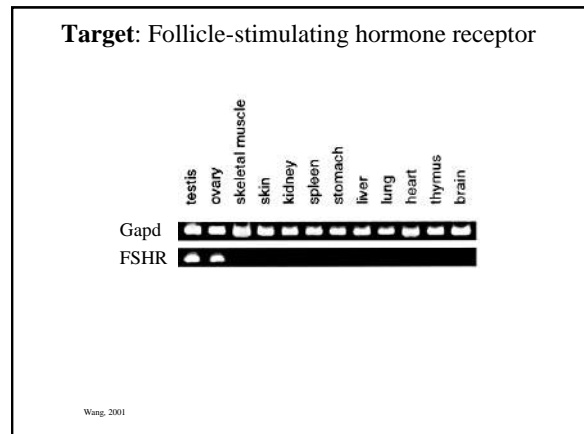
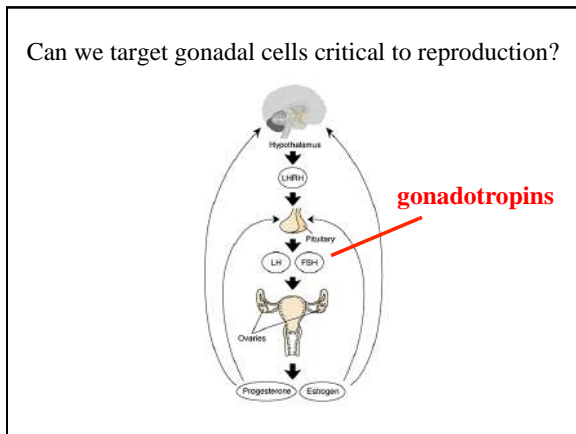
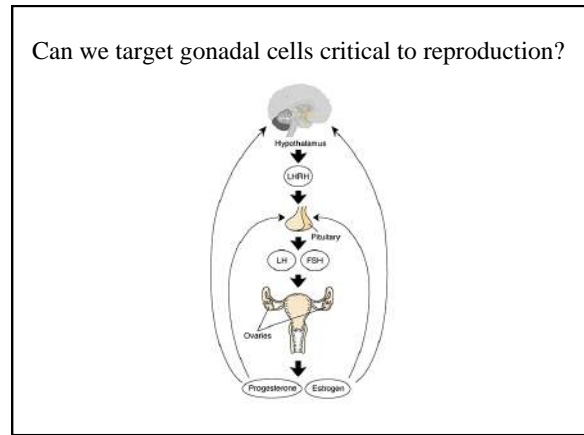
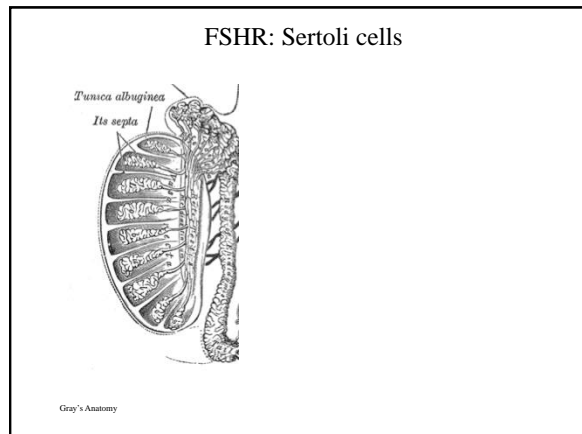
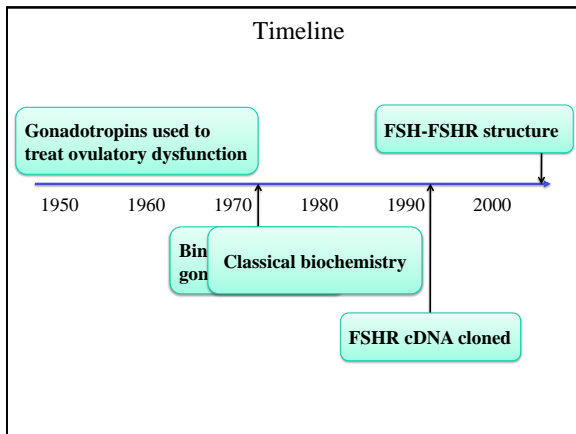
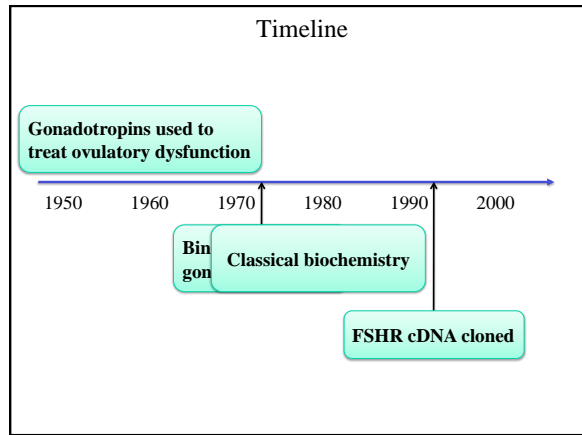
