SABPA PROSPECTIVE COHORT STUDY (2008/9; 2011/12) PROGRESS

PRINCIPAL INVESTIGATOR: PROF LEONÉ MALAN

http://stressed-project.co.za/data-dissemination/

A. CURRENT STATUS
Successful completion of the 3 year follow-up (87.8%).

B. SABPA ACTIVE NATIONAL AND INTERNATIONAL COLLABORATORS

<table>
<thead>
<tr>
<th>NAME OF COLLABORATOR</th>
<th>ENTITIES</th>
<th>FOCUS OF COLLABORATION</th>
<th>ACTIVE COLLABORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTERNATIONAL</strong></td>
<td></td>
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<tr>
<td>1. Prof N Frasure-Smith (PhD)</td>
<td>McGill University, Centre de Recherche de Université de Montréal &amp; Montreal Heart Institute, Quebec, Canada</td>
<td>SABPA: Psychosocial stress and CVD risk</td>
<td>Co-author, SABPA design, analyses of depression</td>
</tr>
<tr>
<td>2. Prof M Hamer (PhD)</td>
<td>University College of London, UK</td>
<td>SABPA: Psychophysiological responses</td>
<td>Author/Co-author, external examiner, co-promoter, SABPA design</td>
</tr>
<tr>
<td>3. Prof T Ziemssen (MD, PhD)</td>
<td>Techniklinikum Dresden, Germany</td>
<td>SABPA: Autonomic Function</td>
<td>Co-author, co-promoter, Takotsubo project PI</td>
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<td>4. Dr M Reimann (PhD)</td>
<td>Techniklinikum Dresden, Germany</td>
<td>SABPA: Autonomic Function</td>
<td>Author/co-author, co-promoter, Takotsubo project collaborator</td>
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<td>5. Dr W Vilser (PhD, Ing)</td>
<td>Imedos, Jena, Germany</td>
<td>SABPA Dynamic retinal vessel analyses</td>
<td>External control SABPA retinal images, <strong>funding</strong> software, co-author</td>
</tr>
<tr>
<td>6. Prof C Kirschbaum (PhD)</td>
<td>Techniklinikum Dresden, Germany</td>
<td>SABPA: HPA axis and Psychophysiological Responses</td>
<td>Co-author (<strong>funding</strong>: cortisol, testosterone analyses), Takotsubo project collaborator</td>
</tr>
<tr>
<td>7. Prof R von Känel (MD)</td>
<td>Klinik Barmelweid AG, Chefarzt Psychosom, Barmelweid, Switzerland</td>
<td>SABPA: Hemostatis profile and mental stress</td>
<td>Author/Co-author, co-promoter</td>
</tr>
<tr>
<td>8. Prof JCN de Geus (PhD)</td>
<td>Vrije Universiteit, Amsterdam, The Netherlands</td>
<td>SABPA: Genetic polymorphisms, autonomic function and mental stress</td>
<td>Co-author</td>
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<tr>
<td>9. Prof M Schlaich (MD, PhD)</td>
<td>Dobney Chair Clin Res, School of Medicine and Pharmacology, Royal Perth Hospital Unit, The University of Western Australia, Perth, Australia</td>
<td>SABPA: Renal Physician &amp; Hypertension Specialist</td>
<td>Co-author, <strong>funding</strong>: 24h urine catecholamine and cortisol</td>
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<td></td>
<td>Name and Institution</td>
<td>Contribution</td>
<td>Role</td>
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<tr>
<td>10.</td>
<td>Prof G Lambert (PhD)</td>
<td>Baker IDI Heart and Diabetes Institute, Melbourne, Australia</td>
<td>SABPA Psychogenic Hypertension</td>
</tr>
<tr>
<td>11.</td>
<td>Prof A Alkerwi (MD, PhD)</td>
<td>Centre de Recherche Public Santé (CRP-Santé), Luxembourg</td>
<td>SABPA: Cardiometabolic responses</td>
</tr>
<tr>
<td>12.</td>
<td>Prof YK Seedat (MD, PhD)</td>
<td>Renal Disease Unit, University of KZN, Natal</td>
<td>SABPA: Planning; co-author, external examiner</td>
</tr>
<tr>
<td>13.</td>
<td>Prof R Delport (RN, PhD)</td>
<td>Dept Chemical Pathology, University of Pretoria</td>
<td>SABPA: Cardiomyopathy</td>
</tr>
<tr>
<td>14.</td>
<td>Prof M Joffe (PhD)</td>
<td>Dept Epidemiology, WITS, Johannesburg</td>
<td>SABPA: Cardiomyopathy</td>
</tr>
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<td>15.</td>
<td>ROCHE Diagnostics</td>
<td>Randburg, Gauteng</td>
<td>SABPA</td>
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<tr>
<td>16.</td>
<td>Multi-disciplinary team of NWU</td>
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**FUNDING**

1. **National Contribution (NWU Multidisciplinary team):**  
   1. Subtotal: R2 918 700.00

2. **Third Stream Funding**
   - Solutions Findings                    R22 495.00
   - Free State University                 R471 200.00
   - ROCHE Diagnostics SA                  R1 300 000.00
   - PA & Alize Malan Trust                R17 000.00
   - SABPA MSI award                       R70 000.00
   - NRF                                  R380 000.10
   - MRC                                  R1 575 030.00
   - North-West Department of Education   R199 989.34

