



*The Abdus Salam
International Centre for Theoretical Physics*



2335-8

Workshop on Entrepreneurship for Physicists and Engineers from Developing Countries

23 - 27 April 2012

**Case Studies: Start-ups & Slip-ups,
Spin-outs or Wipe-outs**

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CASE STUDIES

“Start-ups & Slip-ups Spin-outs or Wipe-outs”

Tony Bunn

**Joint ICTP-TWAS Workshop on Entrepreneurship
for Physicists and Engineers from Developing
Countries
Trieste, Italy**

April 23-27, 2012



Entrepreneurship Workshop
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A E Bunn: Case Studies

Your ideas are our business



Has anyone read Malcolm Gladwell's book
"Outliers-the story of success" ?



Wave no 1





the early 80's

Emerging field of lung function analysis

The beginning of the microelectronics and computer revolution:

Apple was being born- *in a garage!*

The EPSON HX20 “laptop” was on the shelves boasting 15k memory upgradeable to 30k!!!



.....interface a flow-meter onto the HX20 and take lung function testing out of academic hospital laboratories into doctors offices and clinics



ELF Lung Function system – *a world first* (1984)



LOCALLY DEVELOPED LUNG FUNCTION SYSTEM



The Company CRC (Pty) Ltd was formed in 1984

Naïve, highly enthusiastic academics learning that the cheque is seldom in the mail

Run as virtual company relying on outsourcing for manufacture and distribution.

“Licensed” to a UK company on a handshake



LESSONS LEARNED:

- Had no idea of IP protection, licensing etc and within 2 years the market had entrants from USA, UK and JAPAN.
- Its very hard and costly to be a technology missionary
- ALWAYS have agreements in place with partners and distributors
- Choose your partners with great circumspection-same value system