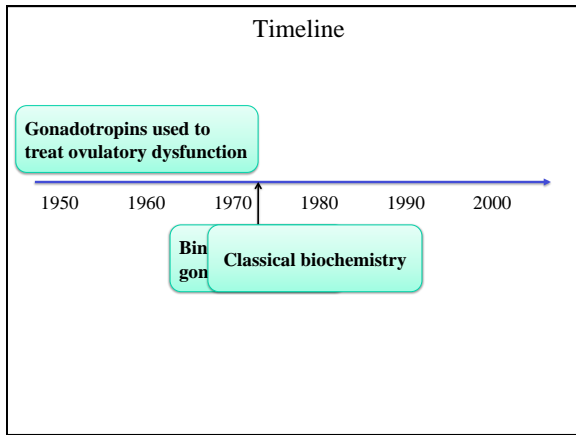
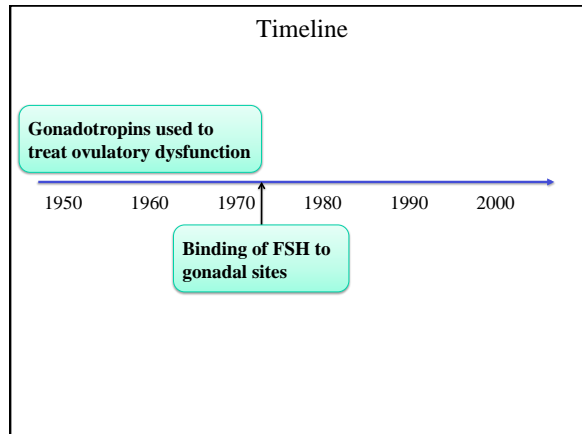
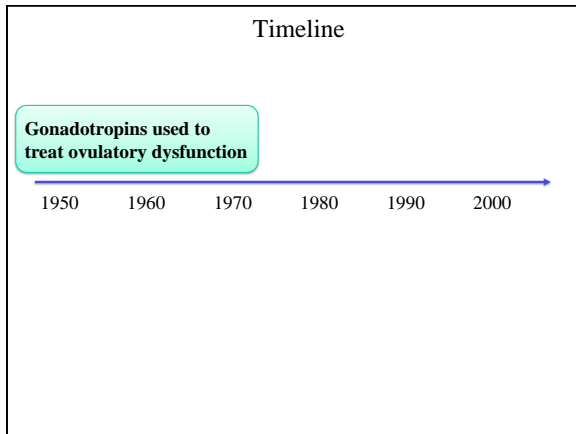
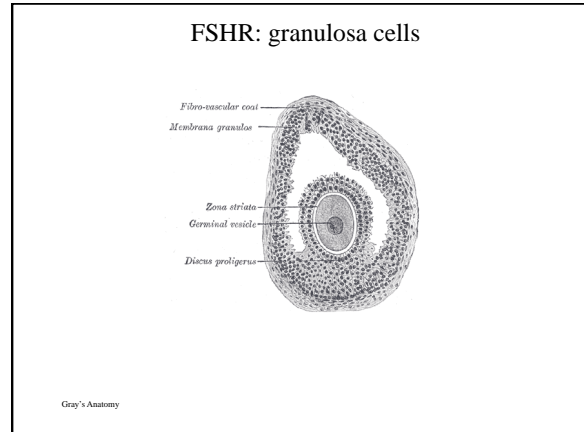
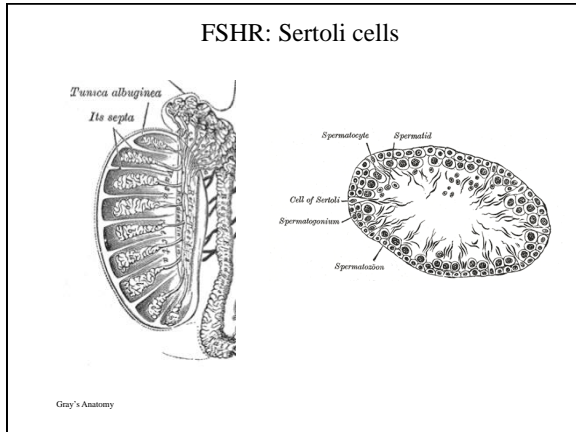


