What is university technology transfer?

- Transfer of intellectual property (IP) created by university employees and/or students from academic institution to private sector for (1) further development and (2) commercialization

- By license – university retains ownership of IP and grants license to commercial entity
  - With performance requirements (milestones)
  - If licensee fails to perform, license can be terminated and IP reverts back to university
Welcome. With the high number of attendees, please note all lines have been muted for the event. Q&A can be posted at the right of your screen, but any questions (time permitting) will be addressed at the end of the event. If using Q&A – please send to both the host and the presenter. Chat will not be enabled. You can send direct questions (including request for copy of slides) to seminars@leclairryan.com with VC Webinar in the subject for reply after the event.
InnovateTech Ventures facilitates university tech transfer venture creation.

- We match entrepreneurs to university technologies and facilitate the creation of startup companies through our Entrepreneur Match Program.
- Clients include:
  - We founded and manage a university life science technology commercialization company:
Entrepreneur Match Process:

- We identify select startup opportunities from clients, and conduct market research
- We match the opportunities with serial entrepreneurs looking for their next startup opportunity
- We introduce the entrepreneur to potential partners, and coach them through the licensing process
- The entrepreneur founds the company with technical support from the inventor
- InnovateTech does not take fees from the entrepreneur nor equity in the startup
Why look at university technologies?

- Benefits of university technologies:
  - Significant technology development
  - Typically high innovation
  - Technical team available
  - Credibility from university

- Tradeoffs:
  - Royalties/equity to university
  - Other license obligations
  - Inventors in academic environment
How to find university opportunities

- Visit university OTTs
- Use the InnovateTech Ventures site: www.innovatematch.com
- Technology listing sites:
  - InvenioIP – www.invenioip.org
  - ibridge – www.ibridgenetwork.org
  - Flintbox – www.flintbox.com
  - Yet2Com – www.yet2.com
  - TechEx – www.techex.com
Established in 1994, VCU IP Foundation - 501 (c) (3)
$250 Million in research awards in 2009
90-100 new inventions/year (90% biomedical)
10-15 new licenses/year; 10-15 research support agreements
250 MTAs and NDAs
1 new startup company/year in the last five years on average
$1 Million in revenues/year
Revenue Sharing at VCU: 40% to inventors; 40% to VCU-IPF; 10% to inventors’ department; 10% to inventors’ school
Core Competencies and Technologies

- Medical devices
- Critical care devices
- Non-invasive devices
- Trauma surgery
- Medical IT
- Neuroscience
- Infectious disease diagnostics and therapies
- Cancer diagnostics and therapies
- Addiction and drug abuse
The License
(The Deal points)

- Diligent development/commercialization (Diligence Milestones)
- License fee/equity
- Annual minimums
- Reimbursement of IP costs
- Research funding
- Milestone payments
- Royalties
Licensing to Start-ups

- Straightforward license template
- Equity in lieu of upfront payment
- Extra diligence milestones
- No annual minimums in the first few years
- Observer seat on the Board

“Licenses are more like marriages than like sales—after all the hoopla is over, you have to live with each other for a long time”  Lita Nelson, MIT
Non-Financial Issues

- “Total deal” structure – exclusivity, field of use, term
- Licensed technologies
- Reservation of rights to the university for internal research purposes
- Publication rights
- Right to improvements
- Right to sublicense
- Confidentiality; use of names
- NO WARRANTIES
- Indemnification
VCU Start-up Companies

**GetO2**  
Oxygen delivery for trauma and emergency applications

- Neurological and cardiovascular medical devices
- Non-invasive diagnostic products

**NEUIMEX**  
Expanding Noninvasive Diagnosis

- A web-based assessment management software application WEAVEonline® to more than 90 university and colleges

**Data Blueprint**  
An IT company that provides customized data management solutions to improve business decision-making.

- Biopharmaceutical company focused on small molecule therapeutics for cancer treatment

**WINGSPAN**  
Developing young children's social-emotional skills, problem-solving abilities, and healthy decision-making

- Therapeutics for sickle cell disease

**NeXegen**  
Medical Systems Inc

**Allos Therapeutics**

**LeClair Ryan**
- Established in 1985, VT affiliated corporation - 501(c)(3)
- $232 million in total research awards to VT in FY 2009
- 150 new inventions/year
- 35 new licenses/year
- 45 NDAs/year
- 3 new startup companies/year in the last five years on average
- $3 million in license revenues/year
- Revenue sharing at VT: 50% to inventors; 40% to university; 10% to inventors' department
Typical license deal terms

