Partner search

Company: 593iCAN Soluções em Impressão 3D Ltda (https://www.593ican.com.br/) CIF/CNPJ: 46.396.224/0001-65	
Adress: Av. Alan Turing, 2912, Bloco Vértice, sala 02, Cidade Universitária, Campinas, SP 13083-898, Brazil.	Contact: Bruna Maria Manzini Position: Co-founder and CEO Telephone: +55 19 98142-7446 Email: contato@593ican.com.br

Short Company presentation

(R & D guidelines, international activities, etc.)

593iCAN is a Brazilian company in Campinas developing equipment and digital tools for personalized medicines 3D printing. Its R&D combines mechanical design and process control, with an emphasis on research and compounding pharmacies applications and usable laboratory workflows.

FAPESP PIPE records document research into extrusion hardware and software for customized medicines, including printhead development and software for G-code generation. This provides a basis for joint research on formulation-dependent printing and reproducibility.

International cooperation sought: pharmaceutical schools in universities and research institutes, software and technology companies interested in co-development, laboratory validation and subsequent commercialization discussions.

DESCRIPTION OF ITS TECHNOLOGY AND CAPABILITIES IN R & D

(Products, technologies, applications, services, etc.)

Proprietary products and technologies: 593iCAN 3D printers for semisolid materials and BIOSCAFFOLDS software for generating G-code. The equipment uses syringe extrusion of hydrogels, ceramic pastes and other printable formulations.

Applications include bioprinting, tissue engineering, functional materials and pharmaceutical researches. Also, compound pharmacies, specialized disease treatment centers and hospital pharmacies are included.

R&D contribution: integration of printer hardware with toolpath design, experimental printing and adaptation of extrusion workflows. The proposed cooperation would extend these capabilities through partner-led formulation characterization and independent performance testing.

Research basis: FAPESP PIPE project 22/01091-9 and linked project 23/08764-1 concerned the development of the hardware and software for

personalized medicine 3D printing. Specific equipment availability, IP rights and access terms would be agreed during project scoping.

PROPOSED COLLABORATIVE PROJECT IN R & D

(As much detail as possible, both in what it offers and what you want in a potential partner)

- **Technology offered to international partners:** 593iCAN offers its expertise in semi-solid extrusion-based 3D printing, proprietary BioScaffolds software, and equipment development for pharmaceutical applications. The proposed collaboration focuses on integrating hardware and software into an intelligent, data-driven platform for personalized medicine manufacturing, combining process automation, sensor integration, real-time data acquisition, and AI-assisted printing parameter optimization.
- **Technology looking for an international partner:** We seek technology enterprises with expertise in digitalization, industrial IoT, sensor technologies, data analytics, artificial intelligence, and human-machine interfaces (HMI). The objective is to enhance BioScaffolds through seamless integration with 3D printing equipment, enabling intelligent configuration of printing parameters based on pharmaceutical formulations, active pharmaceutical ingredients (APIs), patient-specific requirements, material properties, and real-time process data. The collaboration should improve usability, process monitoring, traceability, and manufacturing precision and reproducibility.
- **Other specifications, requirements or comments:** We seek international enterprises interested in jointly developing and validating an integrated digital pharmaceutical 3D printing platform. Particular interest lies in AI-driven decision support, automated equipment setup, user-friendly software interfaces, and data-driven process optimization. Collaboration may include joint R&D projects, technology integration, proof-of-concept development, and applications for collaborative funding, subject to mutually agreed intellectual property and confidentiality terms.
- **PROPOSED COLLABORATIVE PROJECT IN R & D:**

Proposed project: Digital Pharmaceutics Platform for the Development and Production of Personalized Medicines by 3D Printing

Objective:
Jointly develop an intelligent, fully integrated pharmaceutical 3D printing platform combining 593iCAN's proprietary BioScaffolds software and semi-solid extrusion 3D printer, advanced sensing, real-time data acquisition, and artificial intelligence. The project aims to simplify equipment configuration and optimize the manufacturing of personalized oral dosage forms by correlating patient-specific requirements, active pharmaceutical ingredients (APIs), formulation properties, printing parameters, and process quality indicators.

Roles and responsibilities:
593iCAN would lead the integration of its proprietary BioScaffolds software and 3D printing equipment, contributing its expertise in semi-solid extrusion, pharmaceutical applications, and printing process development.

The international partner would contribute expertise in sensor integration, industrial IoT, artificial intelligence, data analytics, and intelligent software interfaces. Both teams would collaborate on system architecture, experimental design, predictive model development, technical validation, and performance assessment.

Expected outcomes:
An integrated, sensor-enabled pharmaceutical 3D printing prototype; an enhanced BioScaffolds platform featuring AI-assisted equipment configuration; structured databases connecting material properties, pharmaceutical formulations, patient-specific requirements, and process parameters; validated predictive models; and a joint technology development and commercialization roadmap.