Can we target gonadal cells critical to reproduction?







Sertoli & granulosa cells are crucial for reproduction

Sertoli Cell Toxicants

KIM BOSKELMEIDE KAMIN I. JOHNSON
Department of Pathology and Laboratory Medicine, Queen's University, Kingston, Ontario, Canada Division of Biological Sciences, L327 Center for Health Research, Research Triangle Park, North Carolina

JOHN H. RICHBURG
Division of Pharmacology and Toxicology, College of Pharmacy, The University of Texas at Austin, Austin, Texas SERTOLI CELL BIOLOGY
Edited by M. K. Skinner and M. D. Griswold

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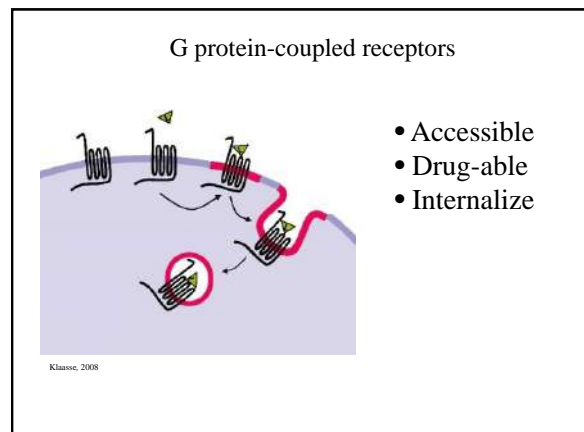
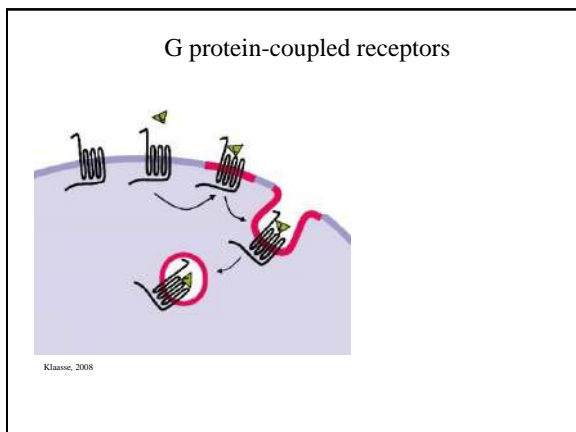
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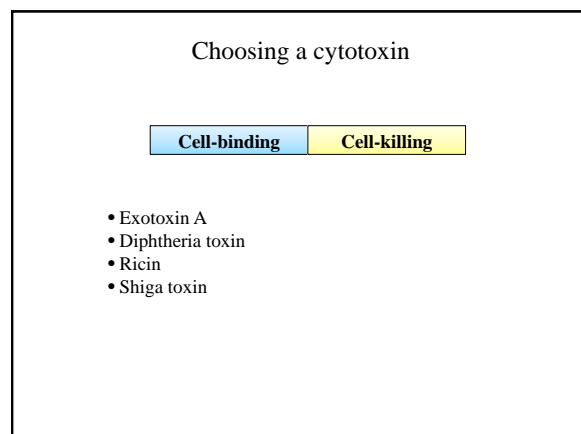
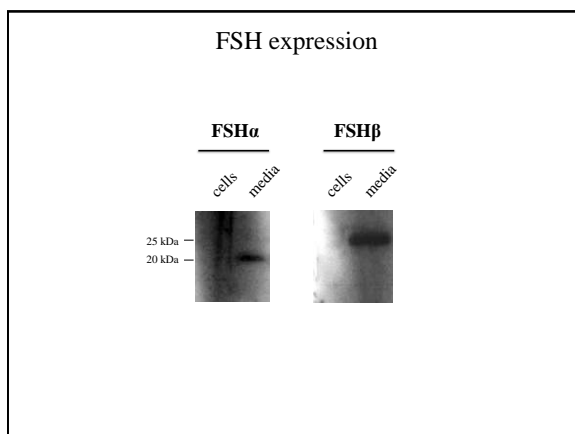
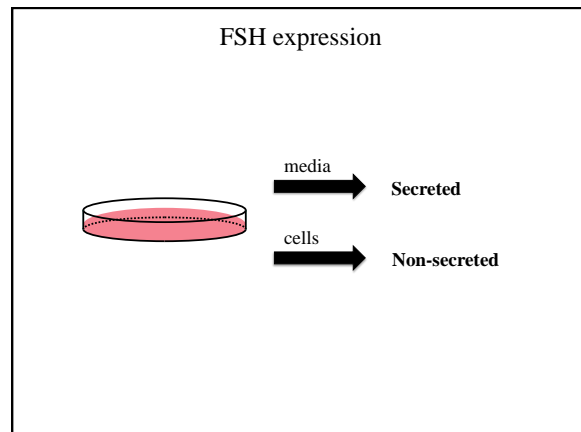
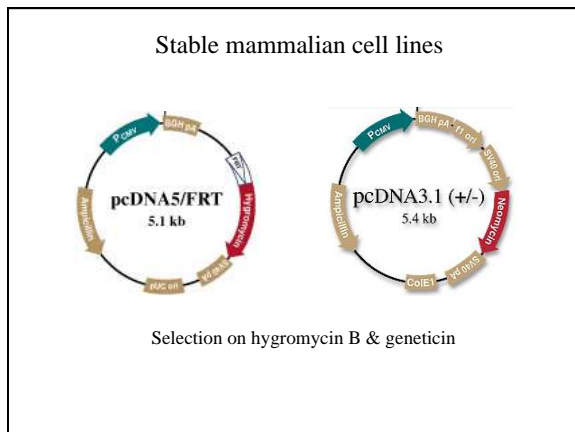
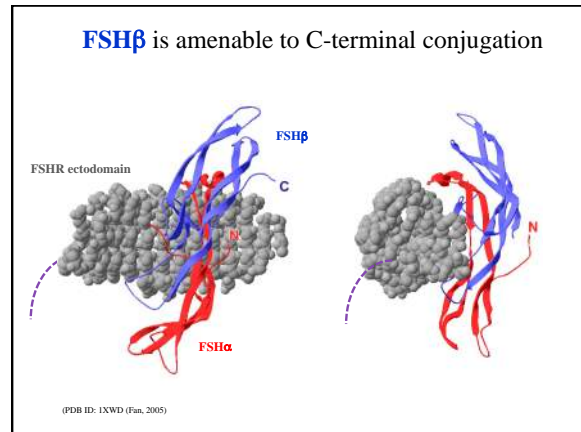
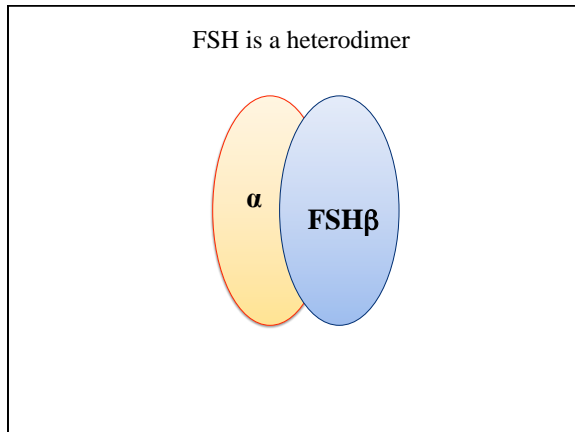
Granulosa Cell-Specific Inactivation of Follistatin Causes Female Fertility Defects

