



# SELECTED OPPORTUNITIES IN IMMUNO CARDIOLOGY

AN AGENT CAPABLE OF DEPLETING CD8 T CELLS FOR THE TREATMENT OF MYOCARDIAL INFARCTION OR ACUTE MYOCARDIAL INFARCTION (BIO 15275)

## Product factsheet

*In vivo PoC*

### ▶ Target:

- ◆ CD8

### ▶ Product:

- ◆ CD8+ T cell depleting agent

### ▶ Application:

- ◆ Myocardial infarction

### ▶ Technology:

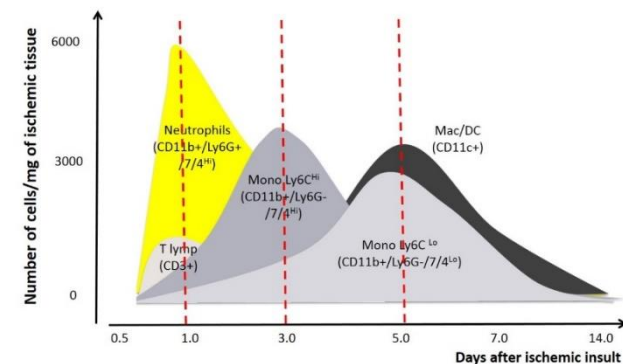
- ◆ Antibody

### ▶ Rational / POC:

- ◆ Immune cells are recruited in myocardial tissue after ischemia reperfusion with beneficial or deleterious impact
- ◆ The role of CD8<sup>+</sup> T cells was not known
- ◆ The team showed that depletion of CD8<sup>+</sup> T cells reduces necrosis, remodeling and improves myocardial function in a mouse model of permanent coronary ligation
- ◆ In human, CD8<sup>+</sup>T cells quickly infiltrates cardiac ischemic tissue
- ◆ Animal Poc (Pig) in progress

### ▶ Patent and publication:

- ◆ WO2017064034: An agent capable of depleting cd8 t cells for the treatment of myocardial infarction or acute myocardial infarction

