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RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE LA DÉFENSE

# French anthrax vaccine program

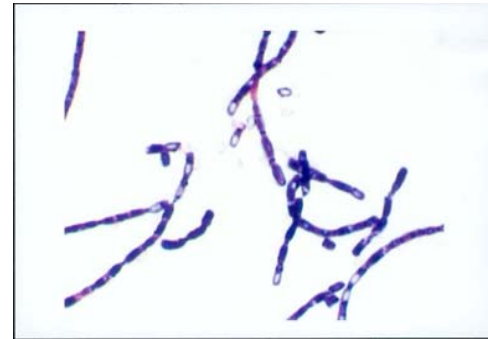
Col Françoise LEVEQUE



DÉLÉGATION GÉNÉRALE POUR L'ARMEMENT



# Context



## ● Background

- The French MOD has supported research on anthrax vaccine candidate for several years with Pasteur Institute.
- The MOD decided to support the development of one promising candidate.

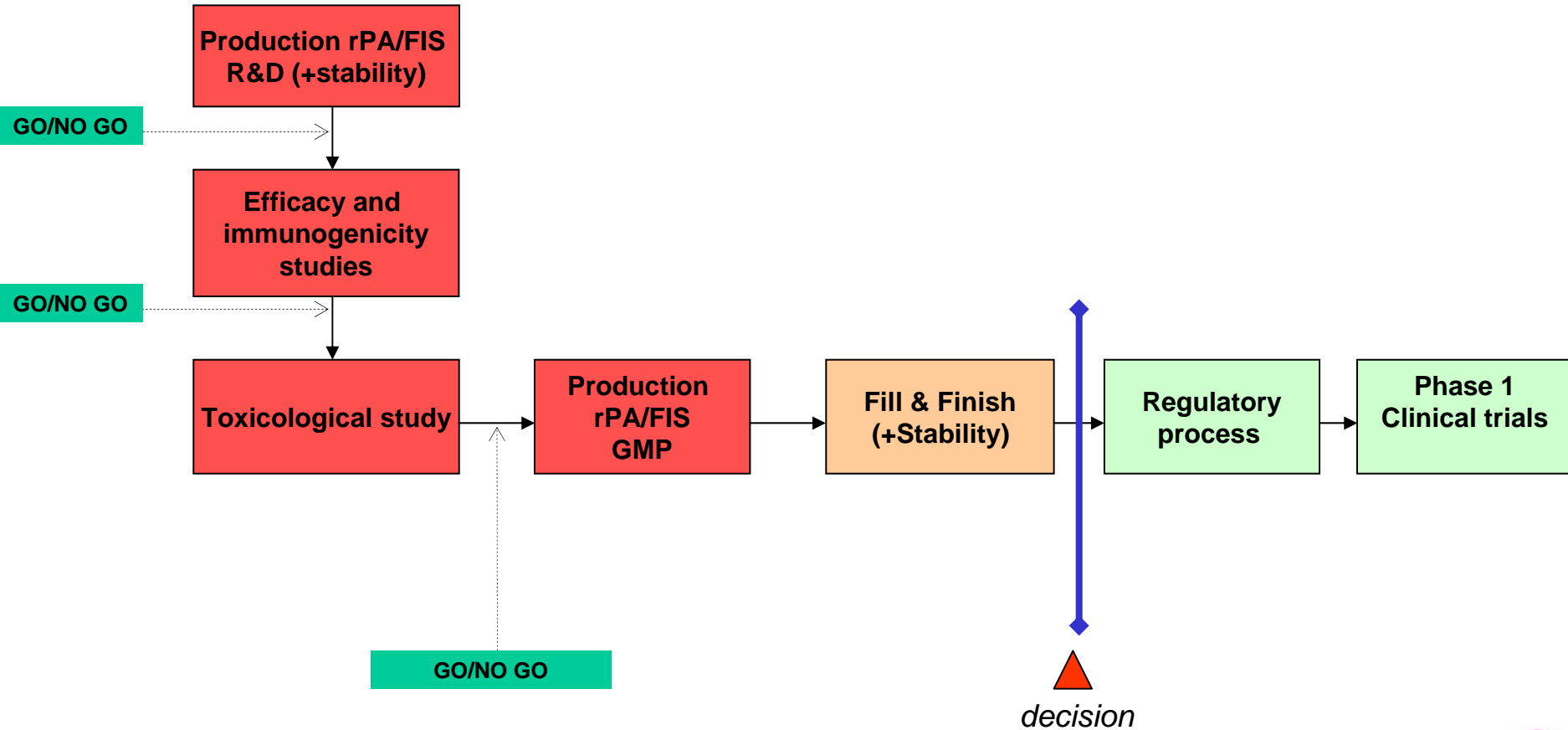
## ● Main objectives

- Obtaining more technical data for a product to be use in post-exposure treatment in combination with antibiotics.
- Increasing knowledge in the regulatory process with the French licensing authorities for a product that cannot undergo clinical trial phases 2 and 3.

