# SAMPLE SUBMISSION 1

**Letter for the Health Behaviour International Collaborative Award**

**Applicant:** [redacted]
India

**Mentor:** [redacted]

**1. Description and justification for purpose and anticipated benefit of international visit.**
In India, "cancer" is a word rife with negative connotations as it is considered to be a stigma and akin to death (Kishore et al., 2007). This frequently results in a cultural phenomenon where families do not disclose a cancer diagnosis to patients. Consequently, 54.1% patients are unaware of their true diagnosis which is, in turn, associated with increased levels of distress among non-disclosed patients than their counterparts (Chittem et al., 2012). Further complicating issues surrounding disease communication, research indicates the prevalence of collusion such that families and patients avoid discussing the cancer diagnosis, treatment, and prognosis (Chaturvedi et al., 2009). Highlighting the persistence of collusion in India, Muckaden et al. (2005) observed that the incidence of collusion towards the end-of-life is 15%.

Innovative techniques such as patients' and caregivers' question prompt list (Brandes et al., 2014; Ellis et al., 2015) and novel theoretical frameworks of Disclosure Decision-Making Model (Venetis et al., 2015) have explained and facilitated honest communication between cancer patients, their families and treating physicians across cultures. However, no research has examined the effectiveness of these techniques in India. Therefore, this 10-day visit will help develop skills in these research methodologies in order to translate and test them with an Indian population. This visit will also be our major, conclusive step towards establishing collaborative efforts in research and practice in cancer communication.

**2. Rationale and methodology for proposed project, visit, and collaborative activity.**
***Rationale:*** The [redacted] and Research Laboratory ([redacted]) is the leading laboratory world-over for examining, developing and implementing psychological interventions to enhance and optimize cancer communication. Further, the Lab has successfully trained international fellows which aided in establishing fruitful cross-cultural collaborations to develop and test culturally-relevant communication skills interventions (see Fujimori et al., 2003, 2014). Owing to the unique profile of cancer in India, and limited research and knowledge on cancer communication and disclosure, I believe training with professionals who have years of expertise in cultural contexts of disease communication such as in [redacted] will help tremendously in providing improved communication pathways for Indian cancer patients, families, and their physicians.

***Methodology:*** During my visit to [redacted] will train with Prof. [redacted] and lead researchers and practitioners in the [redacted] Lab on how to develop the question prompt lists and Disclosure Decision-Making Model for patients, caregivers and physicians. Further, Dr. [redacted], a behavioural scientist in the lab, Prof. [redacted], and I have been planning on conducting an exploratory qualitative study examining communication and information needs of patients, caregivers, and physicians in India. We believe this study will help us understand how to develop our collaborative research efforts as well as rolling out communication skills training programmes in India. We will use my visit to the [redacted] Lab to finalize the details of this qualitative study (e.g., interview schedule).
My training at the [redacted] Lab and the joint qualitative study will translate into Prof. [redacted], and I writing a large grant together which will primarily focus on applying methods to enhance communication within Indian cancer contexts. We will also use this visit to strategize on setting up long-term communication skills training programmes/workshops in India.

**3. Evidence of communication with the international research mentor**
In 2012, I met with the Prof. [redacted] who established the [redacted] Laboratory at [redacted] to visit the laboratory, explore their facilities, and discuss opportunities to collaborate. Following this, Prof. [redacted]

facilitated a one-day workshop on communication skills for healthcare professionals involved in cancer care held at IIT Hyderabad and convened by me in February 2015. Through Prof. [redacted], I began discussions with Prof. [redacted] on nondisclosure of cancer diagnosis, the doctor-patient relationship, and the role of families in medical care in India. These ongoing discussions led us to think about how to harness these culturally-driven factors towards developing research and practice for productive cancer communication in India.

