

# Synaffix enables ADCs for oncology that are both safer and more effective as well as easier to manufacture



## About Synaffix

Synaffix BV is a Netherlands-based biotechnology company that has developed a best-in-class antibody-drug conjugate (ADC) technology platform that consistently delivers highly competitive targeted cancer therapeutics. Our value proposition is to provide platform technology that delivers safer and more effective ADCs. This has been consistently validated across numerous preclinical benchmarking studies versus the 3 major clinical-stage ADC technologies (see chart below). Our vision is to become the preferred partner in the development of these cutting-edge targeted cancer therapeutics, to realize our ambition to enable the best possible ADC therapeutics for patients and **connect to cure™**.

We are backed by a top tier, life science-focused investor syndicate including Aravis, BioGeneration Ventures, BOM Capital and Merck Ventures the strategic corporate venture capital fund of Merck. Our business model is technology out-licensing.

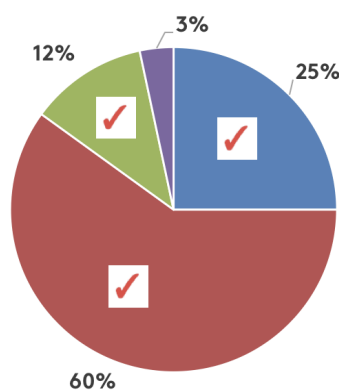
Our platform spans 2 key technologies. The first is GlycoConnect™, a site-specific antibody conjugation technology, and the second is HydraSpace™, an ADC-enhancing spacer technology. Together, these technologies significantly expand therapeutic index of ADCs and improve manufacturability.

We anticipate the first clinical GMP batches of a Synaffix ADC to be manufactured by the end of 2017 and first-in-human studies to be initiated by our partners in 2018.

## Differentiated vs. 3 Major Clinical-Stage Technologies

Approx. 60 active clinical-stage ADC programs currently

ADC Technology Generation	Antibody Conjugation Approach	# of Clinical Programs
1 <sup>st</sup> Gen	Random conjugation to naturally-occurring cysteines (Seattle Genetics)	36
1 <sup>st</sup> Gen	Random conjugation to naturally-occurring lysines (ImmunoGen)	15
2 <sup>nd</sup> Gen	Site-specific conjugation to engineered cysteines (like Thiomab)	7
2 <sup>nd</sup> Gen	Site-specific conjugation to non-natural amino acids (Ambrx)	2



SOURCE: Synaffix internal clinical ADC pipeline database

Across numerous head-to-head studies, Synaffix technology consistently provides ADCs that are safer and more effective than the 3 major clinical-stage technologies.

## ADC Technology Snapshot

Critically focused on continued innovation in the field of ADCs, we ensure that the most advanced tools are available for the design and development of ADC therapeutics.

Key features of Synaffix ADC technology:

- Enhances safety and efficacy versus the 3 major clinical-stage ADC technologies
- High-yield conversion of an antibody to an ADC without need for antibody engineering
- Highly stable ADC products (reduced aggregation and stable payload attachment)
- Proven compatibility with all IgG isotypes and all key payload classes
- Site-specific and efficient conjugation of highly hydrophobic payloads
- Reduces aggregation potential
- DAR2, DAR4 and Dual-Warhead (DAR2+2) ADC formats
- Rapid and predictable scalability demonstrated to multi-gram scale
- Cost of Goods comparable to cysteine-engineered ADCs

## Management Team

**Peter van de Sande**  
MSc, MBA, MBL  
Chief Executive Officer

**Floris van Delft**  
PhD  
Founder & Chief Scientific Officer

**Sander van Berkel**  
PhD  
Founder & Director, R&D Operations

**Anthony DeBoer**  
Director, Business Development

## Board of Directors

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**Simon Nebel**  
PhD, MBA  
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**Edward van Wezel**  
MSc  
Managing Partner  
BioGeneration Ventures

