

## BUSINESS PLAN REPORT HIGHLIGHTS

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## BUSINESS PLAN REPORT HIGHLIGHTS

### Introduction

This document was developed as a companion document for the Tripp Umbach Final Report entitled, “Business Plan to Establish a New College of Medicine in Urbana-Champaign.” It is meant to summarize in a succinct manner highlights from the business plan. Readers are invited to read the business plan to for additional details and depths. References to pages in the business plan corresponding to major sections are given as footnotes.

### Goals of the New College of Medicine<sup>1</sup>

- Reinvent health care around revolutionary advances in engineering and technology to further research, education, and health care delivery.
- Transform health care education of physicians through the development of team-based, innovative approaches to achieving improved health care outcomes throughout the continuum of care: preventive medicine, chronic disease management, acute care, rehabilitative medicine, and end of life care.
- Elevate the quality of patient care, lower the cost, and make it more accessible to more people by attracting the top clinical providers and trainers, applying new, innovative, and practical health care delivery models, and developing the highest tier of health care delivery.
- The partnership between the Carle Health System and the University of Illinois at Urbana-Champaign is also intended to
  - Strengthen the partnership between Carle Health System and the University of Illinois at Urbana-Champaign, and their respective faculty and physicians, and
  - Be open to engagements with additional parties to further the aspirations of the College of Medicine and our respective organizations, realizing that the stronger the two partners are, the stronger the College of Medicine and the partnership will be. The College will seek organizational partnerships as appropriate that further the unique education, clinical training, and research goals of the new College of Medicine.

### Governance Structure of the New College of Medicine<sup>2</sup>

- The new College of Medicine will exist as a college of the University of Illinois at Urbana-Champaign.
  - The new College of Medicine will be subject to the ultimate control of the Board of Trustees of the University of Illinois and its University Statutes.
  - The new College of Medicine will be a discrete college, separately accredited from the University of Illinois at Chicago College of Medicine. Separate accreditation allows for the new distinct curriculum. No new hospital will be needed.
  - A Joint Liaison Committee will assist the Provost and Carle CMO with oversight of the College (Figure 1). The Committee will be non-fiduciary committee that will report and recommend on such matters to the Provost and to the Carle CMO to assist them in ensuring coordination between the Parties and in completing their respective responsibilities related to the approval of plans and budgets for the new College of Medicine<sup>3</sup>.

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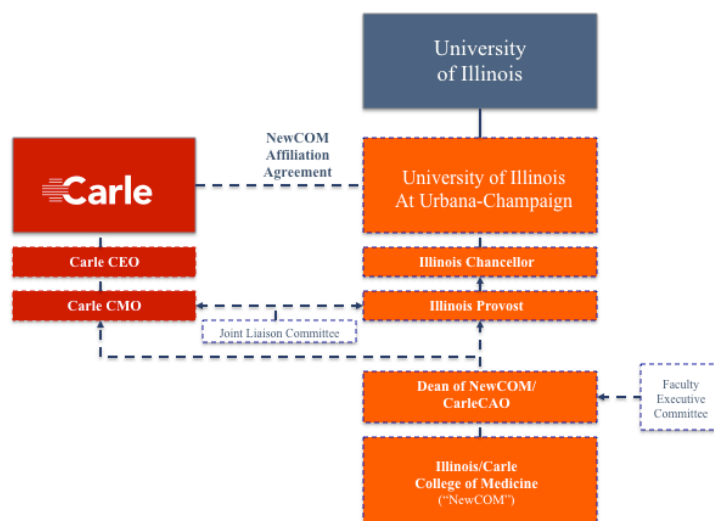
<sup>1</sup> Business Plan Section III Goals, pages 23-26

<sup>2</sup> Business Plan Section IV Governance Structure, Pages 28-30

<sup>3</sup> Extract from MOU being developed

- Engagement and joint governance to be formalized in an equitable contracted “partnership” between Carle Health System and the University of Illinois at Urbana-Champaign.
  - A non-binding Memorandum of Understanding (MOU) is currently being created to allow Carle Health System and the University of Illinois at Urbana-Champaign to move forward in good faith with development of the new College of Medicine.
  - Definitive agreements, which will formalize specific governance rights and obligations concerning the new College of Medicine, will be developed by Carle Health System and the University of Illinois at Urbana-Champaign.