**4. Outline of specific objectives of the proposed visit/project.**

1. To develop research skills and methods to implement the question prompt list for cancer patients and their family caregivers.
2. To develop knowledge about and apply the Disclosure Decision-Making Model for cancer populations.
3. To finalize the details of an exploratory qualitative study on cancer patients', caregivers' and physicians' communication and information needs.
4. To further international collaborations with experts in the field of cancer communication skills.

5. **Plan for executing above objectives, including preliminary timetable of activities during proposed visit with specific emphasis on the feasibility of the project within the proposed timeline.**

The visit will be for 10 days and the proposed timeline is as follows:

| | |
|---|---|
| Days 1 - 4 | Training with Prof. [redacted] on the question prompt list |
| Days 5 - 7 | Training with Prof. [redacted] on the Disclosure Decision-Making Model |
| Day 8 | Finalize details of the qualitative study with Dr. [redacted] |
| Days 9 - 10 | Brainstorm on potential collaborative grant opportunities and training programmes |

We believe that this timeline is feasible as it gives me ample time for training in the new research methodologies as well as sufficient time for us to concretize our collaborative work.

6. **Outline of plan for continued collaboration and product.**

Following my visit to the [redacted], we will continue to focus on writing grants together on implementing the question prompt list and the Disclosure Decision-Making Model in India. We are targeting funding agencies/opportunities such as the Indian Council for Medical Research-National Institute of Health grants, American Association for Cancer Research funding, and American Psychological Association's International Programs and Awards. We will also continue to work on the qualitative study so as to submit it to a reputable journal and build on its findings in the development of our planned research project and training programmes.

**A budget plan (how funds will be utilized) including any additional resources committed by the mentor or institution.**

The mentor institution will provide basic resources such as access to IT facilities and desk space as well as access to training material (e.g., videos, secondary data such as interview transcripts).

| **Expense for a 10 day visit** | **Cost** |
|---|---|
| Flight tickets (Hyderabad, India to New York, USA and return) | $ 1200 |
| Accommodation and subsistence (at $180 per day X 10 days) | $ 1800 |
| **TOTAL** | **$ 3000** |

# SAMPLE SUBMISSION 2

## Reducing depression symptoms in cancer survivorship: A personalized medicine approach

In the past decades, advances in cancer treatment and an aging population have resulted in a rapidly increasing number of cancer survivors. Cancer survivors experience significantly higher rates of major depression and elevated depression symptoms compared to the general population. Depression warrants attention in its own right, but it is particularly urgent to address in cancer survivors as it confers risk for lower survival and greater healthcare usage. **The number of cancer survivors has outstripped the ability of health professionals to deliver traditional evidence-based interventions for depression** such as face to face cognitive behavior therapy (CBT). Despite the efficacy of cognitive behavioral interventions, data also show high (up to about 50%) non-response rates. To effectively treat everyone, we need different interventions and a way to determine who will benefit from which intervention.

A recent comparative efficacy trial showed that cognitive behavioral intervention for sleep disturbance was as, or more, effective at reducing depression symptoms than CBT for depression. Given that more than half of people treated for cancer report sleep disturbance and significant fatigue, sleep intervention may be a promising treatment option for depression in cancer with distinct mechanisms from standard CBT for depression. However, given limited resources, **we cannot afford to leave the process of identifying the right therapy for an individual to trial and error**.

**Aim 1**: To adapt a novel intervention that enriches mindfulness of emotions and promotes resilience to depression in cancer (EMERGE) survivors developed by Dr [redacted] from in person delivery to a remote delivery format (EMERGE-R).
**Aim 2**: To develop an algorithm to personalize and optimize treatment decisions for depression between the intervention adapted in Aim 1 and a remotely delivered sleep intervention (cognitive behavior therapy for sleep; CBT-SR) for cancer survivors. CBT-SR was previously developed in my lab.

