



# DESTINATION STARTUP

## Scintillation Nanotechnologies

**One-Sentence Summary of What You Do:** Scintillation Nanotechnologies has developed novel nanoparticles to detect continuous radioisotopes in non-toxic, aqueous environments, including living cells and tissues, for drug discovery, metabolism and disease mechanism research.

**Affiliated Institution:** University of Arizona

**Have you formed a company yet?** Yes

**Funding/Financing:** Grant Funding, Angel Funding (including Self or Friends/Family)

**Please describe your company and the problem you are trying to solve:** Scintillation Nanotechnologies produces novel, IP-protected nanomaterials used to detect radioisotopes directly in aqueous samples, eliminating the need for extensive sample preparation and sample destruction that are common with competing products. Our greatest differentiating factor is the ability to make continuous measurements inside of living cells and tissues. Competing scintillating and fluorescing products are too large for intracellular measurements, contain organic solvent, are difficult to disperse, or tend to settle during measurement. Multiple collaborators have validated the ability of our products to answer previously impossible questions and drastically reduce research timelines. One collaborator, Dr. Matthias Quick at Columbia University, stated our products “changed his life” when he was finally able to answer a question in his drug resistant malaria research that had remained unanswered for seven years; he has also committed to using our products going forward. Better products with unique capabilities that lead to research breakthroughs that result in savings in time, materials, and opportunity cost will drive market adoption. We have three in-market products and continue product development, an exclusive license from the University of Arizona, three patent applications, numerous invention disclosures, and common-law trademarks on our products and company name. Production and formulation improvements since the patent applications are trade secrets.

**What is/was your go-to-market strategy?** Our target market is drug discovery researchers in academic, biotech and pharmaceutical labs, a \$75M market in the US expected to grow at a 5% CAGR. Growth opportunities include geographic expansion, further product development, and entry into other markets within the \$9B global scintillator radiation detection market (BCC Research LLC, “Radiation Shielding and Monitoring”, 2019.) Our “beachhead” is academic researchers, many of whom tend to be early adopters. Based on over 150 customer discovery interviews and feedback from collaborators and early customers, our most attractive and “best fit” customer segments are researchers performing receptor binding assays (nanoSPA), and researchers performing cellular transport assays (aquaSCINT).



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Our products' ability to make continuous measurements inside of living cells and tissues is a key differentiating factor in both segments. We recently began direct sales and are actively increasing customer awareness through participation in relevant conferences and partnering events, ongoing collaborations with key opinion leaders/influencers, scientific publications, our website, LinkedIn, and direct outreach. We encourage trial through a low volume/low cost "New Customer Trial Pack." Longer term, a continued focus on innovation, expansion into additional markets, and quality products and customer service combined with improved efficiency and lower COGS will be key to retaining customers and growing the business. We are actively seeking strategic distribution partners to achieve the growth potential of the business and are currently in discussions with potential partners.

**How will/do you generate revenue?** We manufacture novel, high-value consumable products using commonly available chemicals in our own lab. We currently generate recurring revenue through direct sales. Third-party distribution will be critical to realizing the potential of the business and we are currently in discussions with potential partners. Considering both our internal Sales and Marketing expenditures and the margin we "give" to a third-party distributor to compensate them for their sales and marketing, our Customer Acquisition Cost is estimated to stabilize near \$1,250 in 2024. The Lifetime Value of a customer is estimated to be \$35,000 due to recurring purchases of a consumable product, high product value, and the tendency to use the same product through the life of a research project. Our novel product capabilities allow us to charge higher prices than competitors while the somewhat price inelastic market gives incumbents little incentive to compete on price. Our product gross margins vary, but average at a level that can support distributor margins approaching 30%. Our gross margin is expected to decline near term as third-party sales increase but ultimately improve as production volume increases drive down the per unit cost for labor and materials. Our net margin will improve significantly and stabilize at a highly attractive level as we leverage existing resources and revenue grows faster than overhead. We increase sales through third-party distribution, developing new products, expansion into different geographies, and entering additional radioisotope detection markets such as energy, defense, and veterinary and plant sciences.

**How will this showcase benefit your company or technology?** One of our biggest challenges has been achieving awareness and recognition of our company and our products in the time of Covid-19. Our hope would be that the exposure gained through participation in this showcase would help in this regard. We view customer awareness as pivotal to product uptake and company recognition as vital to obtaining necessary investment. We are currently seeking \$300k in a fixed price, pre-seed round. Exposure to additional investors would be a benefit of participation in the showcase. Additionally, one of our key operational objectives is obtaining third-party distribution for our products. Identifying a potential partner or networking with advisors who could help identify and put us in contact with appropriate partners would be of immeasurable benefit to the company and another potential benefit of participating in the showcase.



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## **Who are the members of your team, and why is this the right team to get the job done?**

- Chuck Phillips, CEO, has twenty years of experience in the pharmaceutical industry covering a broad range of responsibilities including sales, financial operations, global business unit leadership, and divestiture/restructuring.
- Colleen Janczak, Ph.D is a co-founder, COO, and Head of Research and Development. She is a co-developer of our products and is responsible for technical product support in addition to research and development activities.
- Craig Aspinwall, Ph.D is a co-founder and CSO. Craig is not a full-time employee of the company but is on the board of directors and serves as a strategic and product development advisor.
- David Holub, Ph.D is our National Sales Director. Dave has twenty plus years of experience first working in, then supplying automation solutions to, academic and pharmaceutical research labs.

We have a three-member advisory board consisting of Helen Boudreau, Kara Festa, and Guillermo Morales. Our Advisory Board brings a wealth of industry and executive experience and have been instrumental in shaping our business, operational, and financing strategies.

We are currently searching for partners for distribution of our products including geographic expansion.