**Figure 1**



## The Dean<sup>4</sup>

- The Dean of the new College of Medicine will have dual titles, Chief Academic Officer at Carle Health System and Dean at the new College of Medicine.
- The Dean will report to both the Provost of the University of Illinois at Urbana-Champaign as Dean, and to the System Chief Medical Officer (“CMO”) of Carle Health System as Chief Academic Officer.
- The Dean of the new College of Medicine will be responsible for setting the strategic direction of the new College of Medicine
- The Founding Dean must have a strong clinical background and be a nationally recognized leader in engineering and science-driven medicine, qualified to hold a tenured professor position at the University of Illinois at Urbana-Champaign, and meet and maintain the credentialing and privileging requirements of the Carle Health System.
- A Faculty Executive Committee will be created to serve in an advisory capacity to the Dean.

## Faculty and Staff<sup>5</sup>

- 20 science (PhD) and 3 physician (MD) faculty members
- An additional equivalent of 10 clinical faculty FTEs will also be required.

<sup>4</sup> Business Plan Section IV Governance Structure, Founding Dean, pages 29-30

<sup>5</sup> Business Plan Section VIII, pages 51-52

- It is estimated that these clinical faculty FTEs will equate to approximately 40-50 physicians who will be employees of Carle Health System.
- This does not count the hundreds of volunteer physician-faculty throughout the region.
- Carle Health System currently employs approximately 400 physicians representing 70+ specialties.
- Carle has a physician workforce plan to recruit an additional 130 physicians over the next 5 years.
- By 2024-2025, 75.5 faculty and staff are expected to support the operations of the College.

#### Economic Impacts Associated with the New College of Medicine<sup>6</sup>

- \$1 billion annually by 2035, when the new College of Medicine is at full maturity.
- Add more than 7,600 jobs statewide by 2035 (direct, indirect, and induced).
- With each having its own College of Medicine, both the University of Illinois at Urbana-Champaign and the University of Illinois at Chicago will be able to secure NIH infrastructure programs such as center grants, training grants, programs, etc. For example, the University of California has five CTSA grants awarded to five of its Colleges of Medicine (one per college), generating \$50 million to support clinical trial facilities and resources. The impact on the University of Illinois and the state of Illinois would be substantial.
- The State of Illinois ranks seventh among all states relative to the total economic impact of academic medicine, generating \$28.7 billion in total economic impact in 2012, and tenth among states for per-capita impact of federal sponsored research. The new College will strengthen the state's competitive position.

#### Impact on the Existing University of Illinois at Chicago College of Medicine<sup>7</sup>

- The new College of Medicine will not request new support from state General Revenue Funds (GRF) for the operations of the new College of Medicine in Urbana-Champaign and thus will not compete for those funds with the existing UIC College of Medicine.
- The business plan was developed based upon the assumption that M1 medical students in the University of Illinois at Chicago College of Medicine on the Urbana campus, as well as those who stay on to complete their degrees in Urbana, will continue to be taught by the faculty and utilize facilities and infrastructure that they are currently using.
  - Students from the new College of Medicine will not displace any existing medical students at Urbana-Champaign.
  - The University of Illinois at Urbana-Champaign is also committed to continuing its participation in the Medical Scholars Program in close partnership with University of Illinois at Chicago.
- A contractual agreement can be put in place between the University of Illinois at Chicago and the University of Illinois at Urbana-Champaign for the appropriate resources to be made available in order to fulfill the commitment to continue to provide the M1 education and for the education of the students staying on to complete their degrees in Urbana. No expenses or revenues for this activity are included in this business plan and the corresponding financial analysis.
- The new College of Medicine also will likely have a multiplier effect by spurring the need for new clinical trials and collaborations that the University of Illinois at Chicago College of Medicine will be uniquely positioned to lead.

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<sup>6</sup> Business Plan Section VI, pages 36-41

<sup>7</sup> Business Plan Executive Summary, pages 10-12; Section IV Governance, page 30; Section Financial Plan V, page 24

- The new College of Medicine will enable the addition of new science, engineering, and clinical faculty on the Urbana-Champaign campus. These faculty will represent additional potential collaborators for their colleagues in Chicago.
- The clinician-scientists of the new College, many of whom will hold joint appointments with other University colleges or Carle, will be the ideal bridge between engineering and basic science researchers on the Urbana-Champaign campus and their counterparts at the University of Illinois at Chicago College of Medicine. This can lead to exponential growth in clinical trials at the University of Illinois at Chicago College of Medicine due to innovations resulting from engineering approaches from Urbana-Champaign, including:
  - Conducting clinical trials focused on the adoption of new engineering-driven health care technologies and procedures that leverage the University of Illinois at Chicago College of Medicine's diverse of patient and physician population,
  - Adapting and tailoring bioengineering innovations to urban health care conditions and the underserved in particular,
  - Becoming the new College of Medicine's partner, through the University of Illinois at Chicago College of Medicine's Peoria and Rockford campuses, in adapting innovations to rural health care needs and conditions, and
  - Partnering with biotechnology start-up companies emerging from the new College of Medicine and based both in Urbana-Champaign and in the Chicago region.

