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# Response to NSABB Working Group

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# Why does DURC/GOF affect St. Jude?

- NIAID Centers of Excellence for Influenza Research and Surveillance; WHO Collaborating Center for Studies on the Ecology of Influenza in Animals (PIs Drs. Webby and Schultz-Cherry)
- Influenza-positive samples (of unknown genotype) submitted to St. Jude from all around the world
- Highly pathogenic avian influenza virus is one of the organisms regulated by DURC
- Sequencing, biochemical and in vivo studies are performed on derived virus
- Swapping of viral segments into low risk category virus is frequently undertaken to assess role of identified mutations
- We have encountered potential GOF studies (pause and HHS) – St. Jude determined GOF, NIH no GOF

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# DURC/GOF assessments

- DURC committee consists of both scientists and non-scientist with PI responsible for espousing the risks/benefits of the proposed studies

- Areas of concern
  - No GOF in virus resistant to antiviral agents
  - Availability of vaccine
  - Difficulty in evaluating ‘gray’ areas (‘altering host range and/or tropism’)
  - Ferret as gold standard for biological testing

- St. Jude DURC committee has categorized H7N9 studies as ‘durc’

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# NSABB WG working paper

- Good initial draft that provides guidance to PIs and Institutional officials
- Multiple layers of oversight are required
- Criteria for assessing GOF research are reasonable, but are not specific (terms ‘highly’, ‘significant’ and ‘likely’ are used)
- For example, point iii ‘pathogen generated is likely resistant to control measures…’. St. Jude DURC committee would ensure parental influenza virus is sensitive to oseltamivir prior to approval

# Other concerns

- Generic regulations prohibiting select types experiments may be counterproductive
- If PI can justify risk/benefit to local DURC/IBC committees, and to USG, should such studies be prohibited?
- For example, would knowing the amino acid residues responsible for enhanced mammalian transmission of influenza virus, that might only be identified via GOF studies, be beneficial?

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# Summary

- Lack of definitive descriptions of GOF studies that are, are not, acceptable
- As an individual who will be tasked to interpret GOF guidelines, clarity and defined criteria will make evaluation much more informed/complete
- Guidelines should be flexible to address emerging/future virus
- 'GOFoC' should be reviewed by multiple bodies (local, independent, Federal)
- Do guidelines only refer to USG funded studies? (What about institutes that do not receive Federal funds, companies, etc?)
- Prohibiting specific experiments may be counterproductive, especially if such studies can occur in Europe