Integrating Your IBC & IRB: Coordination & Collaboration

Objectives

- Background about UK Research
- Mission of the IBC
- Interaction with the IRB
- Timely Approvals of HGT Trials

University of Kentucky

UK is #1 employer in Lexington, KY

- Students:
  26,648
- Faculty & Staff:
  13,247
- Laboratory Space:
  1,321,271 sq. ft.

Research at UK

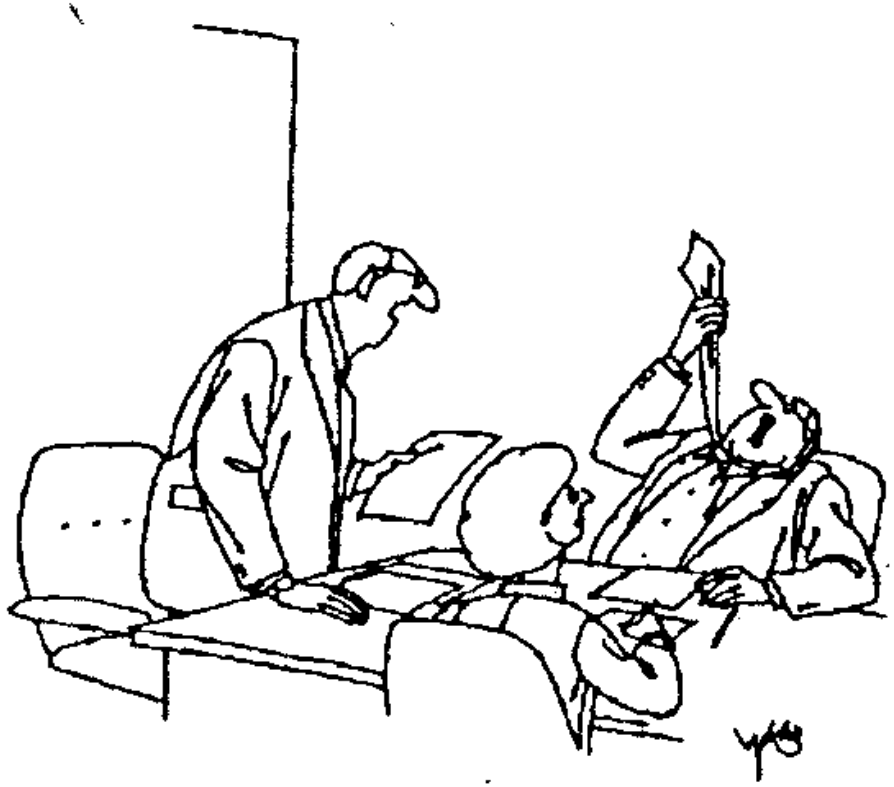
- Total Research Funding for 2008: $294 million
- NIH: $88 million
- NSF: $18 million
- USDA: $8 million

The IBC at UK

Colleges the IBC has worked with:

- Public Health
- Engineering
- Arts & Sciences
- Nursing
- Medicine
- Agriculture
- Pharmacy
- Dentistry

"This session will review the federal regulations Please, we don't need the visual aid."



NIH Mandate to Institutional Biosafety Committee (IBC)

Section IV-A, IV-B

- Ensure rDNA research does not endanger the safety of:
  - Researchers
  - Workers
  - Research Subjects
  - Community
  - Environment

What if I don't register?
Section I-D-2

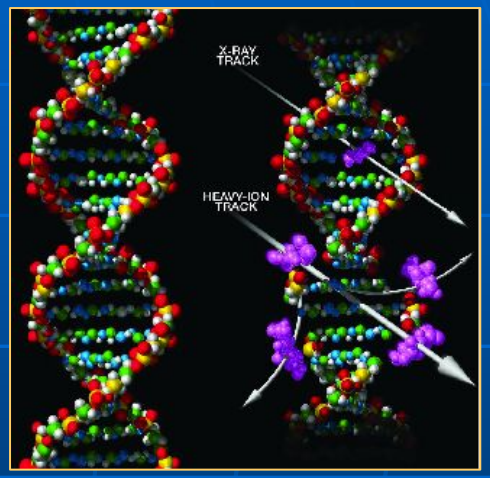
- Noncompliance may result in:
  - Suspension, limitation or termination of NIH funds for rDNA research at that institution
  - Requirement for prior NIH approval of any or all rDNA projects at that institution

