

Preclinical Development of Microbicides

How the Most Promising Products Advance to Clinical Trial Evaluation

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Outline

- Purpose of preclinical microbicide development
- Conceptual view of the process
- Overview of the elements of preclinical drug development
 - PRO 2000

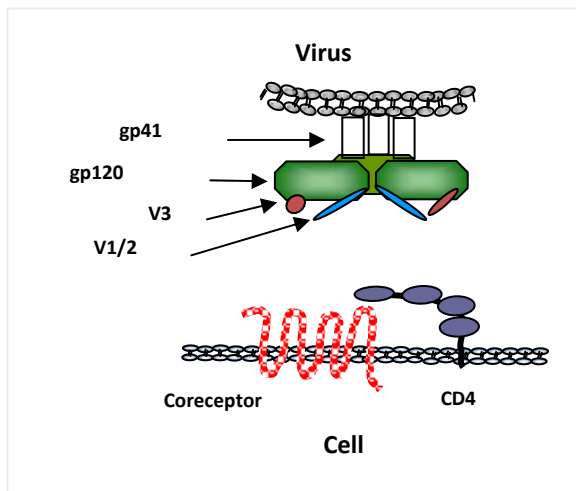


Microbicide Preclinical Development

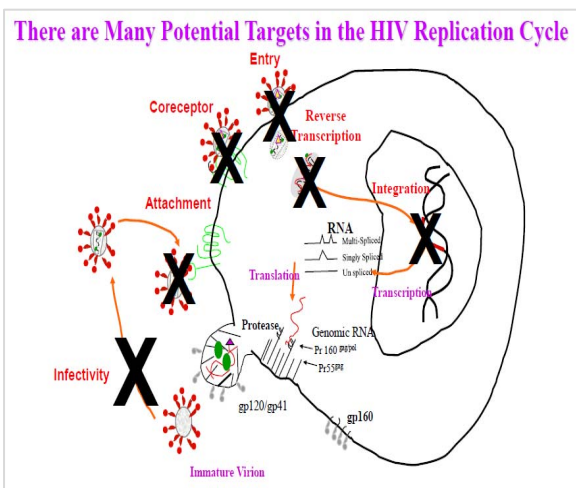
- Purpose
 - To predict how a microbicide will behave in humans before clinical testing
 - To ensure that the estimated risk/benefit profile of a novel microbicide is reasonable for the proposed use
- Objective
 - To rationally select the “best product” and eliminate failures quickly and early