## Purpose and Benefit

As a member of the American Psychosomatic Society & Society for Health Psychology, I am applying for the Health and Behavior International Collaborative Award to spend three weeks working with Professor [redacted]. During this time, I will work with Prof [redacted] to adapt the EMERGE intervention she developed into a brief format suitable for remote delivery to cancer survivors. I have collaborated on 5 manuscripts with Prof [redacted] in the past, and this visit will provide an ideal opportunity for me to work effectively with her. Prof [redacted] is a leader in affective science and the development and delivery of evidence-based interventions in cancer. Working with her and her lab will allow me to develop expertise in designing and planning psycho-oncology interventions, and gain critical insight into the logistics of how they are deployed and managed.
Importantly, as an early career researcher (PhD awarded 2015) working towards laying the foundation of my first lab group, mentorship from experienced researchers and a connection with an established lab will support growth of both me and my lab group.
Concrete outcomes from the trip include: (1) intervention materials for EMERGE-R to be used in the subsequent study; and (2) a finalized study protocol for a novel trial to develop a tool to optimize treatment selection between EMERGE-R and CBT-SR, ready to be tested through my local cancer network.

## Methodology

**Aim 1** will focus on adapting EMERGE, an intervention designed for women with cancer based on Barlow's Unified Protocol. It is based on a transdiagnostic approach targeting cross-cutting deficits in mood disorders (e.g., emotional regulation). The adaptation will revise the delivery of EMERGE to a remote (telephone + email) delivery format (EMERGE-R) consistent with an existing remote (telephone + email) format for cognitive behavior therapy for sleep (CBT-SR) in cancer developed in my lab. Determination of which components to deliver via telephone and which via email will be guided by experience from Prof [redacted] lab delivering EMERGE in person to women with breast cancer.

**Aim 2** will involve developing and finalizing the protocol of a randomized controlled trial (RCT) and conducting it upon my return to my home institute. Briefly, 120 cancer survivors will be recruited from across Australia through cancer support forums, cancer registries, and clinician referrals and randomized in a 1:1 ratio to receive either CBT-SR or EMERGE-R. Inclusion criteria include: (1) aged 18 and over, (2) completed primary treatment for any type of cancer within the last 5 years, (3) presence of at least some symptoms of insomnia and depression defined as a score of $\geq$7 on the insomnia severity index (ISI) and $\geq$3 on the PHQ-4, and (4) regular access to email and a telephone. Exclusion criteria include: (1) severe psychiatric disorder as determined by the M.I.N.I, (2) receiving current psychotherapy treatment for sleep or mood or actively managed anti-depressant medication, (3) having other physical and/or mental health condition that directly affects sleep or depression.

*Interventions*. Both interventions will be structured to entail an initial, 75-minute phone call, a follow-up call lasting approximately 30 minutes, and a series of 7 emails, one per week that take approximately 15-20 minutes to read, for a

total of 6 weeks. Finally, all telephone contact will be recorded via Dictaphone to assess quality control. The interventions will be delivered by trained clinical psychology doctoral students. All study personnel will be GCP certified.

*Measures*. The primary outcome is depression symptoms on the Center for Epidemiologic Studies Depression scale. Secondary outcomes include anxiety symptoms measured by the PROMIS anxiety, the ISI, and sleep efficiency measured by sleep diary. To develop an algorithm to predict whether depression symptoms improve more in EMERGE-R or CBT-SR for an individual, a variety of other potentially relevant measures will be assessed including: sociodemographic (e.g., gender, age, race/ethnicity, SES, marital status), medical (e.g., cancer type, stage, treatment, comorbidities, time since treatment completion), psychosocial (e.g., emotion regulation skills, coping, experiential avoidance) and sleep (e.g., sleep duration, onset latency, timing, variability, all from sleep diaries; Dysfunctional Beliefs and Attitudes about Sleep scale; Morning-Eveningness Questionnaire; pre-sleep arousal; sleep disorders using the DUKE interview), and engagement (e.g., client motivation for therapy; treatment satisfaction via the FACIT-TS-G; intervention adherence).

