BizGenius

AI-Powered Marketing for Life Science

WHITE PAPER

Making Your Website
Discoverable by AI

A Guide for Biotech & Life Science Companies

What You Will Learn

The shift from SEO to AI traffic | AEO vs GEO terminology | The llms.txt standard | Biotech industry analysis | Implementation checklist

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www.biz-genius.com

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Executive Summary

As AI-powered search engines and language models reshape how users discover information, a critical shift is occurring in the life science industry. Researchers, procurement teams, and scientists increasingly use AI assistants like ChatGPT, Gemini, Claude, and Perplexity to find products, protocols, and technical information. If your content is not optimized for AI discovery, you risk becoming invisible to a growing segment of your target audience.

> **Key Statistics (2025-2026)**
> - **800 million weekly active users** on ChatGPT as of 2025/10 (techcrunch)
> - **20% drop in Google search per US user in a year** (searchengineland)
> - **4.4x better conversion** for visitors from AI sources vs organic search
> - **~2 million websites** have implemented llms.txt (BuiltWith, Feb 2026)
> - **0% of major biotech companies** have implemented AI-specific discoverability features

This white paper provides a comprehensive guide to making your biotech website discoverable by AI systems. Based on our analysis of leading technology companies and an expanded study of biotech industry leaders, we present actionable strategies that can be implemented immediately.

Key Takeaways

1. **New terminology is emerging:** AEO (Answer Engine Optimization), GEO (Generative Engine Optimization), and LLMO are replacing traditional SEO concepts

2. **The llms.txt standard** is becoming the robots.txt for AI - adopted by Anthropic, Cloudflare, and Stripe

3. **Biotech has a first-mover advantage** - our research of 17 companies shows none have implemented llms.txt and only 3 implemented AI crawler rules

4. **Content structure matters** - listicles make up 32% of all AI citations according to SEOMator analysis

5. **BizGenius can help** - we offer AI discoverability services for life science companies

1. The Shift in Traffic Sources: From SEO to AI

The internet is undergoing a fundamental shift. For the first time in a decade, automated bot traffic has surpassed human traffic online. More importantly for marketers, the way users discover content is changing rapidly from traditional search to AI-powered discovery.

1.1 Web Traffic Composition (2024-2025)

According to the Imperva Bad Bot Report 2025, bots now constitute 51% of all web traffic, with humans accounting for just 49% - the first time this has happened in a decade.

Traffic Type	Share	Notes
Human Traffic	49%	First time below 50%
Bots	51%	

Within bot traffic, Cloudflare reports that the fastest growth comes from AI-specific crawlers.

#	Bot Name	% Share (July 2024)	% Share (July 2025)	Growth
1	Search Engine - Googlebot	37.5	39	4%
2	AI - GPTBot	4.7	11.7	148%
3	AI - ClaudeBot	6	9.9	65%
4	Search Engine - Bingbot	8.7	9.3	7%

Sources: Imperva Bad Bot Report 2025*;* Cloudflare - The crawl-to-click gap (Aug 2025)

1.2 AI Referral Traffic: +527% Growth

While AI crawlers are exploding, AI referral traffic (visitors sent TO your website from AI) is still small but growing remarkably fast.

Metric	Value
AI share of total web traffic	**~1%** (still small but growing)
Growth (Jan-May 2025)	**+527%** (17K to 107K sessions)
All AI platform referrals (June 2025)	**1.13 billion visits** (+357% YoY, Similarweb)
ChatGPT share of AI referrals	40-60%

Sources: searchengineland.com, similarweb

1.3 The Decline of Traditional Search

According to Search Engine Land, Google desktop searches per user fell nearly 20% year over year, based on clickstream data from tens of millions of U.S. users.

Google's AI Overviews also have fundamentally changed search behavior. When AI summaries appear, users no longer need to click through to websites.

Metric	Before AI Overview	With AI Overview	Change
Organic CTR	1.76%	0.61%	**-61%**
Paid CTR	19.7%	6.34%	**-68%**
Zero-click (news queries)*	56%	69%	**+13pp**

Zero-click data specifically measures news-related search queries, not all Google searches.