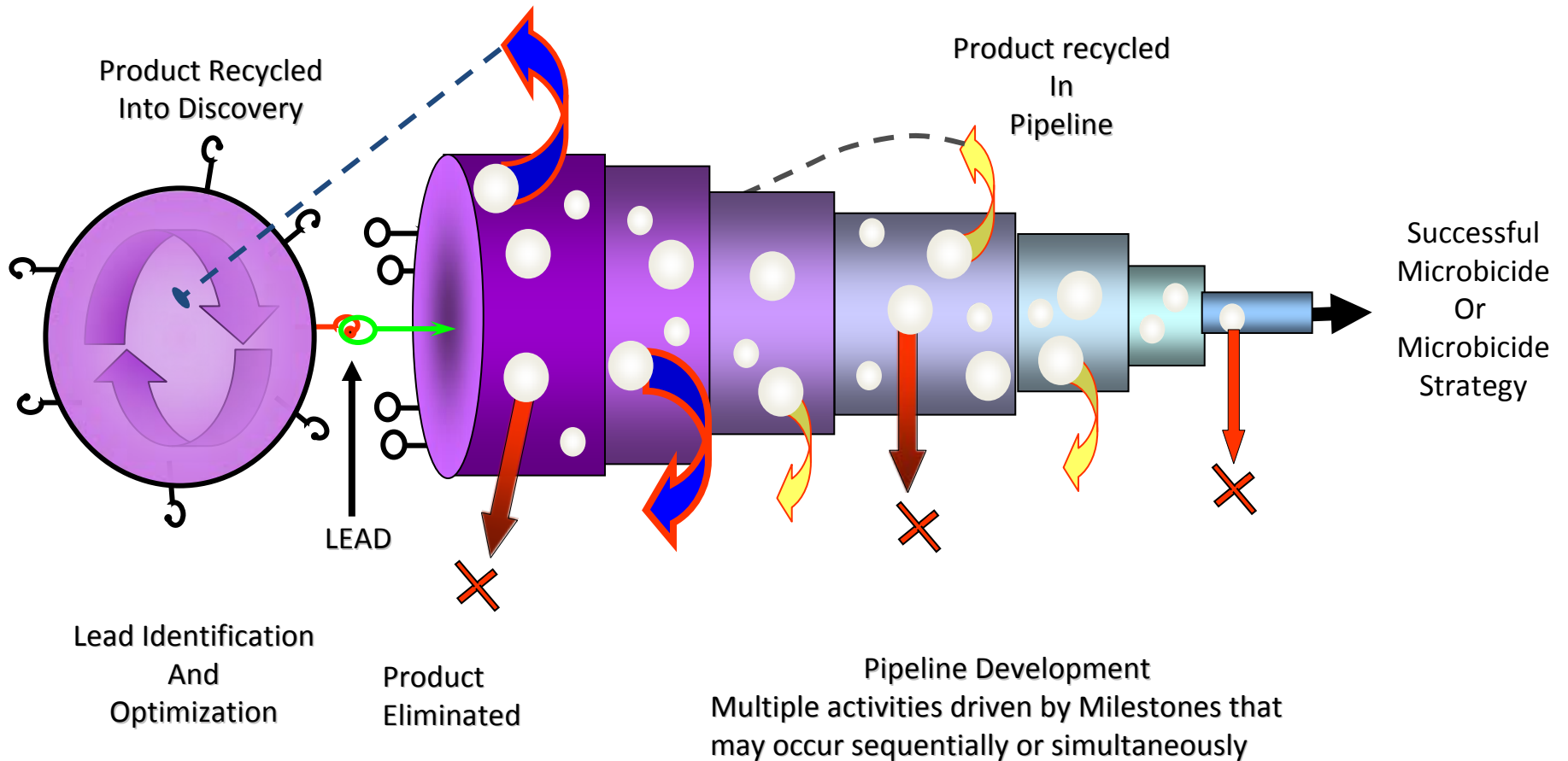
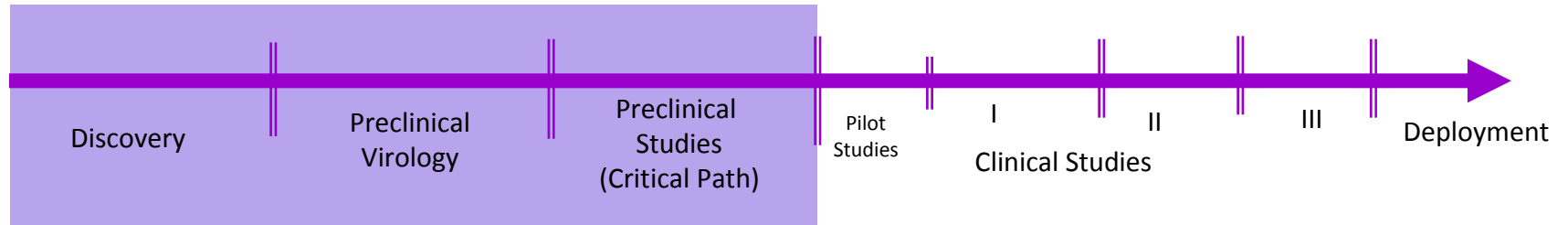
Basic Biomedical Research