*Data analyses*. The primary goal of this intervention is not to compare the efficacy of each intervention, but rather to develop a personalized algorithm to guide whether an individual should receive EMERGE-R or CBT-SR. This will be accomplished using machine learning to build a Bayesian Additive Regression Tree (BART) predictive model. BARTs are ideal as they allow non-linear interactions and can accommodate more predictors than datapoints as they involve built in variable selection. These characteristics allow the BART model to search for important interactions between treatment group and all other variables included in the model. For each participant, predictions will be generated from the BART model for each participant for each condition and the difference between conditions for a participant will capture the personalized advantage index: how much better (or worse) is an individual predicted to do if randomized to EMERGE-R or CBT-SR, which is used to determine "optimal" treatment for an individual. Finally, the algorithm is validated by comparing participants in two groups: those who were randomly assigned into their optimal condition and those randomly assigned into their non-optimal condition. If the algorithm has utility, participants randomly assigned to their optimal condition will have significantly lower depression symptoms than those randomly assigned to their non-optimal condition.

## Budget, Timeline & Feasibility

**Proposed Budget**

| Item | Cost |
|---|---|
| Australia to US Flight | $1,320 |
| Hotel at University of Arizona ($120 x 21 days) | $2,520 |
| Per Diem ($30 x 21 days) | $630 |
| Total from Award | $3,000 |
| Personal Research Funds | $1,470 |

The proposed budget only covers travel as the RCT will not require funds: data collection platforms and personnel time will be provided in-kind. Australia ethics committees prefer that patients in interventions are not payed to avoid coercion.

The project will run from July 2018-2019, with a three week visit in October 2018. The immediate tangible outcomes will be materials for an adapted intervention and a finalized RCT protocol. These are both feasible as I will leverage an existing trial protocol and have several weeks to work closely with Prof [redacted]. The larger aim of conducting the RCT and developing an algorithm to optimize treatment selection will be more challenging but is feasible given the resources available to support the project.

Recruitment targets for the RCT (Aim 2) of ~20 per month are feasible as we are taking people 0-5 years post treatment for any cancer, and as the interventions are remote, living anywhere in Australia. I am currently integrated into one of the largest comprehensive cancer centers in Australia, the Peter MacCallum center, which has >1,000 new cancer patients per year. I also have existing connections with Breast Cancer Network Australia, a support network for people with cancer. In terms of delivering the proposed intervention, I have recruited two clinical doctoral students (both funded by federal scholarship) to conduct the intervention and screening: about 30 hours of intervention and screening per month per student. An Honors student will assist project management. Feasibility of long distance collaboration is demonstrated by the 5 manuscripts Prof [redacted] and I have co-authored long distance. Finally, feasibility of algorithm development is supported by my being one of 13 teams invited to an international tournament to develop treatment selection algorithms (https://osf.io/wxgzu/). I will be able to use the existing code I used to develop the algorithm for that intervention and apply it to the RCT data in cancer.

**Proposed Project Timeline**

| Period | | Activity |
|---|---|---|
| Jul-Sep '18 | | Draft RCT protocol drawing on existing RCT protocol I am running (Aim 2) |
| Oct '18 (visit) | Week 1 | Decide which EMERGE components are suitable for telephone or email (Aim 1) |
| | Week 2 | Work with Prof [redacted] to revise EMERGE materials for telephone & email (Aim 1) |
| | Week 3 | Organize intervention materials & draft therapist guide to intervention (Aim 1) |
| | | Finalize RCT protocol with Prof [redacted] (Aim 2) |
| Nov '18 | | Finalize RCT ethics application & train clinical doctoral student to deliver EMERGE-R (Aim 2) |
| Dec '19 | | Plan recruitment while ethics pending (Aim 2) |
| Jan-Jun '19 | | Recruit & run RCT (Aim 2) |
| Jul '19 | | Build treatment selection algorithm (Aim 2) |