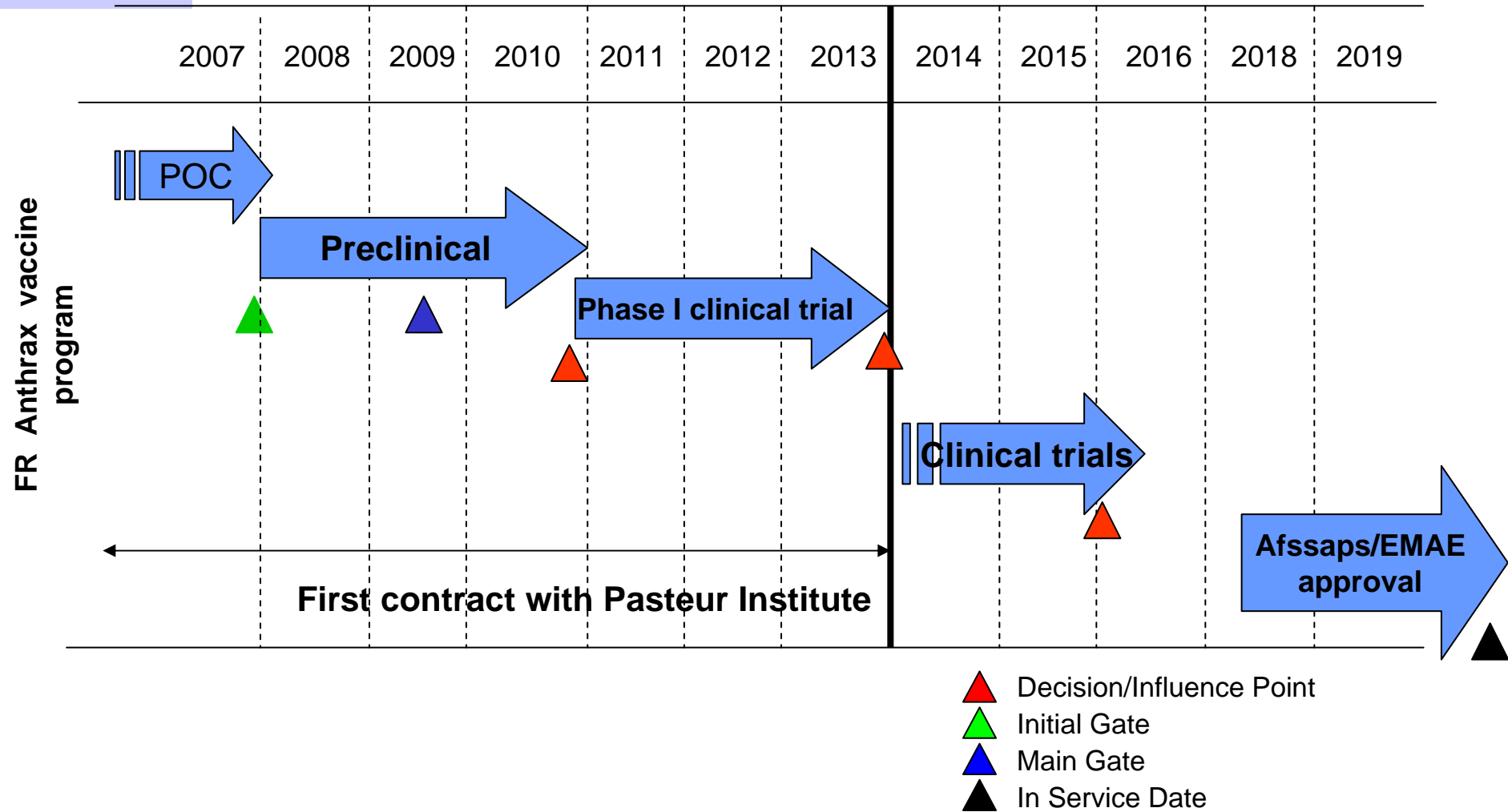
## ● Contract with Paris Pasteur Institute

Duration: 6 years for all preclinical trials

# Main development steps



# Milestones





# Vaccine characterization

- **Vaccine with two components:**
  - Recombinant protective antigen (rPA)
  - Formaldehyde - inactivated spores (FIS)
- **Adjuvant:** aluminum hydroxide.
- This composition aims to target the inhibition of:
  - toxemia
  - bacteria multiplication and toxemia;
- Immunisation obtained by two injections in two weeks.



# Preliminary protection data

Subcutaneous injection (9602 strain)	Animal models	Control Survival	Immunization	Survival of immunized animals	Serological response*	
					Anti-PA	Anti-spores
<b>30 LD<sub>50</sub></b>	Mice	0/18	PA+FIS	<b>24/24</b>	12.000	4.400
		0/18	PA	0/18	8.600	ND
		0/18	FIS	0/12	40	18.000
<b>300 LD<sub>50</sub></b>	Guinea pigs	0/10	PA+FIS	<b>9/9</b>	11.200	15.000

\*Titers of antibodies were determined by ELISA (**Brossier et al., Infection and Immunity, 2002**)  
ND, not determined

