TREAT U is a spin-off from the University of Coimbra, founded in January 2010, and headquartered in Coimbra, Portugal.

MISSION & VISION

Our mission is to develop more effective strategies and safer products for the oncologic patient by increasing therapeutic efficacy and reducing the incidence of adverse side effects, hence reducing treatment costs for healthcare systems and generating a pipeline of interest for the Pharmaceutical Industry.

COOPERATIONS

We have established strong synergies with national and international partners, facing the global market needs in Oncology. Supported by a highly qualified team, the innovative potential of our R&D was recognized by Maksen. We are part of the MIT-Portugal programme and of the "Residence Entrepreneurship" project from the Carnegie Mellon-Portugal programme.

TREAT U is part of the innovation network at the National Scientific and Technological System. We are partners with:

bluepharma biocant PARK CNC · U C ·

RESEARCH

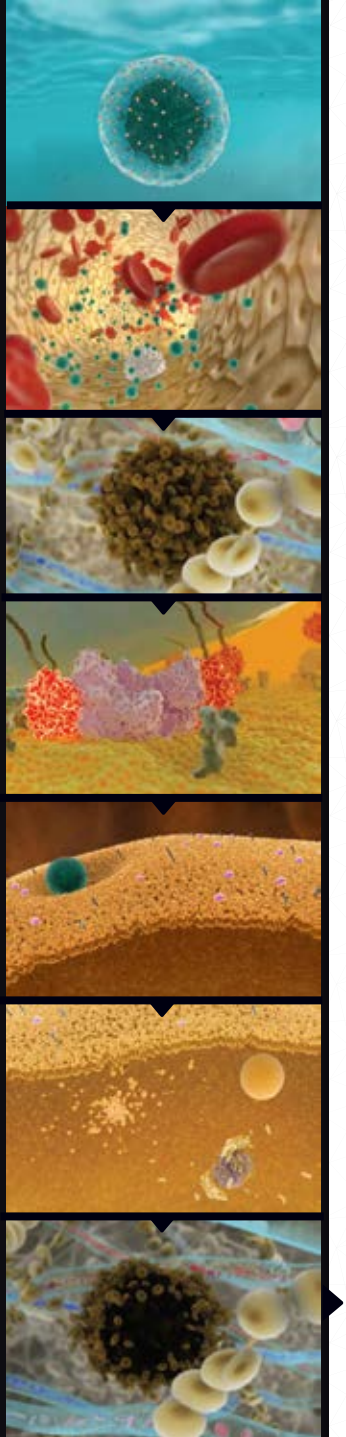
Focusing on the limitations of conventional chemotherapeutic drugs, we are dedicated to the development of targeted nanotechnology-based platforms for specific and triggered drug delivery. The therapeutic agents are released only in the tumour microenvironment, through specific ligand-receptor interactions. Therefore, it is possible to increase therapeutic efficacy by increasing concentration of the drug in the tumour, and decrease the incidence of side effects by decreasing accumulation in healthy organs.

PIPELINE

PEGASEMP™

Our first project was initiated in 2006 with the development of the platform **PEGASEMP™**, for **breast cancer treatment**.

PEGASEMP™ is a lipid-based nanoparticle that carries a chemotherapeutic compound (doxorubicin) trough the bloodstream and delivers the encapsulated agent to specific cell populations in the tumour microenvironment, namely tumour cells and endothelial cells from tumour blood vessels. Upon internalization, the encapsulated drug becomes rapidly bioavailable, following destabilization in the endocytic pathway.



Results obtained with **PEGASEMP™** for the delivery of doxorubicin to breast tumors, both in vitro and in an animal orthotopic model of breast cancer, have demonstrated the benefits of combining **specificity** and **triggered drug delivery** to promote **selective accumulation** of doxorubicin in the tumor microenvironment, thus **decreasing vascular density** and **inhibiting tumor invasiveness** to healthy tissues.

Watch the video

INTELLECTUAL PROPERTY

PEGASEMPTM's technology has two patents granted in USA (US8231895B2, US8529944) and a PCT has already been filed in Europe. This platform was developed at CNC.UC and an exclusive license agreement between TREAT U, CNC and the University of Coimbra was established, granting the commercial rights to the first party on therapeutic and diagnostic applications.

FUNDING

- **Bluepharma** - Pharmaceutical Industry S.A.
- **Portugal Capital Ventures** - Venture Capital Society, S.A.
- **European Funds for Regional Development** (FEDER) from the National Strategic Reference Framework (QREN)

MILESTONES &STRATEGIES

PEGASEMP™ WILL ENTER CLINICAL TRIALS IN 2015 FOR ADVANCED BREAST CANCER.

2012	2013	2014	2015	2016	2017
Pharmaceutical Development Primary Pharmacology Formulation Proof-of-concept IP protection	Scale-up Non-clinical Testing (GPL)		Phase II Trials	Phase III Trials	Regulatory approval

PEGASEMP™ IS AN ATTRACTIVE TECHNOLOGY FOR THE PHARMACEUTICAL INDUSTRY, owing to its versatility in the incorporation of drugs or combinations of drugs. This adds new value to already marketed drugs, which patents are expiring or will expire in the near future, allowing new IP protection for these costumers.

The versatility of our platforms will allow new approaches for the treatment of tumors with different histological origins.

	Target discovery	Delivery platform development	Pre-clinical	Clinical		
				Fhase I	Fhase II	Fhase III
Breast ▸	●	●	●			
Lung ▸	●	●				
Leukemia ▸	●	●				

TREAT-U

Parque Industrial de Taveiro
Lote 44, 3045-508 Coimbra, PORTUGAL
(+351) 239 800 360

www.treatu.pt

info@treatu.pt