

22nd International Symposium on Microencapsulation

Hotel Vila Galé Salvador

Rua Morro do Escravo Miguel, 320, Ondina, Salvador, Bahia, Brazil

SCIENTIFIC PROGRAM

WEDNESDAY, **SEPTEMBER 25, 2019**

08:00 – 08:45 **Accreditation Reception**

08:45 – 09:00 **Opening Ceremony**

ROOM MASTER I

OPENING PLENARY SESSION

09:00 – 09:45 **Juan Manuel Irache**, University of Navarra, Spain

Protein-based nanocarriers for drug delivery

SCIENTIFIC SESSION

Nano- and Microencapsulation for Vaccine Adjuvant and Mucosal Delivery

Chairs: *Claudia Brodskyn* – IGM, FIOCRUZ, Brazil

Juan Manuel Irache – University of Navarra, Spain

09:45 – 10:15 **Sevda Senel** – University of Hacettepe, Turkey

Porins-chitosan based systems for vaccine delivery

10:15 – 11:00 **Coffee-break and Poster viewing**

11:00 – 11:30 **Eliana Martins Lima** – Federal University of Goiás, UFG, Brazil

Interactions at the nano-bio interface and the biological fate of nanoparticles

11:30 – 12:00 **Arnóbio A. da Silva Júnior** – Federal University of Rio Grande do Norte, UFRN, Brazil

Self-assembled nanocarriers as biotechnological approach to antivenom immunotherapy

12:00 – 14:00 **Lunch**

THEMATIC ROUND TABLE

Nano- and Microencapsulation Science for Tropical and Neglected Diseases

Coordinated by *Patrícia Sampaio Tavares Veras* – IGM, FIOCRUZ, Brazil

Camila Indiani de Oliveira – IGM, FIOCRUZ, Brazil

14:00 – 15:30 **Ana Grenha** – University of Algarve, Portugal

Inhalable therapy of pulmonary tuberculosis mediated by polysaccharide microparticles

Eder Lilia Romero – National University of Quilmes, Argentina

Nanomedicines against Chagas disease

Frédéric Frézard – Federal University of Minas Gerais, UFMG, Brazil

Combination oral therapy of leishmaniasis using nanoassemblies made from amphiphilic antimony (V) complex incorporating miltefosine

Gaia Colombo – University of Ferrara, Italy

Microparticles' agglomerates and Dome matrix technology for personalized medicines in malaria

15:30 – 16:15 **Coffee-break and Poster viewing**

CLOSING PLENARY SESSION

16:15 – 17:00 **Paolo Colombo** – University of Parma, PlumeStars srl, Italy

Microparticles of tobramycin for drying powder inhaler

ROOM MASTER II

OPENING PARALLEL SESSION

09:00 – 09:45 **Renata Fonseca Vianna López** – University of São Paulo, Brazil

Micro and nanoparticles for topical ocular drug delivery

SPECIAL SESSION

Oral Presentations

Chairs: *Nereide Stela Santos Magalhães* – Federal University of Pernambuco, UFPE, Brazil

Maria Palmira Daflon Gremião – São Paulo State University, UNESP, Brazil

09:55 – 10:15 **Eloísa Portugal Barros Silva Soares de Souza** – Federal University of Sergipe, UFS, Brazil

Inclusion complex nerolidol-beta-cyclodextrin: evaluation anti-inflammatory activity in arthritis model

10:15 – 11:00 **Coffee-break and Poster viewing**

11:00 – 11:20 **Sued Eustaquio Mendes Miranda** – Federal University of Minas Gerais, UFMG, Brazil

Preparation, characterization, stability and biodistribution of nanoemulsions O/A containing lapachol

11:20 – 11:40 **Edilson de Oliveira Júnior** – Federal University of Goiás, UFG, Brazil

Nose-to-brain delivery of geraniol-ursodeoxycholic acid conjugate-loaded solid lipid nanoparticles for the treatment of Parkinson's disease

11:40 – 12:00 **João Victor Fernandes Cotrim de Almeida** – EMBRAPA, Brazil

Pharmacokinetics of cloxacilin polymeric nanoparticles administered in goats diagnosed with caseous lymphadenitis

12:00 – 14:00 **Lunch**

SATELLITE MEETING

Nano- and Microencapsulation of Natural Products

Coordinated by *Luiz Alberto Lira Soares* – Federal University of Pernambuco, UFPE, Brazil

14:00 – 15:30 **Luis Alexandre Pedro de Freitas** – University of São Paulo, USP, Brazil

