CHILDREN'S HOSPITAL BOSTON

Meeting of Boston Children's Hospital Institutional Biosafety Committee

AGENDA

2/19/2026 11:30 am to 1:00 pm

Karp 4 Conference Room or Teams

Members Present: MM, DF, IJ, SG, SD, PW, CH, DC, EC, SVH, KK, EG, AR, BS, SL

Members Absent: JM, HDL, TW

Guests: RD

RLSO: FJ, DH

SD and PW chaired the meeting

1 IBC Meeting Minutes

Boston Children's Hospital Institutional Biosafety Committee meeting (01/15/2026)

IBC Meeting Minutes were unanimously approved by the committee.

Committee Decision:

- Motion: Approved
- Majority (Approved): 15
- Minority (Against): 0

2 Administrative Updates

- **2025 Annual Biological Safety Program Metrics:** Presentation
  - **Discussion:** The 2025 Biosafety Metrics were presented to the committee.

3 New submission – Clinical

IBC-P00002168 APR-2020-001: A Phase 1, Open-label, Single-arm Study of APR 2020 in Transfusion dependent, Steroid resistant Pediatric and Adolescent Subjects with RPS19 deficient DBA

PI: **CD**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion:** This is a Phase 1, open-label, single-arm study of APR 2020 in transfusion dependent, steroid resistant pediatric and adolescent subjects with RPS19 deficient Diamond-Blackfan Anemia (DBA) by transplantation of autologous CD34+ stem cells transduced with APR-2020. DBA is a rare inherited bone marrow disease caused by mutations in ribosomal protein genes (most commonly RPS19, RPL5, and RPL11), leading to impaired red blood cell production with severe macrocytic anemia in infancy, often accompanied by congenital anomalies. APR-2020 is composed of autologous human CD34+ hematopoietic stem and progenitor cells (HSPCs) derived from mobilized peripheral blood from patients with RPS19 deficient DBA. The CD34+ cells are transduced with a third-generation lentiviral vector carrying the normal RPS19 gene in the presence of cytokine molecules to stimulate vector integration into HSPCs genomic DNA. The gene therapy product will be prepared and stored at the collaborators site and administered in the inpatient stem cell transplant unit in BCH via a closed IV system.

Regulations Applicable to this Protocol: The NIH Guidelines III-C and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- Revise the scientific description summary in layman's terms and clarify what FACT regulations are.

- Confirm whether a liver biopsy will be performed in this study as indicated in the Risks section. If applicable, update the relevant sections of the protocol to reflect the liver biopsy.
- Include provisions outlining how risks to participants will be minimized.
- Ensure that all staff participating in this study are listed in the protocol.
- Clarify whether the protocol has undergone scientific review. If so, include the scientific review document.

IBC-P00002171 Taysha 201 ASPIRE

PI: **DL**

Motion: Modifications Required for Approval – Return to IBC Analyst

Motion: **IBC Discussion**: This is a multicenter, open-label study of the safety, tolerability, and preliminary efficacy of a single intrathecal administration of TSHA-102, an AAV9-delivered gene therapy, for the treatment of pediatric females with Rett Syndrome (RTT). RTT is a rare neurodevelopmental disorder caused by mutations in the X-linked MECP2 gene encoding methyl CpG-binding protein 2 (MeCP2), which is essential for regulating neuronal and synaptic function in the brain. The disorder is characterized by loss of communication and hand function, slowing and/or regression of development, motor and respiratory impairment, seizures, intellectual disabilities and shortened life expectancy. TSHA-102 is a nonreplicating, recombinant, self-complementary adeno-associated virus serotype 9 (scAAV9) vector encoding human miniMECP2_e1 isoform with a 3' untranslated region (UTR) containing an miR-Responsive Auto-Regulatory Element (miRARE). TSHA-102 was designed to deliver genetic material via lumber intrathecal (IT) administration to enable the in vivo expression of a miniature form of methyl CpG-binding protein 2 (miniMeCP2) in patients with Rett syndrome due to an MECP2 loss-of-function mutation. The gene therapy product will be prepared and stored in BCH Pharmacy and transported to the participants room for administration.