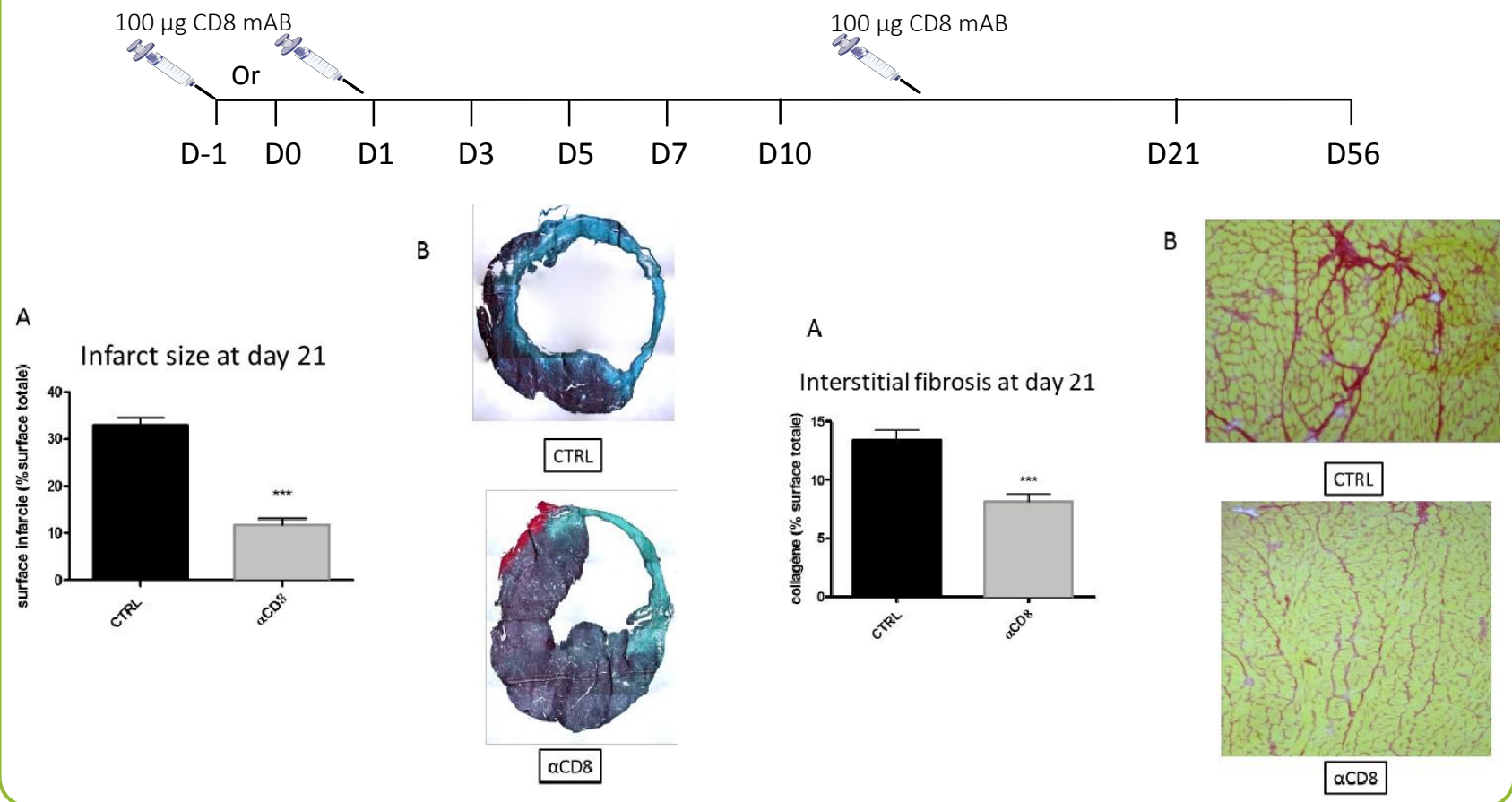


Silvestre et al, Physiol Rev, 2013

# BIO15275 - AN AGENT CAPABLE OF DEPLETING CD8 T CELLS FOR THE TREATMENT OF MYOCARDIAL INFARCTION OR ACUTE MYOCARDIAL INFARCTION