Microencapsulation by Spray Drying using Natural Polymers

Cassia Detoni – Federal University of Rio de Janeiro, UFRJ, Brazil

Use of natural products in the development of micro and nano disperse systems

Ádley Antonini – Federal University of Rio Grande do Norte, UFRN, Brazil

Use of polymers and cyclodextrins in microencapsulated systems with natural products

15:30 – 16:15 **Coffee-break and Poster viewing**

CLOSING PARALLEL SESSION

16:15 – 17:00 **Peter Tygesen** – Croda, Denmark

Innovations in adjuvant technologies to enable new and efficacious vaccines

THURSDAY, **SEPTEMBER 26, 2019**

ROOM MASTER I

OPENING PLENARY SESSION

09:00 – 09:45 **Denis Poncelet** – EncapProcess, France
Encapsulation through dripping: from fundamental to industrial production

SCIENTIFIC SESSION

Food and Probiotic Encapsulation Technology

Chair: *Denis Poncelet* – EncapProcess, France

Vanessa Mosqueira – Federal University of Ouro Preto, UFOP, Brazil

09:45 – 10:15 **Pedro Henrique Hermes de Araújo** – Federal University of Santa Catarina, UFSC, Brazil
Use of encapsulated natural compounds as antimicrobial additives in food packaging

10:15 – 11:00 **Coffee-break and Poster viewing**

11:00 – 11:30 **Samantha Cristina de Pinho** – University of São Paulo, USP, Brazil
Liposomes in food: processes, applications and possibilities

11:30 – 12:00 **Gustavo Cadurim de Oliveira** – Lipid Ingredients & Technologies, Brazil
Lipid delivery systems: scale up challenges & application in food supplement

12:00 – 14:00 **Lunch**

THEMATIC ROUND TABLE

Micro- and Nanotechnology in Sustainable Agriculture, Animal Health and Environment

Coordinated by *Humberto de Mello Brandão* – Embrapa, Brazil

14:00 – 15:00 **Daniel Souza Correia** – Embrapa, Brazil
Nanofibrous membranes: an interesting tool for slow release system applied in agriculture

Elaine C. M. Cabral Albuquerque – Federal University of Bahia, UFBA, Brazil
Potential applications of copaiba oil-resin entrapped into micro/nanoparticles

Caio Pinho Fernandes – Federal University of Amapá, UNIFAP, Brazil
Aqueous nano-dispersions from natural products: a low energy approach

SCIENTIFIC SESSION

Novel Engineered Materials and Processes for Encapsulation Technology

Chairs: *Hermínio C. de Sousa* – University of Coimbra, Portugal

Silvio A. B. Vieira de Melo – Federal University of Bahia, UFBA, Brazil

15:00 – 15:30 **Adriana R. Pohlmann** – Federal University of Rio Grande do Sul, UFRGS, Brazil
Innovative approach to functionalize the surface of polymeric nanocapsules intended for drug targeting

15:30 – 16:15 **Coffee-break and Poster viewing**

16:15 – 16:45 **Maria Helena Andrade Santana** – University of Campinas, UNICAMP, Brazil
Particulate biomaterials based on hyaluronic acid and its processes for applications in regenerative medicine

16:45 – 17:15 **José Carlos Costa da Silva Pinto** – Federal University of Rio de Janeiro, UFRJ, Brazil
Strategies for the simultaneous in-situ functionalization of polymer particles and encapsulation of chemicals

CLOSING PLENARY SESSION

17:15 – 18:00 **Hermínio C. de Sousa** – University of Coimbra, Portugal
Supercritical carbon dioxide-based technologies for the production of drug nanoparticles/nanocrystals

ROOM MASTER II

OPENING PARALLEL SESSION

09:00 – 09:45 **Bartira Rossi-Bergmann** – Federal University of Rio de Janeiro, UFRJ, Brazil
Safe treatment of leishmaniasis with a single dose of microencapsulated drugs

SPECIAL SESSION

Oral Presentations

Chairs. *María José Morilla* – National University of Quilmes, Argentina

Adriano Antunes de Souza Araújo – Federal University of Sergipe, UFS, Brazil

09:55 – 10:15 **Ravenna Lessa Matos** – University of Birmingham, United Kingdom
Co-precipitation of curcumin/PVP using the supercritical antisolvent process (SAS)