Regulations Applicable to this Protocol: The NIH Guidelines III-C and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15

- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- Clarify whether the syringe includes a needle. If it does, indicate whether the needle is capped.
- Specify the frequency and duration of sample collection for shedding testing.
- Clarify whether there are any known allergic risks associated with the AAV vector.
- Confirm whether the protocol has undergone scientific review. If so, include the scientific review document.
- Provide an informed consent document.

4	**Laboratory Amendments**

IBC-A00000272-4

Amendment 4 : Molecular Analysis of Hollow Organs

PI: **RA**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion**: The goal of this research is to understand molecular signaling pathways that regulate bladder and gastrointestinal cell behavior following injury, with the long-term objective of identifying novel therapeutic targets for conditions such as lower urinary tract dysfunction and gut dysmotility. The approved protocol includes banking and molecular analysis of animal and human bladder tissues, establishment and manipulation of primary and established human cell lines to assess changes in proliferation, migration, and signaling using recombinant DNA techniques, including plasmid-based expression, CRISPR/Cas9 genome editing and delivery achieved via standard transfection methods or viral vectors (lentivirus, adenovirus, and AAV). The proposed amendment adds an in vivo RNAi-based approach to knock down Sema3 expression in the urothelium using intravesical delivery of siRNA encapsulated in liposomes, following transient urothelial conditioning to enhance uptake. Generation of lentivirus and adenovirus supernatants and transduction of target cells will be performed at BSL-2 practices and procedures while administration of

adenoviral supernatants to mice will be performed under Animal Biosafety Level 2 (72 hours).

Regulations Applicable to this Protocol: The NIH Guidelines section III-D, III-E, III-F and OSHA Bloodborne Pathogens Standard

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- The committee recommends that after flushing, the pH of the saline flush be tested. If the pH is not neutral, flushing should be repeated until a neutral pH is achieved.
- Include the administration of siRNA oligonucleotides in mice. Indicate a procedure room with a BSC; note that the currently listed room does not have a BSC.
- Ensure that the "safety glasses" is checked.
- In the Animal Research section, indicate a procedure room with a BSC; note that the currently listed room does not have a BSC.

IBC-A10-326-6 Amendment 6 : Molecular analysis of parasite replication and pathogenesis

PI: **JD**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion:** The laboratory studies Plasmodium replication and pathogenesis in host red blood cells. In this submission, the lab proposes to characterize and compare the biology of free-living alveolates, including Chromera, Tetrahymena, and Paramecium, to better understand alveolar structures in these organisms and how they differ from the inner membrane complex of Plasmodium parasites. These organisms are free-living protists and are not known to be pathogenic to humans or animals. Comparative analyses will be performed using standard cell biology, genetic, and microscopy

techniques. Work involving plasmid expression vectors and cultures of Chromera velia, Tetrahymena thermophila, Paramecium aurelia, and Paramecium caudatum will be conducted following BSL-1 practices and procedures. Inoculation of mice with Plasmodium berghei and Plasmodium yoelii will be performed at ABSL-1.

Regulations Applicable to this Protocol: The NIH Guidelines Sections III-D, III-E, III-F, and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- Clarify the genetic techniques that will be used to modify *Chromera*, *Tetrahymena*, and *Paramecium*. Specify which genes or proteins will be targeted and describe how similar these organisms are to *Plasmodium*.
- The protocol mentions creating pores in *Plasmodium* with aerolysin or a similar molecule; clarify what the similar molecule is.
- Revise the instructions for liquid waste disposal: use full-strength bleach to achieve a final concentration of 10% for 20 minutes.
- Ensure that the protocol covers work with EBV-infected tonsil organoids and potential hospital strains carried in red blood cells.
- Occupational Health recommends that anyone working with *Toxoplasma* receives a reproductive consultation.
- Under MMLV: 70% ethanol is sufficient for surface inactivation.
- Under HIV-1: 70% ethanol is sufficient for surface inactivation.
- Update the laboratory procedures section to state: “There is no high safety risk associated with aerosol exposure to lysed samples.”
- Clarify whether any samples will be transported to the collaborating lab.

