

15th

FAPESP
PIPE-HIGH-TECH
ENTREPRENEURIAL
TRAINING PROGRAM

PIPE (Pesquisa Inovativa em Pequenas Empresas):
Innovative Research in Small Businesses

WWW.FAPESP.BR/PIPE/EMPREENDEDOR

The PIPE-High-Tech Entrepreneurial Training, offered by FAPESP, aims to assist companies funded through FAPESP's Innovative Research in Small Businesses program (PIPE in the Portuguese acronym) to develop a robust business model. The goal is to promote sustainable commercial development of the innovative products and services originated from FAPESP PIPE's research projects, generating significant business results. The training methodology is based on Steve Blank's Customer Development and Osterwalder and Pigneur's Business Model Canvas applied to high-tech innovation, similarly to the I-Corps program of the US National Science Foundation.

The São Paulo Research Foundation, FAPESP, has been funding small business research since 1997. The PIPE program focuses on Innovative Research in Small Businesses, targeting from startups to medium companies with less than 250 employees. Similarly to the NSF SBIR (Small Business Innovation Research) program, FAPESP's PIPE is divided in two phases. Phase 1 supports proof-of-concept or feasibility assessments, with a duration of up to 9 months. Phase 2 supports the development of the research required to develop the process or product, with a duration of up to 24 months.

THE TRAINING

The PIPE-High-Tech Entrepreneurial Training selects 21 companies, based on the quality of their proposals and the benefits they could obtain from participating. Each company forms a team of three members. Two of them are nominated by the startup: the Principal Investigator and the Entrepreneurial Lead person for the company. The third member, the Mentor, is assigned by FAPESP from a pool of highly experienced, successful high-tech executives in the State of São Paulo, Brazil.

The training is organized in 4 phases. In Phase 1, the companies prepare their initial business canvas. In Phase 2, the 21 teams will work at FAPESP with the instructors during three days and learn how to interview customers and incorporate their feedback into their businesses. In Phase 3, the teams will conduct dozens of customer interviews in a structured way, adapting their business model as they progress, and have online classes and videoconference sessions with FAPESP instructors. In Phase 4, the teams will meet again at FAPESP in a live session for their final oral presentations.

The training program is based on the Customer Discovery methodology, which is an iterative process of getting out of the office/lab, going to the market to interview potential customers, partners, and competitors, to understand their needs, problems, and difficulties. After each group of interviews, the team evaluates whether the new understanding of the customer needs validates or invalidates the components of its business model. When a team detects that its hypothesis is not valid, they modify the existing business model. This iterative process continues until the team achieves a match between the product/service being offered and the needs of the market. This correspondence is called Product x Market fit.

The program will not only help the 21 startups in enhancing their business capabilities, but also develop, within the State of São Paulo, the expertise on how to apply modern startup engineering methodologies for the development of prosperous high-tech companies.

About 75% of the companies that participated in the previous editions of the PIPE High-Tech Entrepreneurial Training Program revised their business plans to adjust them to market requirements, thereby increasing the likelihood of success.

WWW.FAPESP.BR/EN

FAPESP is a public foundation funded by São Paulo taxpayers to promote the development of science and technology in the state, by supporting research projects in institutions of higher education and research, official or private, which are selected by a rigorous system of analysis based on the peer-review process.

São Paulo has a population of 44 million and generates 31,5% of Brazil's GNP. Under the state Constitution 1% of all state taxes are appropriated to fund FAPESP. The stability of the funding and the autonomy of the foundation allow for an efficient management of the resources that has had a sizable impact: while São Paulo has 21% of the Brazilian population and 34% of the scientists with a doctorate in the country, the state responds for 43% of the country's scientific articles published in international journals.

The effectiveness of research carried out in São Paulo is the combined result of several factors that include the quality of the state's universities and institutes, the productivity of its researchers, high rates of participation by private, São Paulo-based companies that function within the state's R&D outlays, São Paulo's outstanding infrastructure, and the existence of FAPESP, a well-designed state research-sponsoring agency governed, maintained by its directors with excellence and with autonomy over the past half century.

Within this context, in 2018 FAPESP applied \$PPP 601.2 million in \$ purchasing power parity (PPP) in scholarships and grants.