### Curriculum<sup>8</sup>

- The physician-scientists and physician-engineers who graduate from this new College of Medicine will be uniquely trained and equipped to incorporate analytical techniques, innovations, and multi-disciplinary teams into a Human Systems approach to advancing and delivering health care.
- The new curriculum will be rooted in the convergence of medicine and engineering, computer sciences, quantitative sciences, and technology to teach the human body as an integrated system.
  - This understanding of the human body as an integrated system is critical to the analytical, problem-solving skills needed to be a successful physician-scientist, physician-innovator, or physician-entrepreneur positioned to transform health care.

### Facilities and Infrastructure<sup>9</sup>

- The new College of Medicine will utilize existing space for the first ten years of operation included in this business plan.
- Estimates assume that existing M1 medical students and those staying to complete their degrees in Urbana will continue to utilize the space and infrastructure that they are currently utilizing – no existing medical students will be displaced by the new College of Medicine.
- Facility and infrastructure cost estimates to renovate existing space to accommodate the requirements of the new College of Medicine equal \$18 million.
- Additional annual expenses include
  - \$1.2 million to ensure that the new College of Medicine has access to appropriate clinical training center facilities, and
  - \$500,000 to \$1 million for capital equipment, information technology, and medical classroom expenses.

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<sup>8</sup> Business Plan Section VII Curriculum & Admissions Plan, page 42-50

<sup>9</sup> Business Plan Section V Financial Plan, page 33-34; Section XI Facilities, page 59-60

## Clinical Training<sup>10</sup>

- Carle Health System has a long history of providing medical education to students and residents.
- The College will be able to reach out to other partners as appropriate for clinical training and residencies – a listing of clinical training sites and existing residency training programs is provided in Section IX of the report.

## Financial Plan to Support the New College of Medicine<sup>11</sup>

- The operating budget was developed using existing Carle Health System and University of Illinois at Urbana-Champaign financial data as well as estimates provided by Tripp Umbach based upon their experience working with new and existing medical schools for the past 20 years and input from working groups comprised of Carle physicians and administrators and University faculty and administrators.
- The capital budget was developed after an analysis that determined how existing facilities and resources could be leveraged for the new College of Medicine.
- The financial commitments of Carle under the Definitive Agreements will remain in effect upon a change in control or ownership of Carle; Carle is not currently contemplating such a change in control or ownership.<sup>12</sup>
- With major financial commitments from Carle over the initial ten (10) year, the budget, even after including a 10% contingency on all the expenses, maintains a cumulative surplus.
- The following provides a high level summary of budget categories. Please refer to Appendix B for detailed summary of budget assumptions incorporated in the budget.

### REVENUES – HIGH LEVEL SUMMARY

- Student tuition and fees: The first class of 25 students is expected in year three of the budget plan.
- Sponsored project research revenue: This assumes an effective Facilities and Administration (F&A) rate of 25% -- a conservative estimate. It also forecasts a modest ramp-up for assistant professors and a higher level of activity for more senior professors reflecting the expectation that such professors would recover start-up package in five-year time frame.
- Clinical practice revenue: Additional revenue is anticipated from clinical practice of faculty in the College.
- Fundraising: A four-percent draw has been applied to operational and capital needs of the College.
  - This includes a commitment from the University of Illinois at Urbana-Champaign to raise a minimum of \$135 million for the College of Medicine through fundraising activities over eight years to help meet the ongoing operating and capital needs of the new College of Medicine. This endowment is expected to grow to approximately \$145 million by year ten as a result of the net of investment gains versus distributions. The campus is raising \$180 million annually, and will be publicly announcing its next fundraising campaign in 2017.
- Other income: This forecasts a relatively small estimates for restricted gifts.