CAROLINA J. JORGEZ, MICHAL KLYSIK, SOAZIK P. JAMIN, RICHARD R. BEHRINGER, AND MARTIN M. MATZUK
Molecular Endocrinology 18(4):953-967

MAPK3/1 (ERK1/2) in Ovarian Granulosa Cells Are Essential for Female Fertility

Hong-Yu Fan,¹ Zhibin Liu,¹ Masayuki Shimada,² Ezra Sternick,³ Peter F. Johnson,⁴ Stephen M. Hedrick,⁵ Johannes S. Richards^{6*}
15 MAY 2009 VOL 324 SCIENCE





Choosing a cytotoxin

Cell-binding	Cell-killing
--------------	--------------

- Exotoxin A
- Diphtheria toxin
- Ricin
- Shiga toxin

- High potency
- Required internalization
- Survive proteolytic processing
- Economically produced (*E. coli*)

Choosing a cytotoxin

Target-binding	Cell-killing
----------------	--------------

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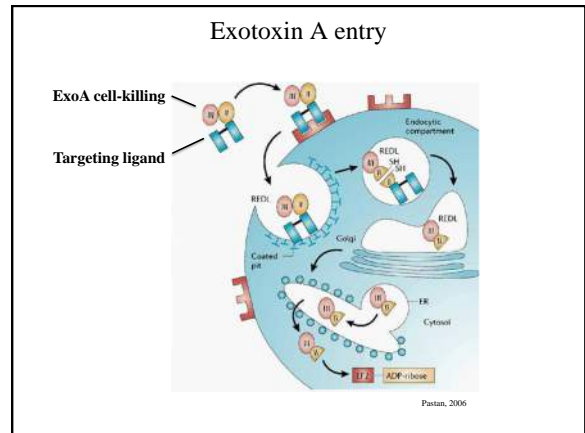
Exotoxin A

I	II	III
---	----	-----

Cell-binding	Translocation	Cell-killing	ADP-ribosylation
--------------	---------------	--------------	------------------

II	III
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PE38



Exotoxin A

I	II	III
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Cell-binding Translocation ADP-ribosylation

