

IOWA INNOVATION CORPORATION

2019
**ANNUAL
REPORT**

IICORP.COM

IOWA
innovation

“Iowa’s reputation and success as a bioscience epicenter is characterized by a continuous focus on innovation and collaboration. With the Iowa Innovation Corporation now serving as a bioscience development center, we are poised to address the transformational changes needed to advance the state’s thriving biosciences industry.”

Debi Durham, Director
Iowa Economic Development Authority and
Iowa Finance Authority

2019 marked the first full year during which the Iowa Innovation Corporation (IICorp) pursued its mission serving as an Iowa bioscience development center (IBDC), advancing bioscience-based economic development focused on the following four platforms:

MEDICAL DEVICES

PRECISION AND DIGITAL AGRICULTURE

BIOBASED CHEMICALS

VACCINES AND IMMUNOTHERAPEUTICS

IICorp also continues to administer the State’s Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) Outreach Program.

IOWA BIOSCIENCE DEVELOPMENT CENTER

During 2019, significant time was spent in discussions with stakeholders to gain (i) perspectives on the needs, gaps, and opportunities in the overall ecosystem and (ii) insights into roles that IICorp can most effectively play. This effort is ongoing.

Iowa's major research universities are historically the greatest source of innovation in each of the four platforms and we foresee this continuing in the future. As such, partnership with these universities is essential for IBDC success.

During 2019, Iowa State University (ISU) and the University of Iowa (UI) requested through the Board of Regents a \$4 million annual appropriation for platform-dedicated people and programs. An approximately \$1.1 million appropriation was made for FY2020 (\$285,000 to UI for the Medical Devices platform and \$825,000 to ISU for the other three platforms). An increased appropriation will be sought for FY2021.

"Innovation in biosciences offers a great opportunity for Iowa. We will be at the forefront in sustainably feeding the 10 billion people that will inhabit the world in 2050. Our producers will benefit by improving their operations and their opportunities. As start-ups develop and grow, they provide potential for youth and can even help lift rural communities. IICorp plays an important part in achieving these outcomes."

Paul Schickler
Chair
Iowa Innovation Corporation Board of Directors

During 2019 IICorp worked closely with university personnel on the following IBDC platform efforts:

BIOBASED CHEMICALS / PRODUCTS

With the FY2020 appropriation, it was decided that ISU would focus primarily on this platform, including the only addition of staff.

Chief Technology Officer (CTO) Hire

After conducting a national search, an excellent candidate with extensive industrial experience was hired. Dr. Sundeep Vani has 22 years of industrial and commercialization experience in the biobased chemicals/products space at companies such as ADM and Kelco. He is focusing on identification of promising emerging technologies and then, in partnership with IICorp personnel, working to ensure their development into viable commercial products.

University-industry collaboration seed grant program

A program to seed new university-industry collaborations within this platform was initiated. Eleven proposals were submitted, with four selected for funding. The awards were approximately \$75,000 each. The proposals described how the work is connected to economic development in Iowa and how the seed project will be leveraged to create follow-on funding either from the company(s) or via partnered proposals to other funding agencies. The companies involved in the funded projects include ADM, Cargill, Dickinson Industries, Kemin Industries, Kent Corporation, Pella Corporation, Puretein Bioscience and Siegwirk USA. In some cases, partners offered matching contributions up to \$25,000 cash or \$35,000 in-kind.

PRECISION AND DIGITAL AGRICULTURE

Industry analysis and identification of priorities

The Precision and Digital Agriculture Platform has engaged a market research company to help us better understand the research priorities of leading companies in this sector as well as to gain their perspectives on the commercial landscape. Analysts from the market research firm engaged approximately 15 companies and had one-on-one conversations with senior leaders. This project is scheduled to be completed in early 2020 and the results will be used to guide thinking about potential partnerships, licensing opportunities as well as the startup landscape.