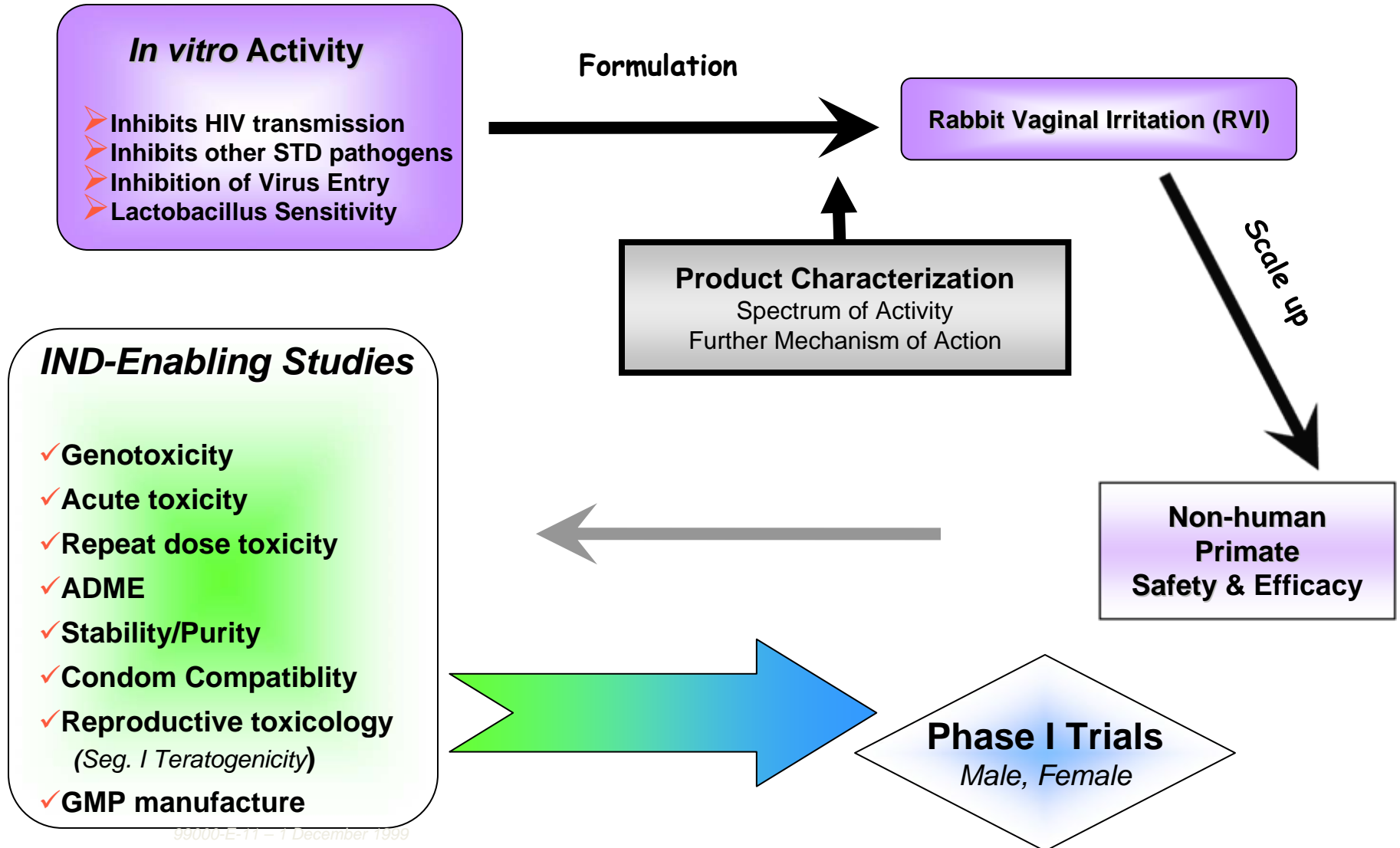
- ❖ Define mechanisms of infection
 - ❖ Site of infection
 - ❖ Vaginal, ectocervical, endocervical mucosa
 - ❖ Rectal mucosa
 - ❖ Infectious unit
 - ❖ Identify targets for microbicide discovery
- ❖ Discover new microbicide candidates
 - ❖ HIV targets
 - ❖ STI targets
 - ❖ Cellular/tissue targets