II	III
----	-----

PE38

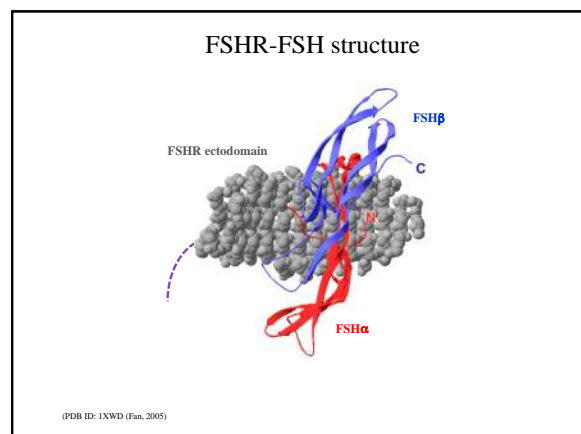
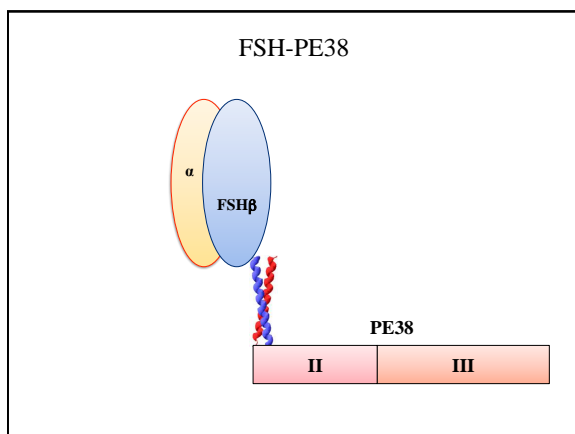
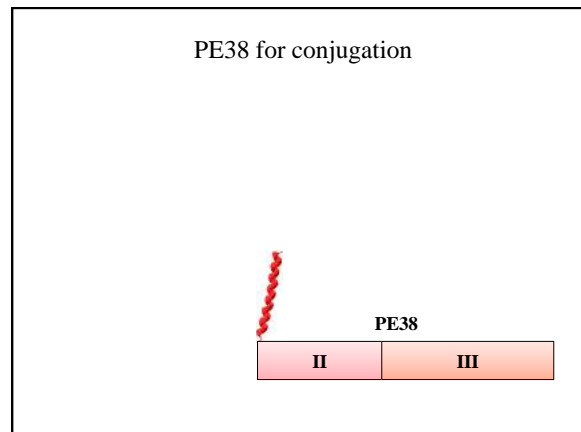
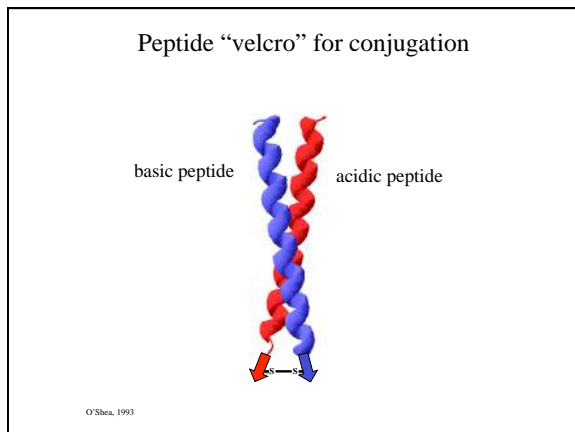
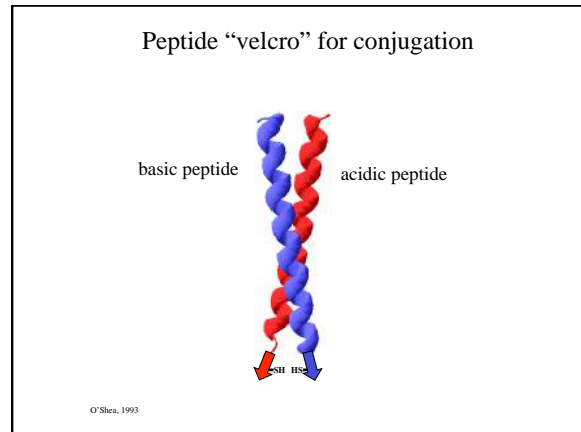
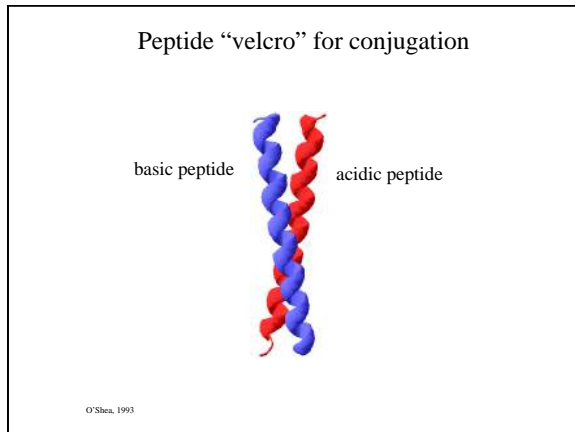
Exotoxin A