Wave no 2

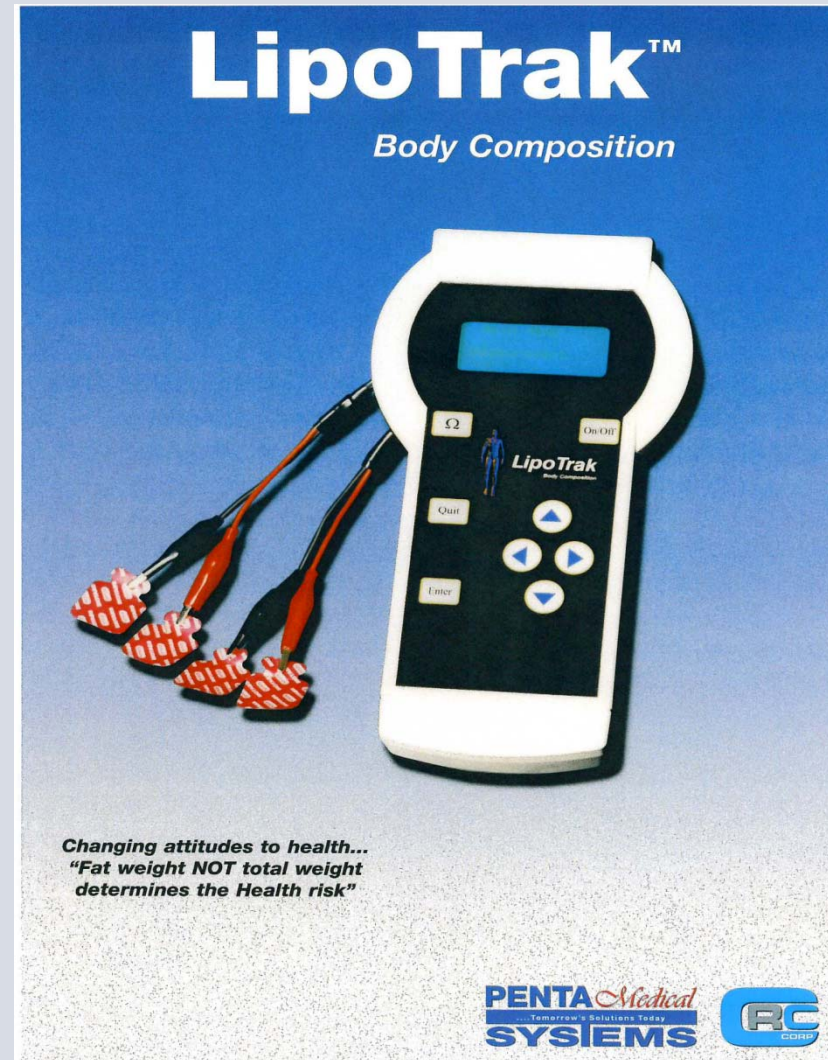


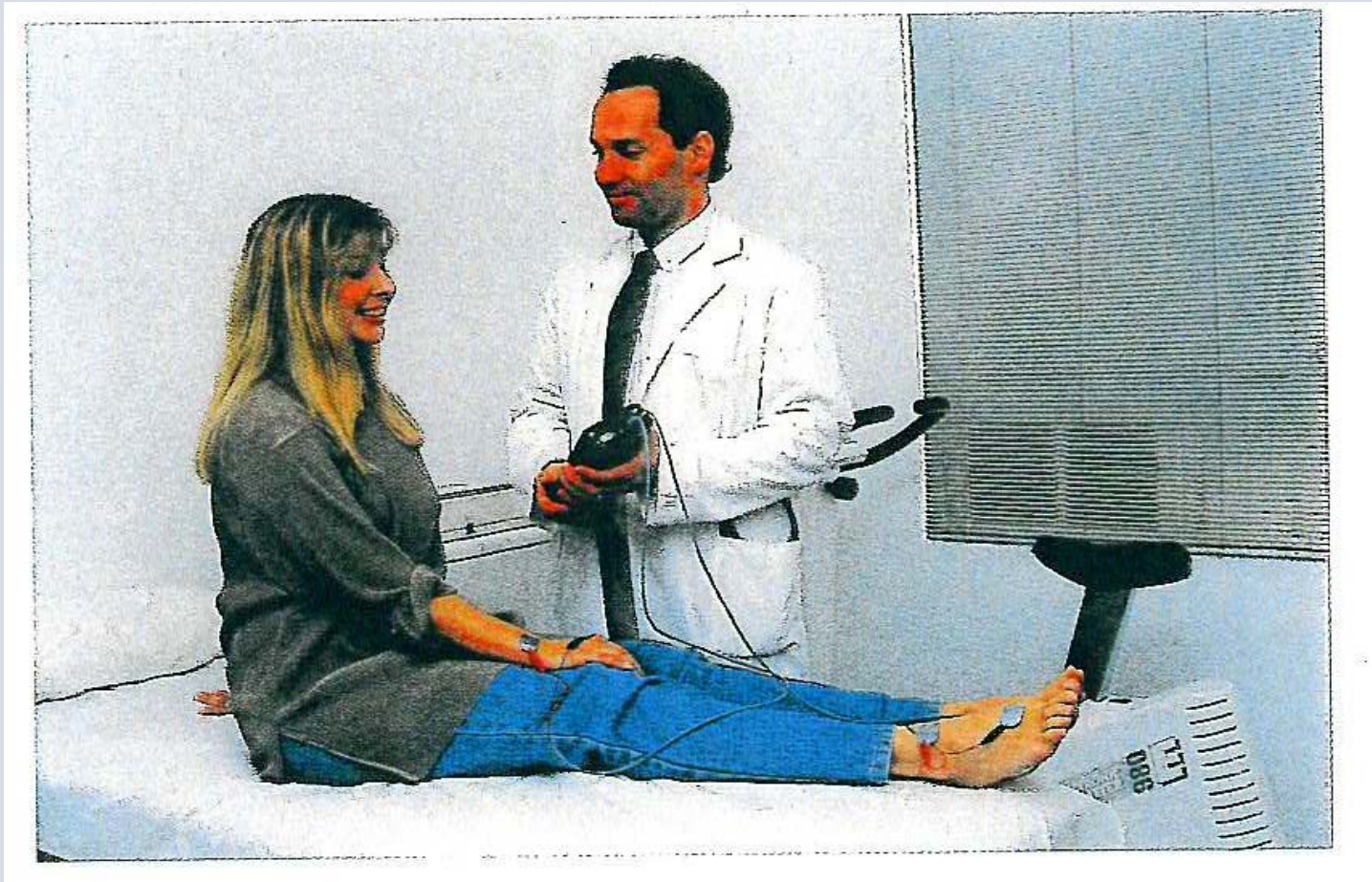


Body composition analysis -1988

....or how much lean and fat weight makes up your total weight – very important as health risk is related to fat weight not total weight

Based on bio-impedance technology







Partnered with University Sport Science Research Unit

Developed good software algorithms to provide analysis and diagnostic reports with recommended lifestyle changes

Kept these proprietary (**trade secret and copyright**)

Got a MBA and former company MD to come on board to drive the business

Developed branding strategy and logos