In addition to the collaborative efforts with ISU and UI, IICorp made progress in several internal areas key to IBDC success:

COMMERCIAL OFFICER HIRING

IICorp aligned 2019 recruitment efforts with the ISU focus on the Biobased Chemicals / Products Platform, with Steve Smith joining IICorp as a Commercial Officer in December. Steve is partnering closely with Sundee Vani to ensure that promising commercial opportunities within this platform are developed effectively. Steve joins Jim Register (President and CEO), Safiya Lee-Evans (hired in February), who provides administrative support to the team and Anne Price (SBIR/STTR Program Coordinator) on staff.

BOARD OF DIRECTORS

Three board members' terms expired in April 2019 and were replaced with new Directors having backgrounds well-aligned with the corporation's current mission. David Kingland (Chair), Kathryn Kunert (Governor-appointed, Senate-approved) and Myron Linn were replaced by Paul Schickler (Chair), Mike Roof (Governor-appointed, Senate-approved) and George Arida.

Georgia Van Gundy (Governor-appointed, Senate-approved) resigned from the board late in the year and the search for a replacement is ongoing.

CORPORATION RENAMING/ REBRANDING

To better align with the corporation's current direction and objectives, IICorp has engaged deNovo Marketing from Cedar Rapids to lead a renaming/rebranding effort. Work is underway and we anticipate completion of this project in early 2020.

VACCINES AND IMMUNOTHERAPEUTICS

University-industry collaboration seed grant program

A program to seed new university-industry collaborations within this platform was initiated. Of the six proposals that were submitted, two were selected for funding at approximately \$40,000 each. Both involved collaboration with Boehringer Ingelheim Vetmedica Inc. The proposals described how the work is connected to economic development in Iowa and how the seed project will be leveraged to create follow-on funding either from the company or through partnered proposals to other funding agencies. The industry partner offered \$30,000 in in-kind matching contributions across the two projects.

MEDICAL DEVICES

Jon Darsee, UI Chief Innovation Officer, has spent his career at medical device startups. Because of this, as well as his physical location in the middle of most of Iowa's medical device research and startup activity, it was decided in 2019 that Darsee will have operational responsibility for the Medical Device platform. His team consults and collaborates with IICorp as appropriate. Jon will continue to serve as an Ex-Officio IICorp board member and will contribute updates on the Medical Device platform to both IICorp board meetings and meeting minutes.

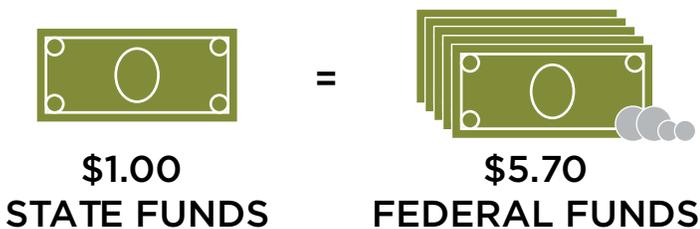
SMALL BUSINESS INNOVATION RESEARCH AND TECHNOLOGY TRANSFER OUTREACH PROGRAM

The SBIR/STTR Outreach Program provides support for innovative Iowa businesses seeking federal grants through the Small Business Administration’s SBIR and STTR programs. This support is not restricted to the four bioscience platforms that are the focus of IBDC efforts. 2019 was another successful year for the SBIR/STTR Outreach Program on several fronts:

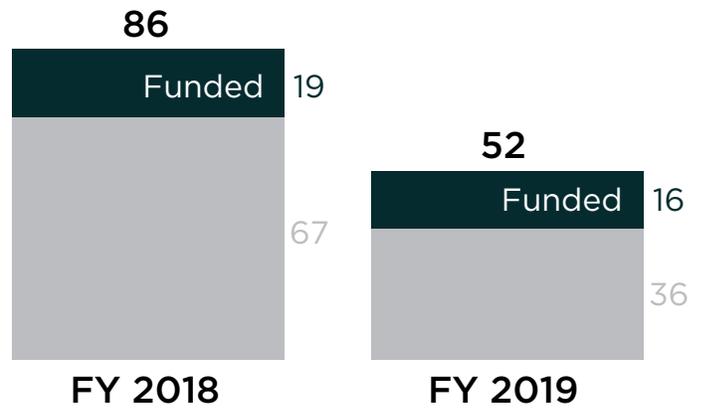
Sixteen awards, totaling \$4 million, were obtained by 12 companies in FY2019 (a list of these companies and award amounts can be found at www.iicorp.com).

