

Fox[®] Protein Footprinting Services

Fast, Precise, and Actionable Insights into Biotherapeutic Structure & Interaction



Outsource Higher Order Structure Studies via Protein Footprinting

Accelerate Discovery. Improve Development. Reduce Risk.

GenNext Technologies empowers your team to answer tough structural biology questions—whether through our expert analytical services or by placing our novel instrumentation directly in your lab. We offer both the expertise and the technology to help you succeed, no matter the scale of your project, the complexity of your science, or the size of your team, such as:

Small to Mid-Cap Pharma & Biotechs

Our service partners are innovative biotech and pharmaceutical companies with critical structural biology questions, but they do not have the budget, bandwidth, or timeline for adopting new technology. Outsourcing to GenNext enables these leaders to stay focused on their core competencies while allowing us to add an extra dimension to their understanding of protein structure and interactions.

Large Pharma & Research Institutions

Industry leaders also collaborate with GenNext by “test driving” our services as a first step toward purchasing our state-of-the-art technology. By experiencing our technology firsthand, these organizations can make confident decisions to go forward with capital equipment investments or elect to continue outsourcing to us on a routine basis with multi-project or multi-year agreements.

Contract Research Organizations & Core Labs

These groups choose GenNext’s services to expand their scientific offerings in scenarios where building internal protein footprinting expertise is not feasible. When partnering with us, these labs offer their clients access to novel, high-quality structural biology data on an accelerated timeline.

GenNext Services are the ideal solution for organizations that:

- **Lack in-house biological mass spectrometry and/or protein footprinting capabilities**
- **Prefer not to invest in capital equipment or new technology**
- **Require expert analysis for specific, mission-critical projects**
- **Need quick, expert-driven answers to questions about biotherapeutics or small molecules**

Whether you’re a nimble biotech, a mid-sized pharma, established industry leader, or service provider, our solutions can be tailored to fit your specific needs.

GenNext's Structural Biology Service Offerings

Actionable Answers Produced with Speed

GenNext specializes in structural biology research using our proprietary Flash Oxidation (Fox[®]) Protein Footprinting platform to answer your most pressing HOS questions—quickly, accurately, and cost-effectively. We can work with a wide variety of molecules, including mAbs, ADCs, multispecifics, cytokines, Fc-fusions, and other complex protein systems. By localizing solvent accessibility changes down to the single-amino-acid level, we can employ our expertise in Fox Footprinting to study:

Biotherapeutics & Monoclonal Antibodies (mAbs)

- **Epitope & Paratope Mapping:** By selectively modifying solvent-accessible residues, we can provide high-resolution insights into protein interactions—vital for optimizing therapeutics.
- **Aggregation Analysis:** By identifying aggregation-prone regions, we can inform formulation adjustments to improve mAb stability and efficacy.
- **Biosimilarity Assessment:** By comparing reference biologics and biosimilars to detect structural differences from manufacturing or formulation, we can help monitor for protein comparability.
- **Stability & Storage Optimization:** By examining how formulation, temperature, and storage impact mAb structure over time, we can help predict degradation to support extended shelf life.
- **Manufacturing Testing:** By comparing structures under different pH, excipients, or process modifications, we can help access batch consistency and product quality.
- **Drug Delivery Considerations:** By evaluating mAb stability under various conditions, we can inform the development of effective IV, subcutaneous, and other delivery methods without compromising function.

Small Molecule Drug Discovery

- **Target Engagement & Response:** By unambiguously pinpointing binding sites and characterizing target response, we can help to ensure that only promising leads advance.
- **Lead Optimization & SAR:** By confirming if optimized leads maintain target engagement at the residue level, we can anticipate if chemical modifications may change affinity and specificity.

AI Model Validation & Refinement

- **Accelerating Pipeline Efficiency:** By bridging *in silico* predictions with *in vitro* validation via protein footprinting, early failure detection and rapid iteration can become routine.
- **Improving AI Predictions:** By experimentally validating computational models, the resulting real-world data allows AI models to infer cause-and-effect relationships between a therapeutic agent and a biological response.
- **Complementing & Enriching Data Sets:** By revealing unique insights into protein surface accessibility and conformational dynamics down to the single-amino acid level, our results can enrich and complement datasets like Cryo-Electron Microscopy, X-ray Crystallography, or HDX-MS.



Our track record speaks for itself—trusted by industry leaders and up-and-coming pioneers alike. When it comes to biotherapeutic and small molecule protein characterization, GenNext stands apart as your expert partner from discovery to development.