IBC-A00001820-6 Amendment 6 : Single Molecule Studies of Genome Maintenance

PI: **TH**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion:

IBC Discussion: The amendment aims to study the role of polyamines during neuronal differentiation using E14Tg2a mouse embryonic stem cells. Polyamines are small molecules present in cells and foods, and many polyamine disorders affect neurodevelopment in children. The lab will chemically transfect these stem cells with plasmids encoding engineered fluorescent protein sensors for polyamines using Lipofectamine or TurboFect. A second-generation lentiviral vector system is used to encode the polyamine sensor and a promoter site. The system includes transfer, packaging, and envelope plasmids, along with a reverse tetracycline transactivator protein. Live and fixed cell imaging and fluorescence-activated cell sorting will be conducted to assess transfection and monitor differentiation processes. Antibodies will be used to identify specific neuronal populations to quantify polyamine levels. Transfection of plasmids using lipofectamine or TurboFect in murine embryonic stem cells will be conducted at BSL-1 work practices and procedures. The generation and transfections of cells with lentivirus will occur at BSL-2 work practices and procedures.

Regulations Applicable to this Protocol: The NIH Guidelines Sections III-D, III-E, III-F, and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- Clarify labeling and organization of the protocol for consistency.
- Consider consolidating redundant information while retaining key details, such as the sentence regarding the FUS protein.
- Include additional details about the experiments performed on cells, including any manipulations, stimulations, or readouts, rather than only describing microscopy and cell sorting.
- Clarify what is being transfected into each cell line.
- Confirm that the statement about studying the protein in vitro and in cell does not refer to in vivo experiments with animals.

- Clarify whether lentivirus will be generated for the polyamine studies or if vectors will be transfected without producing lentivirus.
- Indicate which genes being studied are considered oncogenes and confirm that these experiments will be conducted at BSL-2.
- Move work with murine embryonic stem cell lines and plasmid work to BSL-1.
- Include relevant plasmids added to this amendment.
- Add Zeocin to the list of antibiotic resistances.
- Include all lentiviral vectors that will be used in the described studies and indicate any additional sources of these vectors.
- Remove mouse embryonic stem cell lines from the human materials section.
- Include risk mitigation procedures for the use of a UV lamp in addition to the laser.
- Clarify whether the cell sorter mentioned in the procedures is contained within a biosafety cabinet.

IBC-A08-042-18 Amendment 18 : Molecular Analysis of Mammalian Innate Immunity

PI: **JK**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion**: The lab seeks to understand how the immune system is organized and functions to fight infections using cellular and animal models. The amendment adds an additional influenza A virus strain (H1N1 WSN), a well characterized lab adapted strain used commonly in influenza research. The amendment also introduces the use of mRNA lipid nanoparticles (LNPs) to transiently express proteins of interest (e.g., GFP, ovalbumin, and TIR-domain-containing adapter-inducing interferon-β variants) in mice via intravenous, intraperitoneal, or subcutaneous injection. Animals will be euthanized 24 hours or 14 days post-injection, and blood and tissues will be collected for downstream analyses, including transcriptional profiling, cytokine quantification, and histological assessment. Manipulation of IAVs in vitro will be performed following BSL-2 practices and procedures. Inoculation of mice with IAV will be performed at ABSL-2. Administration of mRNA-containing lipid nanoparticles will be conducted ABSL-1..

Regulations Applicable to this Protocol: The NIH Guidelines sections III-D, III-E, III-F, and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- The mRNA constructs will be synthesized in the lab from DNA templates. Include this information in the scientific description summary and specify the host system used for plasmid propagation.
- Research staff are due for required safety training.
- Confirm whether the lab intends to ship any biological materials to collaborators or other institutions. If so, include this information in the appropriate section and ensure that designated personnel complete Shipping Training.

