

NAST Visayas Regional Scientific Meeting

Challenges in Converting Academic Research to Augment Philippine Healthcare Resources

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Covid19 Pandemic related activities

- **Diagnostic**
- **PPE**
- **Drug**
- **Vaccine**
- **Local Manufacturing capability**

Scientific Career - First 6 Years

- **Rensselaer Polytechnic Institute 1989-1997**

Masters in Chemical Engineering

- **Downstream Bio Process Development**

PhD Chemical Engineering

- **Biopolymer Production Optimization**

Entrepreneurial Track- Next 17 Yrs.

- **Xylos Corporation -1996-2012**

Scale up of Bacterial cellulose production

-develop process to produce a medical grade material

Artificial skin for treating chronic wounds

-Conducted product development to clinical evaluation

Dura replacement after Brain surgery

- Designed an FDA approved permanent implant

At the end of the 17 years in the US

- Sold two medical product applications
- 7 FDA products cleared/ 2 CE approved
- Global product use, U.S. and E.U.
- Received 10 U.S granted patents and 20 IP

Philippine Activities - the last 7 yrs

- **Consultant on technology utilization**
 - **DOST Balik Scientist after 24 years in the US**
 - **Consultant to UP & DLSU to help inventors**
 - **Consultant to USAID STRIDE**
 - **Corresponding Member, NAST**
 - **CISTEM board**

DOST Balik-Scientist activities

- **Technology portfolio review**
- **Meet the researchers and inventors**
- **Identify possible Industry partners**
- **Address scale up/toll manufacturing**
- **Value proposition to Industry adopters**

USAID Stride Activities

Increasing Industry- University linkages

- 1. Collaborative Research grants (Carwin)**
- 2. University Faculty Industry internship**
- 3. Philippine Government University Industry Research Roundtable (PGUIRR)**
- 4. Innovation workshop on Industry sector**
- 5. Industry co-sponsored R&D**

NSF Innovation Corp Model -FEC

- **Filipininnovation Entrepreneurship Corp**
 - **ROTC- boot camp for scientist and engineers**
 - **Focus on customer discovery interviews**
 - **Develop a value proposition for technology**
 - **Complete the business model canvas**
 - **Increases chance to create Spin-off company**

Technology assessment: TRIM³

- **Technology focus/advantage**
- **Regulatory Pathway**
- **Intellectual Property**
- **Market potential**
- **Manufacturing Scale up**
- **Money – is it worth doing it?**

ROI (Return on Investment)!!!

Complete Technology Transfer

It is like a 4 X 100m relay race

- **Academe does 1st 100 with Gov funding**
- **Start up and spin offs with VC 2nd 100**
- **Companies with manufacturing 3rd 100**
- **Companies with distribution does 4th 100**

Thank You!!