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INNOVATION AND ECONOMIC PROSPERITY UNIVERSITIES
AWARDS PROGRAM

CASE
STUDY
2013

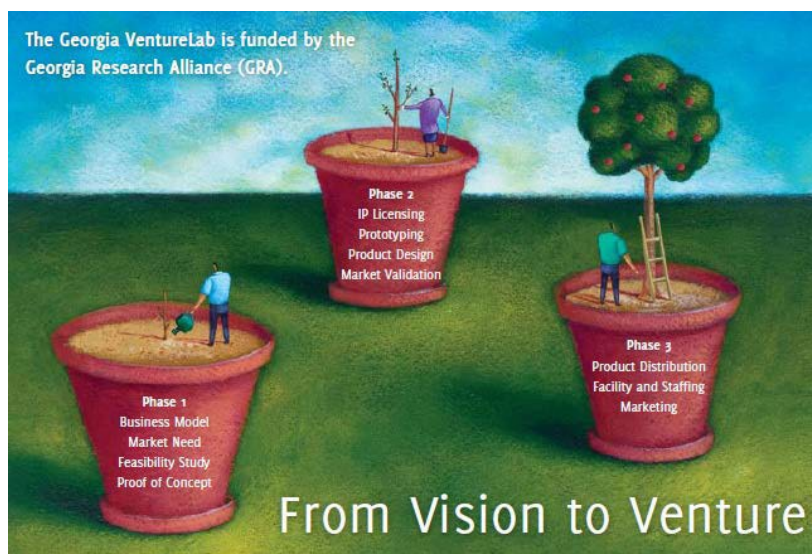
VentureLab

Taking Ideas to the Marketplace

THE GEORGIA RESEARCH ALLIANCE AND VENTURELAB

The Georgia Research Alliance (GRA) was established in 1990 to enable the expansion of technology- based economic development throughout the state. GRA is an independent, privately funded organization that manages public investments in research infrastructure, academic talent and commercialization. GRA's commercialization role involves a nurturing partnership with the six major research universities in the state: the University of Georgia, Georgia Tech University, Georgia Regents University, Georgia State University, Emory University, and Clark Atlanta University. GRA serves as the overarching clearinghouse, champion, and seed funding source for commercially viable research at these institutions as well as accelerating start-ups derived from faculty research. GRA accomplishes this task by recruiting academic talent with a focus on economic development through their Eminent Scholars program and via the GRA VentureLab program which provides grants for technology validation and startup company acceleration.

GRA's VentureLab program serves as an essential tool to shepherd biotechnology and life sciences discoveries made at Georgia's research universities to the marketplace. Started in 2002, VentureLab provides access to management and technical expertise, prototype and proof of concept funding, and infrastructure to early stage start-ups developed from University-based research. After initial vetting of an idea, funding proposals are submitted through a University's VentureLab representative. Representatives from GRA and each member institution gather on a quarterly basis to review submissions and collectively provide recommendations to GRA management for funding awards using a progressive, three-tiered structure. External investors, industry experts, and entrepreneurs serve as advisors as well as independent reviewers. Subject to milestone completion and external review, companies can apply for further funds. Maximum funding available per project/ company is \$150,000 in grants (Phases 1 and 2), \$250,000 in loans (Phase 3) provided directly to the company. Access to a captive venture capital fund is available where appropriate (Phase 4). Subsequent to stage one funding, companies are incubated at their respective universities.

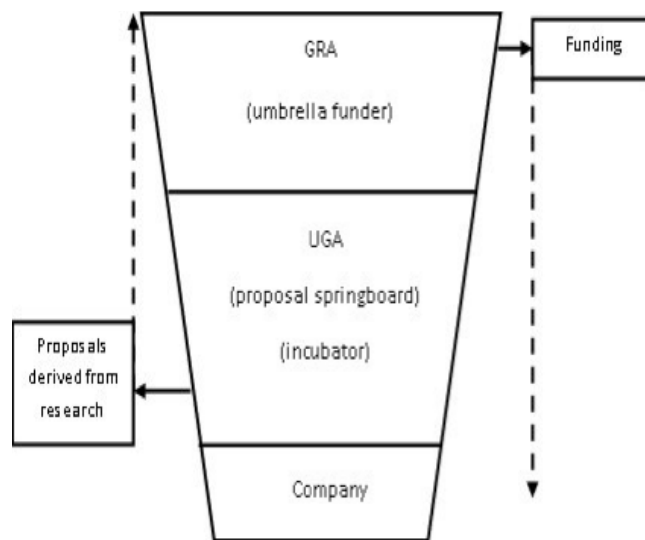


The three phases of Georgia VentureLab company development

VENTURELAB COMES TO THE UGA CAMPUS

In 2002, the University of Georgia (UGA) assisted GRA with piloting the first biotechnology VentureLab projects. This resulted in GRA expanding its program to UGA, formally establishing a UGA VentureLab program on the UGA campus. UGA VentureLab is based within the Georgia

BioBusiness Center (GBBC) which is the university’s biotechnology business incubator. Its trio of on-campus buildings combines office and laboratory space to house a vibrant and fertile environment that intermixes entrepreneurship, research, and instruction. The goal of UGA VentureLab is to mitigate risk early, in order to assist companies to become “fundable” and ultimately be sustainable residents of the incubator and the regional economy. UGA’s VentureLab program provides UGA faculty with the necessary funding to assess feasibility, intellectual property value, prototyping, proof of concept, business planning and ultimately market viability while giving them real-world experience with early stage technology development. Projects are derived from University of Georgia owned intellectual property and the resulting start-up companies are committed to forming and growing in the state of Georgia. A distinguishing feature of VentureLab is providing funding at the earliest developmental phases—when failure is otherwise more apt to occur. Typically Phase 1 and 2 funding triggers successful Small Business Innovation Research (SBIR) funding, which is now a primary method for crossing the chasm to becoming a real company.