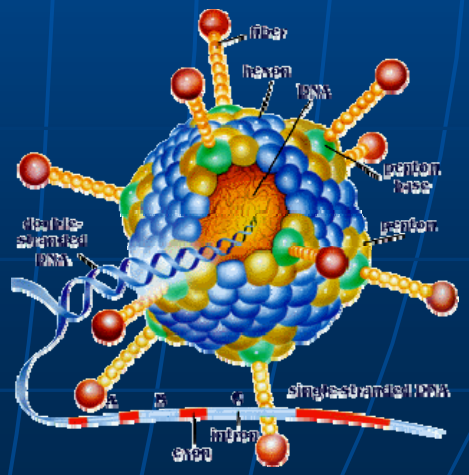
UK's IBC

Section IV-B-2

Registers all research involving:

- Recombinant nucleic acids
  - DNA, RNA
  - NIH Guidelines
- Infectious agents
  - UK Mandate
  - Humans
  - Animals
  - Plants
  - Insects



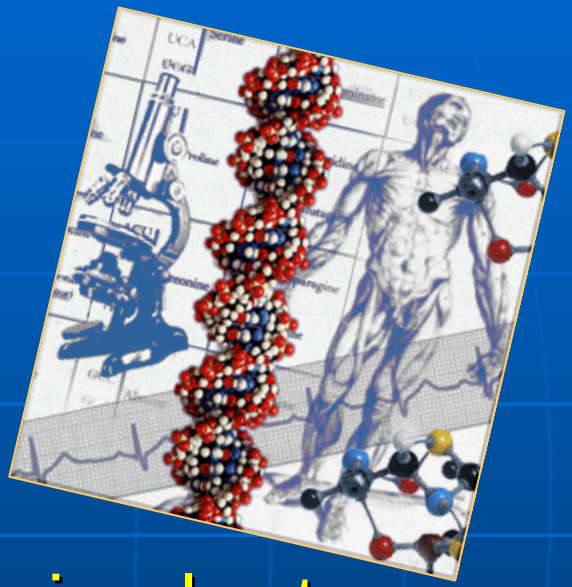


The IBC at UK

- Issues from

  human gene transfer

  to field trials of transgenic plants



Assembling an IBC
Section IV-B-2

Membership

- No fewer than 6 individuals
- Appropriate rDNA expertise collectively
  - Medical Center: Microbiology, Biochemistry, Pediatrics/Physiology
  - Agriculture: Plant Pathology, Agronomy, Animal Science, Veterinary Science
  - Liberal Arts: Biology

Assembling an IBC

Section IV-B-2

Membership

- Laboratory technical staff
- Veterinarian from DLAR/IACUC
- Ad hoc members as needed
  - Blue mold expert
  - Gene transfer
  - Infection control
  - Field trials

Assembling an IBC

Section IV-B-2

Membership

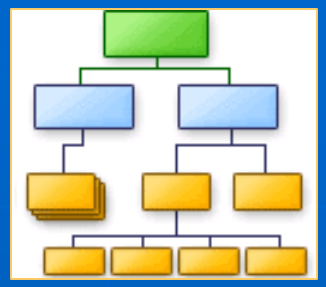
- Expertise in assessment of risk to environment and public health
- MD with expertise in Human Gene Transfer
- At least two members not affiliated with the institution

Assembling an IBC

Section IV-B-2

Non-institutional Members:

- Representatives of community interests with respect to health and protection of the environment
- Safety officer for the city/county school system
- Equine veterinarian from area equine clinic



UK's IBC

- Three year terms
- Appointed by the UK President
- Subcommittee of "Committee on Environmental Safety & Health"
- Does not formally report to Research or Provost
  - They are the final "client", however