In accordance with the Foundation's funding objectives, 36,6% of expenditure was earmarked for advancing knowledge, 6,2% was dedicated to supporting research infrastructure and 57,2% was allocated to supporting application-driven research.

FAPESP works in close contact with the scientific community: all proposals are peer reviewed with the help of panels composed of active researchers from the specific area. Many times scientists in São Paulo submit proposals for programs to the foundation which are carefully analyzed and, if deemed strong in academic terms, are shaped by the foundation into research programs that will constitute a set of related research projects in a given area.

Since FAPESP's mandate is to foster research and scientific and technological development in the state, ideas for programs that couple world class research with contributions that will impact social problems are welcome.

AIMS AND OBJECTIVES

FAPESP's Innovative Research in Small Businesses Program (PIPE), established in 1997, aims to support the development of innovative research projects carried out in small businesses, i.e., companies with up to 250 employees, in the State of São Paulo. Centered on significant scientific and technological problems that have a high potential for commercial or social return, the projects are carried out by researchers who have formal links to the small businesses or who are associated with them for the implementation of the project.



**Inovação Tecnológica
PIPE**

WWW.FAPESP.BR/PIPE

OBJECTIVES

- To use technological innovation as an instrument to increase the competitiveness of small companies;
- To create conditions to enhance the research system's contribution to economic and social development;
- To foster an increase in private investment in technological research;
- To enable the collaboration of small businesses with academic researchers on innovation projects;
- To contribute for the establishment of a culture that values research activities within business environments, technological innovation within small companies, and the employment of researchers in the private sector.

Since the start of PIPE in 1997, more than 2,300 grants have been awarded to companies. In 2018, 247 new projects were approved – one project per working day and 18% more than in the previous year.

Research supported by FAPESP can be consulted at FAPESP Grant Database (www.bv.fapesp.br/en).

More about the research results in the Agência FAPESP (www.agencia.fapesp.br/en) and Pesquisa para Inovação (www.pesquisaparainovacao.fapesp.br), in Portuguese

COORDINATION

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Received the degree of Electronic Engineer from the Universidade Federal do Rio de Janeiro(1966), M.Sc. in Electrical Engineering from the Coordenação dos Programas de Pós-Graduação de Engenharia-COPPE/UFRJ,(1967) and Ph.D in Biomedical Engineering from the University of Pennsylvania,(1971). Grynszpan was the head of the Department of Biomedical Engineering (1973-1976) and became Full Professor of COPPE/UFRJ(1975).

He became the head of COPPETEC, in charge of the University projects to Industry and Government (1976-1985) and the head of the Technology Innovation Center (1985-1986), to commercialize the University research results. In 1987, he founded the Technological Park of Rio de Janeiro, with 73 companies specialized in IT and Telecom. He, then, became the President of Riotec, the company that managed the research activities of the park. He was elected as Vice President of The International Association of Science Parks (1986 to 1989).

Grynszpan founded and headed the Brazilian Association of Biomedical Engineering (1971), was a member of the Conselho Técnico Científico of CAPES/MEC (1975) and Member of the Board of Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) from 1998 to 2002.

In 1989, he became the President of Motorola in Brazil, where he stayed for ten years and was responsible for bringing and installing Motorola's manufacturing facilities in Jaguariuna, São Paulo. In this plant, Motorola manufactured all cellular phones, radios and pagers sold in Brazil and exported to Latin America.

He became Vice President of Abinee – the Brazilian Electronic Industrial Association, until 2001, Member of the Board of Trustees of FIA – Fundação Instituto de Administração,(2000-2006) and Director of Anpei, the Brazilian Association of Innovative Enterprises, until 2008.

He is a Visiting Professor of the MBA Program of the Fundação Instituto de Administração, Director of the Technology Department of the Centro das Indústrias de São Paulo (CIESP), an organization that supports 8,500 industries in the state of São Paulo, and Member of CONIC – the Council of Innovation and Competitiveness of FIESP – the Federation of Industries of the State of São Paulo.

Grynszpan works as business consultant, specialized in innovation, commercialization of University research and entrepreneurship in Brazil and in the international market. He is now working as a consultant to the University of Virginia.

ADJUNCTS

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Bachelor's degree in Telecommunications Engineering (1970) and Master's degree in Electrical Engineering (1972) from Pontifical Catholic University of Rio de Janeiro. Graduated from Corporative Governance Brazilian Institute as Administrative Counselor (2009).