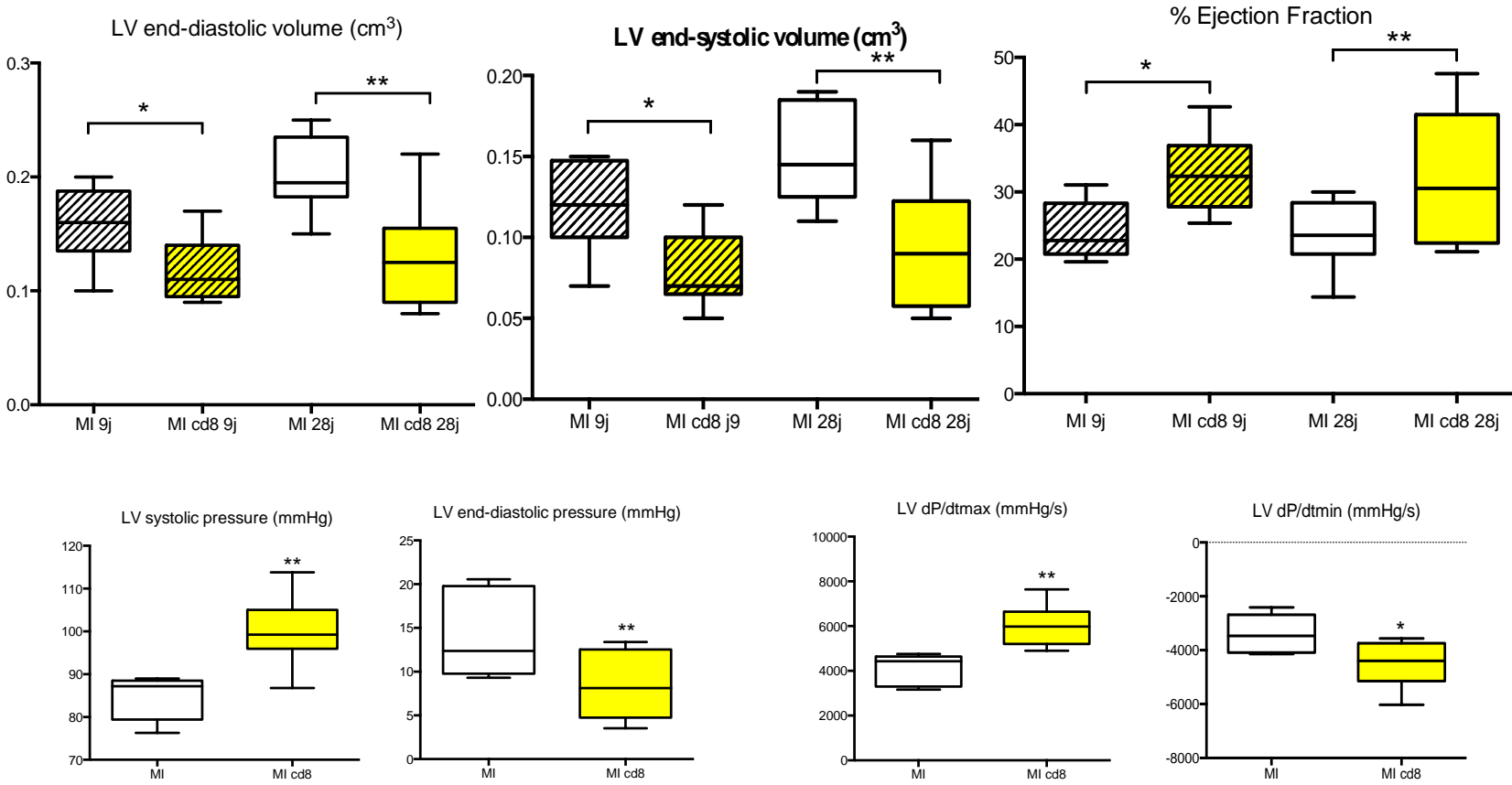
## Proof of concept

### CD8<sup>+</sup>T cells depletion reduces infarct size and fibrosis in peri-infarct area after permanent coronary ligation in mice



## Proof of concept

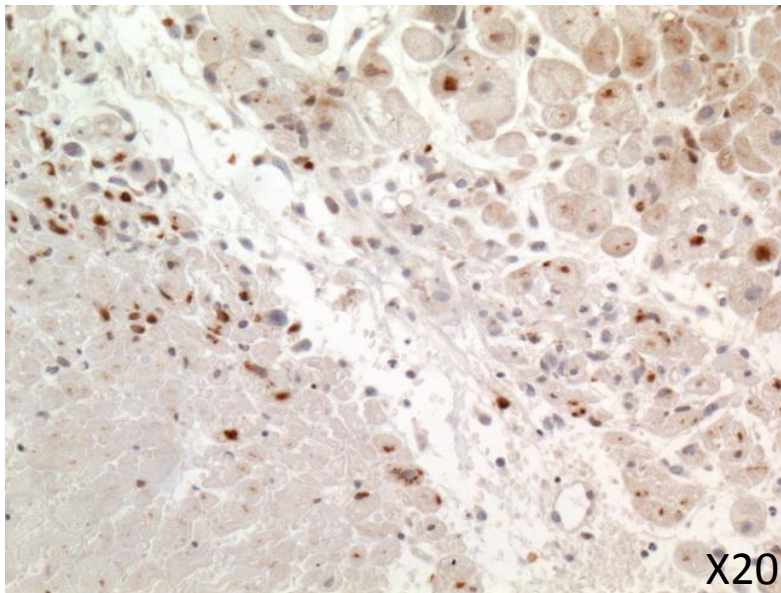
### CD8<sup>+</sup>T cells depletion improves left ventricular function (echocardiography) after permanent coronary ligation in mice