# SAMPLE SUBMISSION 3

**Application for the ICBM Collaborative Award by [redacted]**

**(a) Description and justification for purpose and anticipated benefit of international visit.**

Description of purpose: This application is for the mentee to spend 2 weeks under the mentorship of Professor [redacted] at the [redacted]. The Center aims to aid researchers, policy makers, and school food service staff to design, implement and evaluate effective and sustainable strategies to influence the behaviour of children in selecting and consuming healthier options within the school food setting. The purpose of the visit is to learn about behavioural economic strategies and to directly observe how these strategies have been applied to influence the selection and consumption of foods within the school food environment. The outcomes of the visit will be the design and implementation of a world-first intervention that incorporates these strategies within online canteens in Australian schools, which the applicant will test in a cluster randomised controlled trial in collaboration with the international mentor.

Justification of Purpose: The mentor is an international leader in the design and application of behavioural economic strategies in school food setting. His work at the Center has demonstrated that these strategies are acceptable, effective and sustainable within U.S. school lunchrooms. However, to date, they have not been systematically applied within the Australian school setting or in an online environment. The use of online canteens (where the canteen menu is viewed online, and lunch foods are pre-ordered online and delivered to the student at lunch time) within Australian schools is rapidly growing. The emergence of this technology presents an opportunity to embed evidence-based behavioural strategies in a delivery system which is currently utilised by hundreds of thousands of Australian children, and with the potential to reach millions in the near future as online canteens are rolled-out in schools across the country. The mentor is a world-leader in the implementation of these strategies within the school food setting. He will support the applicant to operationalise these behavioural strategies for delivery via online canteens to facilitate healthier selection and consumption of school lunch foods for children across Australian primary schools.

Anticipated Benefit: This visit will provide the mentee with invaluable, first-hand experience of how these of these strategies are operationalised within a real-world setting, allowing for effective application within the Australian online canteen setting. Specifically, this visit will facilitate the conduct of a RCT of an intervention which delivers these strategies within Australian online canteens. The visit will also facilitate a greater understanding of the theories and principals underpinning behavioural economic strategies and the evidence supporting the use of these strategies to support healthier decision making. It will provide the mentee with exposure to international leaders within this field, and world-class research from a Center of Excellence and is likely to generate collaborative research output in the form of publications in high-ranking journals and presentation at international conferences.

**(b) Overview of the rationale and methodology for proposed project, visit, and collaborative activity.**

Rationale: The visit will enable the mentee to learn first hand about behavioural economic strategies that could be applied to food selection from Australia online primary school canteens. Strategies that have been applied with success in U.S. lunchrooms and which could be translated into an online environment include (but are not limited to) manipulation of: the order in which foods are presented, point-of-purchase information including the description and labelling of foods, the ease of access to healthy and unhealthy foods, purchase prompts, and product bundling. During the visit, the applicant and mentor will determine how to operationalise strategies for use in an online environment and will draft an intervention protocol.

Methodology: The intervention strategies will then be tested in a Cluster Randomised Control Trial, within primary schools within one region of NSW, Australia (Hunter New England). Primary Schools within the region who are using the online canteen service provided by the industry partner of the applicant (Flexischools) will be eligible to participate. Schools will be randomly selected and invited to participate until 10 schools consent. Schools will be block randomised to receive either the intervention (n=5) or the control (n=5). Intervention schools will receive the suite of behavioural economic strategies, whereas control schools will receive the standard online canteen service. Sales data automatically collected by the online system will be used to evaluate the efficacy of the intervention. Menu items will be analysed by a dietitian and the nutrient profile calculated, and then applied to the sales data to calculate the average kilojoule, saturated fat, sugar and sodium content per student lunch order. Historical data will serve as baseline data (the 6 months prior to intervention commencement), and all sales data collected for a 6-month period post-intervention will serve as follow-up data. On the basis that 104 students place at least one online lunch

order during the baseline data collection period, and assuming a standard lunch order contains 1729kJ (sd=700) (unpublished findings from the PICNIC canteen RCT - conducted by the applicant), and assuming an ICC of 0.05, the participation of 10 schools (5 per arm) would enable detection of a difference of 300kJ between groups at follow-up with 80% power at the 0.05 significance level – a clinically significant result.

