

Beta Cell Interest Group (BIG) Weekly Seminar

Current and ongoing beta cell research is presented in this weekly seminar by faculty, postdoctoral fellows and students. If you are interested in attending the Beta Cell Interest Group (BIG) seminars and joining the BIG community, please contact [David Jacobson](#).

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Meeting Details

Start Date / Time	April 24, 2013 at 9:00 AM
End Date / Time	April 24, 2013 at 10:00 AM
Duration	1 hour(s)
Location	512 Light Hall
Presenter Name	Neil Phillips (Powers lab)
Presentation Title	Development of RNA aptamers for beta cell imaging
Status	This meeting has already occurred

Meeting Agenda/Notes

This is currently an unmet need for the in-situ, non-invasive determination of beta cell mass (BCM) in a patient. Current state of the art in terms of imaging BCM (¹⁸F-Fallypride PET, ¹⁸F-Exendin, conjugated antibodies/peptides) is limited by low sensitivity, high background and poor specificity. We are developing novel oligonucleotide imaging probes specific for pancreatic human islets and beta cells that can be used to longitudinally follow changes in beta cell mass. Derivization of functional groups on the oligonucleotide sequence allows the addition of imaging agents that can be used in PET, SPECT, MRI and Optical modalities, and therapeutics such as inhibitory RNA, DNA, drugs and toxins, allowing these platforms to be used for dual theranostic use.