Our Promise: Tailored to You & Totally Transparent

Clarity, Confidence & Convenience

Every GenNext service project is designed around your key scientific objective and delivered with total transparency, from initial consultation to final report. We handle the complexity so you can focus on what matters most—innovation and discovery. The advantages of GenNext services include:

- **Unique Technology, Proven Solutions:** We utilize industry-leading mass spectrometry tools and specialized Fox[®] Protein Footprinting methodologies to provide results you simply can't get anywhere else.
- **Agile Engagement:** Want to outsource a specific project, evaluate our technology through a test drive, or incorporate our solutions into your internal workflow? We can respond to your needs via our flexible product and service offerings.
- **Rapid Turnaround:** From initial consultation to final report, we can reduce your structural biology timelines from months or years to just weeks.
- **Seamless Collaboration & Security:** We work directly with your team or through trusted platforms like [ScienceExchange.com](https://www.scienceexchange.com) and [Scientist.com](https://www.scientist.com) to streamline project management, contracting, and billing to ensure transparency, data security, and quick onboarding—saving you time and administrative effort.

Whether you choose to work with us directly or through a procurement platform, our focus remains the same: delivering precise, insightful results that empower your decision-making.

Our Eight-Step Process from Consultation to Answers

Seamless, Flexible & Fast from Start-to-Finish

At GenNext, we can deliver results within four to six weeks of receiving your samples. Our services are built for agility, whether you need answers for a single study or a comprehensive, extended analytical partnership. You always get the expertise, reliability, and answers you require with our client-focused process, as follows:

1. **Initial Consultation:** Our team qualifies your needs via a brief questionnaire, setting the stage for a successful and efficient collaboration.
2. **Educational Webinar:** Here you can assess our science, technology, and scientists without the need to disclose your proprietary details.
3. **Needs Assessment & Confidentiality:** Next, we will create a Non-Disclosure Agreement (NDA), paving the way for a deeper dive into your research challenge.
4. **Custom Solution Design:** Our team then scopes the project by defining deliverables, timeline, and required sample information, ensuring clarity and alignment.
5. **Transparent Quotation & Statement of Work:** Then you will receive a project quotation detailing the specific experiments, deliverables, and payment terms. Once the quote is approved, a Statement of Work and contract will be executed.
6. **Compatibility & Methods Development:** After we receive your samples and buffers, we begin methods development and validation to confirm labeling behavior, digestion quality, and LC-MS/MS coverage.
7. **Labeling Study:** After the sample passes the "Footprinting Test," GenNext scientists will employ Fox[®] Protein Footprinting Technology with mass spectrometry to perform the differential labeling study.
8. **Fast Analysis & Reporting:** Finally, we use our purpose-built FoxWare[®] Protein Footprinting Software for residue-level analysis to produce a clear, actionable report that informs your next steps.

Don't let structural biology bottlenecks slow your progress. When rapid insights matter, choose GenNext for your advanced protein footprinting studies.

Expert Analysis & Actionable Reporting

More than Just Data—You Get Answers

When you partner with GenNext, you get clear, concise answers to your most pressing structural biology questions. Our final deliverable is a detailed report that includes:

Experimental Design & Methodologies

The report provides a clear summary of how your unique research question was tackled, along with a description of the methods, workflow, and techniques utilized.

Raw & Analyzed Results

According to the research methodology, the report will illustrate protein dose response, sequence coverage, peptide- and residue-level oxidation, and differential study results. Publication- and presentation-worthy figures are included, such as histograms, volcano plots, heatmaps, and protein structure maps (if available). Additionally, you can access the raw data files and the full set of processed tables to perform further analyses and to augment your datasets.

Expert Review of Structural Implications

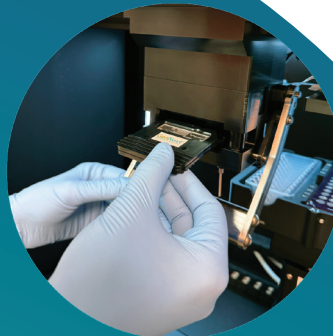
Whether the location of an epitope or paratope, detailed aggregation profiles, or a direct assessment of drug-target binding, the report provides the answer you seek. At the report presentation meeting, we help interpret the results with your team to understand structural changes, interaction surfaces, and relevant mechanistic insights.



Trusted by Innovators

From small biotechs to global pharmaceutical leaders, our clients trust us for a partnership mindset focused on their success.

- **Strong track record of quickly delivering high-quality, actionable insights**
- **Proven cutting-edge technology combined with scientific excellence**
- **Flexible, transparent partnership model**



Accelerate Discovery, Advance Protein Therapeutics

Contact GenNext Technologies to empower your discovery journey—whether you choose to outsource protein footprinting services or bring advanced Fox[®] Technology capabilities in-house.