

Swiss South Africa Joint Research Programme

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SSAJRP SPECIAL

- Very **focussed** with limited amount of projects being supported
- **100% partnership** funding leading to equal partnerships
- **Substantial financial injection** into a research project
- **Deep mining** of knowledge leading to innovation and commercialisation
- **Migration into innovation ecosystem** where relevant
- Robust focus on **science to market** (s2m)
- Pulling of all Swiss Embassy Instruments e.g. Climate change.

SWISS SOUTH AFRICA JOINT RESEARCH PROGRAMME



Joint Research Projects

- 16 Projects

Industry – Academia Cooperation

- 9 Seed Money Call Projects
- Biotech Entrepreneur Prq.

Exchanges

- Faculty Exchanges
- Student Exchanges

- International Visiting Research Chairs
- Bilateral Research Chair

JOINT RESEARCH PROJECTS

- 2008 – 2012 supporting 16 projects
- Areas:
 - Public health and biomedicine = 8
 - Nanotechnology and biotechnology = 4
 - Social and human sciences = 4
- 2013 – 2016
- Areas above three + clean and green technology
- Approx 25 projects

INTEGRATED RESEARCH, EDUCATION AND INNOVATION



- 16 research projects producing
 - Exchanges = 73 exchange visits
 - Publications

Journal Articles	Books	Book Chapters	Conference Papers
71	1	6	32

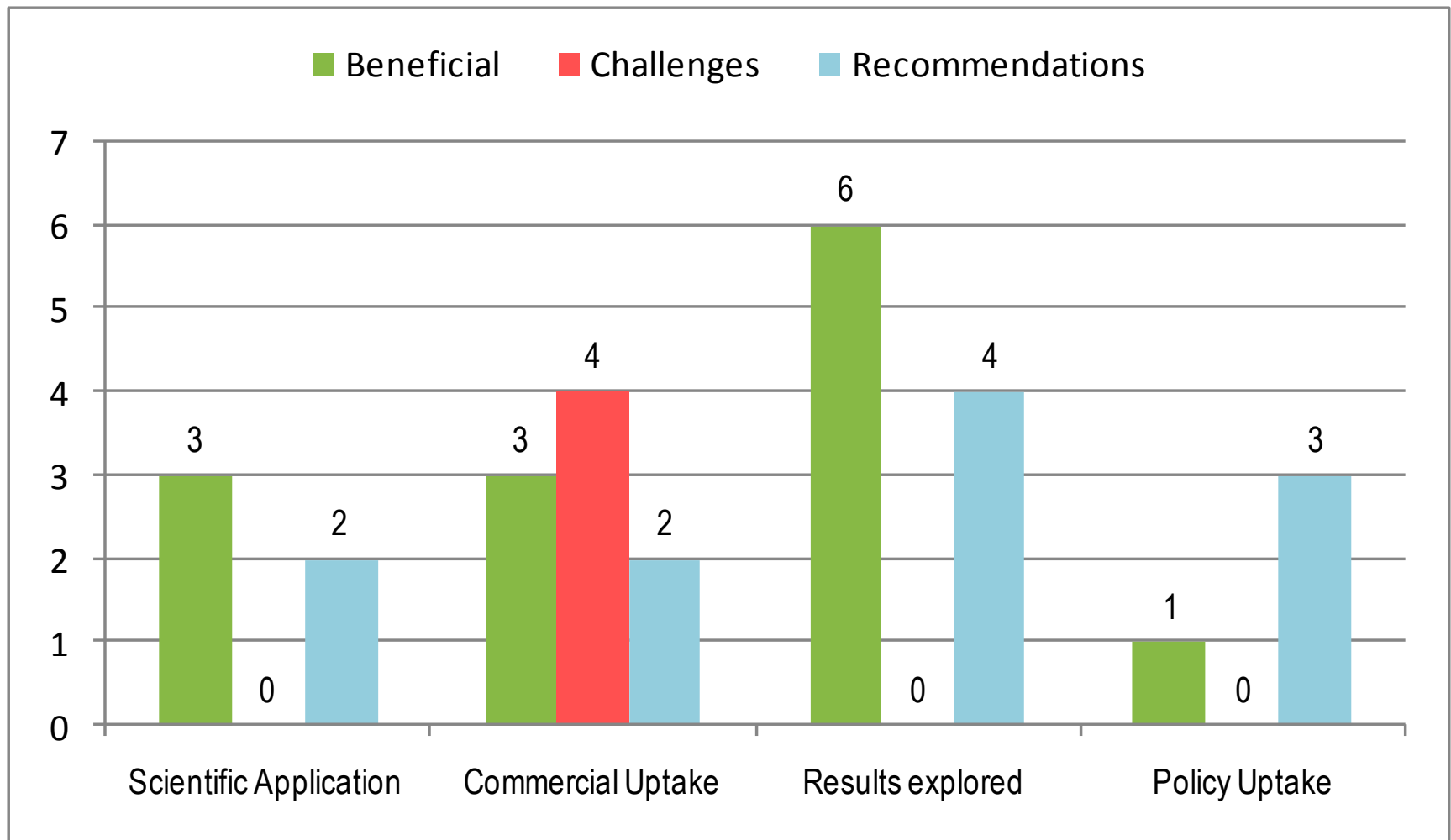
- Research opportunities for your scientists

