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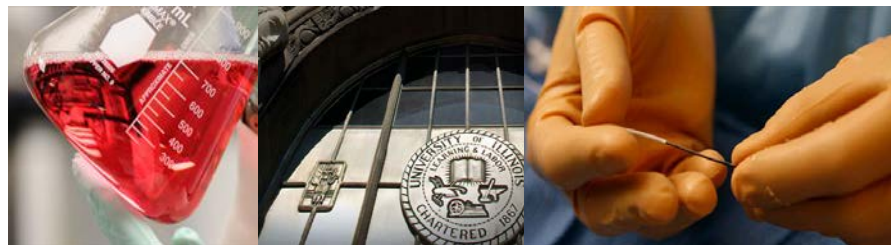
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Meeting of the University Healthcare System Committee *of the Board of Trustees of the University of Illinois*

Dimitri Azar, MD, MBA
Dean, College of Medicine

November 3, 2014





Overview

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- **Pillars of the COM**
 - Convergence of Engineering and Medicine
 - Humanistic Medicine
 - Statewide impact
 - Excellence
 - Inclusiveness
- **Vision for the *Unified* COM of the Future**
- **Business Plan proposal:** <http://www.medicine.uic/bettertogether/>
 - Strategically Integrate Engineering into COM Education & Training
 - Redefine role of Urbana Champaign regional branch of UIC-COM
 - Formalize clinical partnerships
 - Illinois Translational BioEngineering Institute
- **Summary/Conclusions**



Convergence of Engineering/Technology & Medicine

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A unified College of Medicine driven by innovations and discoveries that result from *convergence* of medicine with other life sciences, engineering, computational, physical, chemical and social sciences

Better Together: Opportunity Cost of Implementing the T-U Recommendations

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UIUC's proposal will have potential negative consequences to the COM, UIC, UI and IL.

The good news is, we have an attractive and feasible win-win alternative with substantial economic impact to the University and the State of IL.

- Accomplishes UIUC's objectives
- Faster
- Cheaper
- As large a payoff or greater

...therefore truly Win-Win





We propose a ladder approach for 4 Recommendations:*

- 1. Strategically Integrate Engineering into COM Education & Training**
- 2. Redefine role of the Urbana Champaign regional branch of the UIC COM**
- 3. Formalize clinical partnerships**
- 4. Establish Illinois Translational BioEngineering Institute**

* <http://www.medicine.uic.edu/bettertogether/>

Convergence of Engineering/Technology & Medicine

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Recommendation 1

Integrate Engineering into COM Education and Training

Component Cost	5-Year Total Cost	Ongoing Annual Cost
Introduce Engineering into the Undergraduate Medical Curriculum	\$2.4M	\$529K
Establish Engineering-"Eng-Med" Track	\$3.4M	\$808K
Enhance Resident (GME) Education	\$150K	\$0
Support BS/MD in Engineering	\$690K	\$142K
Support MD/MS in Engineering	\$0	\$0
Support MD/PhD	\$ 6.8M	\$1.6M
Total Net Cost	\$13.4M	\$3.1M

<http://www.medicine.uic.edu/bettertogether/>



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Recommendation 2

Redefine Role of Urbana-Champaign			
	Component	3-Year Start-Up Cost (FY16-FY18)	Ongoing Annual Cost
Enhancement of Urbana-Champaign Campus to Meet Needs of New Programs	Student Advisory Services	\$ 225K	\$75K
	Human Resources	\$600K	\$200K
	Administrative Support Stipends	\$225K	\$75K
	Net Cost	\$1M	\$350K

<http://www.medicine.uic.edu/bettertogether/>



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Recommendation 3

Formalize Clinical Partnerships

Component Cost	3- Year Start-up Cost	Ongoing Annual Cost
Establishment of a Regional GME* Consortium Infrastructure	\$100K	-
Establish GME Consortium Operations	\$1.7M	\$616K
Creation of New GME Programs (2 new Programs)	\$961K	\$304K
Total Net Cost	\$2.8M	\$920K

- Graduate Medical Education

<http://www.medicine.uic.edu/bettertogether/>



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Recommendation 4

Illinois Translational BioEngineering Institute Five Year Expenses

	Year 1	Year 2	Year 3	Year 4	Year 5
Start-up Costs	\$13M	\$3M	\$3M	\$3M	\$3M
Salaries	\$1.1M	\$1.7M	\$2.4M	\$3.1M	\$3.9M
Salaries Offset by Grants	(\$181K)	(\$320K)	(\$498K)	(\$634K)	(\$770K)
Other Grant Expenditures	\$269K	\$1.2M	\$2.8M	\$4.4M	\$5.8M
Total Expense	\$14.4M	\$5.9M	\$8.2M	\$10.5M	\$12.7M

<http://www.medicine.uic.edu/bettertogether/>



Feasibility study and business plan...