This equates to \$5.70 in federal funds received for every \$1 invested by the state into application support and award matches. Although this figure is approximately 8% lower than seen for FY2018 (when \$6.20 was received for every \$1 of state investment), the difference is primarily due to the lower number of much larger Phase II grants obtained in FY2019 vs FY2018. Iowa companies received two Phase II awards totaling \$1.55M in FY2019, vs five awards totaling \$4.55M in FY2018.

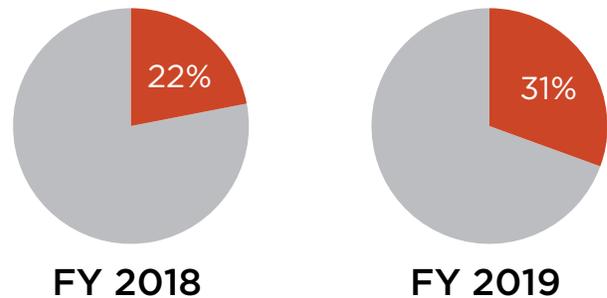
Iowa SBIR/STTR Outreach Program, Leveraged Federal Funds FY2019



Breakdown of Iowa SBIR/STTR Outreach Program Applications, FY2018 and FY2019



Iowa SBIR/STTR Outreach Program Percentage of Applications Receiving Awards, FY2018 and FY2019



A key objective for 2019 was increasing the quality of applications, as measured by the rate at which applications are funded. While the number of awards obtained in FY2019 was slightly lower than for FY2018, this came from nearly 40% fewer applications (Table I). Overall, just over 30% of applications were funded in 2019, an increase over the state’s historical average and well above the national success rate of approximately 15%. Although data from one year do not define a trend, this does appear to be building on the results from FY2018 and we will continue monitoring these metrics.