Sources: SearchengineLand; Seer Interactive AIO Study (Sept 2025); Similarweb News Search Analysis (2025)

1.4 The Quality Paradox: AI Traffic Converts Better

Despite the small volume, AI referral traffic is significantly more valuable. AI users tend to be further along in their research journey with higher intent. According to Semrush, AI traffic converts 4.4x better than Google organic search traffic. The dollar value per session of AI traffic is shown below.

AI	Share	Average session value
ChatGPT	40-60%	$2.34
Claude	Very small	$4.56
Gemini	8-15%	$1.98
Perplexity	15-25%	$3.12

Sources: Semrush AI Traffic Analysis (June 2025); Superprompt AI Visitor Value Study (2025)

2. Understanding AI Search: AEO, GEO, and LLMO

The rise of AI-powered search has created a new vocabulary. Understanding these terms is essential for navigating the evolving landscape of digital discoverability.

2.1 AEO: Answer Engine Optimization

AEO (Answer Engine Optimization) is the practice of optimizing your brand so AI engines can confidently select, reference, and recommend you as the answer. While SEO aims for clicks and rankings, AEO aims for citations, mentions, and brand authority within AI-generated responses.

> **Key Distinction:** SEO helps search engines *find* your content. AEO helps AI *understand and utilize* your content.

2.2 GEO: Generative Engine Optimization

GEO (Generative Engine Optimization) was introduced by researchers at Princeton University in November 2023. It describes strategies to influence how large language models retrieve, summarize, and present information. GEO is the broader strategy that encompasses how content is chosen, cited, and reused across generative AI systems.

Princeton's research found that GEO techniques can boost source visibility by up to 40% in generative engine responses. The best strategies include fluency optimization and adding statistics to content.

2.3 Terminology Comparison

Term	Focus	Best Used For
SEO	Traditional search engine ranking	Google, Bing organic results
AEO	Q&A-style AI visibility	ChatGPT, Copilot, voice search
GEO	Broader AI content strategy	All generative AI systems
LLMO	Large Language Model optimization	Technical LLM implementations

> **Practical Recommendation:** In 2026, succeeding in search is not about choosing SEO vs AEO vs GEO. A hybrid optimization strategy integrating all three provides the greatest reach and visibility.

3. Major AI Crawlers and robots.txt

Understanding which AI systems crawl your content is essential for optimization. As of 2025, almost 21% of the top 1,000 websites have rules for AI bots in their robots.txt file.

Company	Bot Name	Purpose
OpenAI	GPTBot	Training data collection
OpenAI	OAI-SearchBot	ChatGPT search indexing
Anthropic	ClaudeBot	Claude training data
Google	Google-Extended	Gemini training and grounding
Perplexity	PerplexityBot	AI search engine indexing
Common Crawl	CCBot	Open dataset used by many AI companies

4. The llms.txt Standard

4.1 What is llms.txt?

The llms.txt file is a proposed web standard introduced by Jeremy Howard of Answer.AI in 2024. It is a Markdown file placed at yoursite.com/llms.txt that helps AI systems understand your website structure and find high-value content. Think of it as robots.txt for AI - while robots.txt tells bots what *not* to crawl, llms.txt tells AI systems where your most authoritative resources are located.

4.2 Who Has Implemented llms.txt?

Major technology companies have adopted llms.txt, demonstrating its growing importance:

Company	File Size	Approach
Anthropic	481K tokens	Complete API documentation
Cloudflare	3.7M tokens	Organized by product/service
Stripe	Large	Structured by product categories
Zapier	Medium	Focused on API endpoints

4.3 Tiered Implementation Strategy

You do not need to create a Markdown version for every page. Follow this prioritized approach:

Tier 1 - Essential (Do First):
- /llms.txt - your site overview with links to key resources
- /llms-full.txt - complete documentation in one Markdown file

Tier 2 - High Priority Pages:
- FAQs and help articles
- Product/service pages
- How-to guides and protocols

Tier 3 - Lower Priority:
- Blog posts (optional - already text-heavy)
- Simple informational pages
- News/time-sensitive content

5. Biotech Industry Analysis

5.1 Expanded Research: 17 Companies Analyzed

We conducted an analysis of AI discoverability across a sample of biotech companies in three categories: reagent suppliers, instrument manufacturers, and service providers.