..... ***some lessons had been learned***



More LESSONS LEARNED..... and reinforced

- Sometimes easier to be a rapid follower rather than a technology missionary
- choose your *partners* very carefully. A shared ethos/ethic/value system is imperative
- *Agreements* such as shareholders, licensing, distribution, royalty are essential and of value to the company.....*but only as much as the partners wish to honour them*



Wave no 3



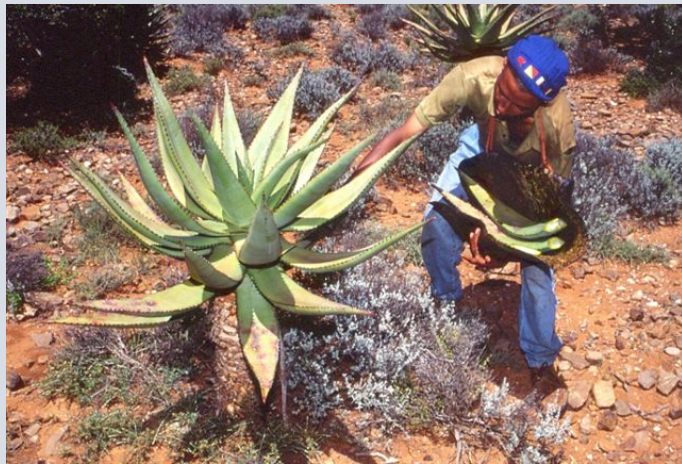


.....in 1999

Commercialisation of plant –based medicines

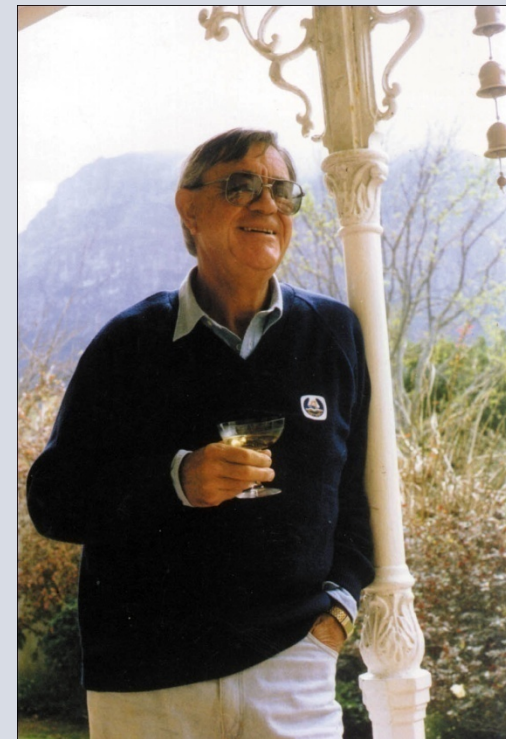


Sustainable Aloe Tapping for Aloe Bitters (Since 1750)