Discovery and the Product Development Pipeline



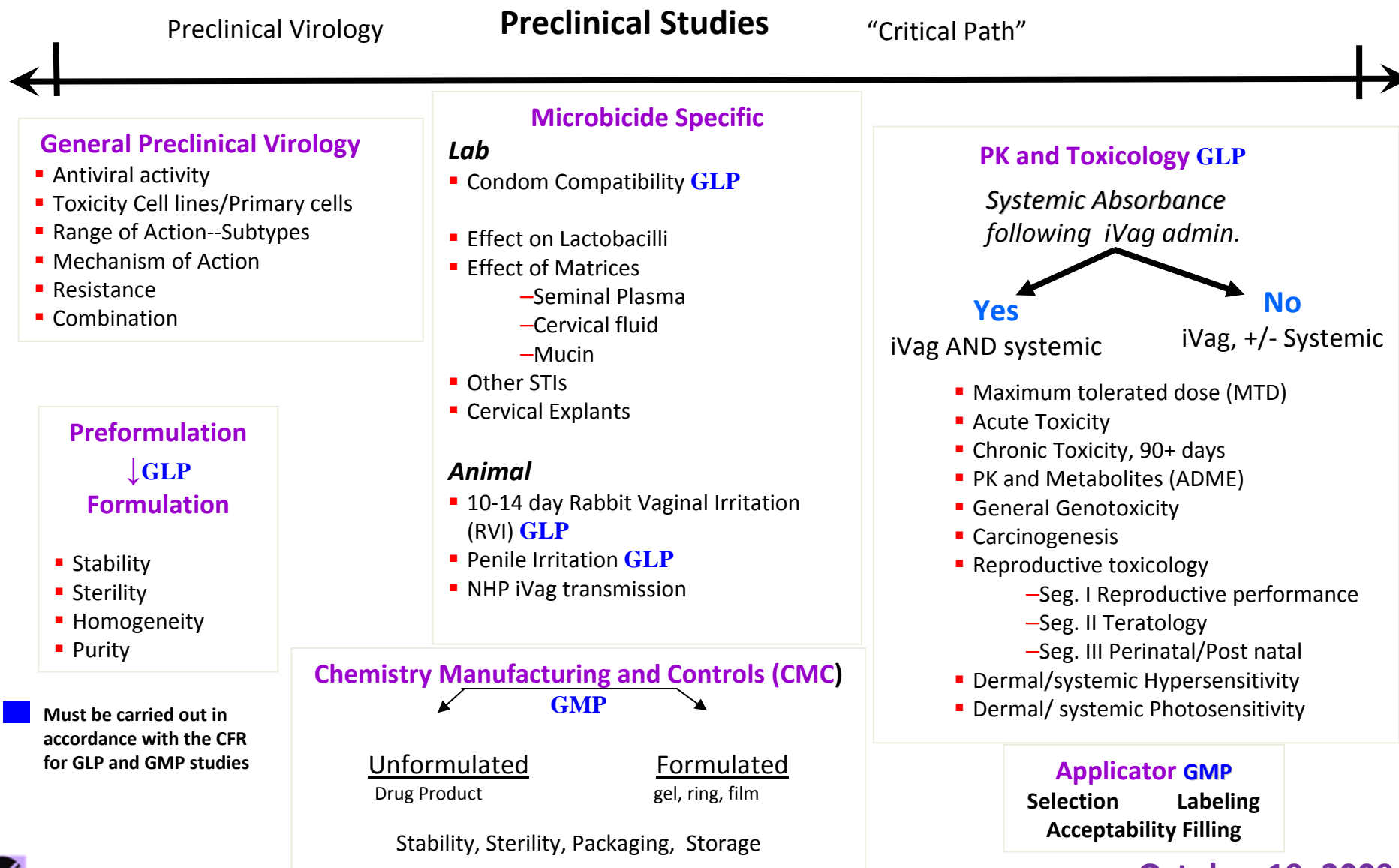
Phase I Development Path