Company	llms.txt	AI Bot Rules (robots.txt)	Category
Agilent	❌ No	**ALLOWS:** GPTBot, ClaudeBot, ChatGPT-User, PerplexityBot, CCBot, Google-Extended, Amazonbot, OAI-SearchBot, Applebot-Extended, Bingbot; **Blocks:** ByteSpider, PetalBot	Instruments
OriGene	❌ No	**BLOCKS:** ClaudeBot, Bytespider, DataForSeoBot; Baiduspider: Crawl-delay 15	Reagent
Bio-Techne	❌ No	No AI bot rules	Reagent
WuXi AppTec	❌ No	No robots.txt	CRO/CDMO
Tecan	❌ No	No AI bot rules	Instruments
Bio-Rad	❌ No	No AI bot rules	Reagent/Instruments
QIAGEN	❌ No	No AI bot rules	Reagent/Instruments
Pacific Biosciences	❌ No	No AI bot rules	Instruments
System Biosciences	❌ No	No AI bot rules	Reagent
BioChain	❌ No	AI crawlers (GPTBot, ChatGPT-User, Google-Extended, anthropic-ai) are permitted with strict rate limits	Reagent
Thermo Fisher	❌ No	No AI bot rules	Reagent/Instruments
Abcam	❌ No	No AI bot rules	Reagent
Cell Signaling Tech	❌ No	No AI bot rules	Reagent
PerkinElmer	❌ No	No AI bot rules	Instruments
Illumina	❌ No	No AI bot rules	Instruments
Charles River	❌ No	No AI bot rules	CRO
Eurofins	❌ No	No AI bot rules	CRO

Key Finding: None of the 17 biotech companies analyzed have implemented llms.txt and only 3 implemented AI crawler rules. This represents a significant first-mover advantage for companies willing to invest in AI optimization now.

6. Implementation Checklist

6.1 Quick Wins (Week 1)

✓ Create /llms.txt with links to key resources

✓ Create /llms-full.txt with complete documentation

✓ Update robots.txt to allow AI search bots (GPTBot, ClaudeBot, etc.)

✓ Verify sitemap.xml has accurate lastmod timestamps

6.2 High-Impact Actions (Week 2-4)

✓ Add FAQPage schema to FAQ and support pages

✓ Add Product schema to product pages

✓ Add Organization schema to homepage

✓ Create FAQ sections on high-traffic product pages

✓ Structure content with clear H1/H2/H3 hierarchy

6.3 GEO Content Strategies

✓ Include citable statistics and facts (32% of AI citations are listicles)

✓ Add current year to titles/meta descriptions (increases citation likelihood)