**(c) Evidence of communication with the international research mentor**
The applicant and mentor have communicated via email to discuss the project and potential collaboration**.** The parties have jointly determined the scope of the proposed collaboration and the objectives. Drafts have been circulated of proposed application and timeline and amended based on feedback from the mentor.

**(d) Clear outline of specific objectives of the proposed visit/project and e) A clear plan for executing above objectives, including preliminary timetable of activities during proposed with specific emphasis on the feasibility of the project within the proposed timeline.**

| **d) Objective** | **e) Plan for completion** | **Estimated timeframe** |
|---|---|---|
| Directly observe the behavioural economic strategies applied within a lunchroom setting | Visit schools where these strategies are routinely applied | 1 day |
| Observe any lunchroom trials currently being conducted in the host department | Visit institutes where strategies are being evaluated in research trials | 1 day |
| Observe the broader work of the host department and meet research staff working on existing lunchroom trials | Be based at the Center for the duration of the 2 week visit, meet staff, observe their trials, and learn about the work they do | 2 weeks - ongoing |
| Present the pilot work conducted to date by the applicant to the host department | Presentation/s delivered in routine staff meetings or lecture spots | 2 hours |
| Determine how to operationalise the strategies for implementation within an online environment | Discussing, drafting and refining a protocol for a cluster RCT | 4-5 days |
| Develop a comprehensive plan to evaluate the effectiveness of the strategies | Draft an evaluation plan | 1 day |
| Develop a plan for future collaboration | Meeting with Mentor and interested researchers | 2 hours |
| Discuss future opportunities to implement these strategies in an online environment | Meeting with Mentor and interested researchers | 2 hours |
| Discuss & observe strategies for increasing research output as an ECR | Meeting with Mentor and other ECRs | 2 hours |

**(f) Outline of plan for continued collaboration and product.**
The protocol for the cluster randomised controlled trial and the trial findings will be submitted for publication. It is anticipated that the trial findings will be published in a high-ranking journal and widely disseminated at national and international conferences. The applicant and mentor will jointly submit abstracts to international behavioural medicine conferences including ICBM (potentially as a late breaking abstract for 2016 conference), Australian and New Zealand Health and Behavioural Medicine Conference in 2017, and the International Society of Behavioural Nutrition and Physical activity in 2017). An invitation will also be extended to the mentor for a reciprocal visit to the applicant's research group.

**g) Budget plan (how funds will be utilized) including any additional resources committed by the mentor or institution.** Please note, funds in excess of $US 3,000 will be provided through the applicant's professional development budget which is provided under the terms of her Research Fellowship (NHMRC 'Translating Research into Practice' scheme).

- Return QANTAS Flights: Sydney to NY = $AU2,563
- 2 weeks Accommodation (Approx $250 / night x 13 night) = $AU3,250 **Total = $5,813**

Thank you to the committee for consideration of this application. For any further information, please contact [redacted]

# SAMPLE SUBMISSION 4

Dear Award Committee,

I am writing to apply for the Health and Behavior International Collaborative Award as a member of the International Society of Behavioural Medicine. As requested, I am enclosing my curriculum vitae, letter of support from my supervisor Associate Professor [redacted] and documents related to my proposed research mentor at Deakin University Associate Professor [redacted]. For clarity, this two-page letter is following the structure set out in the application guidance.

**Description and justification for purpose and anticipated benefit of international visit:** The purpose of the visit is to undertake preliminary, collaborative work to support adaptation of an existing dietary impulse management intervention, developed as part of my PhD, for use in problem drinkers. This will primarily comprise service user consultations, in the form of focus groups, with heavy drinkers to help inform the necessary changes to the intervention.