Served as a college professor. Former President (1990-1994) and currently Emeritus Member of Telecommunications Brazilian Society.

Worked at CPqD (Telecommunications R&D Center), since its creation (1976), in several areas: digital transmission, optical communication, microelectronics, technological and strategic planning.

TELEBRÁS R&D Director (1995-1998), CPqD's President (1998-2015) and CEO of CPqD Technologies&Systems Inc. (2000-2015). During his mandate CPqD created technology based startups with manifold business model in several areas: next generation network, optical communication systems, telecommunications clearing services, radio communication systems, optical sensors, fraud detection and prevention services, integrated photonics devices.

Has been President of the Administrative Board of Telesc, Telebahia, Padtec, Trópico, Sistel, member of the Administrative Board of Telergipe, Algar, Cleartech, Telebrasil, member of Fórum Campinas Foundation Board of Trustees and Director at Telebrasil.

Presently is Research for Innovation Area Coordination at FAPESP, member of TELEBRÁS Administrative Board, startup Mentor, Director at Fiesp Telecommunications Division, Member of CONIC – the Council of Innovation and Competitiveness of FIESP, member of Brazilian IoT Consultive Council and member of IPT (Institute of Technological Research) advising council and Co-founder of Brazil iCorps Institute.

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Bachelors in Business Administration (USP, 1996), MSc in Business and Planning (PUC, 2002) and PhD in Industrial Engineering (Poli-USP, 2008).

Nakagawa is entrepreneurship and innovation professor at INSPER Institute of Education and Research and entrepreneurship director at FIAP (Faculdade de Informática e Administração Paulista).

Works in the field of Entrepreneurship and Innovation, having published 2 books, co-authored another 3 titles and other papers and articles. He is entrepreneurship columnist at O Estado de São Paulo newspaper and Pequenas Empresas, Grandes Negócios magazine.

He also carries out research in the fields of new business creation, innovation management, corporate entrepreneurship and startups. He developed entrepreneurship education programs including Bota Pra Fazer (Endeavor), Inovativa Brasil (MDIC), Empreenda e Conexões (SENAC) and StartupOne (FIAP).

Nakagawa has more than 20 years professional background in industries such as banking, strategic consulting, venture capital, innovation, private equity and education.

TECHNICAL SUPPORT

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COURSE SYLLABUS

COURSE DATES

KICKOFF MEETING	APRIL, 29
ONLINE INITIAL WORKSHOP	MAY, 11, 12 AND 13
ONLINE CLASSES	MAY, 18 AND 25 / JUNE, 1,8, 15 AND 22
ONLINE CLOSING WORKSHOP	JUNE, 29 AND 30

COURSE EXPECTATIONS

Each team member should commit to attending every planned session of the program. Each team must have two members that can commit to class time plus approximately 15-20 additional hours per week, for the full seven weeks of the program, on customer discovery and exercises outside of class. Additional team members must commit to 6-8 hours a week.

COURSE DESCRIPTION

Customer Discovery is an iterative process of physically getting out of the building to interview potential customers and stakeholders to understand their problems and pain points in the market and in society. These interviews, or experiments, lead to real-world learnings and insights that validate or invalidate key components of the business model, often leading to pivots.

This course will provide teams with real-world, hands-on learning experience with customer discovery and successfully transferring knowledge into products and processes that benefit society. The entire team will engage with industry. You and your team will spend your time talking to and learning from customers, partners and competitors, and learning how to deal with the chaos and uncertainty of commercializing innovations and creating ventures.

This course is about getting out of the building. You will be spending a significant amount of time outside the building, talking to customers and testing your hypotheses about what they want in products and services. We will spend our limited class time on what you learned from talking to customers, not what you already knew coming into the course. Teams should be striving for 15 interviews per week, for a total of 100 interviews by the end of the course.

CLASS CULTURE

We have limited time and we push, challenge, and question you in the hope you will quickly learn. We will be direct, open, and tough – just like the real world. We hope you can recognize that these comments are not personal, but part of the process. We also expect you to question us, challenge our point of view if you disagree, and engage in a real dialog with the teaching team. This approach may seem harsh or abrupt, but it is all part of our wanting you to learn to challenge yourselves quickly and objectively, and to appreciate that as entrepreneurs, you need to learn and evolve faster than you ever imagined possible.