UK's IBC

- Meets monthly with lunch provided by Biological Safety
- Applications, documents posted to secure Sharepoint IBC website the week before
- Minutes kept by Biosafety staff
- By-laws periodically revised

IBC Review

- Registration documents on Biosafety webpage
- Biosafety staff
  - Reviews for completeness, consistency
  - May suggest changes to PI
  - Perform biosafety audit
  - Research/document particular issues
    - i.e., 3rd generation retro-viral vectors
  - Coordinate with IRB & IACUC
    - Approval #'s checked

UK's IBC

- Three Primary Reviewers
  - All members can access IBC applications
  - 1º reviewer assignments posted & e-mailed
  - 1º review documents
  - 1º reviewers present protocol/application to full committee
- Full committee discusses
- Consensus, vote
  - Provisional approval, full approval, send back to PI

IBCs and NIH OBA

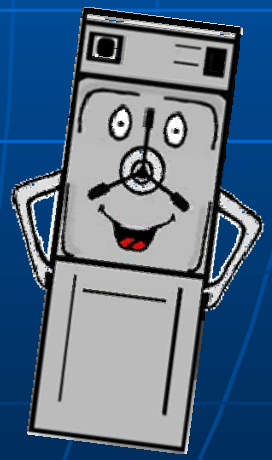
Section IV-C-2

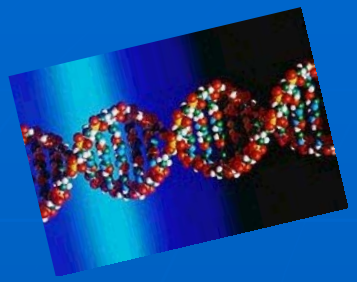
- NIH OBA provides oversight, guidance, and resources for IBCs
  - Risk Assessment
  - Containment Practices

- RAC recommends (within 15 working days) whether protocol warrants in-depth review and public discussion
  - Novel approach and/or
  - Significant scientific, safety, and/or ethical issue

UK's IBC

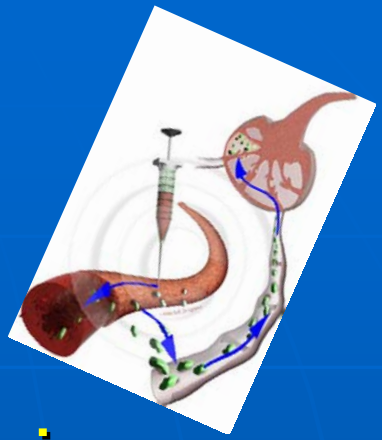
- Develops policies, then sends to CESH
  - E.g., Minors in Research Laboratories
- Mandates on-line training
  - Bloodborne pathogens
  - Biological safety
- Requires participation
  - Autoclave verification program