### EXPENSES – HIGH LEVEL SUMMARY

- Salaries and wages - covering Dean's office, basic science instruction, clinical instruction, research administration, student services, and institutional support

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<sup>10</sup> Business Plan Section IX Clinical Training, page 53-54

<sup>11</sup> Business Plan Executive Summary, pages 14-16; Section V Financial Plan 31-35

<sup>12</sup> Extract from MOU

- Benefits – 40% rate applied to salaries and wages that cannot be covered by student tuition and fees
- Fundraising – staff and communications
- Marketing and communications
- General expenses – including recruitment costs, travel, consulting, library subscriptions
- Faculty start-up packages – based on a mix of assistant, associate, full, and named professors
- Supplies, professional and other expenses
- Sponsored research expenditures
- Facilities and equipment – maintenance expenses and equipment for specialized facilities
- Capital expenditures including building renovations and classroom equipment
- 10% contingency is added to all the expenses

#### FUNDING SOURCES – HIGH LEVEL SUMMARY

- \$100 million contribution from Carle Health System to be made over 10 years
- An additional \$1.5 million ongoing annual contribution from Carle Health System to extend beyond the first 10 years; subject to review due to inflationary factors
- 10% contribution from the campus to the start-up packages

## ADDITIONAL NOTES ON FINANCIAL PLAN

- It is envisioned that the new College of Medicine eventually will construct a medical education facility. This business plan assumes that this facility will not be built until after the timeframe included in the business plan.
- It is expected that a contractual agreement will be put into place between the University of Illinois at Chicago and the University of Illinois at Urbana-Champaign for the appropriate resources to be made available in order to fulfill the commitment to continue to provide the M1 education and for the education of the students staying on to complete their degrees in Urbana. No expenses or revenues for this activity are included in this business plan and the corresponding financial analysis.
- It is envisioned that the new College of Medicine will leverage available resources at both Carle Health System and the University of Illinois at Urbana-Champaign to achieve cost savings that are not accounted for in the business plan.

## Timeline<sup>13</sup>

This business plan assumes that the first cohort of 25 medical students will begin their medical education in the fall of 2017. This is an aggressive timeline that can be achieved if the following actions occur within the identified time frames included in the timeline provided in Appendix A.

## New College of Medicine Work Groups<sup>14</sup>

To help guide the development of the business plan, Carle Health System and the University of Illinois at Urbana-Champaign chartered a series of work groups involving more than 60 individuals. The workgroups included: an executive leadership committee, governance, finance & revenue, curriculum & admissions, faculty & staff, clinical training, research, facilities, communications & government relations, and accreditation.

## The Partners

### CARLE HEALTH SYSTEM

- Ranked 14 out of 220 hospitals in the state by *U.S. News and World Report*, and the only hospital outside of the Chicago area to rank in the top 15
- One of the nation's Most Wired Hospitals by *Hospitals and Health Networks*
- A Magnet Status hospital for nursing excellence, and
- One of the top hospitals in the country for Stroke, Critical Care, Neuroscience and Neurosurgery, Gastrointestinal Care, Pulmonary Care, and Women's Services by Healthgrades

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

- A member of the prestigious Association of American Universities (AAU),
- A Carnegie I Research Intensive University, and
- A recognized global leader in fostering excellence in teaching, research, service, and economic development.
- The University of Illinois at Urbana-Champaign is consistently ranked among the top five universities in National Science Foundation (NSF) funding.