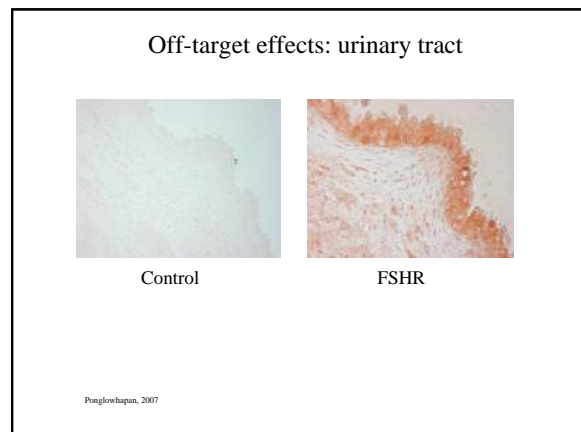
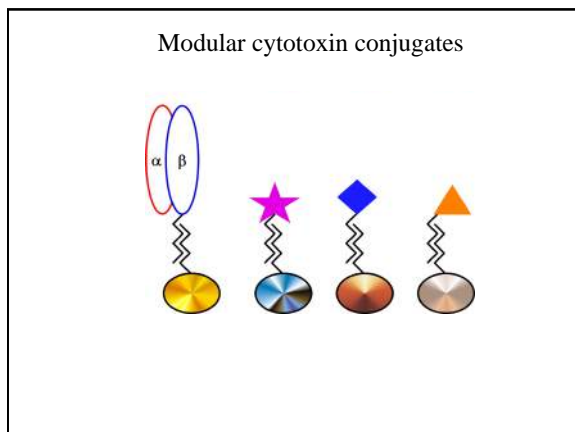
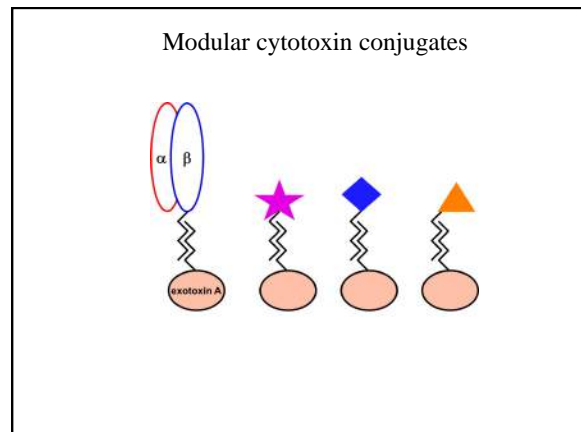
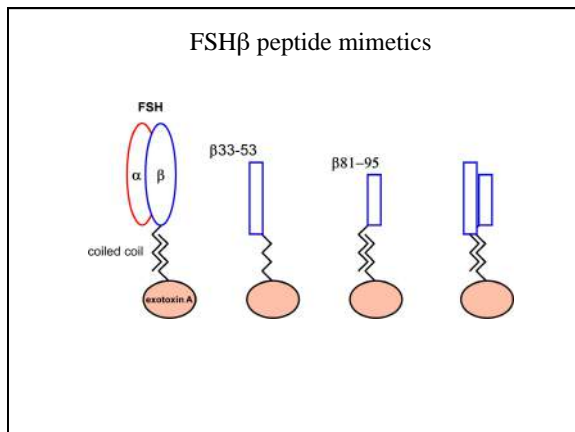
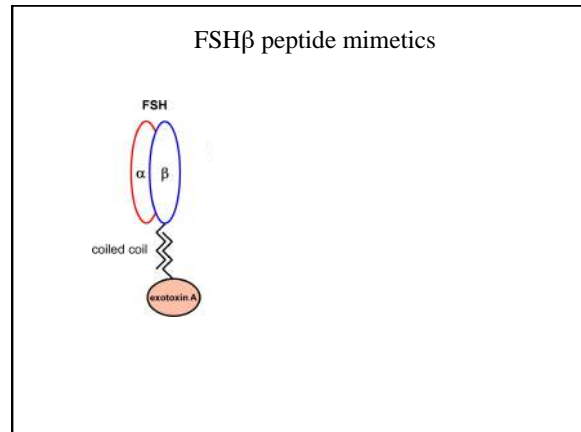
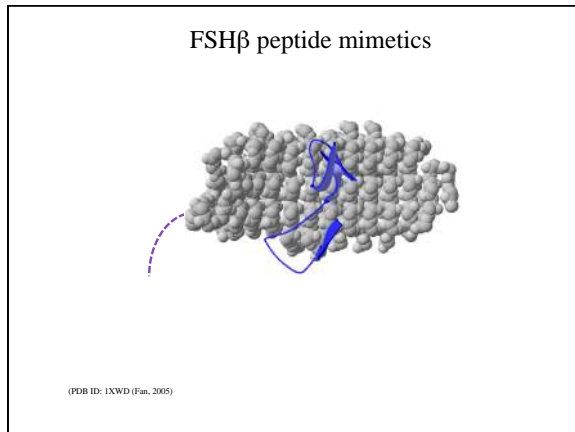
I	II	III
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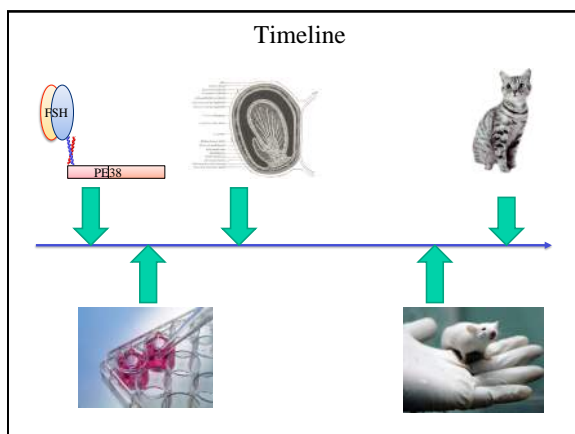
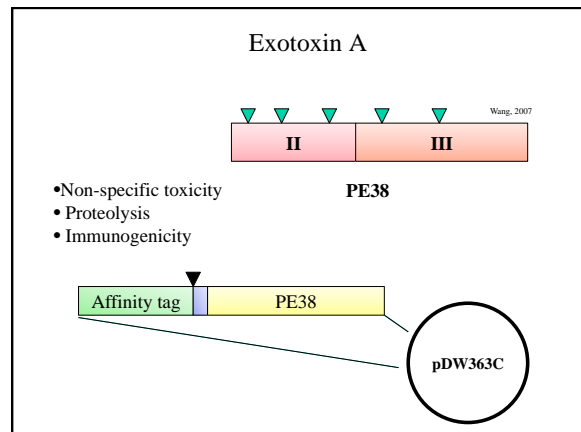
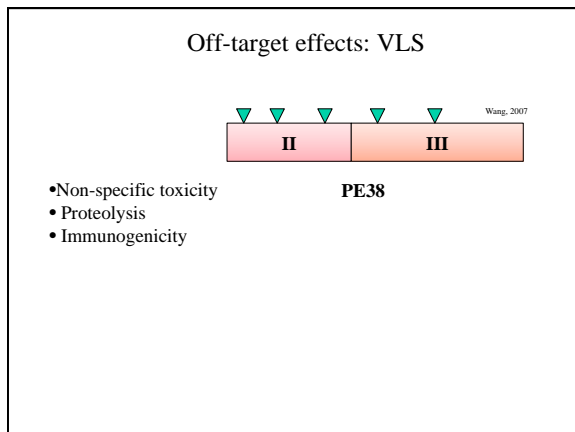