✓ Write comprehensive, scannable content from a single authoritative source

✓ Focus on E-E-A-T signals: expertise, experience, authoritativeness, trust

7. Examples

1. https://www.biz-genius.com/llms.txt

```
# BizGenius

> BizGenius is a Silicon Valley technology company (Stanford StartX)
providing AI-powered marketing tools for biotech and life science companies.
We specialize in citation tracking, leads generation, and AI chatbot
solutions.

BizGenius helps life science companies track their product publications and
citations, generate targeted leads from scientific literature and NIH
grants, and enhance their websites with AI-powered tools. Trusted by 300+
companies including Bio-Techne, Bio-Rad, PacBio, TECAN, Sartorius, OriGene,
Analytik Jena, Refeyn, Novus Biologicals, and Biomedica Immunoassay.

## Services

- [Citation Widget & Data](https://www.biz-genius.com/services/citation-
tracking/): Comprehensive citation tracking with smart embed code,
interactive maps, and structured data
- [ChatGenius](https://www.biz-genius.com/embed-chatgpt-on-your-website/):
AI chatbot that delivers instant answers, enhances visitor interactions, and
generates leads
- [Leads Generation](https://www.biz-genius.com/services/leads-generation/):
Find targeted academic and industry customers from NIH grants, publications,
and company databases


## Citation Widget Features

- [Smart Embed Code](https://www.biz-genius.com/services/citation-
tracking/smart-embed-code/): No-code citation display for your website
- [Citation Search Form](https://www.biz-genius.com/services/citation-
tracking/citation-search-form/): Searchable citation library
- [Deep Analysis](https://www.biz-genius.com/services/citation-
tracking/deep-analysis/): In-depth citation analytics and insights
- [Setup Manual](https://www.biz-genius.com/services/citation-
tracking/smart-embed-code-setup-manual/): How to set up the citation widget

## Case Studies

- [All Case Studies](https://www.biz-genius.com/case-studies/): See how we
help biotech companies
- [ATUM Case Study](https://www.biz-genius.com/case-studies/): Citation
tracking implementation
- [Refeyn Case Study](https://www.biz-genius.com/case-studies/): Mass
photometry citation tracking

## Resources

- [Blog](https://www.biz-genius.com/blog/): Marketing tips for biotech
companies
- [How to Use Citation Data](https://www.biz-genius.com/how-to-use-citation-
data/): Guide to leveraging citation data
```

```
- [Email Marketing Checklist](https://www.biz-genius.com/checklist-for-life-
science-email-marketers/): Best practices for life science email marketing
- [7 Ways to Find Academic Leads](https://www.biz-genius.com/7-ways-to-find-
academic-leads/): Lead generation strategies

## Contact

- Address: 177 Park Ave, Suite 200, San Jose, CA 95113
- Phone: (650) 468-0218
- Email: support@biz-genius.com
- [Contact Form](https://www.biz-genius.com/contact/)

## Optional

- [Privacy Policy](https://www.biz-genius.com/privacy-policy/)
- [Service Card 2026](https://www.biz-genius.com/bizgenius-service-card-
2026/)
```

2. https://www.biz-genius.com/llms-full.txt

```
# BizGenius - Complete Documentation

> BizGenius is a Silicon Valley technology company that grew out of Stanford
University's StartX Motwani Labs. We provide AI-powered marketing tools and
services for biotech and life science companies, specializing in citation
tracking and widget, leads generation, and AI chatbot solutions. Trusted by
300+ companies from startups to public companies.

## Company Overview

BizGenius helps life science companies track their product publications and
citations. Our happy customers range from startups to public companies
including Bio-Techne, Bio-Rad, PacBio, TECAN, Sartorius, OriGene, Analytik
Jena, Refeyn, Novus Biologicals, and Biomedica Immunoassay.

### Our Team

Our team has a combined 60+ years of experience in core research at top
universities:
- Xu Cui, Ph.D. - BCM/Stanford
- Valerie Song, Ph.D. - Cornell
- Hua Jin, Ph.D. - Michigan/Stanford

### Contact Information

- **Address**: 177 Park Ave, Suite 200, San Jose, CA 95113
- **Phone**: (650) 468-0218
- **Email**: support@biz-genius.com

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## Services
```

1. Citation Widget & Data

The best way to convince a scientist is to produce results. As a maker of scientific research products, your results are the many publications that cite your products.

Key Benefits
- Boost your reputation and inspire confidence in prospective customers
- Maintain warm relationships with customers by sending timely congratulatory or thank-you notes
- No tedious work
- No coding required
- Get insights of your product applications
- Cover 99+% of scientific publications

What We Offer

Structured Data: In addition to the basic citation information, we report 10+ fields (e.g., author contact information) for each citation. We send structured data in Excel format for easy import into databases or website formatting.

Smart Embed Code: A simple code snippet that displays your citation list, search form, citation number, etc. in a professional format. No coding required.

Interactive Map: We create an interactive map showing the locations of the citations.

Citation Figures: We create sliders showing figures citing your products.

99+% Coverage: We cover multiple literature databases and compile a comprehensive list of your citations.

Monthly Updates: We ensure your citation data is always current.