IBC-A07-164-22 Amendment 22 : Understanding molecular, cellular and organismal basis of childhood neurological diseases

PI:	**MS**
Motion:	Modifications Required for Approval – Return to IBC Analyst
Discussion:	**IBC Discussion**: The lab investigates neural function and connectivity to better understand tuberous sclerosis complex (TSC), a genetic neurological disorder characterized by seizures, learning difficulties, and autism. By examining how TSC-related genes regulate neuronal connectivity and function, the lab aims to identify potential therapeutic strategies to ameliorate disease-associated phenotypes. This amendment adds new lentiviral vectors that will be used to transduce human iPSC-derived neurons cultured in 2D monolayers and 3D organoid systems. One vector encodes a genetically encoded calcium indicator to enable live-imaging studies for assessing neuronal activity in cultured neurons and in mice. The second vector drives

overexpression of the fluorescent reporter mScarlet3 for cellular labeling and visualization in the human iPSC-derived neuronal cultures. Lentiviral vector transduction of human iPSC-derived neurons will be performed following BSL-2 practices and procedures. Mouse studies involving transplantation of transduced organoids will be conducted at ABSL-2 **inoculations and ABSL-1 housing** practices and procedures.

Regulations Applicable to this Protocol: The NIH Guidelines Sections III-D, III-E, III-F and OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- To consolidate the protocol, animal work can be removed since it is covered in a separate IBC.
- Clarify whether the use of replication-incompetent vectors to control oncogene expression controls for lentivirus production rather than oncogenesis.
- Specify the route of administration and viral titer that will be inoculated into animals.
- Research staff are due for safety training.
- Animal procedures involving lentivirus injection are performed at ABSL-2 for 72 hours, while injection of human organoids is conducted at ABSL-2.
- For surface inactivation of lentivirus, 70% ethanol is sufficient.
- Arm sleeves can be removed in the exposure control plan.
- Alternatives such as Nair or disposable razors can be used instead of razor blades.
- Include sorting and flow analysis in laboratory procedures.
- Double gloving and face shield precautions are not required for the *E. coli* used in this protocol.

PI: **TS**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion:** The lab investigates how mice and human cells can be reprogrammed or directed into specific lineages using growth factors, small molecules, and genetic modification techniques to generate induced pluripotent stem cells and differentiated cell types, including blood and blood stem cells. This amendment adds the use of macaque pluripotent stem cells and skin tissue where they will expanded/banked as undifferentiated stem cells and use in in vitro differentiation experiments to turn them into hematopoietic stem/progenitor cells (HSPCs); the macaque iPSC derived HSPCs will be analyzed using hematopoietic colony formation assays and protein/gene expression studies (antibody staining, RNAseq). All work involving macaque cells will be conducted using BSL-2 practices..

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- In the general information, liquid waste will be inactivated with bleach to achieve the appropriate concentration before being removed from the BSC. All contaminated waste must be sealed in a biohazard bag inside the BSC and then disposed of in the red biohazard waste bin.
- Research personnel must complete Herpes B training.
- Clarify how RNA is extracted from macaque cells for RNAseq experiments and whether this is performed inside a BSC.

5	**3 year Lab Study Renewals**
IBC-RN00001194-2	Renewal 2 : Characterizing the immune response to respiratory virus infection in the nasal mucosa

PI: **BH**

Motion: Modifications Required for Approval – Return to IBC Analyst

Discussion: **IBC Discussion:** The lab investigates the host immune response to viral respiratory infections, focusing on identifying distinct cell subsets in the nasal mucosa associated with disease severity and wheezing. They also study mechanisms of virus-induced pathogenesis using in vitro cell culture models. This renewal adds work with respiratory syncytial virus (RSV) strain A2, which will be propagated in the lab and used to infect human HEp-2 cells. RSV-infected epithelial cells will be either fixed in 4% paraformaldehyde for immunocytochemistry or collected in lysis buffer for RNA and protein assays, including qPCR and protein quantification. Flow cytometry will be performed on fixed cells to assess cellular phenotypes. All work involving propagated RSV and human cell lines will be conducted at BSL-2 work practices.. Fixed cells will be handled at BSL-1 work practices and procedures.