[redacted] University has a Centre for Drug, Alcohol and Addiction Research (CEDAAR) and Associate Professor [redacted]. CEDAAR has an ongoing relationship with an intake and assessment organisation for adults experiencing substance misuse issues called DirectLine managed by Turning Point. In collaboration with Turning Point the Centre has run a number of randomised controlled trials, including a trial that evaluated the success of modifying approach behaviours in relation to alcohol consumption using cognitive bias modification (Manning et al., 2016). Dr [redacted] has also commenced an inhibition training program to help people quit smoking. This makes [redacted] University the ideal place for conducting the proposed work.

The anticipated benefits of this international visit are (1) direct access to very heavy drinkers who would like support to reduce their alcohol use that might otherwise be difficult to recruit; (2) expertise and experience in running alcohol treatment trials that can be drawn on in planning a future study to evaluate the adapted intervention, and above all (3) the opportunity to build an international collaboration with the research team at [redacted] University, and specifically Dr [redacted] and [redacted], which will broaden my research horizons, open up further post-doctoral opportunities, and strengthen planned grant applications to extend my existing work.

**Overview of the rationale and methodology for proposed project, visit, and collaborative activity:** Contemporary dual-process approaches (e.g. Bechara, 2005; Kahneman, 2012; Stacy & Wiers, 2010; Strack & Deutsch, 2004) to describing and explaining health-related behaviours and addiction highlight how patterns of behaviour can be initiated by external cues with little conscious deliberation or monitoring. It is recognised that these impulsive processes can lead to behavioural relapse and maintenance of unhealthy (but rewarding) automatic and habitual behaviours and that interventions targeting health behaviour change should therefore incorporate techniques that can prevent, or modify these impulses (Dean, 2013; Hofmann, Friese, & Strack, 2009; Marteau, Hollands, & Fletcher, 2012; Sheeran, Gollwitzer, & Bargh, 2013). ImpulsePal is a smartphone app-based intervention designed as part of my PhD to target these impulsive processes to support dietary behaviour change to aid weight loss, using techniques identified in a recent systematic review (van Beurden, Greaves, Smith, & Abraham, 2016). Qualitative feedback from my ongoing feasibility study suggests that ImpulsePal is a helpful tool for in-the-moment support to manage impulses and made users feel more able to resist temptations. The aim of this project is to adapt ImpulsePal for use by heavy drinkers. Specifically, we will modify the current version of ImpulsePal so that it addresses the urges, cravings and impulses that precipitate excessive alcohol use.

Development of ImpulsePal involved the use of the Intervention Mapping protocol (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011) to identify needs, determinants of change, potentially effective strategies for change and a suitable delivery platform for people who are overweight or obese and trying to lose weight. This process involved extensive service-user involvement and formal qualitative research. A systematic review was also conducted to identify techniques that have been evaluated for managing impulsive processes associated with unhealthy eating (van Beurden et al., 2016). The app incorporates strategies identified from this review which are supported by the most promising evidence: (1) Implementation Intentions, (2) Mindfulness-based strategies, (3) Inhibition Training, (4) Contextual Priming/diet reminders, (5) Brisk Walk (in implementation intentions). In addition to these strategies, the app provides users with an easily accessible Emergency Button for support when cravings or urges are strong.

To adapt ImpulsePal for use in the domain of alcohol consumption we propose to conduct two structured workshops with service user groups (6-10 participants per workshop group) consisting of: (1) heavy drinkers who wish to reduce their alcohol consumption; and (2) people who have successfully managed to reduce their alcohol consumption. The first part of each workshop will consist of a focus group discussion about influences that hinder people's attempts to reduce their alcohol consumption, specific situations where temptations occur, and strategies that have been useful to deal with those influences and situations. Both workshops will conclude with time for participants to work in groups to review current and alternative wording in the ImpulsePal app. We will ask the groups for suggestions of amendments to the wording and content of the app to ensure it is appropriate to the new target population and to ensure clarity. The discussions will be

audio-recorded and transcribed verbatim. Transcripts will be analysed to identify overarching themes. This will then be used to create the bank of Implementation Intentions to be added to the intervention. We will also aim to establish whether or not there is a need for a de novo systematic review on impulse management techniques in relation to alcohol use.