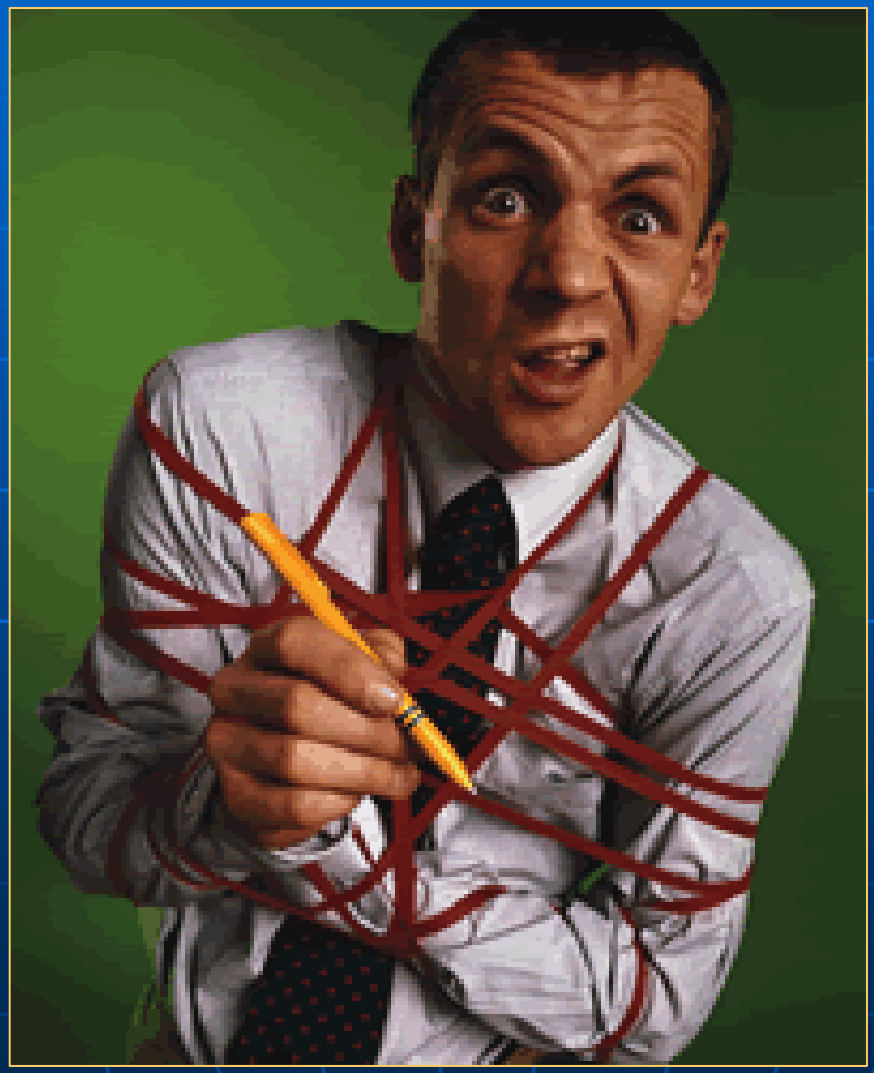
IBC Training

Section IV-B-1-h



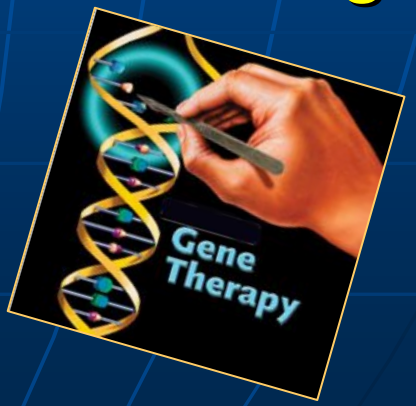
- Institution is required to provide IBC appropriate training
  - Duties, as defined by NIH guidelines
    - Section IV-B-2
- At UK:
  - Monthly & Annual
  - Special topics
  - Transgenic plant/seed containment
  - Nanoparticles
  - Field trips

Research Red Tape



Challenges of HGT Trials

- Smallest number of protocols/trials
- Most time consuming
- Most complex and challenging
- High profile
- Highest potential for media coverage (+/-)
- Not a typical “drug trial”



Documents for IBC Review

- IBC registration documents
- Appendix M (NIH Guidelines)
- Investigator's Brochure
- RAC comments
- Proposed consent form
- Staff training
- Patient education materials
- Infection control plan for trial at UK
- Current UK SOPs for HGT
- Approval letter from departmental Medical Review Board