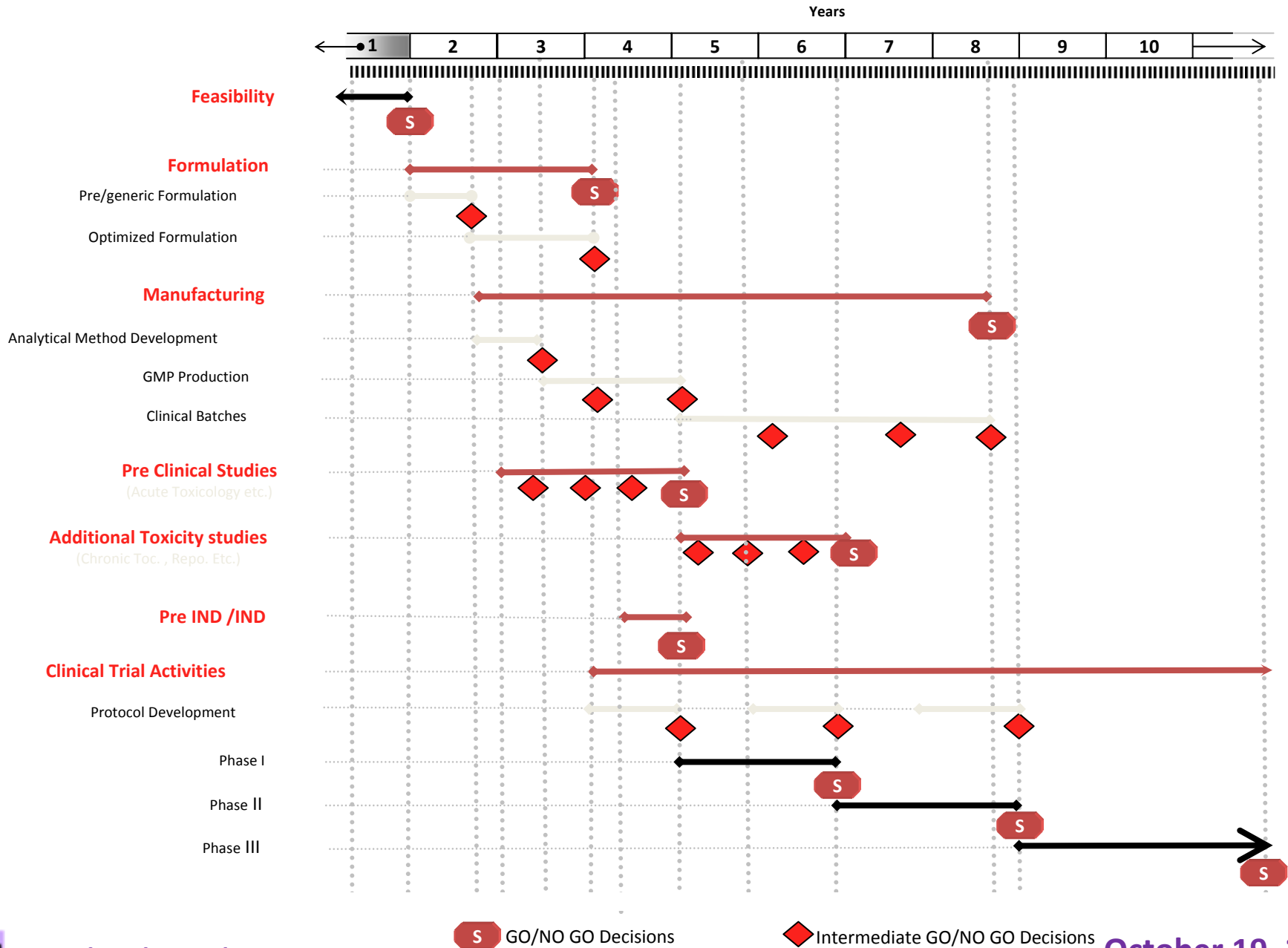
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