



# CSS perspective on the Review of Preclinical Abuse Potential Data on Decision Making

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Advancements in Abuse Potential Assessments  
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## Outline

- Abuse potential assessment of drugs under development:
  - What is abuse potential?
  - What is an abuse potential assessment?
  - Why is it important?
- Decision-making conceptual framework
- Abuse potential assessment in animals
- Conclusions and topics for further discussion

## What is Abuse Potential ?

- Refers to the likelihood that a drug will be used non-therapeutically, repeatedly or sporadically, for the psychoactive effects it produces.
  
- Examples of psychoactive effects predictive of the potential abuse of a drug include:
  - Euphoria, perceptual and other cognitive distortions, hallucinations, and mood changes

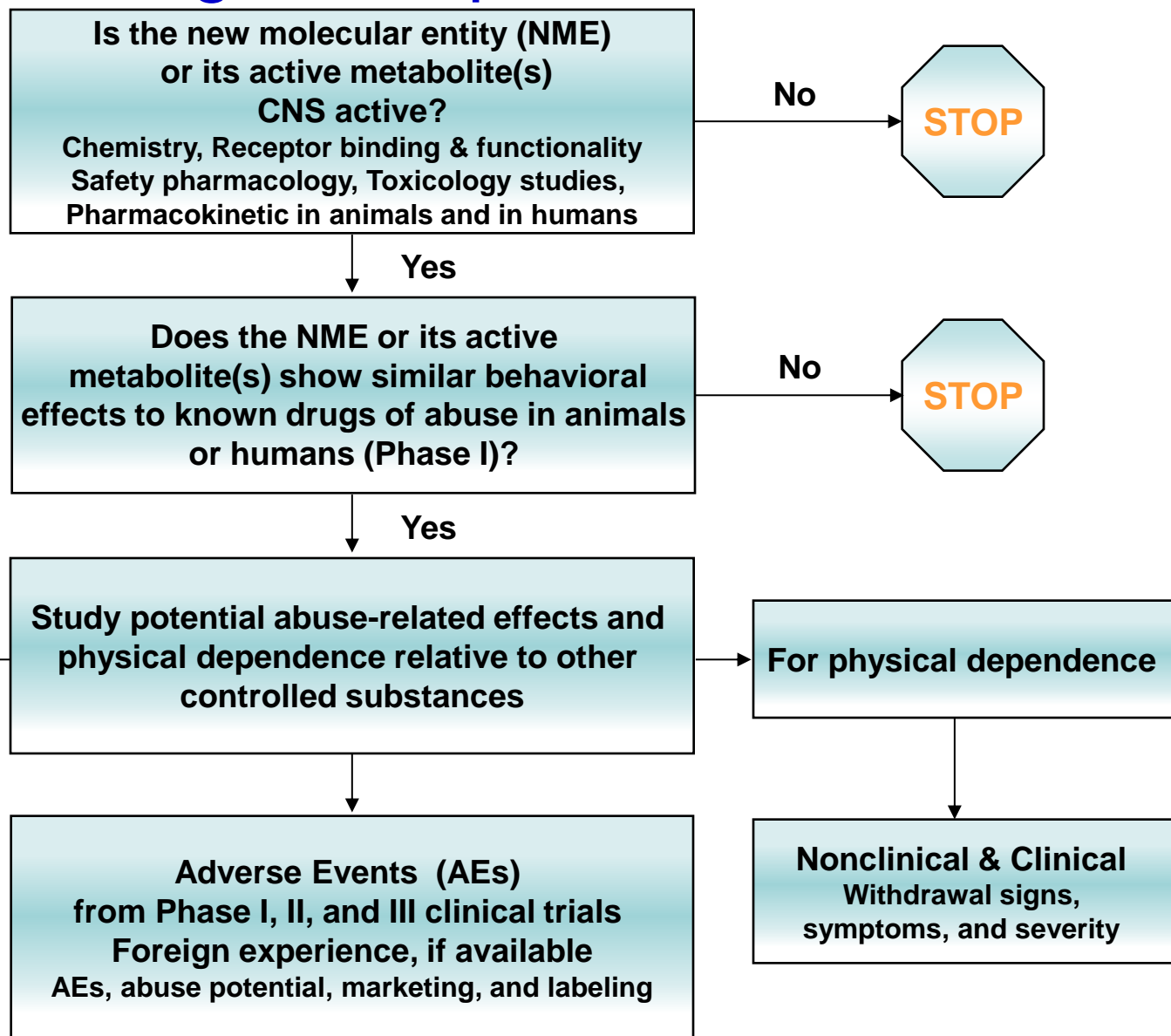
# What is an Abuse Potential Assessment?

