

Follow-on Biologics: A Brief Overview

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A Drug Product

 As defined in Federal Food, Drug, and Cosmetic Act (FD&C Act):

> articles intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals; articles intended to affect the structure or any function of the body of man or other animals.



A Biological Product

 As defined in Section 351(i) of the Public Health Service Act (PHS Act):

"...a virus, therapeutic serum, toxin, antitoxin, vaccine, blood, blood component or derivative, allergenic product, or analogous product, or arsphenamine or derivative of arsphenamine (or any other trivalent organic arsenic compound...)"







Proteins have expected:

- Size, charge, hydrophobi**city** Correct folding (S-S bonds) Subunits
- Glycosylation
- Bioactivity

& Unexpected:





Abbreviated Application —

- One that relies, to at least some extent, on the Agency's conclusions about the safety and effectiveness (or safety, purity, and potency) of an approved (or unlicensed) product
- Under the PHS Act no explicit pathway
- Under the FD&C Act two pathways – 505(j)
 - -505(b)(2)



Terminology

Pharmaceutical Equivalents

Drug products in identical dosage forms that contain identical amounts of the identical active drug ingredient or (e.g., for modified



Other Relevant Terminology

Comparability

The comparison by the manufacturer of a biological product before and after a manufacturing change to demonstrate that the safety, identify, purity, and potency remain unchanged http://www.fda.gov/cder/Guidance/compare.htm

Follow-on

Informal term, referring to products intended to be



Potential Regulatory Considerations

 Is the product sufficiently similar to a licensed product to allow reliance on existing scientific knowledge about



Consider the Following



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