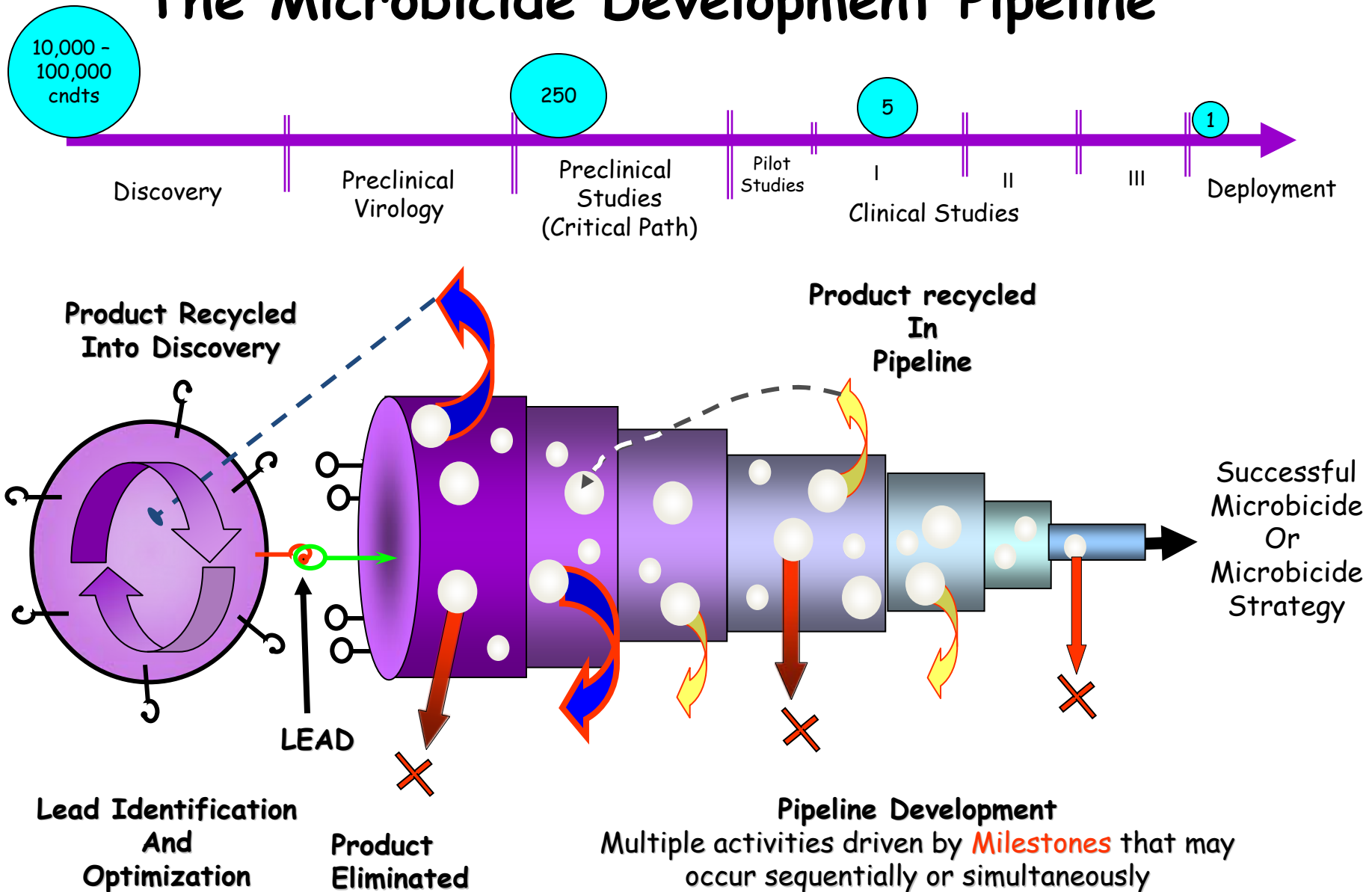
What is needed for the Translation from Preclinical to Clinical?