How to Use Citation Data
- **Website**: List citations on your website, preferably searchable, to instill confidence in visitors
- **Webinar**: Rank citations by journal impact factor to find top publications and invite authors for webinars
- **Marketing/Sales Tools**: Find relevant references for potential customers
- **Content Marketing**: Get ideas and content for LinkedIn, Facebook, Twitter, or Instagram

Smart Embed Code Features
- Display citation list with customizable styling
- Citation search form for visitors
- Citation count display
- Interactive map with clustered markers
- Figure thumbnails and snippets
- PDF display in page
- Dark mode support
- Lightning-fast loading globally
- Works in China

```
- Predefined themes available
- AI-powered "Ask our AI about citations" feature
```

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2. ChatGenius

ChatGenius transforms your website into an engaging hub with conversational AI tailored to your product knowledge, delivering instant, accurate answers, enhancing visitor interactions, and generating leads.

Features
- Integrate on your website
- Custom knowledge base integration
- Instant answers for visitors
- Enhanced customer engagement

---

3. Leads Generation

Find targeted academic and industry customers interested in your products.

Academic Leads Web Portal

We offer a self-service web portal for finding academic leads. Instead of manual searching, use our tool to quickly discover researcher contact information.

How It Works:
1. **Enter Keywords** - Simple or complex search terms for your target research area
2. **Select Source** - Choose from PubMed, PubMed Central, NIH Grants, or Google Scholar
3. **Filter by Date** - Target recent publications or specific time periods

Features:
- Detailed contact information for every relevant researcher
- Access to multiple academic databases simultaneously
- Supports sophisticated keyword searching
- Significantly reduces manual research time

Pricing: Starting at $1,999/year with tiered usage options. Free trial available.

Try it: https://www.biz-genius.com/handy-tool-to-find-academic-leads/

Data Sources and Services

Data Source	Service Type	Target
NIH awarded grants	List of researchers who received grants last month	Academic (mostly)
NIH awarded grants	List of researchers whose grants will expire next month	Academic (mostly)
NIH awarded grants	List of researchers with active grants	Academic (mostly)

```
| Scientific publications | List of researchers who used competitors'
products | Academic (mostly) |
| Scientific publications | List of researchers who published papers with
your keywords | Academic (mostly) |
| Scientific publications | List of researchers who cited a classic paper |
Academic (mostly) |
| Company database | List of researchers in biotech/pharma with relevant
experience | Industry |
| Company database | List of CXOs in biotech/pharma companies | Industry |
| Company database | List of biotech/pharma companies with NIH grants |
Industry |
```

Testimonials

Xuan Liu, Ph.D. - OriGene Technologies, SVP of Marketing and Business Development
"BizGenius has been an integral part of our marketing strategy at OriGene for the past 12 years. Their citation tracking service consistently delivers accurate, high-value data that helps us make informed decisions."

Joe Barco, Ph.D. - ATUM, Head of Marketing
"Tracking citations, maintaining our own database, and updating the website became labor intensive. BizGenius freed up our team to work on other projects once citation tracking became automatic. It was less than 3 weeks from start to full deployment."

Carrie Brennan - Analytik Jena, Marketing Manager
"Integrating the citation tool onto our website was seamless, and the results are outstanding. The added citations have significantly boosted the credibility of our products."

Nico Palanca - Refeyn, Science Communications Specialist
"We have been relying on BizGenius to keep track of newly published papers where our technology is used. They provide an excellent tool, and their widgets look great!"

Gabriela Berg - Biomedica Immunoassay, Head of Scientific Affairs
"We've been working with BizGenius for almost 10 years. Using their smart-embedded code saves us lots of time and delivers valuable content to our website."