Table I.
Iowa SBIR/STTR Outreach Program Performance, 2016-2019

YEAR*	AWARDS	APPLICATIONS SUBMITTED	TOTAL \$ AWARDS
2019	16	52	\$4M
2018	19	86	\$7M
2017	10	69	\$5.8M
2016	11	52	\$2.75M

*IICorp fiscal year; July-June

SBIR/STTR “AMBASSADOR” PROGRAM

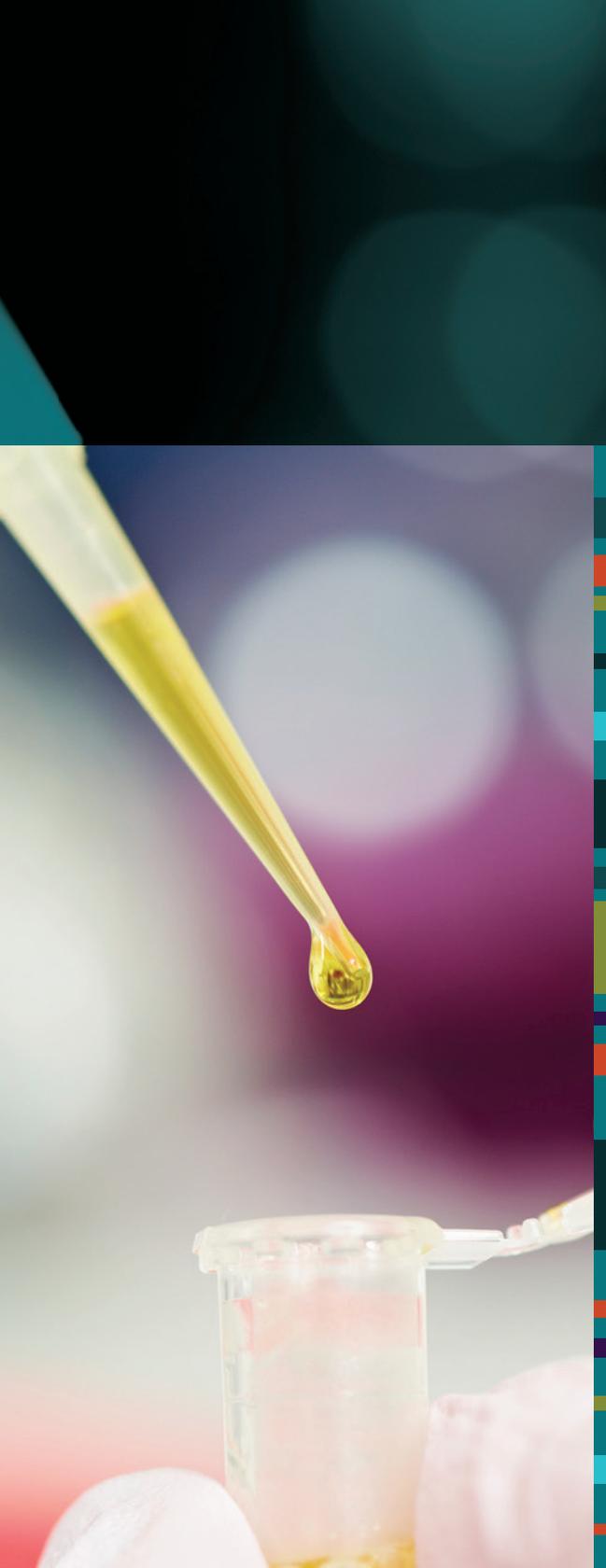
Knowledge about the federal SBIR and STTR programs and the state’s outreach program is inconsistent across the state. We believe one way we can improve this situation is by providing a small number of individuals who regularly interact with entrepreneurs across the state knowledge about the programs and information they can provide to entrepreneurs in their regions. The objective is that these individuals, through their local presence, will raise awareness of the programs and help answer questions that potential applicants might have. Promising potential applicants will be directed to IICorp for in-depth assistance. In 2019, “ambassadors” in five locations outside of Des Moines were identified (Table 2) and informational materials created. The program will be rolled out in early 2020.

Table II.
SBIR / STTR “Ambassadors”

Location	Ambassadors (Affiliation)
Mason City	Tim Putnam (John Pappajohn Entrepreneurial Center; JPEC)
Iowa City / Cedar Rapids	Lynn Allendorf, Kady Light, Kurt Heiar (JPEC)
	Paul Heath, Scott Swenson (SBDC)
	*Jon Darsee, Jordan Kauffman (UI)
Cedar Falls / Waterloo	Paul Kinghorn, Bill Hartwood (UNI)
Ames	Judi Eyles, Diana Wright (JPEC)
	Lisa Shimkat (SBDC)
	Leah Barton, Jodi Essex (CIRAS)
	*Kris Johansen (ISU Startup Factory)
Western Iowa	John Engel (JPEC/Iowa Western Community College)

*Existing contacts





2019 IOWA INNOVATION CORPORATION BOARD OF DIRECTORS

Chair

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DuPont Pioneer (Retired), Des Moines

Secretary and Treasurer

Georgia Van Gundy
Hy-Vee, Des Moines

George Arida
30Ventures, Madison, WI

John Greaves
Kemin Industries, Des Moines

Adam Claypool
Bridgepoint Investment Banking,
Des Moines

Mike Roof
Boehringer Ingelheim Vetmedica,
Ames

Brad Epperly
Nyemaster Goode PC, Des Moines

Ex-Officio

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Iowa Economic Development
Authority and Iowa Finance Authority,
Des Moines

Peter Hong
NewTech Ceramics, Ankeny

Sarah Nusser
Iowa State University, Ames

Jon Darsee
University of Iowa, Iowa City