COURSE SYLLABUS

ADDITIONAL RESOURCES

1) Request access to the Course Repository:

shorturl.at/iuFIV

2) These short videos from Steve Blank provide helpful tips and examples for preparing for your customer interviews.

<https://vimeo.com/groups/204136/videos>

Pre-Planning Pt. 1	(4'55)
Interviews Pt. 1	(5'40)
Interviews Pt. 2	(3'49)
Asking the Right Question	(2'37)
Assuming you know what the customer wants	(1'56)
Understanding the Problem (the right way)	(3'22)
Customers Lie	(2'37)
The Distracted Customer	(3'12)
Engaging the Customer	(3'37)
Customer Empathy	(2'25)
The User, the Buyer & the Saboteur	(2'24)
Death by Demo 1	(2'18)
Death by Demo 2	(1'45)

For a more detailed explanation of Customer Development and the Lean Startup, here are some short videos of Steve Blank from the Kaufmann Founders School:

www.entrepreneurship.org/Founders-School/The-Lean-Approach/Getting-Out-of-the-Building-Customer-Development.aspx

www.entrepreneurship.org/Founders-School/The-Lean-Approach/Customer-Development-Data.aspx

www.entrepreneurship.org/Founders-School/The-Lean-Approach/Minimum-Viable-Product.aspx

3) All team members should purchase the textbooks outlined on the following page. The Osterwalder books have free e-version previews, and the Constable book has a full free e-version.



VALUE PROPOSITION AND DESIGN

Alexander Osterwalder, Yves Pigneur, Greg Pernarda & Alan Smith

A free download of the first chapter of the book is available at:

<https://strategyzer.com/books/value-proposition-design>



TALKING TO HUMANS

Giff Constable

A free download of the book is available at:

www.talkingtohumans.com

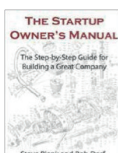


BUSINESS MODEL GENERATION

Alexander Osterwalder & Yves Pigneur

A free download of the first chapter of the book is available at:

<http://businessmodelgeneration.com/book>



THE STARTUP OWNER'S MANUAL

Steve Blank & Bob Dorf

COURSE SYLLABUS

REQUIRED KICKOFF ASSIGNMENTS

You should watch all of the videos in the “How to Build a Startup” course:

<https://www.udacity.com/wiki/ep245/downloads>

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You can watch these at your own pace, but it’s recommended to have completed the lectures shown below before initial workshop:

- Lecture 1: What we Now Know
- Lecture 1.5A: Business Models
- Lecture 1.5B: Customer Development
- Lecture 2: Value Proposition
- Lecture 3: Customer Segments

HIGHLY SUGGESTED KICKOFF ASSIGNMENTS

The following assignments augment the required assignments, and should be used to provide a greater understanding of the material. At a minimum, we recommend that you scan these readings.

- Business Model Generation – pages 14-51
- The Startup Owner’s Manual – pages 195-199
- “12 Tips for Early Customer Development Interviews” by Giff Constable:
(<http://giffconstable.com/2010/07/12-tips-for-early-customer-development-interviews>)

REQUIRED DELIVERABLES FOR THE INITIAL WORKSHOP

1. A two-slide presentation.
You may be called upon to present to the whole class and will definitely present to a group of peers and instructors in a breakout session. See the template provided on the following page.
2. Ten or more customer/industry contacts that you hope to interview on Day 2 of the initial workshop

COURSE SYLLABUS

ADDITIONAL RESOURCES

PRESENTATION TEMPLATE FOR THE INITIAL WORKSHOP

SLIDE 1

- Title Slide
- Team Name
- University or company logo
- Product or technology picture & description (1 sentence)
- Pictures & names of your team members



SLIDE 2

Populated Business Model Canvas

It's recommended to create a online template for free at Canvanizer:
<https://canvanizer.com/new/business-model-canvas>

Use the questions in the image below to guide your answers – focus on Customer Segments & Value Propositions

