*DISSEMINATION MEASURES*

Beneficiaries of this work includes the academic community interested in hormone and neuropeptide secretion and organelle trafficking. Since impaired insulin secretion is the underlying mechanism for the development of type 2 diabetes, findings of this work is relevant to the pharmaceutical industry as well as to clinicians. Increasing proportion of the population (~4-5 %) suffers from this metabolic disease and thus the findings are also highly relevant to the general public.

Communications and Engagement:

*Engaging with Academia* – We have ensured that the results of this research have been/will be available to a wider research community via publications in scientific journals and presentations at national and international conferences.

*Academic journal papers*

1. Diraison, F., Hayward, K., Sander, KL., Brozzi, F., **Lajus, S.,** Francis, J.E., Ainscow, E., Bummer, U.A., Hancock, J.,Molnar, E., Avent, N.D. and Varadi, A.(2011) Translationally controlled tumour protein (TCTP) is a novel glucose-regulated protein that is important for survival of pancreatic beta cells. *Diabetologia,* **54:**368-379.

2.Brozzi,F., **Lajus, S.,** Diraison, F., Regazzi, R., Molnar, E. and Varadi, A. (2011) Identification of a novel receptor of myosin Va in neuroendocrine cells. Under review with Traffic

3. **Lajus, S.,** Brozzi, F.,Diraison, F., Regazzi, R., Molnar, E. and Varadi, A. **(**2011) Role of MyRIP in hormone secretion (To be submitted to Molecular Cell Biology in June 2011)

4. **Lajus, S.,** Diraison, F.,Brozzi,F.,Molnar, E. and Varadi, A. (2011) Novel link between metabolism and vesicle trafficking in pancreatic beta cells. To be submitted to Diabetologia in September 2011.

*Preliminary communications/abstracts*

1.Brozzi, F., **Lajus, S.,** Diraison, F., Regazzi, R., Molnar, E and **Varadi, A** (2011) The Rab27 effector proteins granuphilin-a/b and rabphilin-3A bind the neuronal isoform of myosin Va to secretory granules. Joint Biochemical Society/Wellcome Trust Conference on Cellular cytoskeletal motor proteins, Cambridge, UK

2.Brozzi, F., **Lajus, S.,** Diraison, F., Regazzi, R., Molnar, E and **Varadi, A** (2011) MyRIP anchors PKA to the MyoVa-associated protein complex on secretory vesicles. Joint Biochemical Society/Wellcome Trust Conference on Cellular cytoskeletal motor proteins, Cambridge, UK

3.Brozzi, F., **Lajus, S.,** Regazzi, R. and **Varadi, A** (2010) Granuphilin-a/b and rabphilin-3A link myosin Va to LDCVs in pancreatic beta-cells. EASD Islet Study Group, Tallberg, Sweden

4. **Lajus, S** and **Varadi, A** (2008) Molecular mechanisms of nutrient stimulated insulin-containing vesicle transport in pancreatic beta cells - identification of secretory vesicle-specific motor protein receptors. *Diabetologia*51**,** S204-S204

5. **Lajus, S.** and **Varadi, A.** (2009) Large dense core vesicle (LDCV) transport in pancreatic beta-cells – identification of vesicle-specific motor protein receptor. *BSCB Spring Meeting**and Biochemical Society Focused Meeting. The Dynamic Cell.*

6. **Lajus, S.,** Brozzi, F. and **Varadi A.** (2009) Large dense core vesicle transport in pancreatic beta-cells – Myosin VIIa-Rab27-interacting protein (MyRIP) function in pancreatic beta-cells. Islet Study Group Meeting, Vienna.

*Invited talks:*

2011 **Molecular mechanism of the brain isoform of myosin Va (BR-MyoVa) recruitment to hormone and neuropeptide-containing secretory granules.** 16th International Symposium on Chromaffin Cell Biology. Beijing, China.(AV)

2010 **MYRIP function in pancreatic β-cells: interaction with myosin Va and myosin VII or both?** EASD,European Islet study Group Meeting, Tallberg, Sweden (SL)

2009 **Molecular mechanism of vesicle trafficking – Role of Myosin Va, MyRip and Rab27a.** EASD, European Islet study Group Meeting, Vienna, Austria (AV)

2010 **Life and death of the pancreatic beta-cell.** The Severnside Alliance for Translational Research(SARTRE), The First South West and South Wales Network Meeting, Translational Research in Diabetes (AV)

2010 **Regulation of pancreatic beta-cell function - survival and insulin vesicle transport**. Department of Clinical Science @ North Bristol , University of Bristol (AV)

2008 **Molecular mechanism of nutrient-stimulated insulin-containing vesicle transport in pancreatic beta-cells.** CRIB Review Day, Bristol, United Kingdom (SL)

*Engaging with Industry* – AV’s current MRC & Astra Zeneca funded Industrial Case PhD studentship is an exemplary case of engaging with Industry. AV is the PI on this studentship which involves close collaboration with two leading diabetes focused research groups at Astra Zeneca (Cardiovascular and Gastrointestinal Unit and Advanced Science and Technology Laboratory). In particular, they are interested in the molecular mechanism underlying pancreatic beta-cell dysfunction. The collaboration includes regular meetings, site visits and exchange of personnel. Insulin vesicle transport plays an important role in normal glucose-regulated insulin secretion and thus, it is a potential drug target to improve insulin release. Findings of this project is relevant to the pharmaceutical industry and have been discussed at our regular monthly meetings as well as the annual ‘Collaborations Day’ at Alderley Park at Astra Zeneca (the Diabetes Research Group at Astra Zeneca and all collaborators working on diabetes ~ 25 research groups will attend this annual event in September 2011) and new projects will be developed with our existing collaborators plus other groups working in this research area.

*Engaging with Healthcare professionals –* AV and SL haveinformed the Academic and Healthcare community on their research through activities of the The Severnside Alliance for Translational Research (SARTRE), South West and South Wales Network Meeting on Translational Research in Diabetes. In addition, AV is the coordinator for the Clinical Chemistry module of the MSc in Biomedical Sciences programme designed to train Biomedical Scientists. Her research results inform a generic module ‘Current Issues in Biomedical Sciences’ (50 students/year). She regularly meets clinicians (at least four times a year) from six NHS Departments in the South West region which includes Endocrinologists working on Diabetes and related metabolic diseases. These activities helped us to obtain access to human samples such as islets of Langehans, has led to collaborations and publications such as (Diraison et al., (2011). *Diabetologia*) and has informed/shaped our research in terms of making it purposeful and relevant to clinicians and end-users.

*Public Engagement* - To engage the general public interest, we regularly present our findings to audiences primarily made up of school children/young people (e.g. presentations associated with beta-cell imaging contributed to ‘*Hands on Science*’ for year 10 students from local schools). To promote our research activities we also present our live cell images to prospective students and their parents on University Open days.

Collaboration and co-production - Collaborations within this project involved a continuation of existing links with University of Bristol, UK (Prof. Molnar) and Astra Zeneca (Dr Ainscow) and new collaborations with University of Lausanne, Switzerland (Dr Regazzi), University of Tohuku, Japan (Prof. Fukuda). These contributions have been critical for the success of this project.

People exchange – SL carried out the islet preparation and some of the imaging at University of Bristol and thus interacted with a wide range of researchers in different laboratories.