**Hakan Goker**  
PhD  
Investment Director  
Merck Ventures

**Peter van de Sande**  
Chief Executive Officer - (see above)

## Investors

**Aravis**  
Switzerland

**BioGeneration Ventures**  
Netherlands

**Merck Ventures**  
Germany / Netherlands

**BOM Capital**  
Netherlands

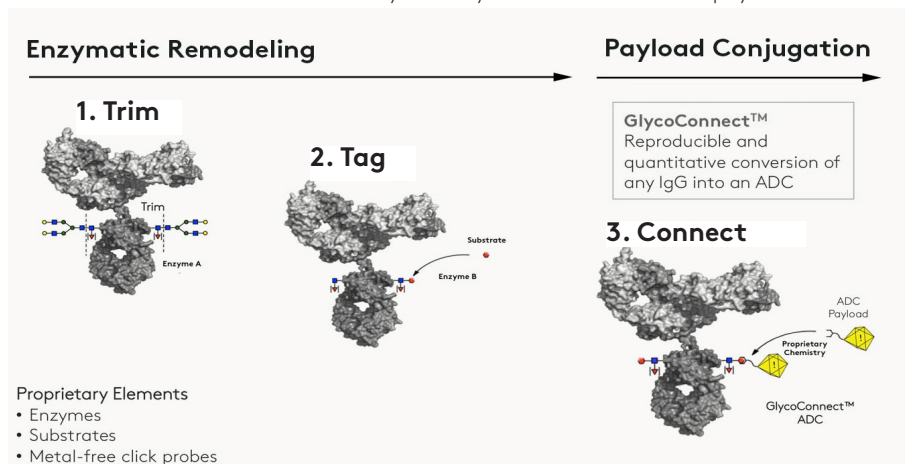
Series A financing completed Feb 2014.

## GlycoConnect™ Site-Specific Antibody Conjugation

**GlycoConnect™** is a cutting-edge antibody-conjugation technology that represents the foundation of the Synaffix ADC technology platform. The value proposition of GlycoConnect™ is to enable ADCs that are both safer and more effective. This is achieved by securely attaching an anti-cancer payload directly to the antibody glycan. All antibodies have two (2) glycans that represent ideal, natural anchor points. Through the application of two (2) enzymes, a small molecule azidosugar and metal-free click chemistry, GlycoConnect™ takes advantage of these natural anchor points to stably attach anti-cancer payloads to the antibody glycan.

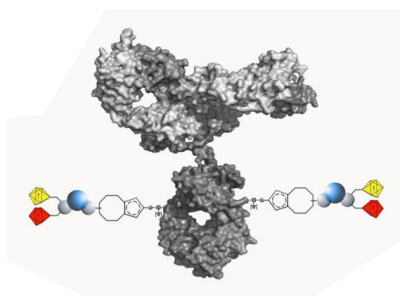
GlycoConnect™ is applied in 3 highly-efficient steps:

1. **Trim** mAb glycan trimmed by endoglycosidase, creating homogenous intermediate
2. **Tag** trimmed glycan is tagged with azidosugar by glycosyltransferase
3. **Connect** metal-free click chemistry securely attaches anti-cancer payload



GlycoConnect™ process (from antibody to purified ADC with >75% overall process yield)

## HydraSpace™



**HydraSpace™** is a highly polar, yet compact ADC-enhancing spacer technology that is complimentary to GlycoConnect™. It is incorporated into the linker-payload at one or multiple positions and brings the following additional advantages:

- Further improves therapeutic index
- Improves stability (reduced aggregation)
- Improves conjugation efficiency and speed
- Enables branching for higher drug loading
- Enables "dual-warhead" ADC format with two mechanisms of action

## Granted IP on Resulting Products thru at Least 2035

The Synaffix IP portfolio is comprised of 18 patent applications and granted patents that are necessary and useful to generate and sell Synaffix ADCs. With IP protection on resulting products thru at least 2035, granted claims cover key aspects of Synaffix ADC technology including:

- **GlycoConnect™** site-specific antibody conjugation technology
- **HydraSpace™** ADC-enhancing spacer technology
- **BCN** metal-free click chemistry

## Technology Partnering

Synaffix regularly collaborates with companies that have an antibody only, or that have antibody and payload, and are interested in developing a highly competitive ADC program.

In just a few weeks, Synaffix can apply its proprietary ADC technology to a collaborator's antibody (and payload, if provided) to supply material for non-clinical proof-of-concept studies.

With an established supply chain of proprietary components for GMP manufacturing, we enable rapid development of new product candidates by our partners.

In October 2016, Synaffix entered into a commercial license agreement with ADC Therapeutics, the first announced of several undisclosed collaborations.

## Scientific Advisory Board

**Hans-Joachim Boehm, PhD**  
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Small Molecule Research, Roche

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Chemistry, Leiden Institute of Chemistry

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