- Process generated broad-based support
- Revealed the cost is within our means

Implementation is already underway.



Better Together!

UIC COLLEGE OF
UNIVERSITY OF ILLINOIS
AT CHICAGO **MEDICINE**

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Expected Economic Impact of Win-Win Alternative

	Base	FY 2025	FY 2035	Impact
UI Health - growth	\$3.3B	\$3.6B	\$4.0B	\$0.7B
New Initiatives		\$0.3B	\$1.0B	\$1.0B
Total	\$3.3B	\$3.9B	\$5.0B	\$1.7B

Feasibility: Convergence of Engineering/Technology & Medicine

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We bring the commitment to work together, the resources, and the ability to implement.

What is needed?

- **Willing partners**
- **UI and Board of Trustees support**



Better Together

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Thank you!



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'Backup Slides'

Recommendation # 1

Table 1: Integrate Engineering into COM Education and Training

Component Cost	Projected Costs/Year						Start Up Cost	Ongoing Annual Cost
	Year 1	Year 2	Year 3	Year 4	Year 5	5-Year Total		
A - Introduce Engineering into the Undergraduate Medical Curriculum								
M1 and M2 Curriculum Development	\$336,000						\$336,000	
Lead Faculty								
Chicago Campus	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551	\$530,914		\$109,273
Peoria/Rockford Campus	\$100,000	\$103,000	\$106,090	\$109,273	\$112,551	\$530,914		\$109,273
M4 Curriculum Development	\$105,000	\$108,150	\$111,395			\$324,545	\$324,545	
M4 Program Director								
Chicago Campus				65,000	65,000	\$130,000		\$65,000
Peoria/Rockford Campus				65,000	65,000	\$130,000		\$65,000
M4 Team Teaching								
Engr Fac - Chicago	\$0	\$0.00	\$0.00	\$120,000	\$123,600	\$243,600		\$120,000
Engr Fac - Peoria/Rockford	\$0	\$0.00	\$0.00	\$60,000	\$61,800	\$121,800		\$60,000
Net Cost	\$641,000	\$314,150	\$323,575	\$528,545	\$540,502	\$2,347,772	\$660,545	\$528,545
B - Establish Engineering - Medicine Track ("Eng-Med")								
Program Director								
Chicago	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531	\$318,548		\$65,564
Urbana	\$60,000	\$61,800	\$63,654	\$65,564	\$67,531	\$318,548		\$65,564
Curriculum Development	\$210,000	\$216,300	\$222,789			\$649,089	\$649,089	
M1-M2 Summer Coursework								
Student Support/Teaching		\$271,920	\$420,116	\$576,960	\$594,269	\$1,863,265		\$576,960
M4 Capstone								
Faculty Supervision - Chicago				\$50,000	\$51,500	\$101,500		\$50,000
Faculty Supervision - Urbana				\$50,000	\$51,500	\$101,500		\$50,000
Net Cost	\$330,000	\$611,820	\$770,213	\$808,087	\$832,330	\$3,352,450	\$649,089	\$808,087
C - Enhance Resident (GME) Education								
Curricular Development (Electives)	\$75,000	\$75,000	\$0	\$0	\$0	\$150,000	\$150,000	
Net Cost	\$75,000	\$75,000	\$0	\$0	\$0	\$150,000	\$150,000	\$0
D - Support BS/MD in Engineering								
Advisor/program ing UIC & UIUC	\$130,000	\$133,900	\$137,917	\$142,055	\$146,316	\$690,188		\$142,055
Net Cost	\$130,000	\$133,900	\$137,917	\$142,055	\$146,316	\$690,188	\$0	\$142,055
E - Support MD/MS in Engineering								
Net Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
F - Support MD-PhD								
Student Support Costs								
MD-PhD Students - Chicago	\$375,000	\$386,250	\$397,838	\$409,773	\$422,066	\$1,990,926		\$409,773
MD-PhD Students - Urbana	\$375,000	\$772,500	\$1,193,513	\$1,229,318	\$1,266,197	\$4,836,528		\$1,229,318
Net Cost	\$750,000	\$1,158,750	\$1,591,350	\$1,639,091	\$1,688,263	\$6,827,454	\$0	\$1,639,091
TOTAL Net Cost	\$1,926,000	\$2,293,620	\$2,823,055	\$3,117,778	\$3,207,411	\$13,367,863	\$1,459,634	\$3,117,778

Notes:

Costs excalated at 3% per year

Ongoing annual costs based on Year 4 costs

Recommendation #2

Summary Cost Projection - Recommendation 2

Sub-Recommendation	Component	Capital Cost	3-Year Start-Up Cost (FY 16-FY 18)	Ongoing Annual Cost
<i>Enhancement of Urbana-Champaign Campus to Meet Needs of New Programs</i>	Student Advisory Services	\$ -	\$ 225,000	\$ 75,000
	Human Resources	\$ -	\$ 600,000	\$ 200,000
	Administrative Support Stipends	\$ -	\$ 225,000	\$ 75,000
	Net Cost	\$ -	\$ 1,050,000	\$ 350,000
Recommendation 2 Net Cost		\$ -	\$ 1,050,000	\$ 350,000

Recommendation #3

Summary Cost Projection - Recommendation 3				
Sub-Recommendation	Component	Capital Cost	3-Year Start-Up Cost (FY 16-FY 18)	Ongoing Annual Cost
<i>Establishment of a Regional GME Consortium Infrastructure</i>	Formation of Consortium			
	Consulting	\$ -	\$ 100,000	\$ -
	Recruitment	\$ -	\$ -	\$ -
	Net Cost	\$ -	\$ 100,000	\$ -
<i>Establish GME Consortium Operations</i>	Staff			
	Associate Dean for GME and Affiliations/DIO	\$ -	\$ 618,180	\$ 218,545
	Director of Medical Education (1)	\$ -	\$ 309,090	\$ 109,273
	Administrative Staff (2)	\$ -	\$ 309,090	\$ 109,273
	Staff benefits	\$ -	\$ 420,362	\$ 148,611
	Office Expenses			
	Office Expenses	\$ -	\$ 90,000	\$ 30,000
	Net Cost	\$ -	\$ 1,746,722	\$ 615,702
<i>Creation of NEW GME Programs (2 New Programs)</i>	Program Management & Staff			
	Program Director	\$ -	\$ 556,362	\$ 196,691
	Program Coordinator	\$ -	\$ 154,545	\$ 54,636
	Staff Benefits	\$ -	\$ 241,708	\$ 85,451
	ACGME Fees (Initial Application & Annual Fees)	\$ -	\$ 33,200	\$ 10,400
	Resident Management			
	Resident Recruitment	\$ -	\$ 60,000	\$ 20,000
	Resident Insurance	\$ -	\$ 60,000	\$ 60,000
	Resident Salaries	\$ -	\$ 1,683,000	\$ 1,699,500
	Resident Benefits	\$ -	\$ 572,220	\$ 577,830
	Total Expenses	\$ -	\$ 3,361,035	\$ 2,704,508
	Revenue			
	Hospital Affiliation Agreements	\$ -	\$ 2,400,000	\$ 2,400,000
	Net Cost	\$ -	\$ 961,035	\$ 304,508
Recommendation 3 Net Cost	\$ -	\$ 2,807,758	\$ 920,210	

Recommendation #4

Illinois Translational BioEngineering Institute (ITBI) - Chicago

Five Year Salary Projections

Salaries

Executive Director (1)	\$350,000
Chicago Director (1)	\$300,000
Professor (2)	\$250,000
Associate Professor (2)	\$200,000
Assistant Professor (2)	\$150,000

(1) +/- 20%

(2) +/- 30%

Salary Expense	Year 1	Year 2	Year 3	Year 4	Year 5
Executive Director	\$175,000	\$180,250	\$185,658	\$191,227	\$196,964
Chicago Director	\$300,000	\$309,000	\$318,270	\$327,818	\$337,653
Professor	\$250,000	\$515,000	\$795,675	\$1,092,727	\$1,406,886
Associate Professor	\$200,000	\$412,000	\$636,540	\$874,182	\$1,125,509
Assistant Professor	\$150,000	\$309,000	\$477,405	\$655,636	\$844,132
Total	\$1,075,000	\$1,725,250	\$2,413,548	\$3,141,590	\$3,911,143

Recommendation #4

Illinois Translational BioEngineering Institute (ITBI) - Chicago

Start-up Expenses

Start-up Funding	Year 1	Year 2	Year 3	Year 4	Year 5
Executive Director	\$10,000,000				
Chicago Director	\$5,000,000				
Professor A	\$1,500,000				
Professor B		\$1,500,000			
Professor C			\$1,500,000		
Professor D				\$1,500,000	
Professor E					\$1,500,000
Associate Professor A	\$1,000,000				
Associate Professor B		\$1,000,000			
Associate Professor C			\$1,000,000		
Associate Professor D				\$1,000,000	
Associate Professor E					\$1,000,000
Assistant Professor A	\$500,000				
Assistant Professor B		\$500,000			
Assistant Professor C			\$500,000		
Assistant Professor D				\$500,000	
Assistant Professor E					\$500,000
Total	\$18,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000