Exploiting Aloe Ferox for cosmetic and medicinal use: primarily the pioneering work of Prof “MC” Botha from 1996





Anecdotal evidence accumulates that the powder is able to treat;

- **HIV/AIDS related Diarrhoea**
- **Irritable Bowel Syndrome**
- **Infantile Diarrhoeal Disease**

Baylabs (Pty) Ltd consequently formed in 1999 to exploit the medicinal properties of the formulation



BOOT-STRAPPING THE COMPANY

STRATEGY

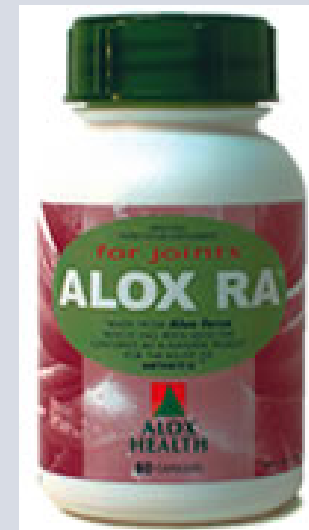
Develop patent portfolio and scientific evidence of efficacy for the gastro-intestinal global opportunity (mainly developed world IBS)

- **No salaries**

- **Decision to develop a few natural OTC remedies from *A-ferox* and distribute to pharmacies and use revenue generated to drive PATENTS and SCIENTIFIC EVIDENCE**



The OTC products generating about R30k profits pm





POSITIVE OUTCOMES

- Have secured patents in 17 countries
- Have conducted successful phase 2 clinical trial in ARD
- Have developed strategic partnerships with international biotechs
- Have conducted successful trials in veterinary applications using AT402 as a growth enhancer (pigs, turkeys and calves)
- In process of securing VC for clinical trials in IBS and to penetrate international markets.