Plan for Microbicide Product Development



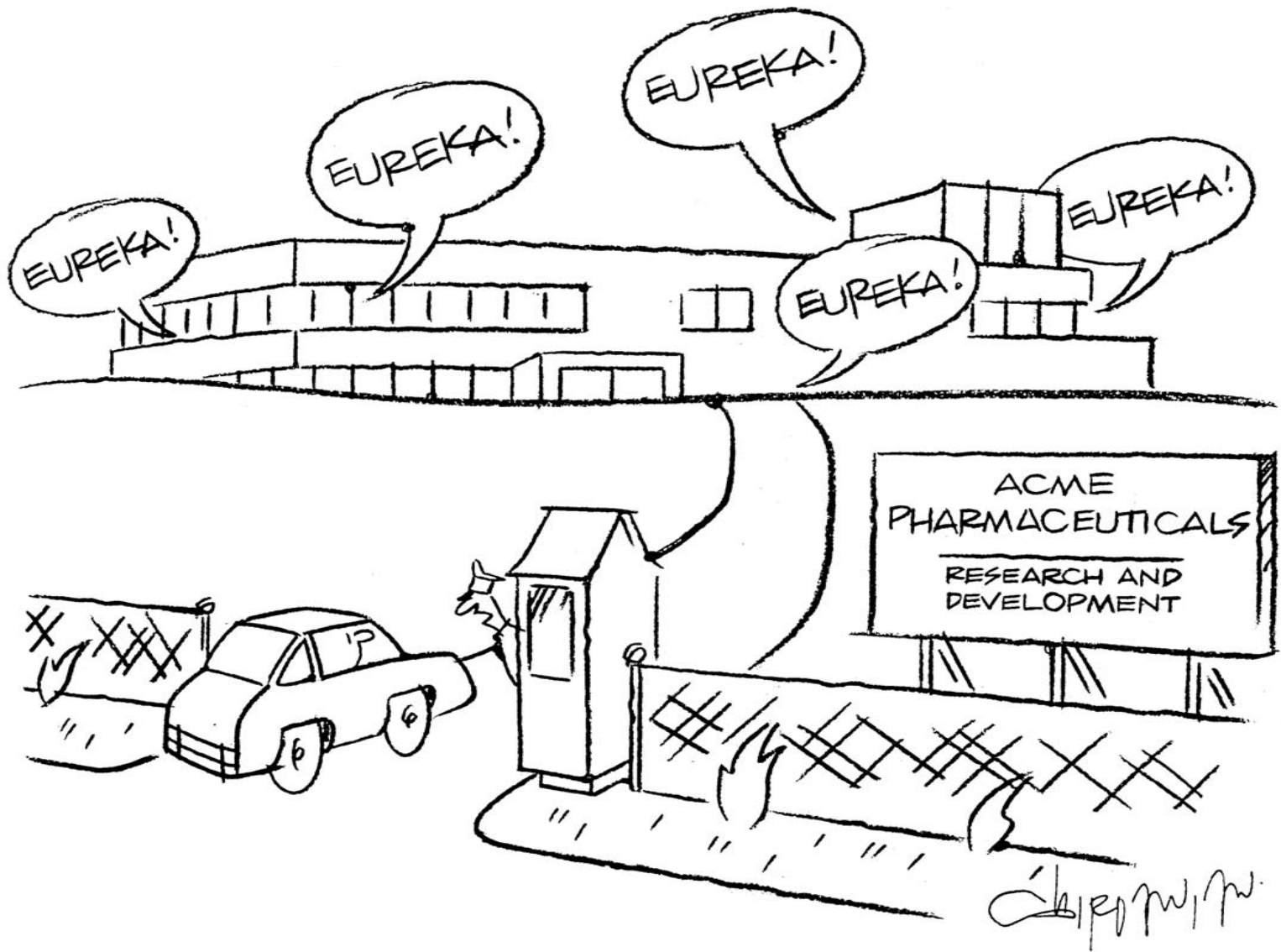
The Microbicide Development Pipeline



Conclusions

- ❖ Discovery research and preclinical development is an **iterative**, risky, complex task
- ❖ Microbicide preclinical selection algorithms are evolving processes, informed by clinical trial results and state-of-the-art understanding of HIV transmission.
 - *The goal is to identify the **most promising** candidates to advance while **eliminating** those candidates that are not optimal.*
- ❖ To date, it is not possible to validate a microbicide-specific preclinical development path that is predictive for clinical efficacy and safety.
- ❖ **Failure** is a normal part of the process.
- ❖ There is a **substantial** body of data on safety and efficacy before any candidate advances to clinical testing.





"Other days you can hear a pin drop."