- Comprehensive evaluation of:
  - Chemical properties
  - Pharmacological and pharmacokinetic characteristics
  - Clinical data (human abuse studies, and clinical trial data relative to abuse)
- Relative to an appropriate comparator drug

## Why is Abuse Potential Assessment Important?

- Characterizes the properties of a drug predictive of its abuse
- Part of the safety evaluation of drugs
- Provides the basis for:
  - Accurate risk-benefit assessment
  - Regulatory actions related to drug control
- To industry, abuse potential is a risk to be considered early on in the development plan

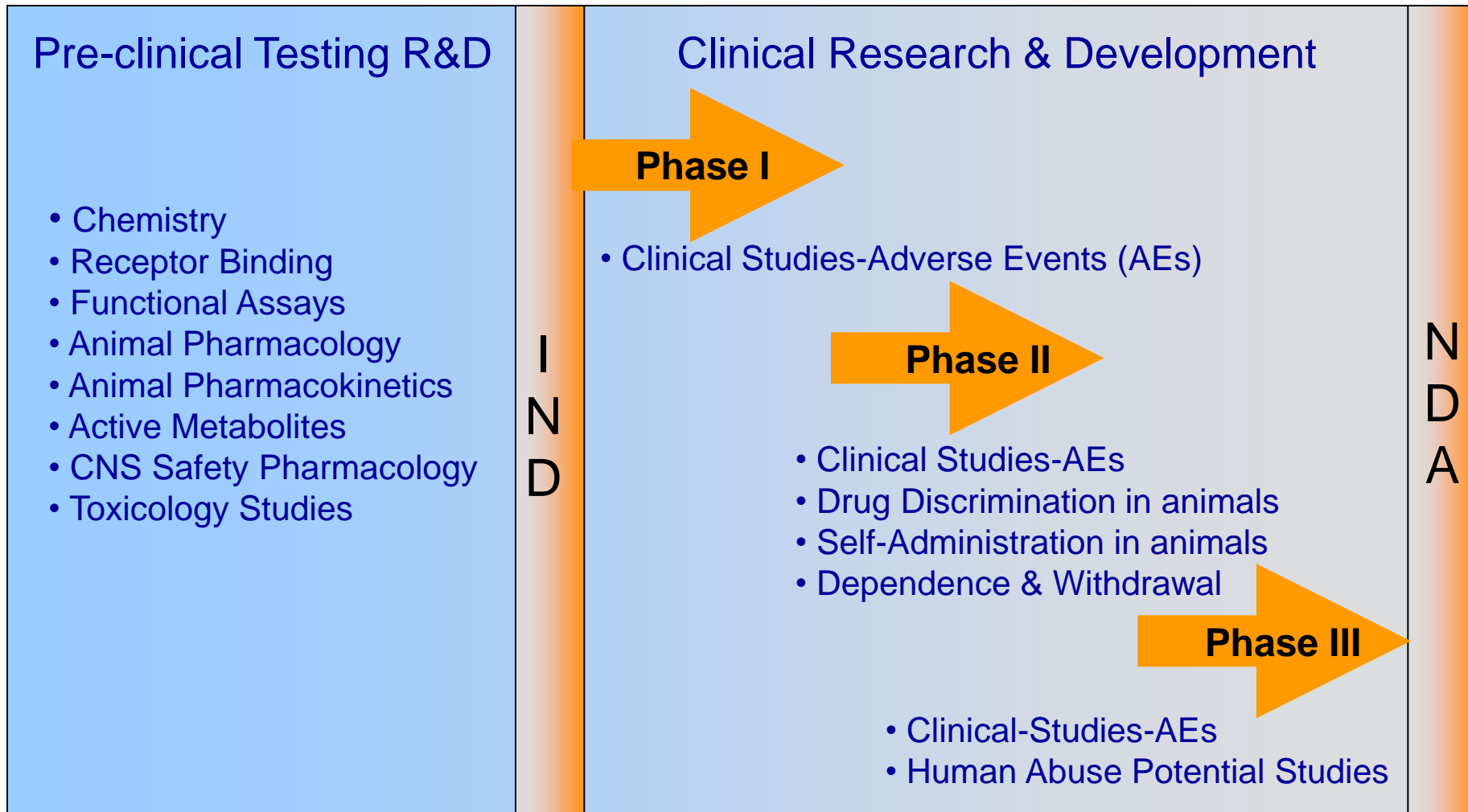
# Decision-making Conceptual Framework



# Abuse Potential Assessment in Animals

- Behavioral studies. Capture aspects of drug seeking and taking behaviors, and “subjective” properties
  - Traditional studies
    - Self-administration
    - Drug discrimination
  - Other behavioral models
    - Conditioned place preference
    - Intracranial self stimulation
- Physical dependence studies

# When to Assess the Abuse Potential of a Drug in Relation to the Drug Development Timeframe?





## Conclusions and Topics for Further Discussion

- The abuse potential assessment of drugs is
  - Critical in the overall safety assessment
  - Based upon the comprehensive evaluation of all abuse-related data
  - Particularly challenging when evaluating NMEs with novel mechanism of action
- Traditional methodology works well when studying drugs that belong to recognized classes associated with abuse such as opioids, benzodiazepines, and amphetamine-like drugs among others

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