YUMAB GmbH
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YUMAB: universally accessible human antibody innovation

YUMAB, a global provider of fully human monoclonal antibody discovery and development, delivers the antibodies closest to germline on the market. The company provides crucial support to innovators such as Singapore-based startup Enleofen Bio, an exciting new player in fibrosis.

German biotechnology company YUMAB, a global developer of fully human monoclonal antibodies (mAbs), offers ultrafast antibody discovery and efficient therapeutic lead development. With the number of fully human mAb approvals matching the number of humanized mAb approvals in 2018, and with fully human mAbs now holding a major share of the global mAb market, YUMAB's commitment to providing easy and affordable access to state-of-the-art and next-generation human antibody technologies to help drive innovation in new clinical areas has become ever more relevant.

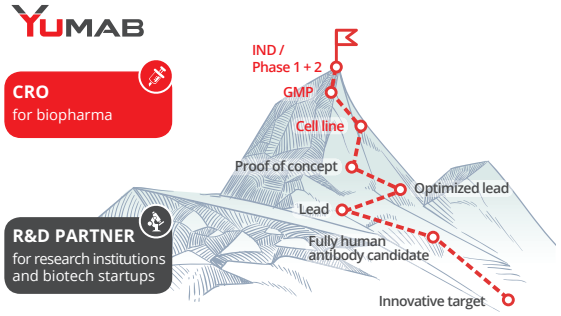

Fig. 1 | The YUMAB process. Partners are offered a flexible, unique and affordable path to rapidly advance their antibody programs from discovery to therapeutic lead.

Streamlined human antibody discovery platform

As a contract research organization, YUMAB collaborates with partners worldwide to help bridge the gap from discovery to therapeutic lead by harnessing the company's antibody platform to develop antibodies against any class of target, in any antibody drug format and for any clinical indication.

YUMAB's platform integrates all technologies for discovery through the use of the company's very large universal libraries or patient-derived libraries to the lead development of novel, fully human mAb drugs. Natural antibody libraries are presented as ultradiverse, universal, naive or disease-driven immune repertoires that deliver the drug candidates closest to the human antibody germline on the market.

Key strengths of YUMAB's platform include (1) elimination of potential epitope preference by the host immune response that could misguide antibody responses to immunogenic, but nonfunctional, epitopes, and (2) identification of antibodies of broad specificity for better diagnostics, vaccines and drugs.

Breaking new ground in novel disease areas

In early 2018, YUMAB relocated its headquarters and research and development (R&D) laboratories to Science Campus Braunschweig-South, one of Germany's life science hotspots. YUMAB is now collocated with the Helmholtz Centre of Infection Research, the Leibniz Institute–German Collection of Microorganisms and Cell Cultures, and the German Centre for Infection Research, three world leaders in the fight against infectious diseases.

Since its relocation, YUMAB has been actively expanding its global research collaboration network in infectious diseases and other therapeutic areas. The company has been further expanding its capacities, and is now establishing a novel humanized mouse platform for the development of fully human mAbs against highly conserved targets that is expected to join YUMAB's fully human antibody discovery technology portfolio in 2019.

"Since its foundation in 2012, and leaning on 30 years of experience in recombinant antibody display and library technologies by the company's founders, YUMAB has rapidly grown into a globally operating company" said Thomas Schirrmann, CEO of YUMAB. "Now also incorporated in the USA, YUMAB has become industry's and academia's company of choice for the development of novel fully human mAbs."

Accelerating breakthrough fibrosis drug development

In early 2016, YUMAB entered into a development project with Stuart Cook and Sebastian Schäfer at the National Heart Centre Singapore (NHCS) and Duke–National University Singapore (NUS) Medical School to generate novel antibody candidates that target interleukin-11 (IL-11) in fibrotic disease. Groundbreaking results from their research revealed the critical role of IL-11 in fibrosis and set the stage for potential anti-IL-11 therapies that could transform the treatment of fibrosis of the lung, heart, liver, kidneys and other organs[1].

In April 2017, Cook and Schäfer founded Enleofen Bio Pte. Ltd., a spin-out from NHCS, SingHealth and Duke–NUS Medical School focused on the development of first-in-class antibody therapeutics for the treatment of fibrotic human diseases.

"We chose to work with YUMAB because of its proven expertise in antibody engineering. They rapidly generated high-quality antibodies that were essential for the development of our antifibrotic therapies," explained Stuart Cook, Enleofen Bio's cofounder and director.

"Successful drug development requires interdisciplinary expertise and technologies that are most easily accessed through collaborations," added André Frenzel, CSO of YUMAB. "Being able to support our colleagues in Singapore in their quest to rapidly translate their new insights into fibrosis into a startup company was very rewarding for us, and we are excited to have played a small but crucial part in that process."

Translating research innovation into drug development

YUMAB is committed to helping its partners accelerate their research pipelines through the company's robust and streamlined human antibody discovery and lead optimization platform. A flexible partnering philosophy facilitates the establishment of collaborations that maximize the effect of YUMAB's antibody technology on the partner's R&D programs.

YUMAB acts either as a contract research developer providing tailored solutions for the biopharma industry or as a research partner offering custom solutions at an affordable entry cost for antibody development projects in academic laboratories and biotech startups (**Fig. 1**). YUMAB's goal is to help bridge the gap between research and translation to advance innovation.

1. Schäfer, S. et al. *Nature* **552**, 110–115 (2017).

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