<p>Key Partners 6</p> <p>Who are your key partners? Who are your key suppliers? What are you getting from them...and giving to them?</p>	<p>Key Activities 7</p> <p>What key activities do you require? Manufacturing? Software development? Personal concierge service?</p> <hr/> <p>Key Resources 8</p> <p>What key resources do you require? Financial? Physical? Intellectual property? Human resources?</p>	<p>Value Propositions 1</p> <p>What customer problems are you helping to solve? What customer needs are you satisfying? What are key features of your product/service that match customer problems/needs?</p>	<p>Customer Relationships 4</p> <p>How will you get, keep and grow customers?</p> <hr/> <p>Channels 3</p> <p>Through which channels (sales, distribution, support) do you customers want to be reached?</p>	<p>Customer Segments 2</p> <p>Who are your most important customers? What are their archetypes? What job do they want you to get done for them?</p>
<p>Cost Structure</p> <p>What are most important costs inherent in your business model? What is mix of fixed and variable costs?</p>	<p>9</p>	<p>Revenue Streams</p> <p>How will you make money? What is revenue model? What are pricing tactics?</p>	<p>5</p>	

KICKOFF WORKSHOP: SCHEDULE AT-A-GLANCE

DATE	TIME	TOPIC
WEDNESDAY April, 29	13:30 pm	Zoom Test
	14:00 pm	Kickoff meeting with all teams to review logistics, and to connect mentors to teams
	3:15 pm	LECTURE #1: Using Customer Discovery to Build a Business Model, Customers & Value Propositions and required deliverables for the initial workshop
	4:45 pm	Support platform training
	5:00 pm	Closing
MONDAY May, 11	8:15 am	Zoom Test
	8:30 am	Welcome & Introduction
	8:45 am	Intellectual Property presentation
	9:30 am	Startup testimony videos
	9:45 am	Zoom Training
	10:00 am	BREAK
	10:15 am	Team Introductions: 10 minutes for each presentations, another 5 for comments. Startups will be divided into 3 rooms in Zoom Platform.
	12:15 pm	LUNCH
	1:15 pm	Welcome introduction by FAPESP
1:30 pm	LECTURE #2: Best Practices for Customer Discovery Interviews	
3:30 pm	Mentor/PI/EL Workshops	
4:30 pm	Closing	
TUESDAY May, 12	All Day	Customer Interviews
WEDNESDAY May, 13	8:00 am	Zoom Test
	8:15 am	Welcome Back, Q&A, Discussion
	8:30 am	LECTURE #3: Channels
	9:30 am	BREAK
	10:00 am	Team Presentations – 7 teams in each of the 3 rooms. Breakout Rooms 10 minutes for presentations
	12:00 pm	LUNCH
	2:00 pm	Optional Office Hours at Zoom
4:00 pm	Closing	

ONLINE AND CLASSES: ASSIGNMENTS

REQUIRED ASSIGNMENTS

You should watch all of the videos in the “How to Build a Startup” course:

<https://www.udacity.com/wiki/ep245/downloads>

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You can watch these at your own pace, but you must have completed the lectures shown below by May and June.

- Lecture 4: Channels
- Lecture 5: Customer Relationships
- Lecture 6: Partners
- Lecture 7: Revenue Models
- Lecture 8: Resources, Activities, and Costs

ADDITIONAL ASSIGNMENTS

The teaching team may assign additional short readings or tasks throughout the course as deemed necessary based on the progress of teams.

ONLINE AND CLASSES: SCHEDULE AT-A-GLANCE

DATE	TIME	TOPIC
MONDAY May, 18 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Test Zoom Team Presentations * LECTURE #4: Problem Solution Fit Value Proposition Canvas: Customer Profile & Value Map, Customer Pains/Gains Closing
MONDAY May, 25 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Test Zoom Team Presentations * LECTURE #5: Customer Relationships & Revenue Models Closing
MONDAY June, 01 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Teste Zoom Team Presentations * LECTURE #6: Key Partners Closing
MONDAY June, 08 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Test Zoom Team Presentations * LECTURE #7: Business Model Fit Resources, Activities and Costs: how to build and validate the rest of your business model Closing
MONDAY June, 15 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Test Zoom Team Presentation * LECTURE #8: Lessons Learned Presentations & Story Videos Overview and directions for the final course deliverables Closing
MONDAY June, 22 (ONLINE)	1:30 pm 2:00 pm 4:00 pm 5:00 pm	Test Zoom Team Presentation * To be Defined Closing

* TEAM PRESENTATIONS

Teams present their business model canvas in three concurrent tracks. Each team is allotted 15 minutes total to include 10 minutes for presentations and 5 minutes for teaching team comments.