10:15 – 11:00 **Coffee-break and Poster viewing**

11:00 – 11:20 **Natália Noronha Ferreira Naddeo** – São Paulo State University, UNESP, Brazil
Exploiting hallmarks of cancer using nanotechnology tools as a novel therapeutic strategy against glioblastoma: biological performance

11:20 – 11:40 **Nayara Almeida Lage** – Federal University of Minas Gerais, UFMG, Brazil
Evaluation of chitosan microparticles and microemulsion as potential adjuvants for immunization with epsilon toxoid

11:40 – 12:00	Ana Paula dos Santos Matos – Federal University of Rio de Janeiro and FIOCRUZ, Brazil <i>Development, in vitro release and skin permeation studies of Amphotericin B nanoemulsions for cutaneous leishmaniasis treatment</i>
12:00 – 14:00	Lunch
SATELLITE MEETING	
Nano- and Microencapsulation Science as Innovation Tools for Pharmaceutical Industry <i>Coordinated by</i> Helvécio Vinícius Antunes Rocha – Farmanguinhos, FIOCRUZ, Brazil	
14:00 –15:30	Samuel Mussi – Nile, Ferring/Aché, Brazil <i>Lipid-based nanocarriers loading peptides to enhance the oral absorption: a pharmaceutical industry perspective</i>
	Renata Raffin – Croda/Inventiva, Brazil <i>Topical application of delivery systems: results and perspective</i>
	Paola Russo – University of Salerno, Italy <i>Prilling as a versatile technique for the encapsulation of drugs and bioactives</i>
15:30 – 16:15	Coffee-break and Poster viewing
CLOSING PARALLEL SESSION	
1 6:15 – 17:00	Eryvaldo Sócrates T. do Egito – Federal University of Rio Grande do Norte, UFRN, Brazil <i>Microemulsions as a diluent for insoluble active pharmaceutical Ingredients (API)</i>

FRIDAY, **SEPTEMBER 27, 2019**

ROOM MASTER I

OPENING PLENARY SESSION

09:00 – 09:45 **Bruno Sarmiento** – University of Porto, Portugal
Functionalized PLGA nanomedicines for the disruptive delivery of biopharmaceutical drugs

SCIENTIFIC SESSION

Nano- and Microencapsulation for Innovative Therapies, Biomedical Imaging and Diagnostics

Chairs: *Gaia Colombo* – University of Ferrara, Italy
Fabio Rocha Formiga – IAM, FIOCRUZ, Brazil

09:45 – 10:15 **Ricardo Bentes de Azevedo** – University of Brasilia, UnB, Brazil
Photodynamic therapy can cure natural cutaneous hemangiosarcoma in dogs

10:15 – 10:45 **Coffee-break**

10:45 – 11:15 **Antonio Cláudio Tedesco** – University of São Paulo, Brazil
The treatment of neurodegenerative disorders and brain cancer by drug delivery system associated with photoactive compounds

11:15 – 11:45 **Silvia S. Guterres** – Federal University of Rio Grande do Sul, UFRGS, Brazil
Therapeutic applications of lipid-core nanocapsules

12:00 – 12:30 **Prizing attribution and Concluding Remarks**

ROOM MASTER II

OPENING PARALLEL SESSION

09:00 – 09:45 **Carlota Rangel-Yagui** – University of São Paulo, USP, Brazil
Polymersomes - an alternative for protein drugs encapsulation and delivery

SPECIAL SESSION

Oral Presentations

Chairs: *Ana Grenha* – University of Algarve, Portugal
Bolívar P. G. L. Damasceno, State University of Paraíba, UEPB, Brazil

09:55 – 10:15 **Christian Quijia Quezada** – University of Brasília, UnB, Brazil
Nanoliposomes composed by membrane lipid extracts from macrophage cell line for delivery of the trypanocide N, N'-Squaramide 17 towards CL-breiner clone of Trypanosoma cruzi

10:15 – 10:45 **Coffee-break**

10:45 – 11:05 **Daniele Baiocco** – University of Birmingham, United Kingdom

Animal-free oil-Retaining microcapsules via complex coacervation

11:05 – 11:25 **Eduardo Burgarelli Lages** – Federal University of Minas Gerais, UFMG, Brazil

Evaluation of antitumor efficacy and preliminary toxicity of nanostructured lipid carriers loading doxorubicin, docosahexaenoic acid, and alpha-totopherol succinate

11:25 – 11:45 **Ana Paula Buratto** – Federal Technological University of Paraná, UTFPR, Brazil

Microencapsulation of feijoa pulp (Acca sellowiana) by the spray drying process
