Deutsche Gesellschaft für Parasitologie

Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

First Announcement

24th Drug Design & Development Seminar (DDDS) 2024 of the German Society for Parasitology (DGP)

"Combining Efforts towards Human and Animal Parasitic Diseases"

Date: **March 13th – 15th, 2024**

Venue: **University of Würzburg, Germany**

Conference Homepage in preparation

On the occasion of the **24th DDDS** conference you are cordially invited to participate and to present your research in **an oral presentation (15 minutes) or as poster**. An abstract is requested for both talks and posters (**abstract guidelines below**). The scientific board will select the topics for oral presentations or posters depending on the abstracts. Renowned international keynote speakers will provide a high-quality scientific framework. The seminar will be opened with a welcome reception on Tuesday evening and conclude Friday at noon.

Deadline for registration is November 17th, 2023

Deadline for abstract submission is December 8th, 2023

Scientific Board

Prof. Dr. Klaus Brehm
University of Würzburg, Germany

Prof. Dr. Markus Engstler
University of Würzburg, Germany

Prof. Dr. Paul M. Selzer
Boehringer Ingelheim Animal Health
Ingelheim am Rhein, Germany

Dr. Sandra Noack
Boehringer Ingelheim Animal Health
Ingelheim am Rhein, Germany

Organizer:

University of Würzburg

About the Drug Design & Development Seminar (DDDS)

The Drug Design & Development Seminar (DDDS) was founded in 1999 as an active working group of the German Society for Parasitology, by Prof. Dr. Peter Köhler (Univ. of Zürich, CH), Prof. Dr. Rolf Walter (BNI, Hamburg, DE), and Prof. Dr. Heiner Schirmer (Univ. of Heidelberg, DE). Since 2004 Prof. Dr. Paul M. Selzer (Boehringer Ingelheim Animal Health, Ingelheim, DE) is the coordinator of the DDDS transferring the meeting into an international well recognized scientific forum. Exchange of scientific information about anti-parasitic chemotherapy between universities, industry, and other research organizations continues to be important to accelerate anti-parasitic drug development. The DDDS is open to all scientists and professionals interested in the field of anti-parasitic research. The DDDS aims at connecting human and veterinary health by complementary approaches in medical and veterinary parasitology and medicinal chemistry to aim and stimulate One-Health approaches to combat parasitic diseases. The main topics include but are not limited to:

- Target identification, characterization, and validation
- Identification of compounds
- Synthesis and optimization of lead compounds towards marketable drugs
- Testing active compounds in animal models

Abstract guidelines:

To facilitate preparation of the abstract book, please provide the abstract as follows:

- Title, authors, affiliations, E-mail address of corresponding author, abstract text, selected literature citations
- .docx format, Arial font size 11 points, 1.5-fold line spacing
- Maximum: 1 page (A4 size)
- Maximum: 220 words
- References, if appropriate/needed
- Text format example below

In case these guidelines are disregarded, the Scientific Committee reserves the right to return inadequate abstracts to the sender for correction. Keep deadlines in mind, as the selection of topics for presentation will be based on correct abstracts only.

Abstract example:

Development and *in vivo* efficacy of biocompatible drug-loaded microspheres against C*. parvum*

E. Blanco García[1], J. Blanco Méndez[1], F. J. Otero Espinar[1], H. Gómez Couso[2], E. Ares Mazás[2], A. Luzardo Álvarez[1]

[1]Departamento de Farmacología, Farmacia y Tecnología Farmacéutica. Universidad de Santiago de Compostela. Spain; [2]Departamento de Microbiología y Parasitología. Universidad de Santiago de Compostela. Spain.

E-mail: francisco.otero@usc.es

Human cryptosporidiosis is one of the most commonly diagnosed protozoan-associated intestinal diseases worldwide. It is one of the main causes of diarrhoe in immunocompromised hosts [1]. There is no completely efficient treatment. Based on previous work [2], an alternative therapy against *Cryptosporidium parvum* using bioadhesive Paromomycin and Diloxanide Furoate (DF)-loaded microspheres was developed. Microspheres (MS) were prepared using chitosan (CHI) and poly(vinyl alcohol) (PVA) and two types of cyclodextrins (β-CD and DM-β-CD) for potential use. Microparticle formulations were characterized in terms of size, surface charge, drug release and morphology. *In vivo* bioadhesion properties of CHI/PVA microspheres were also evaluated. In addition, the *in vivo* efficacy of CHI/PVA microspheres against *C. parvum* was tested in neonatal mouse model of cryptosporidiosis.

Microspheres prepared by spray-drying showed spherical shape, diameters between 6.67 ± 0.11 and 18.78 ± 0.07 μm and positively surface charge. The bioadhesion studies demonstrated that MS remained attached at +16h (post-infection) to the intestinal cells. The efficacy of treatment determined in mice receiving orally administered microspheres with and without drug showed significantly lower parasite loads compared with the control.

Our results suggest that microspheres are safe and simple systems for anticryptosporidial treatment. This work demonstrated the high potential of using bioadhesive chitosan/PVA microspheres for antiparasitic drug delivery by oral route in the treatment or prevention of *C. parvum* infections.

[1] Bouzid, M. et al., 2013. Clin Microbiol Rev. 26, 115–34.

[2] Luzardo-Álvarez, A. et. 2012. Eur. J. Pharm. Sci. 47, 215-227.