



# Brief to Search

For a CEO Right-Hand

Internship contract (6 months), based in Tours, France

For MABSilico



## MABSilico in brief

### Summary:

MABSilico is a French TechBio company which designs and implements computational solutions for the development of therapeutic antibodies and bio-drugs, which are used in an increasing number of pathologies, including oncological diseases. MABSilico aims at creating a formal approach of antibody development, reducing the risks of failure and the duration of pre-clinical steps as well as strengthening intellectual property protection. Conventional approaches for the discovery and pre-clinical development of such drugs take two to three years, while MABSilico technologies allow shrinking this time to a few weeks.

This technology based on artificial intelligence and machine learning is the result of more than twenty years of French scientific research (laboratories affiliated to INRAE and CNRS).

### Strategy:

MABSilico develops computational methods based on artificial intelligence for the selection, characterization and optimization of antibodies. Once completed, methods will allow generating a few candidates ready for final experimental validation and pre-clinical tests, reducing this phase of the development of a therapeutic and/or diagnostic biomolecule from 3 years to few weeks. MABSilico is also very attentive to the extensive experimental validation of its methods. For this reason, MABSilico conducted since its very beginning experimental validation of its own algorithms as proof of concept. These experiments are either conducted in-house, or through collaborations with academic partners or private companies. Our products are distributed through a scalable SaaS platform integrating within our clients' workflows.

### SaaS – Platform Technology:

The MABSilico pipeline consists in a suite of AI-based tools, allowing the selection, characterization and optimization of leads in a few hours. Some of these tools have already been in operation for two years, such as MABTope, which allows predicting the epitope of an antibody in less than one hour. This method has now been extensively validated. The methods MABBinning (allowing to cluster antibodies within a very large group along their ability to bind a same target at the same epitope), MABCross (allowing to predict off-targets: proteins to which the antibody binds, other than its primary target) and MABHuman (antibody framework humanization) are also operational.

### Machine Learning:

Antibody repertoires are very large. A single individual possesses approximately  $10^{12}$  different antibodies, and the number of possible antibodies is even much higher. Among these, only a small fraction represents real therapeutic solutions with high affinity and specificity. To rationalize the search of 3D-templates space, MABSilico is leveraging AI and machine learning algorithms to pull the most promising candidates.

Experimental validations are then conducted in-house to validate predictions. With this back and forth approach, MABSilico is pretty unique as a deep-tech company.

### Background:

Since its inception in 2017, MABSilico has grown to 10 FTE, including 7 PhDs. MABSilico has been selected as one of the six winners of the Bpifrance Concours d'innovation, i-Nov, award in "Bioproduction" track in 2019 and other international grants like Bill and Melinda Gates Foundation. With more than 55 clients in pharma industry, MABSilico is one of the world leader in the field of computational antibody drug discovery.

The team is divided into three departments: (1) biology, (2) software engineering & data science and (3) Computational sciences. This team has been tasked with the exciting challenge of developing various tools that can guide biologists, speed up lab efforts and lead generation of new therapeutic strategies. It's a multidisciplinary team that includes protein engineers, data scientists, bioinformaticians and software engineers. Each department is engaged in both capability development projects and asset development projects.

The company is now seeking to recruit a highly motivated and talented DevOps engineer. This person will work with the software engineering team.



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**Approved by:**  
Vincent PUARD  
CEO

## Your role at MAbSilico

The company is now seeking to recruit a highly motivated CEO Right-Hand. This person will work with the CEO and the Scientific Business Developer to contribute to strategic thinking processes and the organization of the company. You will help the CEO to accelerate the structuration and manage the growth of the company.

The right-hand of CEO plays a strategic role in life of the company.

As Right-Hand CEO, you will be at the heart of MAbSilico activity and have the great opportunity to work on very various strategic topics. You will work closely with the CEO and other co-founders on these projects:

- Set up internal tools and processes to improve team efficiency.
- Participate in strategic projects including on the international expansion of MAbSilico.
- Contribute to the HR structuring and management, and to the recruitment of new talents.
- Coordinate and support the different teams (care, product, tech, etc.) on personal data protection.
- Contribute to the CEO's communication with the rest of the team (e-mails, documentation, etc.).
- Carry out data analysis and reporting on the business, for internal or external use.

## Preferred experience and skills

### Education:

- Business school student, you are looking for an internship with a variety of missions to discover the challenges of a startup and the daily life of an entrepreneur.
- Biological background is appreciated (master or PhD in biology, Pharm D.).

### Efficiency:

- You are analytical and rigorous, very focused on details.
- You are fond of productivity tools.

### Adaptability:

- You have a strong ability to adapt.
- You are curious and independent.

### Mindset:

- You have an entrepreneurial spirit, you like challenges, you welcome feedback and you are willing to get better everyday to reach excellence.
- You like to learn and surpass yourself.

### Problem solver:

- You are pragmatic and know how to solve problems quickly.

### Language:

- You have an excellent level of English, as everything we do at MAbSilico is in English.

Anything else you can bring will be welcome, it is important for us to build a team that is as diverse as possible in terms of experiences, cultures, hobbies, etc!

## The key responsibilities

### Business development:

- Customers and partners acquisition: prospecting and follow-up of new clients / partners in biotech ecosystem in EU and US (biotech and pharma companies, top 100 research institutes).
- Customer meeting: helping in preparing customers' meeting and presentation (data collection, presentations review, writing meeting reports).

### Strategic thinking:



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CEO

- Competitive intelligence: performing competitive analysis and scouting for companies developing or commercializing similar solutions.
- Product definition: reflection on the evolution and diversification of the products.

**Sales operations:**

- Analysis: follow and track company's sales
- Improvement: implement management tools and sales processes.

**What this position will bring you:**

- An improvement in your ability to make rapid decisions that structure a company.
- The opportunity to face the issues encountered by start-up managers (business, legal, HR, financial, etc.).
- The satisfaction of being able to observe the tangible results of your actions/decision making.
- The development of a network of first-rate contacts. Our clients are made up of profiles holding management positions in biotech and pharma companies and founders/directors of start-ups.

**Position evolution**

As part of a startup your job position can evolve in line with the scaleup and growth of the company. Your position as CEO Right-hand allow you to work directly with the executives of a startup company is scale-up with international customers.

The company is planning to recruit between 5 to 10 highly talented people within the next 12 months for positions as developer, ML scientist, data scientist, biologist, business developer and sale.

**Organization**

The CEO Right-Hand works with the executive team under the supervision of the CEO. You are collaborating with the executives and co-founders of the company.

MABSilico is located in Tours (France) at 1 hour by train from Paris in bright co-working space. The activity is on-site with 1 day per week on remote. MABSilico is start-up on a human scale, we offer a stimulating work environment where everything is done to ensure that our talented team produces the most beautiful presentations in the world.

The contract can start immediately.

**Salary**

Salary depends on experience.