The flow of GRA funding and information in VentureLab

In FY 2012, the UGA VentureLab received \$281,300 in GRA funding for nine projects over nine separate awards. Over the Lab’s lifetime, over \$2 million in GRA funding has been secured. A total of 22 companies have been born via UGA’s VentureLab. Additionally, the Lab supports an entrepreneurial environment on campus by hosting workshops and seminars. These activities have the added benefit of cultivating a vibrant atmosphere that attracts future UGA VentureLab participants.

VENTURELAB EXAMPLE—WHEN AN IDEA TAKES ROOT AND GROWS

What if a student learned a scientific concept not by memorizing a section of a textbook but by engaging with the subject using 3-D video gaming technology to interact and thus truly grasp and retain the material?

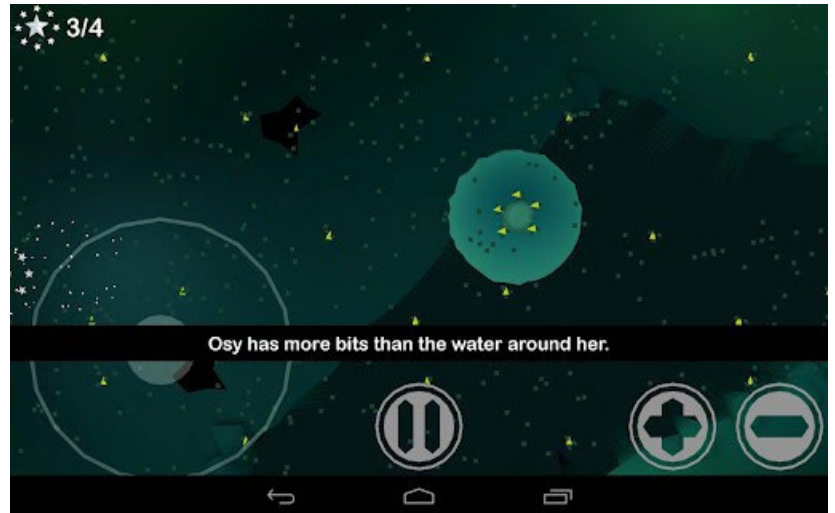
As the result of a five-year NIH study into classroom science education conducted through UGA’s College of Veterinary Medicine, the idea for this pioneering means of science education emerged as a new potential product in 2010 at the company *Interactive Sciences in 3D (IS3D)* which was started by UGA faculty.

Among IS3D’s offerings is the game *OsyOsmosis* that enables students to use their understanding of the process of osmosis to navigate a fictional single-celled organism “Osy” through her environment, collecting points along the way. In another application, students assume the role of a veterinarian tasked with diagnosing *Clark the Calf* who is having persistent seizures. Students

can “fly-in” to Clark’s body where they observe what happens in the brain when seizures are brought on by an ionic imbalance. By taking the same measurements that might be available to a veterinarian, students can compare Clarke’s data to baseline readings, generate a hypothesis, make a diagnosis, and administer treatment making a “real world” application of the scientific method. The high quality graphics and creative scenarios engage the students who must master the scientific concept of osmosis in order to “win” the game and save Clarke. More about *Clark the Calf* is available at http://www.redandblack.com/news/calf-in-distress-teaches-kids-about-science/article_64664c4a-2f81-11e2-b9d7-001a4bcf6878.html.

Through the assistance and support of UGA’s VentureLab, IS3D was able to explore the requirements to develop and commercialize their idea and then secure seed funding from GRA that allowed them to further develop their concept, hire subject matter experts, and fine-tune a prototype. This positioned them to receive further funding from the National Institutes of Health (NIH) with an SBIR grant.

Over a two-year period, IS3D received \$150,000 in funds from GRA and brought a significant return to Georgia on this investment. As a result of GRA’s support, 10 highly skilled jobs were created, and \$3 million in federal funds were brought into Georgia for subsequent grant funded research by UGA participants and members of the local Athens community. Currently in the Lab’s second developmental phase, IS3D is working on developing a full suite of software for integration into biology curricula.



Screenshot from “Osby Osmosis,” an interactive science education game developed by IS3D, LLC, a Georgia VentureLab company.

UGA GRA/VentureLab Cumulative Awards Since 2002

	Project/Company	Award
1	Abeome	\$250,000
2	AerovectRx	\$150,000
3	ARChem	\$72,500
4	Algix	\$100,000
5	Argent Diagnostics	\$100,000
6	Aruna Biomedical	\$250,000
7	BioInquire	\$150,000
8	Body Surface Translations	\$100,000
9	Cardionic	\$25,000
10	CYAN Bio	\$30,000
11	Down to Earth Energy	\$23,000
12	Evirx	\$350,000
13	Glycosensors and Diagnostics	\$50,000
14	GlycoScientific	\$25,000
15	HyperCell Technologies	\$25,000
16	InsectiGen	\$250,000
17	IS3D	\$196,500
18	JenPat	\$25,000
19	Pathens	\$115,000
20	PhotoChem	\$11,000
21	Planteco	\$25,000
22	SciStem	\$22,500
23	Sustainable Solutions	\$25,000
24	Trellis	\$150,000
25	VacCell	\$21,000
26	Viamune	\$25,000
	Total	\$2,566,500