LESSONS LEARNED WORKSHOP: SCHEDULE AT-A-GLANCE

ONLINE CLASSES AND PRESENTATION

DATE	TIME	
MONDAY June, 29	8:15 am	Zoom Test
	8:30 am	Welcome Back
	9:00 am	Review Videos & Draft Presentations
	11:30 am	LUNCH
	2:00 pm	Chat with investors
	4:00 pm	Optional Office hours
	5:00 pm	Closing
TUESDAY June, 30	8:15 am	Zoom Test
	8:30 am	FAPESP Introduction of Final Presentations
	9:00 am	Team Presentations: 6 teams (10 min presentations / 5 min comments)
	10:30 am	BREAK
	11:00 am	Team Presentations: 7 teams (10 min presentations / 5 min comments)
	12:45 pm	LUNCH
	2:00 pm	Team Presentations: 8 teams (10 min presentations / 5 min comments)
	4:00 pm	Closing Ceremony and Certificate Release

Company 01: **AFIN** (Cidade: Ribeirão Preto/SP)

Name of the project: Produção de colunas de bioafinidade (Afin) para triagem de ligantes de colinesterases
 Entrepreneur: Adriana Ferreira Lopes Vilela / E-mail: dricea@hotmail.com
 Principal investigator: Daniella Romano de Carvalho / E-mail: daniella_r_carvalho@hotmail.com
 Mentor: Carlos Cantelli / E-mail: cecantelli@gmail.com

Company 02: **AGRIENTECH LTDA** (Cidade: São Carlos/SP)

Name of the project: Detecção automatizada do greening (HLB) nos estágios sintomáticos e assintomáticos em laranjeiras em campo: Sistema de VANT provido de sensores óticos e Inteligência Artificial
 Entrepreneur: André Luiz Ferraz Lourenço / E-mail: alourenco@agrientech.com
 Principal investigator: Adolfo Nicolas Posadas Durand / E-mail: posadasdan@gmail.com
 Mentora: Lilian Cristina Anefalos / E-mail: lcanefal@iac.sp.gov.br

Company 03: **BMR PESQUISA E DESENVOLVIMENTO EXPERIMENTAL EM CIÊNCIAS FÍSICAS E NATURAIS LTDA.**
(Cidade: São José dos Campos/SP)

Name of the project: Cateteres de silicone modificados via técnica de deposição por camada atômica para aplicações neurocirúrgicas
 Entrepreneur: Bruno Vinicius Manzolli Rodrigues / E-mail: bruno.manzolli@gmail.com
 Principal investigator: Anelise Cristina Osorio Cesar Doria / E-mail: ane.doria@gmail.com
 Mentor: Israel Guratti / E-mail: israelguratti@gmail.com

Company 04: **CENTRO PAULISTA DE DIAGNÓSTICO, PESQUISA E TREINAMENTO** (Cidade: Ribeirão Preto/SP)

Name of the project: Avaliação genética pré-implantacional não invasiva para embriões humanos
 Entrepreneur: Laura Diniz Vagnini Alavarse / E-mail: vagninilaura@cpdp.com.br
 Principal investigator: Adriana Renzi / E-mail: adriana.renzi@cpdp.com.br
 Mentora: Eliane Victorelli / E-mail: eliane.victorelli@gmail.com

Company 05: **PRAGAS.COM** (Cidade: Piracicaba/SP)

Name of the project: Produção massal de ovos de *Euschistus heros* (fabricius), principal insumo biológico para produção de parasitoides de ovos de percevejos-praga
 Entrepreneur: Leandro Silva / E-mail: leandro.silva@pragas.com.vc
 Principal investigator: Cristiane Maria Tibola / E-mail: cristiane.tibola@pragas.com.vc
 Mentor: Carlos Eduardo Calmanovici / E-mail: calma1313@gmail.com

Company 06: **CLEAIR TECHNOLOGY** (Cidade: Campinas/SP)