HGT: Key Issues for IBC Review

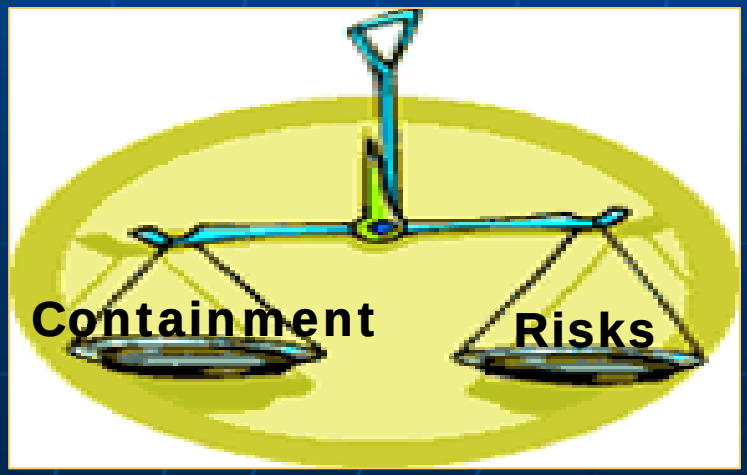
Appendix M-II-B-3, 4

- Risks to the patient
- Risks to health care workers, community, or environment
- Containment level

HGT: Key Issues for IBC Review

Appendix M-II-B-3, 4

- Infection control plan
  - Personal Protective Equipment (PPE)
  - Adequacies of facilities, SOPs
  - Locations in hospital, clinic
  - Disinfection



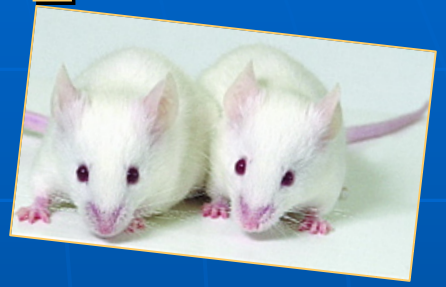
HGT: Key Issues for IBC Review

Appendix M-II-B-5

- Adequacy of Training, Experience
  - PI, Staff
  - Training materials
  - Documentation
- Trial Design
  - Appropriate safety monitoring
  - Adequate duration of monitoring

HGT: Key Issues for IBC Review

Appendix M-II-B-2

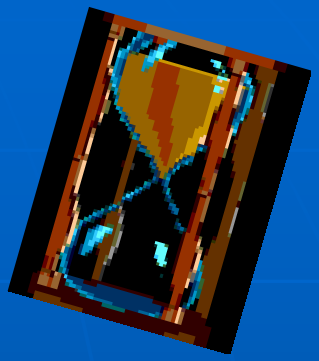


- Previous studies
  - Cell culture
  - Animal studies
  - Human studies

HGT: Key Issues for IRB Review

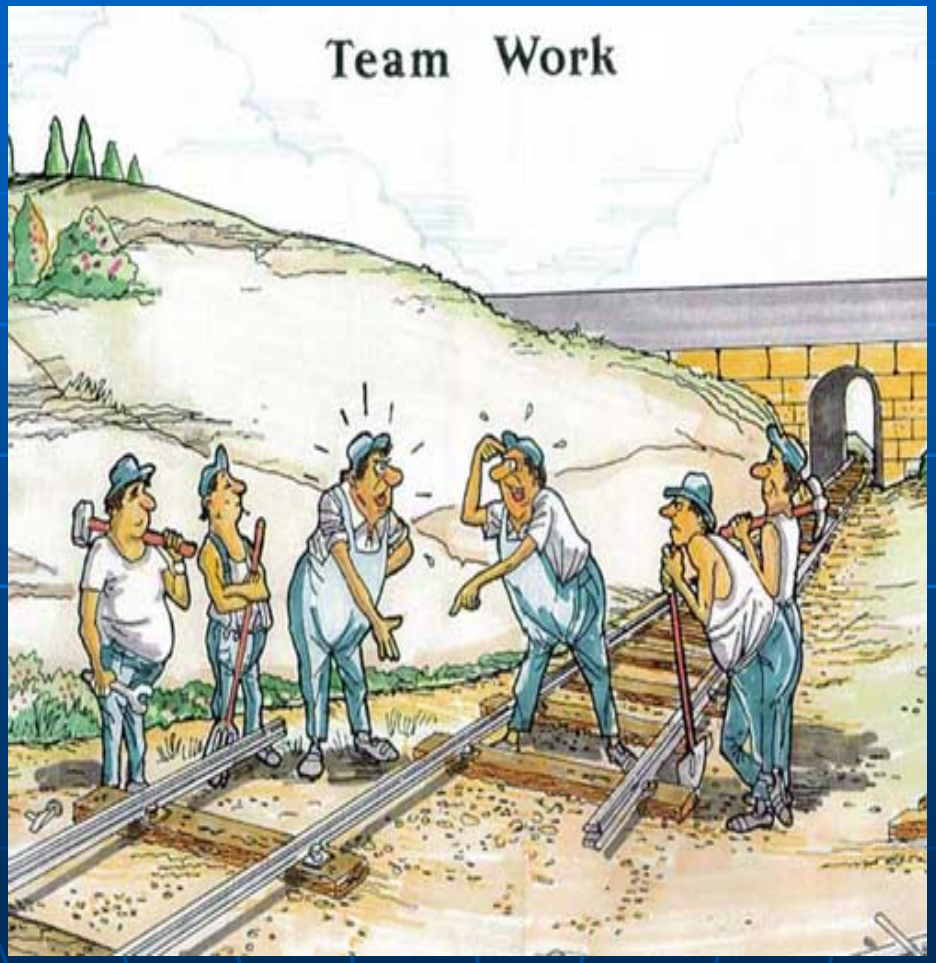
- Informed consent
  - Benefits not over emphasized
  - Risks not minimized
  - Benefits to the patient (if any)
  - Benefits to society
- Patient selection (minimize risks, therapy warranted)
- Adequate sample size
- Appropriate outcome measures
- Study design
  - Trial phase