STILL MORE LESSONS to learn

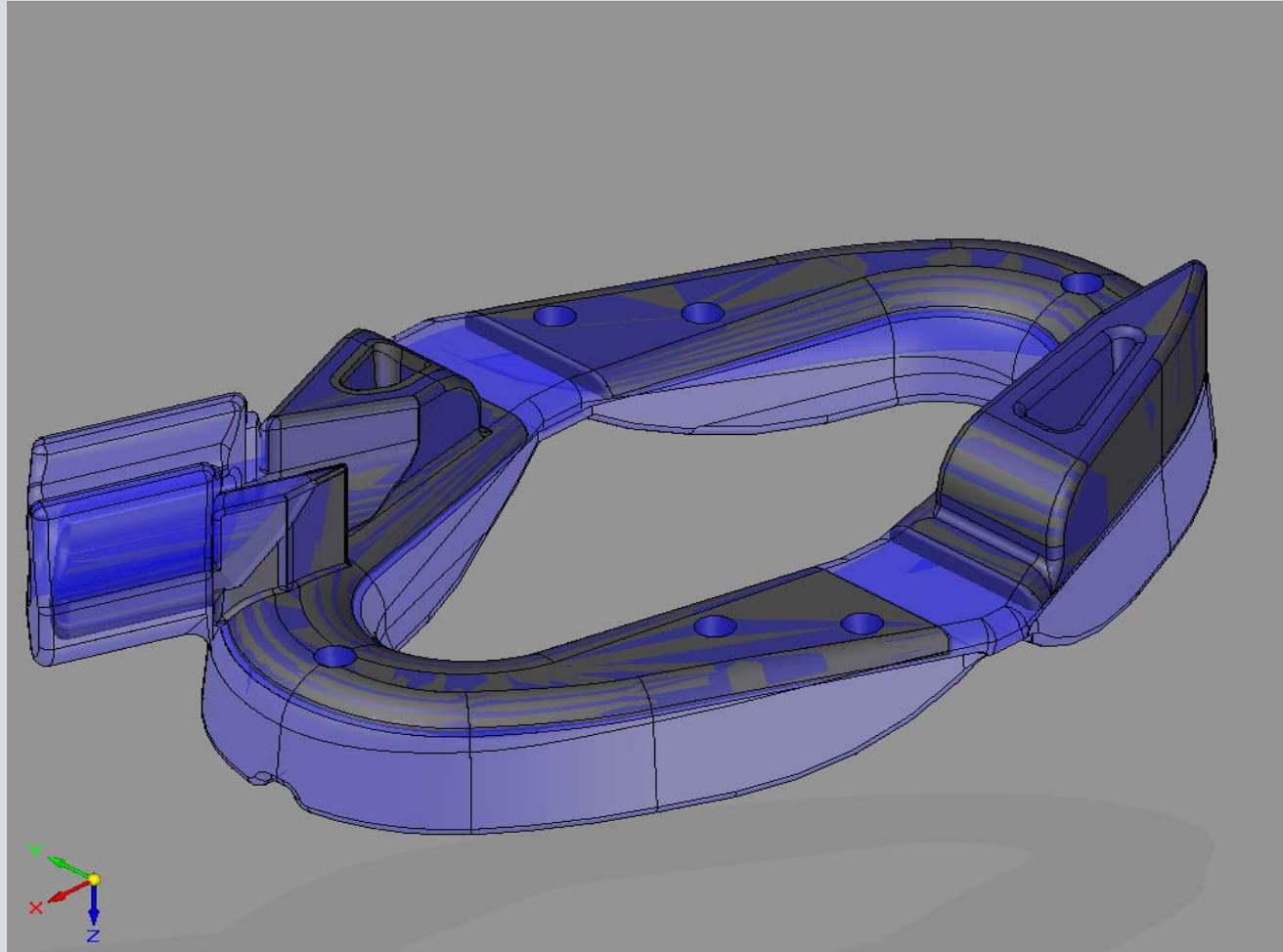
- **in the “no salary” mode beware of inactive/sleeping shareholders waiting for pay day based on your hard work.**
- **Marketers love to have a great story to tell- the heart transplant connection and the virtuous circle of improved livelihood for aloe tappers**
- **Is it not better to get VC involved earlier and get to market sooner?**



.....and in 2002

An endotracheal tube retaining device with incorporated safety features

- Concept patented by anaesthetist in 2002 and Jirehsa (Pty) Ltd established to exploit the proposed product
- By 2007 product still not on market and company/individual unable to afford patenting costs and patents close to lapsing.





and still more lessons

- Beware of patenting too early –rather keep confidentiality until you are guaranteed of a workable product that is close to market. Hopefully allow sales to cover patent costs
- Beware of getting government funding support- easier to get but once government has a stake it is VERY hard to get them out!!!



The big one?





.....and in 2007

An open innovation platform towards personalised medicine



....a web-based company for integrating pathology, patient history, family history, patient lifestyle and nutrition with genetic information to determine health risk



Genomics

ICT

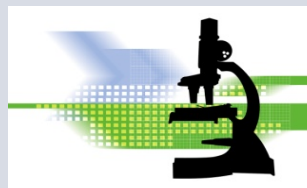
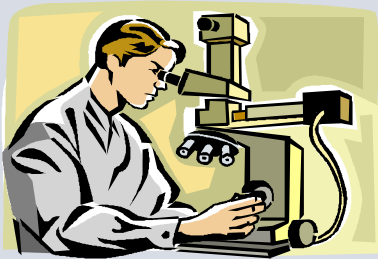
medical imaging, artificial
intelligence,
CAD, neural networks, DSP