Nine Points to Consider
1. Right to practice
2. Encourage development and use
3. Minimize the licensing of improvements
4. Manage related conflicts of interest
5. Access to research tools
6. Carefully consider enforcement action
7. Be mindful of export regulations
8. Implications of patent aggregators
9. Provisions for unmet needs

Different Perspectives
Mission driven by university
Public interest - Nine points
Specific clauses of importance
Considerations for startups

Specific Clauses of Importance
Retained rights clause
Period of exclusivity/field of use
Diligence provisions/termination
Insurance and indemnification
Patent prosecution

Considerations for startups
Conflict of interest
Commercialization plan
Equity or upfront fee

Virginia Tech Intellectual Properties, Inc.
Milestones

- Flexible
- Determined on a case by case basis
- Purpose is always to ensure that the intellectual property is diligently exploited
Post-license university support

What role can the university play after the deal in terms of support?

- Any transfer of technology not licensed (e.g., writing software code), research support, technical support, or assistance with business development typically is the subject of a separate agreement with the university.

- Consulting agreements with university faculty members may also be a possibility.

- Relationship building is the key benefit that often results in unforeseen benefits after the deal.
VTIP Portfolio

Active Areas

- 899 technologies available for licensing
- Active licenses for 384 technologies
- Major areas –
  - Electrical & Computer Eng: 266 (85)
  - Mechanical Engineering: 64 (39)
  - Chemistry: 56 (34)
  - Center for Photonics Technology: 46 (15)
  - Materials Science and Engineering: 43 (15)
  - Biomedical Engineering & Science: 33 (9)
  - Wireless@VT: 28 (1)
  - VETMED: 27 (10)
VTIP Portfolio

Active Areas

- Major areas (cont.)
  - Virginia Bioinformatics Institute | Avail: 26 | Lic’d: 5
  - Biological Systems Engineering | Avail: 24 | Lic’d: 7
  - Computer Science | Avail: 21 | Lic’d: 6
  - Crop & Soil Environmental Sciences | Avail: 19 | Lic’d: 15
  - Chemical Engineering | Avail: 17 | Lic’d: 22
  - Ctr for Power Electronics | Avail: 11 | Lic’d: 39
  - Virginia Tech Transportation Institute | Avail: 16 | Lic’d: 3
  - Industrial and Systems Engineering | Avail: 13 | Lic’d: 2
  - Wood Science and Forest Products | Avail: 11 | Lic’d: 1
  - Ctr for Intell. Material Sys and Structures | Avail: 11 | Lic’d: 1
VTIP Startups

SciGenesis
Enhancing nanoparticles

TechLab
Diagnostics for intestinal diseases
Interlibrary loan management tools

Enteric Diagnostics
Renewable energy power electronics

Vehicle safety systems

ATLAS Systems, Inc.
Bone and cartilage replacements and implants

TransSecurity
Wireless network design tools – acquired by Motorola

BC Genesis
Omega-3 fatty acids via fermentation

Wireless Valley Communications, Inc.

AlgiSys
Reducing computer energy consumption

MiserWare
Virginia Tech Intellectual Properties, Inc.
LeClairRyan is a full-service law firm representing a wide variety of clients throughout the nation, with offices in California, Connecticut, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Virginia and Washington, DC. LeClairRyan provides business counsel and client representation in corporate law and high-stakes litigation with the talent of more than 300 attorneys in 80 areas of practice.

Initially formed as a venture capital boutique law firm, LeClairRyan’s attorneys have significant and long-standing ties to the angel, venture capital, and business communities. LeClairRyan’s attorneys are able to use their extensive networks to make client introductions to potential customers, alliance partners, employees, service providers, lenders, angel investors, venture capital firms, investment bankers, and other sources of capital. Collectively, our attorneys have closed hundreds of venture capital transactions for companies and investors and have closed more than 500 financing transactions and 500 merger and acquisitions transactions. We have helped take our clients from concept to IPO and beyond, from a single entrepreneur with an idea to a company with more than 1000 employees.
Role of Law Firm in Tech Transfer Deals

- Organize company
- Advice and counsel in connection with the license agreement
- Assist with negotiating the license agreement
- All done with an eye toward fundraising
- Use Rolodex
Special Considerations for University Licenses

- Licensee culture shock
  - No warranties/FTO
  - Publication rights
  - Internal use rights
  - Choice of patent counsel
  - Sublicense limitations

- Stacking
Practical Considerations

- Is there a market?
- Future development/ongoing inventor involvement
Financing the Deal

- Know where you are/who you should be talking with
- Proof of concept
  - CIT GAP Fund
  - SBIR/STTR
  - Friends and family
- Pre-revenue
  - Angel
  - Seed-stage venture fund
- Post-revenue
  - Venture funding
Questions and Answers
Thank You.

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