Timely Approvals



- How long will it take to get approval to enroll patients?
  - Ideally: 2-4 weeks
- Have we ever done it that fast?
  - NO
- Everyone has to have the same overall plan to obtain 2-4 week timetable

Or you can end up with this:

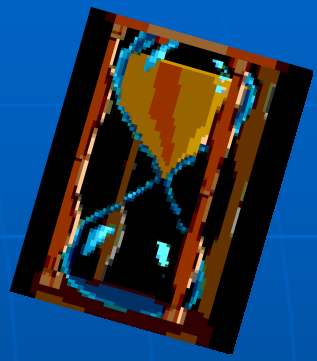


Timely Approvals

- Training
- Collaboration
- Communication
- Appropriate Safety Data

Timely Approvals

- Training
  - BSO trains IRB staff, Clinical Research Associates
    - Key words to trigger a call to Biological Safety
    - Basic concepts of what the IBC reviews
  - IRB reviewers
    - Sub-group of IRB

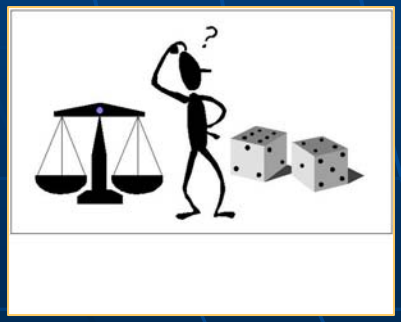


“Watch Words” Call Biological Safety:

- Gene transfer
- Gene therapy
- Recombinant nucleic acid (DNA, RNA)
- Virus (adenovirus, retrovirus, vaccinia virus)
- Live or attenuated vaccine

Timely Approvals

- Training
  - Assessing Risk
    - Cannot necessarily follow classical drug trial assessment criteria
    - Unpublished proprietary data



Timely Approvals

- Collaboration
  - IRB/IBC written SOP on coordination for HGT

    IBC →IRB→Approval

  - Joint IBC/IRB adverse event reporting form

Timely Approvals

- Communication
  - IRB staff
  - IRB committee members
  - PI
  - CRAs
  - RNs
  - Sponsor

After All the Approvals:

- Serious, unanticipated adverse events associated with gene transfer reported to IBC

- Reviewed annually
  - Same documents to IRB & IBC

Lessons Learned

- Administration of effective IBC is a hybrid between cheerleading

Lessons Learned

- And

A team effort is a lot of people doing what I say:
NOT!!!


Questions???

Contact Info

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