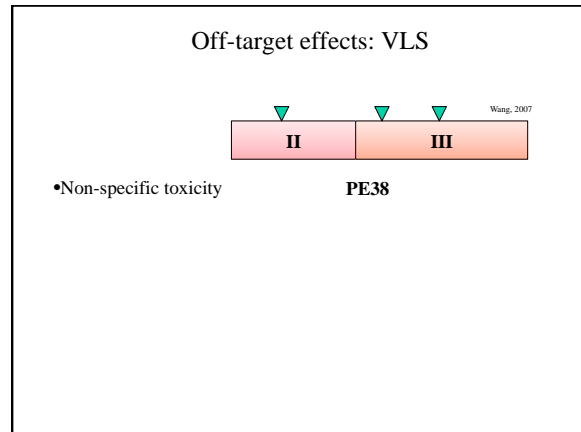
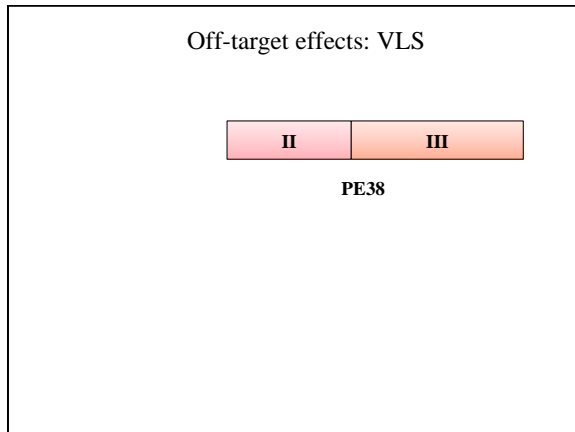
Cell-binding Translocation ADP-ribosylation

Target-binding	II	III
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PE38







Acknowledgments

- Megan Larisch (Caltech)
- Claudia Harden (Palm Beach Zoo)
- David Waugh (NCI)
- Found Animals Foundation

wja@scripps.edu

Detailed description: A photograph of a light-colored dog, possibly a Weimaraner, looking towards the camera.