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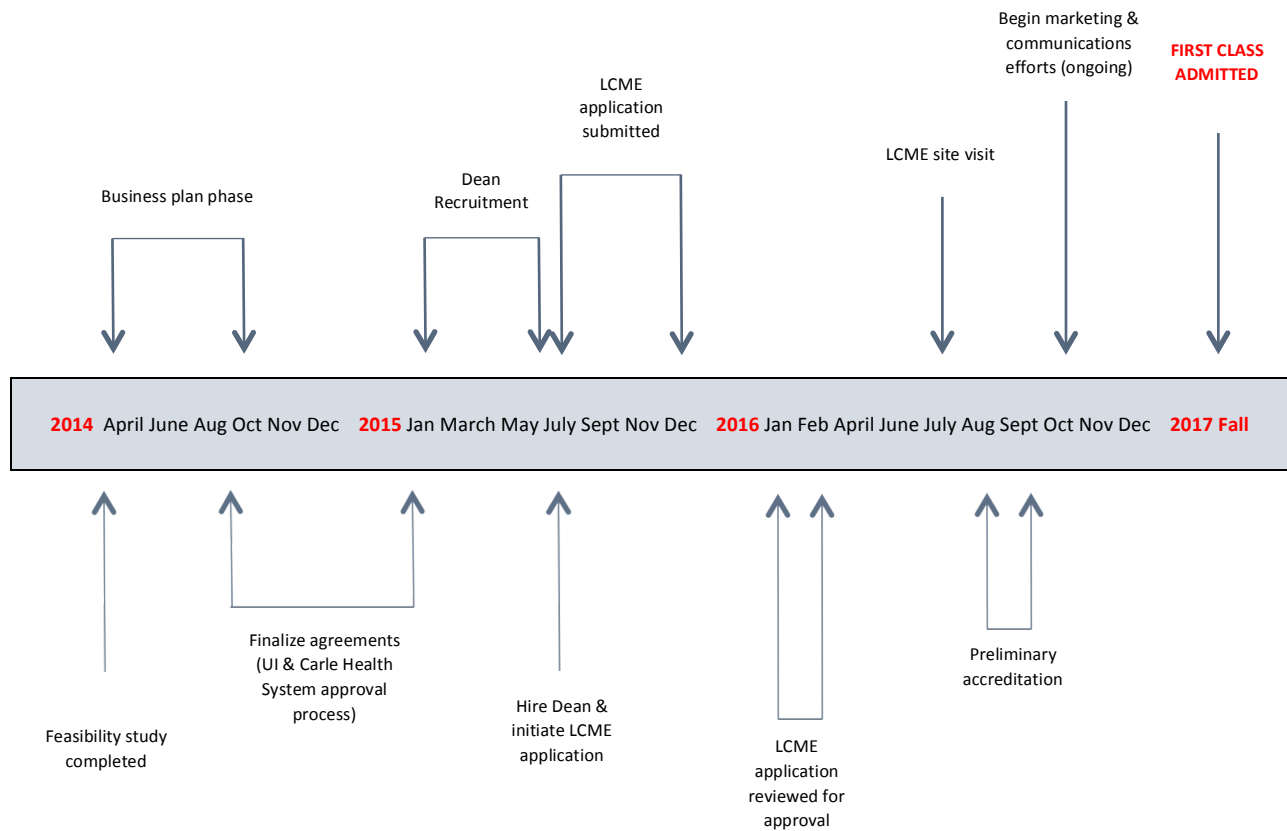
<sup>13</sup> Business Plan Executive Summary, pages 16-17; Section XIII Accreditation, page 62

<sup>14</sup> Business Plan Section Appendix F Work Group Members, pages 8-91, Appendix G Work Group Charters, page 92-101



- Its College of Engineering is among the highest ranked colleges of engineering in the nation and is actively engaged in engineering innovations for medicine in areas such as material science, computer science, imaging and sensors, and bioinstrumentation.

## Appendix A. Timeline



## Appendix B. Financial Assumptions built into the Budget

Budget Assumption	Detail	Rationale / Source
<b>Admissions Statistics Assumptions</b>		
Student Enrollment	Begins with 25 students enrolled per year in the first two years and then increases by 5 students per year up to 50	Decided by Governance Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign. For simplicity, the model assumes all students will complete a 5-year MD/MS program.
Student Tuition Funding	In-State: \$45,000 per year Out of State: \$60,000 per year Percentage of In-State Students: 50%	Decided by Curriculum and Admissions Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign. Tuition rate estimated based on current tuition based at peers adjusted for inflation and value of unique engineering-infused MD/MS program.
Percentage of Tuition Waived	30%	Assumes 30% will be waived due to fellowships or waivers for some students pursuing MD-PhD. Percentage corresponds to Tripp Umbach experience
Professional Student Fees	\$8,091 per year	Matches the UIC College of Medicine annual student
<b>Faculty and Staff Assumptions</b>		
Faculty and Staff FTEs	Basic Science Teaching Faculty: 10 FTEs Clinical Teaching Faculty: 16 FTEs (See budget for additional detail on support and administrative staff including Deans.)	Estimated using faculty models created by Tripp Umbach with inputs from the Curriculum and Admissions Work Group to support the curriculum envisioned for the new school. Staff FTE based on Tripp Umbach experience with medical schools throughout the country.
Annual Faculty and Staff Salaries	Basic Science Faculty: \$140,000 (average salary for all ranks) Clinical Faculty: \$270,000 for Clinical Faculty (See budget for additional detail on support and administrative staff including the Deans)	Estimated based on experience by Tripp Umbach. Validated against national standards using the AAMC Salary Comparison Report (2006-2007) and the MGMA Academic Practice Compensation and Production Survey (2014)
Benefits Percentage	40%	Utilizes the University of Illinois benefit percentage, applied as appropriate
Faculty Time Percentages	Basic Science Faculty: 60% Teaching, 20% Clinical, 20% Research Clinical Faculty: 20% Teaching, 60% Clinical, 20%	Approved by the Governance Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign
<b>Revenue Assumptions</b>		
Clinical Practice Revenue per Faculty Member	\$238,436	Estimated utilizing average gross charges from the 2013 MGMA Cost and Revenue Survey compared with the Carle Foundation's internal collection rate and average operating financials
Estimated Research Contributions per Faculty Member	Basic Science faculty FTE, Asst. Professor level: \$350,000 per year; Senior Hires: will generate increase in research expenditures sufficient to repay startup expense over the first 5 years of employment through additional indirect cost recovery Clinical Faculty: \$50,000 per year UIUC Existing Faculty: \$100,000 per year (See budget for additional detail)	Estimated by the Research Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign. Original estimates by Tripp Umbach yielded the same total result. (<5% difference)