PostDocs	PhD	MSc
8	31	6

- Migrate into the Swiss South Africa Business Development Programme for Innovation

JRP 2008 – 2012

VISION - SCIENCE TO MARKET



SCIENCE TO MARKET – ACADEMIA / INDUSTRY COLLABORATION FOR SOCIAL CHALLENGES



- Nine projects supported – some from Phase I with notable progress in s2m e.g.
- Development and characterisation of shigella vaccines – globally 165 million cases of shigellosis per year – 5 million hospitalisation and over 1.1 million deaths.

EMPA / UCT and Glyco Vaxyn AG



SCIENCE TO MARKET (s2m) SUPPORT BUSINESS DEVELOPMENT PROGRAMME



4th
Entrepreneurial
workshop in SA

3rd Business
Development
Programme in CH

Mentorship

Successful
Start-ups

- 2010 = first business development programme in CH in 2011
 - 40% of participants incorporated their company and are running a successful company
 - In total they have created 5 direct jobs and 12 indirect jobs.
 - Quote: *“This summer programme [in CH] provides and excellent opportunity to fully understand the process of business development in the technology sector”*

SSAJRP FOCUSING ON SOCIAL CHALLENGES

NEGLECTED INFECTIOUS DISEASES



- In Africa every 30 seconds a child dies of malaria
- Neglected Infectious Diseases globally affect 800 million individuals.
 - Drug delivery system for anti-malarial drugs with probable reversal of drug resistance for chloroquine.
 - Analyses of geographical patterns of malaria transmission and mortality in Africa using bayesian spatio-temporal modelling – SPILL OVER TO SADC
 - Investigate novel natural plant molecules – candidates = bio-prospecting



NON-COMMUNICABLE DISEASES

- Cancer detection:



Dye for molecular imaging of diseases such as cancer
Production and application of terbium radionuclide as a potential cancer diagnostic and treatment tool

- Ageing and Adult-neurogenesis:



Stem cell activity in the adult human hippocampus with the potential of future cell replacement therapy in central nervous system repair

- Cardiovascular diseases:



Investigation of natural and synthetic high density lipoproteins as a therapeutic vehicle for cardio protection.

TUBERCULOSIS AND/OR HIV/AIDS

- Globally two billion people infected with MTB exacerbated by either or co-infection of HIV and drug resistance
 - Understanding the natural barriers for survival of MTB
 - HIV Drug Discovery from Medicinal Plants – SSAJRP with an outflow in follow-up support
 - Genetic disposition and risk of contracting HIV/AIDS

RESOURCE EFFICIENCY & CLIMATE CHANGE



- Organisational capabilities and the governance of utilities: electricity, water supply and sanitation.
- Environmental Health Research Chair – 2013 + 15 yrs.
 - Eco-health (ecosystem and relation to human health)
 - Pollutants / clean technology (water, waste, air)
 - Social innovation e.g. Water and sanitation

FOOD SECURITY AND SUSTAINABLE BIO-RESOURCES (S2M)



- Bio-Nano-Transporter as an outcome of the ZA.CH business development programme
 - Doubled manufacturing capacity
 - Signed several commercial international distribution agreements
 - Start with the development of a fungicidal and insecticidal product based on the bio-nano-transporter

SECURE AND INCLUSIVE SOCIETIES



- Measuring e-learning impact in primary schools
– the integration of technology into pedagogy
- Safeguarding democracy
- International Visiting Research Chairs in the domains of migration and diversity

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