Popular Blog Topics

Email Marketing
- Best sending times and days
- Open rate and click rate optimization
- Deliverability best practices
- Email list management
- A/B testing strategies

Citation Tracking
- How to use citation data for marketing
- Styling citation lists
- Interactive citation maps

```
- Showing citations on product pages

### Lead Generation
- Finding academic leads
- NIH grant data analysis
- Competitor customer targeting
- Industry lead generation

### AI and Technology
- ChatGPT for marketing
- AI image generation
- Text-to-image tools
- AI writing assistants

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## Getting Started

1. **Contact us** at support@biz-genius.com or call (650) 468-0218
2. **Get a free estimate** for your citation tracking or leads generation
project
3. **Review our proposal** with pricing and timeline
4. **Start your project** - typical delivery in 3-7 days for leads, ongoing
for citation tracking
5. **Integrate with your website** using our no-code smart embed solutions

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## Pricing

Contact us for custom pricing based on your needs:
- Citation tracking: Monthly subscription based on number of products
- Leads generation: Per-contact pricing
- ChatGenius: Custom pricing
- Other services: Project-based quotes

Get a free estimate: https://www.biz-genius.com/contact/
```

3. FAQ in both text and json-ld format

```
## Frequently Asked Questions

### 1. What is BizGenius?
BizGenius is a Silicon Valley technology company (Stanford StartX) providing
AI-powered marketing tools for biotech and life science companies, including
citation tracking, leads generation, and AI chatbot solutions.

### 2. What services does BizGenius offer?
BizGenius offers three main services: Citation Widget & Data for tracking
product publications, ChatGenius AI chatbot for website visitor engagement,
and Leads Generation from NIH grants and scientific publications.

### 3. How does the Citation Widget work?
```

The Citation Widget uses a smart no-code embed that displays your product
citations on your website, with features including searchable citation
library, interactive maps, and deep analytics.

4. Who are BizGenius's customers?
BizGenius is trusted by 300+ biotech and life science companies including
Bio-Techne, Bio-Rad, PacBio, TECAN, Sartorius, OriGene, Analytik Jena,
Refeyn, Novus Biologicals, and Biomedica Immunoassay.

5. How can I contact BizGenius?
Contact BizGenius at: Phone (650) 468-0218, Email support@biz-genius.com, or
visit the office at 177 Park Ave, Suite 200, San Jose, CA 95113.

```json
{
  "@context": "https://schema.org",
  "@type": "FAQPage",
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        "text": "BizGenius is a Silicon Valley technology company (Stanford
StartX) providing AI-powered marketing tools for biotech and life science
companies, including citation tracking, leads generation, and AI chatbot
solutions."
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Data for tracking product publications, ChatGenius AI chatbot for website
visitor engagement, and Leads Generation from NIH grants and scientific
publications."
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displays your product citations on your website, with features including
searchable citation library, interactive maps, and deep analytics."
      }
    },
    {
      "@type": "Question",
      "name": "Who are BizGenius's customers?",
      "acceptedAnswer": {
        "@type": "Answer",
        "text": "BizGenius is trusted by 300+ biotech and life science
companies including Bio-Techne, Bio-Rad, PacBio, TECAN, Sartorius, OriGene,
Analytik Jena, Refeyn, Novus Biologicals, and Biomedica Immunoassay."
```

```
      }
    },
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      "acceptedAnswer": {
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        "text": "Contact BizGenius at: Phone (650) 468-0218, Email
support@biz-genius.com"
      }
    }
  ]
}
```

8. How BizGenius Can Help

BizGenius specializes in AI-powered marketing tools for biotech and life science companies. We offer comprehensive AI discoverability services to help you get found by the AI assistants your customers are using.

8.1 Our AI Discoverability Services

Service	What We Do
llms.txt Generation	We analyze your website and create optimized llms.txt and llms-full.txt files
FAQ Generation	We create AI-optimized FAQ content with FAQPage schema markup
AI Integration	We integrate AI Agent/chatbot to your system

Get Started Today

Email: support@biz-genius.com

Phone: (650) 468-0218

Web: www.biz-genius.com/contact

About BizGenius

BizGenius is a Silicon Valley technology company that grew out of Stanford University's StartX program. We provide AI-powered marketing tools for biotech and life science companies, helping them connect with researchers and customers more effectively.

Our Services:

- **Citation Widget & Data:** Track publications citing your products
- **Leads Generation:** Find targeted customers from NIH grants and publications
- **ChatGenius:** Integrate AI agent/chatbots to your website
- **AI Discoverability (GEO/AEO):** Make your website more visible to AI search engines

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