Regulations Applicable to this Protocol: The OSHA Bloodborne Pathogens Standard.

Motion: Modifications Required for Approval

- Majority (Approved): 15
- Minority (Against): 0
- Abstention: 0

Modifications Requested:

- Include the vendor information for the SARS-CoV-2 spike glycoprotein peptide pool. Briefly describe how the GFP-labeled human RSV A2 strain will be propagated in the lab.
- Research personnel are due for Influenza Training.
- RSV consultation is available for staff through Occupational Health.
- Remove references to sharps if they are not being used and update the information accordingly.

6	**Human Study Annual Reconfirmation**

IBC-P00001590 An Open-label, Phase 1/2 Trial of Gene Therapy 4D-710 in Adults with Cystic Fibrosis

PI: **AC**

Motion: Approved

Discussion: The study is active and open to enrollment.

IBC-P00000581 BEAR II Randomized Control Trial

PI: **YMY**

Motion: Approved

Discussion: The study is active and open to enrollment.

IBC-P00002060 JAG-201-CL-10

PI: **SS**

Motion: Approved

Discussion: The study is active and open to enrollment.

IBC-P00002055 Arcturus Phase 2

PI: **GS**

Motion: Approved

Discussion: The study is active and open to enrollment.

7 Administrative Reviews

IBC-RN04-029-5 Renewal 5 : Differentiation of mouse and human pluripotent stem cells

PI: **GD**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no changes to the risk assessment.

IBC-RN00000180-5 Renewal 5 : Genetics of Human Hematopoiesis

PI: **VS**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no changes or updates to the risk assessment.

IBC-RN11-246-5 Renewal 5 : Toggling cell expression and states of choroid plexus cells and neurons in rat, mouse, and cell culture models

PI: **ML**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no changes to the risk assessment.

IBC-A00001003-5 Amendment 5 : Gene Therapy for X-linked Retinitis Pigmentosa caused by RPGR mutations

PI: **AF**

Motion: Administrative Approval

Discussion: The Investigator Brochure was updated. This update does not change the biosafety risk of the study product.

IBC-RN03-175-5 Renewal 5 : In vivo Rescue and Growth of Adult and Neonatal Sensory and Motor Neurons

PI: **CW**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no updates or changes to the risk assessment.

IBC-RN06-323-4 Renewal 4 : Characterization of Stem Cells in Normal Lung and Lung Cancer

PI: **CK**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no changes to the risk assessment.

IBC-A00001982-1 Amendment 1 : Multi-Center, Open Label Study of RP-A501 in Male Patients with Danon Disease

PI: **DA**

Motion: Administrative Approval

Discussion: The Investigator Brochure and Informed Consent were updated. The update does not change the biosafety risk of the study product.

IBC-RN00000427-4 Renewal 4 : Salmonella paratyphi vaccine

PI: **YL**

Motion: Administrative Approval

Discussion: This is a three-year renewal with no changes to the risk assessment.

IBC-A00001943-1 Amendment 1 : Tissue Engineering of urogential tissues/organs

PI: **ZI**

Motion: Administrative Approval

Discussion: The lab added new room locations to their protocol. There are no changes to risk assessment.

IBC-A00001765-1 Amendment 1 : Role of Virus-like DNA repeats in Health and Disease

PI: **SZL**

Motion: Administrative Approval

Discussion: The lab will be shipping transduced DLD1 and HeLa cells to collaborators. There are no changes to risk assessment.

IBC-RN00001155-2 Renewal 2 : Investigation of genes associated with autoinflammatory diseases

	PI:	**PL**
	Motion:	Administrative Approval
	Discussion:	The lab will include the use of BLAER-1 cells, an oncogenic cell line, as part of their electroporation approach to introduce synthesized guide RNA and recombinant Cas 9 directly. Work with BLAER-1 cells will be conducted at BSL-2 conditions.

