger signal whereas adenosine generally serves as a negative feedback to limit inflammation. Extracellular nucleotides modulate a variety of biological actions via purine receptors and their actions are controlled by the ectonucleotidases. In a recent study, we investigated the role of members of the ectonucleoside triphosphate diphosphohydrolase (E - NTPDase) family and ecto-5'-nucleotidase/CD73 (ecto-5'-NT) in the macrophages differentiat ion. Firstly, peritoneal mice macrophages were differentiated to M1 and M2 phenotypes by LPS or IL - 4, respectively. M1 and M2 phenotypes were characterized by evaluating the arginase/iNOS activities, Ym1 and FIZZ1 mRNA expression and cytokine production. N ext, we showed that M1 macrophages presented a decreased in NTPDase1, - 3 and the ecto - 5' - nucleotidase expression while M2 macrophages showed an increased NTPDase1, - 3 and ecto - 5' - nucleotidase expression. The increased ATPase/ADPase and ecto - 5' - NT activities presented by M2 phenotype macrophages can drive the ATP rapidly to generation of adenosine, which is associated with anti - inflammatory and regeneration actions in immune cells. We also aimed to assess whether the differential expressi on of NTPDases can regulate the P2 signaling during macrophage differentiation. We showed that mRNA P2X7 expression was not altered during macrophages differentiation and that the M2 macrophages, which have a higher ATPase activity, were less sensitive to cell death when exposed to ATP. Considering these data, we suggested that the modulation of NTPDases during M1 and M2 differentiation could be important in the regulation of P2X7 - induced cell death, and we proposed that the changes in the ectoenzyme might allow macrophages to adjust their functions during the inflammatory set. Support: CAPES and CNPq; Dr. J. Sévigny was the recipient of an FRQS senior scholarship

Purinergic signaling in vascular dysfunction. Claudia Lucia Martins Silva, PhD. Pharmacology and Inflammation Research Program, Biomedical Sciences Institute, Federal University of Rio de Janeiro, RJ, Brazil

ATP is released into the extracellular environment by several mammalian cell types as a response to physiological or pathophysiological stimuli. Extracellular

ATP acts as an autocrine or paracrine mediator, through the activity of different P2 purinoceptor subtypes. Moreover, ectonucleotidases (NTPDases) are involved in the metabolism of extracellular nucleotides, controlling their availability for purinoceptor activation. Both G protein-coupled P2Y receptors (P2YR) and ion-channel P2X receptors (P2XR) are expressed in endothelial cells (ECs), vascular smooth muscle cells and immune cells, where receptor activation triggers different signaling cascades, including those leading to vasodilation or vasoconstriction, as well as vessel remodeling, immune cell migration and EC apoptosis. The main purinoceptor subtypes expressed on mammalian ECs are $P2Y_1R$, $P2Y_2R$ and P2X4R, although vessel- and species-specific differences in receptor subtypes exist. As shown by ours and other research groups, alterations in vascular P2 receptor signaling and NTPDases function contribute to endothelial dysfunction. P2Y1 receptors participate in EC activation, which is essential for monocyte diapedesis. Also atherosclerotic lesions are reduced in $P2Y_1R$/apolipoprotein E (ApoE) double knockout mice (compared to ApoE single knockout controls). Analysis of this double knockout model showed that $P2Y_1R$ contributes to the expression of endothelial adhesion molecules that mediate leucocyte recruitment during inflammation. In an intestinal inflammation model, our data show that increased expression of mesenteric EC NTPDase 2 triggers higher levels of extracellular ADP, a full agonist of P2Y1R, with subsequent endothelial $P2Y_1R$-mediated monocyte adhesion. Short-term activation of endothelial P2X7R stimulates endothelial nitric oxide (NO) synthase activity, resulting in NO production and vasodilation. In the same inflammation model, basal P2X7R expression is reduced by higher than normal levels of TGF-β, resulting in a reduced NO synthesis. While leukocyte adhesion to lung ECs is abolished in $P2Y_2R^{-/-}$ mice, $P2Y_2R$ up-regulation on coronary artery ECs induces intimal hyperplasia and monocyte/macrophage infiltration. Lastly, upon endothelial damage ATP released by activated leukocytes activates myocyte P2R, causing vasoconstriction. In conclusion, our group and others have produced considerable evidence in support of the notion that the pharmacological targeting of purinergic signaling might be effective to reduce vascular dysfunction in inflammatory diseases. Financial support: CNPq, FAPERJ

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