Praxis Pharmaceutical

Praxis Biopraxis Research

DARTRIX Workshop – DARPin Targeted Magnetic Hyperthermic Therapy for Glioblastoma

Commercialization of Magnetic Nanoparticles for Hyperthermia

January 18th 2017, London

Ing. Oihane Ibarrola
Scientific Responsible for Process Technologies
Research & Development Division

THE COMPANY

PRAXIS PHARMACEUTICAL GROUP is structured in three **divisions:**

R&D Division

Research and development of own or acquired molecules in early development phases

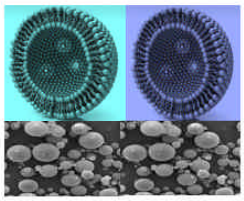
Manufacturing Division

Contract development and manufacturing of sterile liquid or lyophilized drugs, specially biologics and other complex drugs, cell therapy products and nano-microformulations.

Sales Division

Marketing of drugs and health devices in Spain, France, Portugal and South America

MANUFACTURING DIVISION



INNOVATION

Drug Delivery
Nano-Micronanomedicines

"Praxis has developed Technology Platforms for the Development, Scale-up and Manufacture of Nanomedicines"

- Recognized scientific team supporting all the development activities (patents and articles in high impact articles).
- Capabilities for Development and up scaling of production of nano/ micro pharmaceuticals at our GMP facilities.
- The proposed platform technologies, mainly based in lipid matrices, allows the obtaining of nanoformulations of different drugs in a safe and efficient way (SLNs and NLCs).
- Ability to overcome lack of reproducibility / homogeneity, absence of regulatory guidelines and toxicity issues.
- Other processes available for microparticles processing (using PLGA or similar components).

MANUFACTURING DIVISION

Clinical GMP and ISO Manufacturing

"Flexibility and efficiency combined with Regulatory compliance"

- Special equipment for easy format changing, featuring CIP and SIP processes, designed for highly efficient small-medium batch production.
- Maximum Flexibility (single use materials, cold compounding, absence of oxygen, light protection, etc.)
- Clinical batch manufacturing (Phase I, Phase II, Phase III) with semi-automated/automated filling processes, matching all customer needs.
- In house release of clinical batches (QP) and experience to provide regulatory support for the CMC, pre-clinical and clinical sections.

R & D DIVISION

Micro-nanoformulations for cancer therapy and diagnosis

TheraGlio

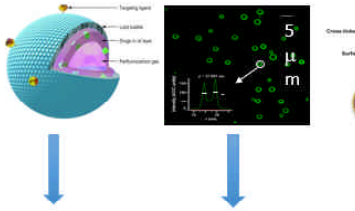
Microbubble driven multimodal imaging and theranostics for gliomas

Microbubbles (MBs) are a well-established contrast agent for US imaging.

Theraglio will develop a multimodal imaging system for Theranostics (therapy+diagnosis) of patients bearing malignant glioma.

TheraGlio will avail of new generation Microbubbles (MBs) that can simultaneously act as drug delivery system and contrast agent for Magnetic Resonance Imaging, intra-operative Contrast-Enhanced Ultrasound and intra-operative fluorescence microscopy.

Microbubbles supporting imaging and theranostics



Clinical tests

Pre-clinical tests

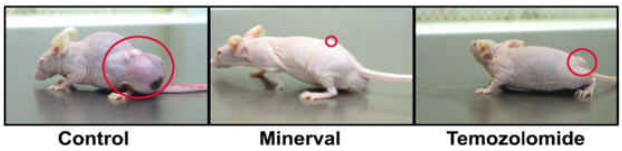
SEVENTH FRAMEWORK PROGRAMME

R & D DIVISION

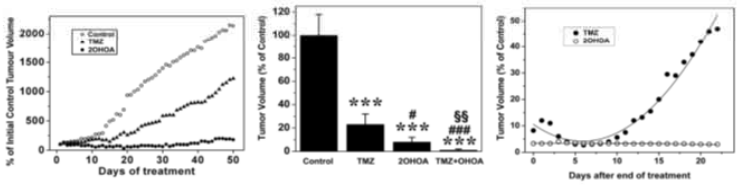
MINERVAL for cancer therapy and diagnosis

Minerval against human brain tumors (GLIOMA) compared to TMZ

Human glioma (SF767) cells in Nu/Nu mice



Control Minerval Temozolomide



Lipid nanoformulations for skin regeneration

Nanoformulate growth factors to decrease their degradation.

Dose reduction.

WO 2015/001163 A2

(54) Title: LIPID NANOPARTICLES FOR HEALING WOUNDS

(54) Título : NANOPARTÍCULAS LIPÍDICAS PARA LA CICATRIZACIÓN DE HERIDAS

(57) Abstract: The invention relates to lipid nanoparticles comprising a growth factor and/or an antimicrobial lipid, and a method for the preparation thereof. The invention also relates to pharmaceutical compositions comprising said lipid nanoparticles and a pharmaceutically acceptable carrier. The invention further relates to the use of said pharmaceutical composition as medication and for promoting the healing of wounds, in particular by means of topical administration.

(57) Resumen: La invención se refiere a nanopartículas lipídicas que comprenden un factor de crecimiento y/o un lípido antimicrobiano y a su método de preparación. Asimismo, se refiere a composiciones farmacéuticas que comprenden dichas nanopartículas lipídicas y un vehículo farmacéuticamente aceptable. Por último, se refiere a dicha composición farmacéutica para su uso como medicamento y para su uso para promover la cicatrización de heridas, en particular mediante administración tópica.