IBC-RN00001060-2 Renewal 2 : Investigating Redox signaling at Cellular Membranes

	PI:	**JT**
	Motion:	Administrative Approval
	Discussion:	This is a three-year renewal with no changes or updates to the risk assessment.

IBC-A00002055-2 Amendment 2 : Arcturus Phase 2

	PI:	**GS**
	Motion:	Administrative Approval
	Discussion:	The amendment updated their protocol, informed consent, and exclusion and inclusion criteria. These updates do not change the biosafety risk of the study product.

IBC-A09-218-4 Amendment 4 : Transcriptional Regulation of Hematopoiesis

	PI:	**AC**
	Motion:	Administrative Approval
	Discussion:	This amendment adds Huh-7, a human hepatocellular carcinoma cell line to their study. This update does not change the risk assessment.

8	**Laboratory Study Annual Reconfirmation**
09-243	Transfection of Expression Constructs in vivo and in vitro to Label Sparse Populations of Cells.

PI: **BS**

08-287 RNA Discrimination by the Innate Immune System & mechanism of AIRE/Foxp3

PI: **SH**

IBC-P00001900 Insights from human neuromas to develop novel neuropathic pain therapies

PI: **CW**

IBC-P00000407 The impact of symbiotic microbes on host development and homeostasis

PI: **SS**

IBC-P00000277 Heart development and disease

PI: **SC**

10-350 Response of the mouse nervous system to peripheral nerve injury

PI: **CW**

09-194 Plasticity at the Retinogeniculate Synapse

PI: **CC**

IBC-P00001040 Copper depletion in leukemia therapy

PI: **NK**

11-077 Cell shape and organ assembly in C. elegans

PI: **MH**

IBC-P00001515 Research involving human biological samples

PI: **MGH**

IBC-P00001840 Generation of Knockin Mouse Lines

PI: **MR**

IBC-P00001980 Human sample and bacterial isolate processing

PI: **KM**

IBC-P00001809 Recombinant VSV

PI: **HC**

IBC-P00000509 Interneuron differentiation, noninvasive brain stimulation, and mechanisms of neuromodulation in neurological disease.

PI: **AR**

IBC-P00000041 Generation of transgenic mice using mammalian expression vectors

PI: **CW**

IBC-P00000443 Genome editing using clustered regularly interspaced short palindromic repeats (CRISPR)

PI: **CW**

IBC-P00000957 Studies of Rheumatic Diseases and Immunodeficiencies

PI: **LH**

IBC-P00000911 The intestinal response to the pathobiont adherent-invasive Escherichia coli and Vibrio cholerae outer membrane vesicles

PI: **PW**

09-075 Transplantation of human cells into mice

PI: **LZ**

IBC-P00001147 Genetics of Neural and Cardiovascular Disorders

PI: **RD**

IBC-P00001608 Cardiovascular Development and Disease

PI: **WP**

08-042 Molecular Analysis of Mammalian Innate Immunity

PI: **JK**

IBC-P00000168 Genetics of Epilepsy

PI: **AP**

IBC-P00000079 Candida albicans: molecular genetics of morphogenesis and Tor signaling

PI: **JK**

IBC-P00001997 Effect of adjuvant conditioning on peritoneal macrophages

PI: **AC**

IBC-P00001890 Genetic Movement Disorders

PI: **DEF**

IBC-P00001910 Studies of Human Genetics and Precision Medicine

PI: **WC**

IBC-P00001245 Challenges to the immune system due to infection, inflammation and vaccination

PI: **HS**

07-202 Blood-derived progenitor cells for tissue vascularization

PI: **JB**

11-172 Milton and the Transport of Mitochondria

PI: **TS**

IBC-P00000715 The role of ion transporters in bacteria

PI: **KY**

IBC-P00000374 Analysis of virulence and immunity to microbial pathogens

PI: **GP**

9	**Completions**

IBC-P00001324 Metabolomics of gastrointestinal stromal tumors

PI: **NK**