Budget Assumption	Detail	Rationale / Source
Indirect Cost Recovery Revenue Percentage	25%	Slightly below the UIC College of Medicine ICR of 28.83%
Restricted Gifts per faculty member	\$6,079 per year	Estimated based on Deloitte experience
Other Expense Assumptions		
General Expenses	Costs are not constant and include Dean/Faculty Search, Travel, Consulting and Project Management, Media Consulting, and Library Subscriptions. (See budget for additional detail)	Estimated based on experience by Tripp Umbach. Budget does not include costs of providing M1 education to UIC students and continuation of education for UIC MD/PhD scholars on Urbana campus.
Inflation Factor	A 2% inflation factor was applied to expense line items, as appropriate	Estimate based on anticipated growth in expenditures as a result of inflation
Supplies and Professional Expenses	<u>Expenses per Staff FTE per year:</u> Telephone-\$600, Office Supplies-\$750, Postage-\$150, Professional Development-\$750, Membership Expense-\$750 <u>Expenses per Student per year:</u> Medical Supplies-\$800, Teaching Materials-\$1,500	Estimated based on experience by Tripp Umbach
Marketing and Communications	\$300,000 in the first year, and then \$200,000 annually	Estimated by Marketing and Communications Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-
Research Startup Costs	Basic Science Faculty (over 5 years): <ul style="list-style-type: none"> <li>Assistant Professor: \$1,000,000s</li> <li>Associate Professor: \$1,500,000</li> <li>Full Professor: \$2,000,000</li> <li>Named Appointment Professor: \$3,500,000</li> </ul> Continuing Research Faculty Support: \$250,000 year 7; \$500,000 year 8; then, \$1,000,000 annually	Estimates for assistant professors are consistent with bioengineering dept. and experience of Tripp Umbach. Estimates for associate, full, and named professors are consistent with discussions with bioengineering candidates related to the recruitment of top tier faculty through the GEBI (Grainger Gift) program. Estimated for continuing research support in later years are related to the notion of new start-up packages to replace faculty.
Fundraising Assumptions		
Fundraising Revenue	Dean Position Naming Gift: \$10,000,000 total Faculty Support Gifts: \$2,500,000 total per basic science faculty member (20 total) Student Support Gifts: \$50,000,000 total Training Facilities, Laboratories, and Equipment Gift: \$25,000,000 total Assumed Annual Earnings: 5.5% Assumed Annual Spend Rate: 4.0%	Estimated by Fundraising Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign
Fundraising Expenses	Development Staff: \$118,000 per year Communications: \$50,000 per year	Estimated by Fundraising Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign
Capital and Equipment Assumptions		

Budget Assumption	Detail	Rationale / Source
Capital Expense	<p>Facility Costs to Upgrade Existing Buildings: \$18,000,000 over 10 years</p> <p>Capital Equipment IT/Media Classrooms: approximately \$4,500,000 over years 4-10</p>	<p>Estimated by Tripp Umbach and Facilities Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign. The workgroup assumed that UIC student and staff would continue to be on-site. The estimates include renovations and possible expansion of existing facilities at both Carle and UIUC. These estimates do not include any consideration for the development of a new</p>
Facilities Expense	<p>\$13 per square foot</p> <p>Total Square Feet: 36,000 total square foot</p> <p>Training facilities, laboratories, and equipment: approximately \$8,000,000 over years 4-10</p>	<p>Estimated by Facilities Workgroup that included representatives from the Carle Foundation and the University of Illinois at Urbana-Champaign.</p>