Name of the project: Desenvolvimento de um reator fotocatalítico piloto para descontaminação de ar em ambientes internos
 Entrepreneur: Alan Perina Romão / E-mail: geosustent@gmail.com
 Principal investigator: Ana Kássia Spagnollo Rossetti / E-mail: anaka.rossetti@gmail.com
 Mentor: Roberto do Coutto / E-mail: rcoutto@terra.com.br

Company 07: **EDUMAP** (Cidade: São Paulo/SP)

Name of the project: EduMap: Plataforma gamificada de conhecimento para desenvolvimento pessoal e profissional
 Entrepreneur: Alice Salvo Sosnowski / E-mail: alicesalvo@gmail.com
 Principal investigator: Viviani Akemi Kasahara / E-mail: viviakemik@gmail.com
 Mentor: Italo Flammia / E-mail: italoflammia@uol.com.br

Company 08: FATORIA PESQUISA E DESENVOLVIMENTO (Cidade: Marília/SP)

Name of the project: Sistema e dispositivo de baixo custo para saúde em casas inteligentes: monitoramento de aspectos físicos e emocionais de usuários
 Entrepreneur: Camila Lumi Mano Alves / E-mail: contato@fatoria.com.br
 Principal investigator: Leandro Yukio Mano Alves / E-mail: fator.ia.ped@gmail.com
 Mentor: Claudio Violato / E-mail: cviolato@gmail.com

Company 09: GITZ'S RESEARCH & DEVELOPMENT (Cidade: São Paulo/SP)

Name of the project: Desenvolvimento de um equipamento à base de vapor fluente para limpeza automatizada de instrumentais cirúrgicos
 Entrepreneur: Walmir Gomes Lourenço / E-mail: Walmir@3albe.com.br
 Principal investigator: Jonas de Castro Gitz / E-mail: jonasgitz@pm.me
 Mentora: Norma Garcia / E-mail: Norma.garcia@uol.com.br

Company 10: HTW GAMES (Cidade: São Caetano do Sul/SP)

Name of the project: MoveYou: Estudo de viabilidade da checagem de movimentos para fisioterapia através de um novo algoritmo para manipulações de nuvens de pontos capturadas em tempo real
 Entrepreneur: Cinthia Nacamura / E-mail: cinthia.nacamura@gmail.com
 Principal investigator: Alexandre Greluk Szykman / E-mail: alex@htwgames.net
 Mentor: João Lencioni / E-mail: joao.lencioni@pratica-digital.com

Company 11: IDEAS FARM (Cidade: São Paulo/SP)

Name of the project: SERIES: Sistema de Educação em Realidade Imersiva
 Entrepreneur: Rodrigo Medeiros Sagioma / E-mail: sagioma@gmail.com
 Principal investigator: Ettore Baldini Neto / E-mail: neto.baldini@gmail.com
 Mentor: Luis Cortez / E-mail: labarbosacortez@gmail.com

Company 12: INSPECTRAL SOLUÇÕES INOVADORAS EM TECNOLOGIA DA INFORMAÇÃO ESPACIAL

(Cidade: Presidente Prudente/SP)

Name of the project: Análise e classificação de macrófitas por meio de técnicas de visão computacional e modelos bio-ópticos com integração de imagens multiespectrais de satélite e de drone
 Entrepreneur: Alisson Fernando Coelho do Carmo / E-mail: carmoafc@gmail.com
 Principal investigator: Nariane Marselhe Ribeiro Bernardo / E-mail: narianebernardo@gmail.com
 Mentor: Luiz Carlos Heiti Tomita / E-mail: lch_tomita@hotmail.com

Company 13: KALAMAZOO NATURAL SOLUTIONS (KNS) (Cidade: Campinas/SP)

Name of the project: Pesquisa e desenvolvimento para a obtenção de extratos do lúpulo (*Humulus lupulus*) usando tecnologia de fluidos pressurizados para a aplicação na indústria de bebidas
 Entrepreneur: Francisco Manuel Barrales / E-mail: manubarrales@gmail.com
 Principal investigator: Aureliano Agostinho Dias Meirelles / E-mail: aurelianodias91@gmail.com
 Mentor: José Eduardo Martins / E-mail: jemart12@gmail.com

Company 14: LABMAQ DO BRASIL (Cidade: Ribeirão Preto/SP)

