**Salmonella typhirium** colonizing the root of hair cell of *Arabidopsis thaliana*

Residue contacts identified from saturation suppressor mutagenesis (Red: Parent inactive mutant; Green: Local Suppressors)

Comparative sequence analyses of genome and transcriptome reveal novel transcripts and variants in the Asian elephant *Elephas maximus*

The presence of hyperpolarization-activated cyclic-nucleotide-gated nonspecific-cation (HCN) channels in neurons alter the phase (A) of local field potentials (LFP) without significant alterations to the amplitude, for computations performed with different numbers of neurons (B). These channels also significantly contribute to enhancement of spike phase coherence (C)

Perfusion bioreactor that can accommodate scaffolds on cover-slips with provision for high magnification in situ (Top). NIH 3T# cells grown on ring scaffolds (Bottom)
**DIVISION OF BIOLOGICAL SCIENCES**

Research Snapshots 2015

**Signaling pathways mediated by receptor guanylylcyclase C (GC-C) in gut epithelial cells**

**Neurons from wildtype and transgenic Alzheimer’s disease model**

**Left:** Activation of the prefrontal cortex and parietal cortex during attention measured with fMRI. **Right:** The whole brain connectome measured with dMRI followed by tractography.

**Discovery of protein that could serve as a drug target for a deadly form of brain tumour called glioblastoma**

**Left:** Immunostaining for the Core protein, present in the cytoplasm and nucleoli of Japanese Encephalitis virus in a mouse melanoma cell. **Right:** Immunostaining for Japanese Encephalitis virus envelope protein in infected Neuro2a neuroblastoma cells.