Recommendation # 4

Illinois Translational BioEngineering Institute (ITBI) - Chicago

Grant Funding and ICR Distribution

Grant Funding	Year 1	Year 2	Year 3	Year 4	Year 5
Executive Director	\$100,000	\$300,000	\$500,000	\$500,000	\$500,000
Chicago Director	\$200,000	\$500,000	\$800,000	\$1,000,000	\$1,000,000
Professor A	\$100,000	\$300,000	\$500,000	\$700,000	\$700,000
Professor B		\$100,000	\$300,000	\$500,000	\$700,000
Professor C			\$100,000	\$300,000	\$500,000
Professor D				\$100,000	\$300,000
Professor E					\$100,000
Associate Professor A	\$50,000	\$200,000	\$500,000	\$500,000	\$500,000
Associate Professor B		\$50,000	\$200,000	\$500,000	\$500,000
Associate Professor C			\$50,000	\$200,000	\$500,000
Associate Professor D				\$50,000	\$200,000
Associate Professor E					\$50,000
Assistant Professor A	\$0	\$100,000	\$200,000	\$375,000	\$375,000
Assistant Professor B		\$0	\$100,000	\$200,000	\$375,000
Assistant Professor C			\$0	\$100,000	\$200,000
Assistant Professor D				\$0	\$100,000
Assistant Professor E					\$0
Total	\$450,000	\$1,550,000	\$3,250,000	\$5,025,000	\$6,600,000

ICR @ 59%	\$265,500	\$914,500	\$1,917,500	\$2,964,750	\$3,894,000
ITBI Share of ICR @ 47.5%	\$126,113	\$434,388	\$910,813	\$1,408,256	\$1,849,650

Recommendation #4

Illinois Translational BioEngineering Institute (ITBI) - Chicago

Five Year Revenues and Expenses

Revenue	Year 1	Year 2	Year 3	Year 4	Year 5
Grant Revenue	\$450,000	\$1,550,000	\$3,250,000	\$5,025,000	\$6,600,000
ICR Distribution	\$126,113	\$434,388	\$910,813	\$1,408,256	\$1,849,650
Total Revenue	\$576,113	\$1,984,388	\$4,160,813	\$6,433,256	\$8,449,650
Expenses					
Start-up Costs	\$13,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Salaries	\$1,075,000	\$1,725,250	\$2,413,548	\$3,141,590	\$3,911,143
Salaries Offset by Grants	(\$181,000)	(\$320,000)	(\$498,300)	(\$634,200)	(\$770,100)
Other Grant Expenditures	\$269,000	\$1,230,000	\$2,751,700	\$4,390,800	\$5,829,900
Total Expense	\$14,163,000	\$5,635,250	\$7,666,948	\$9,898,190	\$11,970,943
Net Revenue	(\$13,586,887)	(\$3,650,862)	(\$3,506,135)	(\$3,464,934)	(\$3,521,293)
Net Operating Revenue	(\$586,887)	(\$650,862)	(\$506,135)	(\$464,934)	(\$521,293)

Facility Cost Estimate

Building Size (GSF)	60,000	80,000	100,000
Assignable Square Feet @ 65%	39,000	52,000	65,000
Support Space	5,000	7,000	9,000
Lab Space	34,000	45,000	56,000
Double Lab Modules @ 1200 sq. ft	28	38	47
Building Cost per GSF (1)	720	720	720
Project Cost	\$43,200,000	\$57,600,000	\$72,000,000
Annual Debt Service @ 5%	\$3,441,850	\$4,589,134	\$5,736,417

(1) Cost equivalent to ACTB



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Illinois Translational BioEngineering Institute Five Year Revenue

	Year 1	Year 2	Year 3	Year 4	Year 5
Grant Revenue	\$450K	\$1.6M	\$3.3M	\$5.0M	\$6.6M
ICR Revenue	\$126K	\$434K	\$911K	\$1.4M	\$1.9M
Total	\$576K	\$2.0M	\$4.2M	\$6.4M	\$8.5M

<http://www.medicine.uic.edu/bettertogether/>



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Illinois Translational BioEngineering Institute Facility Return on Investment

Facility Costs	\$86M
State Contribution	\$22M
Economic Impact in 2035	\$991M
Tax Revenue in 2035	\$50M
Total Tax Revenue over 20 years	\$272M
Return on Investment	\$12.59 for every dollar invested

www.medicine.uic.edu/bettertogether/



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Overall Economic Impact of Win-Win Alternative

	Base	FY 2025	FY 2035	Impact
UI Health - growth	\$3.3B	\$3.6B	\$4.0B	\$0.7B
New Initiatives		\$0.3B	\$1.0B	\$1.0B
Total	\$3.3B	\$3.9B	\$5.0B	\$1.7B

The impact includes 7,700 new jobs over the same time period.