P4 medicine

Predictive, Preventative, Personalised and Participatory



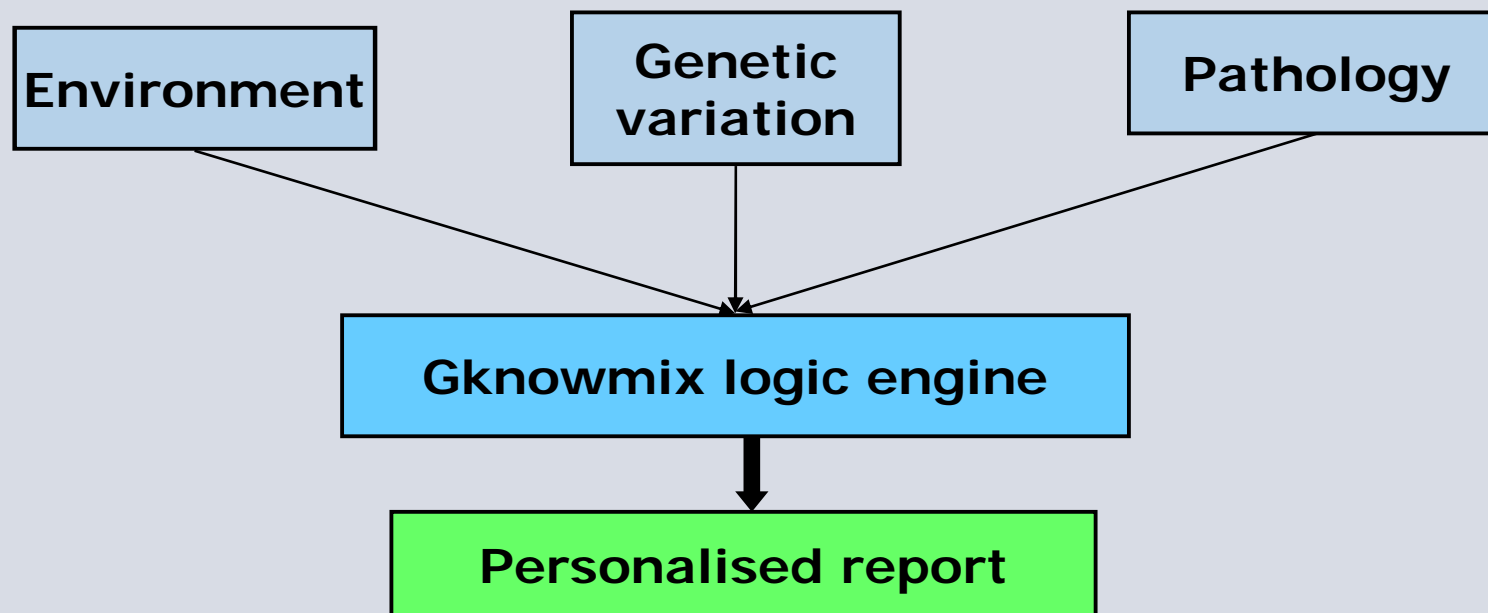
.....2007





How do scientists get involved?

- By developing pathology supported genetic tests for integration into the Gknowmix logic engine
- By signing off the resulting reports for release and download by health professionals.



.....and have a business within a business without leaving academia



And MORE

- **Timing is key- revolution in health services and health care from curative to personalised medicine**
- **Cloud computing enables global entry but make sure you get it right on home soil first**
- **Competitors are having ethical struggles by going directly to consumer –including Google supported *23 & me*.**



Spin-out or Wipe-out?



Some current waves driving innovative medical technologies

- **Nano technology and micro-fluidics (point of care devices)**
- **Cloud computing, telemedicine, eHealth, MRS and EPRs (personalised medicine)**
- **Use of 3G wireless networks and mobile phones**
- **Orthopaedic implants, CT to CAD, rapid prototyping, (personalised implants)**



Thanks