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**HART**
- Electrical & Electronic Engineering  
  (P J van Vuuren)
- PharmaCEN:  
  (BH Harvey)
- Education:  
  (PI Mentz)
- AUTORe:  
  (T Khumalo, JC Potgieter)
- PhasRec:  
  (JH de Ridder)
- Fieldworker:  
  Mr GJ Motlhasedi

**PharMACE**
- Electrical & Electronic Engineering  
  Modelling  
  Stressed Phenotype

**Education**
- Funding, transport, biochemical analyses, co-authoring

**AUTHOR**
- Psychology:  
  data collection, Author/co-author
- Biochemistry:  
  funding, analyses, Co-author
- Fieldworker:  
  African Culture Expert:  
  Recruitment, feedback
3. **International Collaborators**

- Publications as first authors: R1 567 444.00
- Biochemical analyses (In-kind): R3 984 376.00
- First author &/Open access (UK, Switzerland, Germany): R 72 000.00

**3. Subtotal: R5 623 820.00**

**TOTAL: R12 426 189.34**

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**Summary of SABPA study funding and output (subsidy - R106,000.00/article)**

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**C. SABPA POSTGRADUATE and POSTDOC STUDENTS (2008-)**
a) BSC HONNOURS COMPLETED (N=25)
b) MSC COMPLETED (N=25)
c) PHD (N=5), In progress (N=11)
d) POSTDOC students:
   • S Péter (PhD, MD)
   • M Möller (PhD)
   • M Glynn (PhD)
   • S Hoebel (PhD)

D. SABPA PROJECT INTERNATIONAL AWARD
   Study Design Excellence: Metabolic Syndrome Institute (France), New York, USA, 11th July 2008.

E. Invited SABPA INVITED SYMPOSIUM

F. Invited SABPA Project (META-ANALYSIS)
   1. Prof JBE Tcheugui (MD, PhD), Cambridge University (UK) pertaining hypercholesterolemia prevalence of Africans (2011- ).
   3. Prof D Vancampfort, Belgium (Psychomotorisch therapeut). Depression and cardiometabolic health: The SABPA Study (2012- ).
   4. Prof ML Molendijk, Leiden University, the Netherlands. Serum BDNF concentrations in depression (by antidepressant treatment) and healthy controls (2013- ).
   6. Dr M Mathur (MS): The association between perceived psychological stress and telomere length in humans. Quantitative Sciences Unit, Stanford University, USA: https://med.stanford.edu/profiles/profiles/maya-mathur

G. SABPA BEST POSTER AWARD
   Alberto Ferrari best poster award (Section: Neural Mechansims) 21st European Society of Hypertension (ESH) meeting, Milan, Italy, 20th June 2011.

H. SABPA RIPPLE EFFECT: L Malan & NT Malan sparked the concept and implementation of the Hypertension and Training on-campus clinic.

I. SABPA PUBLICATIONS

<table>
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<th>PEER REVIEWED PUBLICATIONS SINCE 2009</th>
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<tr>
<td>METRICS SUMMARY</td>
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<tr>
<td>Peer-reviewed Articles</td>
</tr>
<tr>
<td>Peer-reviewed Chapters in Books</td>
</tr>
<tr>
<td>One-pager/Editorials (Invited)</td>
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</tbody>
</table>
Popular manuscript/One-pager 2
Commentary (Invited) 1
Peer-reviewed Articles
(Impact factors) IF ≥ 9 (n=3)
IF ≥ 7 (n=4)
IF ≥ 4 (n=15)
IF 0.8-3.99 (n=59)

Figure 1: SABPA output

**POPULAR MANUSCRIPTS AND EDITORIALS**

INVITED COMMENTARY


CHAPTERS IN BOOKS


PEER-REVIEWED PUBLICATIONS

2009


2010


2011


2012


2013

2015


J. CONFERENCE PROCEEDINGS
- Plenary/keynote presentations (n=33)
- Published abstracts (n=28)

K. PUBLIC ENGAGEMENT (number of contributions in brackets)
- National & International papers: Burger (1), Volksblad (1), Herald (3), The Star (1); North-West Independent (2); Beeld (3); HORIZON 2020: PanEuropean Networks 2014 (2).
- Radio interviews: SABC Monitor (1); Radio Pretoria (1); OFM (1).
- SABPA project-stress relaxation workshops (2).
- SABPA Feedback Workshops: (2).
- Invited Talks (18)
- Ongoing community service monitoring for local and/or referred patients (L & NT Malan & team) (133): 24h ABPM & -ECG, 12-lead ECG, Retinal vessel analysis, IOP, CIMT & echocardiogram, plus full report.

L. INTERNATIONAL VISITS TO SOUTH AFRICA
2009: Mr D Mueller, Jena Germany: Training of Dynamic Retinal vessel analyses
2010: Prof J Reid (Glasgow, Scotland): Planning of Blood pressure clinic on Campus (CPD points).
2011: Prof M Hamer & Dr M Reimann: Visiting SABPA, data collection sites, training sessions, planning and discussing data dissemination (CPD points).
2012: Prof Dr T Ziemssen & Dr Ing W Vilser: Keynote address: Hypertension Research and Training clinic Opening.
2013: Prof Dr R von Känel: Visiting SABPA, data collection sites, training sessions (CPD points), planning and discussing data dissemination.