Name of the project: Defensivos naturais: inovação em inseticidas e acaricidas
 Entrepreneur: Fúlvia Andrea Dantas de Freitas / E-mail: fulviafreitas@hotmail.com
 Principal investigator: Ariadne Felício Lopo de Sá / E-mail: ariadne.sa@usp.br
 Mentor: Cesar Pomin / E-mail: cesar.pomin@hotmail.com

Company 15: LINAX ÓLEOS ESSENCIAIS LTDA (Cidade: Votuporanga/SP)

Name of the project: Microencapsulação de óleo de mostarda (*Brassica* sp.) para uso como defensivo natural na agricultura de larga escala, orgânica e doméstica – Técnicas encapsulantes combinadas para ação prolongada

Entrepreneur: Nilson Borlina Maia / E-mail: linax@uol.com.br

Principal investigator: Poliana Moser / E-mail: polimoser@gmail.com

Mentor: Vitor Mondo / E-mail: vitor.mondo@embrapa.br

Company 16: MIRÁ PESQUISA E DESENVOLVIMENTO LTDA (Cidade: São Carlos/SP)

Name of the project: Desenvolvimento de uma nova bebida premium: espumante de mel de abelhas nativas brasileiras

Entrepreneur: Mariana Machitte de Freitas / E-mail: mari.machitte@gmail.com

Principal investigator: Juliana Massimino Feres / E-mail: julianaferes@gmail.com

Mentora: Loraine Mondini / E-mail: lorainemondini@gmail.com

Company 17: MIRSCIENCE THERAPEUTICS (Cidade: São Paulo/SP)

Name of the project: Superexpressão do mir-29c como um potencial tratamento da atrofia muscular esquelética na caquexia induzida pelo câncer

Entrepreneur: Lucas Ariel Fernandes da Rocha / E-mail: lukas.ferocha@gmail.com

Principal investigator: William José da Silva / E-mail: williamsilvaj@gmail.com

Mentora: Christine Nogueira / E-mail: cpnog1@gmail.com

Company 18: PROGT INDUSTRIAL LTDA (Cidade: Paulínia/SP)

Name of the project: Secagem direta de açúcar cristal sem cisalhamento com auxílio de tecnologia de irradiação infravermelha de ondas médias (MIR).

Entrepreneur: Fabio Eduardo da Silva Caetano / E-mail: vendas01@progt.com.br

Principal investigator: Felipe Iwagaki Braga Ogando / E-mail: felipe@progt.com.br

Mentor: Carlos Carnevali / E-mail: ccarneva@tropp.com.br

Company 19: QUANTICUM - ANÁLISES E MAPEAMENTO (Cidade: Jaboticabal/SP)

Name of the project: Qualidade das argilas e o magnetismo do solo: ambientes de produção para cafeicultura tropical

Entrepreneur: Renan Gravena / E-mail: regravena@gmail.com

Principal investigator: Diego Silva Siqueira / E-mail: diego_silvasiqueira@yahoo.com.br

Mentor: Stefan Bodgan Barenboim Salej / E-mail: sbsalej@gmail.com

Company 20: SPR CONSULTORIA METROLÓGICA (Cidade: São José do Rio Preto/SP)

Name of the project: Desenvolvimento de candidato a material de referência certificado de cátions (cádmio, cromo, cobre, níquel e chumbo) do Anexo XX de potabilidade e resolução CONAMA 420 para solos e águas

Entrepreneur: Bruno Trevizan Franzin / E-mail: trevizanfranzin@gmail.com

Principal investigator: Tony Rogério de Lima Dadamos / E-mail: tonyrll@yahoo.com.br

Mentor: Hélio Cesar Alves Seabra Salles / E-mail: helioseabrasalles@gmail.com

Company 21: TAK CONTROLE BIOLÓGICO (Cidade: Pirassununga/SP)

Name of the project: Produção nacional de *Tachinaephagus zealandicus* (Ashmed) para aplicação no controle biológicos de moscas

Entrepreneur: Luiz Rubens Pinto de Carvalho Júnior / E-mail: luizrubens@hotmail.com

Principal investigator: Lucila Maria Lopes de Carvalho / E-mail: lucila.takcb@gmail.com

Mentor: Sérgio Parreiras Pereira / E-mail: sergiopereira@iac.sp.gov.br



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