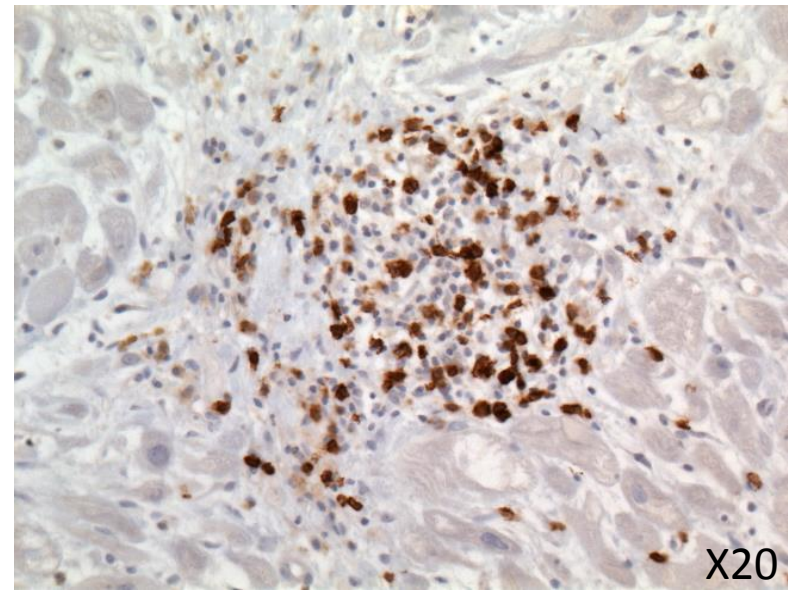
## Proof of concept

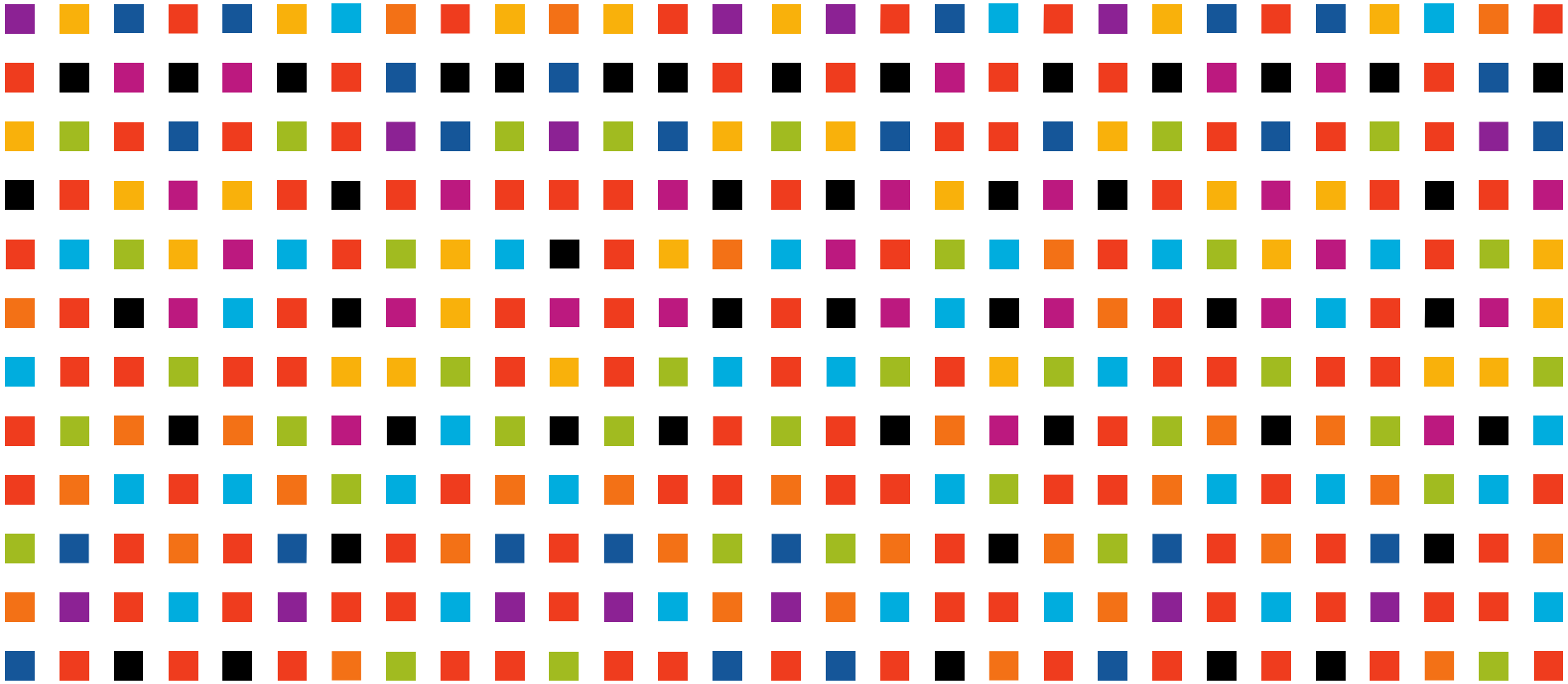
### CD8<sup>+</sup>T cells infiltration in human cardiac ischemic tissue

A: 1 day after MI



B: 7 days after MI





AYMERIC.EMPEREUR@INSERM-TRANSFERT.COM