**Evidence of communication with the international research mentor:** Since meeting in 2014, Dr [redacted] and I have been in regular communication about my PhD work involving the systematic development of ImpulsePal and potential opportunities for collaboration. We have had multiple discussions about various target populations where impulse management interventions may be suitable (e.g., heavy drinkers, dependent drinkers, tobacco smokers), issues surrounding recruitment into trials, intervention fidelity and sustainability, and opportunities to strengthen my research track record for future grant applications. Dr [redacted] also invited me to combine my visit to Melbourne for ICBM 2016 with a chance to meet her research team and present my PhD work at [redacted]. In addition, Dr [redacted] has existing collaborations at the University [redacted]. She is currently collaborating with Dr [redacted] at the University [redacted] (one of the collaborators involved in the development of ImpulsePal), on the inhibition training programme to help people quit smoking.

**Clear outline of specific objectives of the proposed visit/project:** The main objectives for this proposed visit are to: (1) identify whether there is a need for a systematic review to synthesise effectiveness evidence of impulse management techniques used to facilitate reductions in alcohol consumption; (2) adapt an existing smartphone-based intervention targeting impulsive processes to facilitate dietary behaviour change into a tool that facilitates people in reducing their alcohol use; and (3) establish a collaborative relationship with international researchers working in the area of alcohol and addiction, and running trials in this field.

The specific objectives for the service user consultations are to: (1) identify barriers and facilitators to reducing alcohol consumption and explore how these map onto the current intervention; (2) use the themes related to risk situations (barriers) and the associated useful strategies (facilitators) to help populate a "bank" of Implementation Intentions to choose from in the intervention and (3) inform changes to wording and content to ensure appropriateness and clarity.

**A clear plan for executing above objectives:** *(Length of time of the stay: 3 weeks. Approx. date of visit: July 2017*). The two separate structured workshops with the different sets of participants (see above) will be scheduled for the first two weeks of the stay (allowing for participant availability). The remainder of the stay will involve: (1) discussing scope for, and focus of, a systematic review; (2) the specification of change objectives for the adapted app as derived from the two workshops and existing literature; and (3) the selection or adaptation of practical strategies to target those change objectives. Scheduling of the workshops will be done prior to visit commencement to fully utilise the visit for data collection.

Following the 3-week stay the ImpulsePal app will be ready for programming and any further discussion required in relation to the wording and content will be possible via email or Skype. Should we identify the need for a de novo systematic review during the stay, we will collaboratively prepare a protocol via email or Skype.

**Outline of plan for continued collaboration and product:** This award would provide the opportunity to instigate a collaborative programme of research. After the 3-week stay we aim to program the new version of ImpulsePal, write up for publication, and work together on grant applications to attain funding for a feasibility randomised controlled trial to assess (1) feasibility and acceptability of the intervention, (2) intervention fidelity, and (3) the feasibility of the trial procedures. This could lead to seeking further funding for a fully randomised controlled trial to evaluate intervention effectiveness. In addition, should a systematic review be necessary, we will seek funding to progress this.

**Budget plan:** *Participant involvement*: $15 p.p. (20 AUD p.p 12 -20 participants) – $180- $300. *Travel:* Return flight in July London to Melbourne– $1500. *Accommodation/ Subsistence*: $1200 - 1320

**Additional resources:** Professor [redacted] will provide time and support by scheduling the workshops with participants before commencement of the visit, provide access to space and equipment at [redacted] University to host the workshops, offer working space and equipment within the lab, and support in finding ways to reduce accommodation costs should participant availability require the visit to be extended (we will know this prior to visit commencement).

This award would be a great opportunity to broaden my research horizons, strengthen my track record as an independent researcher, and would allow me to instigate a collaborative programme of research that has the ability to create further post-doctoral opportunities.

Thank you for your time and consideration.
Sincerely,

[redacted]