Funding and intellectual property:
The collaboration may be structured as a jointly developed R&D project, potentially supported by FAPESP's PIPE program and complementary international innovation funding mechanisms, subject to eligibility requirements. Budget allocation, technical milestones, intellectual property rights, data governance, and commercialization arrangements would be mutually agreed upon before project implementation.
Initial validation would be conducted in a laboratory research environment. Any subsequent pharmaceutical manufacturing or clinical application would require appropriate quality, safety, and regulatory assessments.

General comments:

- By sending this information document authorizing its dissemination.
- A profile of the company must be attached

593iCAN COMPANY PROFILE | INTERNATIONAL R&D PARTNERSHIPS

COMPANY OVERVIEW

593iCAN Soluções em Impressão 3D is a Brazilian technology company and academic spin-off of the University of Campinas (UNICAMP). Founded in 2022, the company develops proprietary extrusion-based 3D printing systems and software for the processing of semi-solid materials, including gels, hydrogels, pastes, pharmaceutical formulations, and bioinks. Its mission is to provide a friendly and innovative experience, allowing our users to carry out cutting-edge applications in a simple way and aiming to provide reliability and repeatability invarious applications.

CORE PRODUCTS AND TECHNOLOGIES

- 3D printing systems: syringe-based extrusion equipment designed for semi-solid materials, with options such as dual extrusion heads, controlled heating, and UV-assisted processing.
- BioScaffolds software: proprietary software for parametric scaffold and deposition-path generation, enabling users to prepare printing strategies without conventional CAD workflows.
- Technical solutions: user training, technical support, and consumables for extrusion-based processes.

R&D CAPABILITIES

593iCAN combines mechanical and system development with extrusion-process expertise, materials-oriented experimentation, and software development. The company works on process reproducibility and control of deposition parameters. Its technology is commercialized in academic and research environments spanning biomaterials, tissue engineering, ceramics, food and pharmaceutical development.

MARKET PRESENCE AND INTERNATIONALIZATION

593iCAN has commercial and research-market experience in Brazil and Argentina and is expanding its international presence through events, institutional engagement, and partner development. The company has participated in initiatives linked to international market access and innovation, including Hannover Messe 2026 and Web Summit Lisbon 2025/2026, and has established connections with academic and research institutions.

RESEARCH & INNOVATION ROADMAP

FOCUS: INTELLIGENT PHARMACEUTICAL 3D PRINTING

593iCAN is advancing its technology toward a connected, data-driven platform for personalized oral dosage-form development. The vision is to tightly integrate the BioScaffolds software with the 3D printer, allowing a more intuitive, traceable, and reproducible workflow for equipment setup and process execution in research and, subject to appropriate validation, future pharmaceutical settings.

The proposed platform would relate formulation and material characteristics, active pharmaceutical ingredient (API) information, patient-specific requirements, and manufacturing-process data. Sensor integration, structured data collection, and artificial intelligence would support configuration of printing parameters and continuous process improvement. Clinical decisions and prescribed doses would remain under qualified healthcare professionals' responsibility.

PRIORITY COLLABORATIVE R&D AREAS

- Sensorization and connectivity: integration of relevant sensors and equipment interfaces for monitoring temperature, pressure, extrusion behavior, deposition, and other critical variables.
- Data infrastructure: standardized acquisition and management of material, formulation, process, equipment, and quality-related datasets, with traceability and data governance.
- AI and decision support: predictive models and intelligent recommendations for parameter selection, printability assessment, process optimization, and repeatability.
- User experience: a streamlined BioScaffolds interface and guided workflows to reduce setup complexity for personalized pharmaceutical production research.
- Technical validation: laboratory demonstration using representative formulations and simulated patient scenarios, with defined measures of accuracy, reproducibility, and process performance.

COLLABORATION MODEL

593iCAN seeks international partners with complementary expertise in industrial IoT, sensors, embedded systems, AI, data analytics, human–machine interfaces, and pharmaceutical process validation. 593iCAN would contribute its existing proprietary printing platform and software, extrusion expertise, and application knowledge. Partners would contribute agreed technical capabilities and jointly develop, test, and validate new functions.

Potential collaboration formats include joint R&D projects, prototype integration, proof-of-concept studies, and applications for complementary Brazilian and international innovation funding, including FAPESP PIPE. Scope, milestones, contributions, confidentiality, background and foreground intellectual property, data rights, and commercialization terms would be negotiated before implementation.

PARTNERSHIP OBJECTIVE

Jointly develop and validate an intelligent pharmaceutical 3D printing system integrating BioScaffolds software, sensor-based process monitoring, real-time data acquisition, and AI-assisted parameter optimization.