

May 2, 2022  
Sysmex Corporation

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## Astrego Diagnostics AB Becomes Wholly-owned Sysmex Subsidiary through the Acquisition of Outstanding Shares

- Commercialization of Rapid Antimicrobial Susceptibility Test to Reinforce Structure for Promoting AMR Countermeasures -

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Sysmex Corporation (HQ: Kobe, Japan; Chairman and CEO: Hisashi Ietsugu) announced today that Astrego Diagnostics AB (HQ: Uppsala, Sweden; CEO: Ove Öhman) has become a wholly-owned subsidiary through the acquisition of outstanding shares and that the company name has changed to Sysmex Astrego AB. Going forward, in addition to accelerating the clinical application of rapid antimicrobial susceptibility testing<sup>1</sup> for urinary tract infections,<sup>2</sup> the companies aim to contribute to solving the problem of antimicrobial resistance (AMR)<sup>3</sup> and other issues related with healthcare.

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Urinary tract infections are infectious diseases with a high rate of incidence and are said to affect 150 million people globally<sup>4</sup>. Making a proper diagnosis and using an effective antimicrobial in a timely manner is of crucial importance in the treatment of bacterial infections. For this purpose, in addition to clinical findings, bacterial identification tests<sup>5</sup> and antimicrobial susceptibility tests are required; however, such testing can require several days in the current situation, making it difficult to prescribing antimicrobials based on test results at the first consultation. As a result, the appearance of antimicrobial-resistant bacteria due to improper antimicrobial use has become a problem. This is not limited to urinary tract infections. As a factor in the development of drug-resistant bacteria, the improper use of antimicrobials is becoming a global issue. If measures against AMR are not taken, in 2050, it is estimated that annual worldwide deaths due to drug-resistant bacteria will exceed 10 million<sup>6</sup>, more than those due to cancer. At the World Health Assembly held in May 2015, the Global Action Plan on Antimicrobial Resistance was adopted and initiatives toward countermeasures have been gathering speed, particularly among developed countries.

Astrego's unique and proprietary microfluidic technology (<https://astrego.se/technology/>) involves forming microchannels at the micrometer to nanometer level, capturing individual bacteria from among the multiple bacteria present in a fluid and the bacteria are then cultured unidirectionally within these tiny channels, which achieves a rapid antimicrobial susceptibility test result. Astrego has been developing a rapid antimicrobial susceptibility test for urine samples.

With the aim of commercializing Astrego's rapid antimicrobial susceptibility test, Sysmex acquired 24.99% of Astrego's shares in 2020. The companies have been conducting joint product development activities and on March 23, 2022, completed a self-declaration and CE-marking according to Directive 98/79/EC on *in vitro* diagnostic medical devices.

In May 2022, Sysmex acquired outstanding shares in Astrego to strengthen synergies between the companies and accelerate clinical application of the rapid antimicrobial susceptibility test. With the acquisition, Astrego became a wholly-owned subsidiary of Sysmex, and the company name changed to Sysmex Astrego AB.

In addition to working on the further development of diagnostic technologies, the two companies will contribute to solving medical issues through such endeavors as measures to reduce the occurrence of antimicrobial resistance and promote the proper stewardship of antimicrobial drugs to improve patient QOL and efficiency in medical care.

### Overview of Astrego

Company name:	Sysmex Astrego AB
Location:	Uppsala, Sweden
Representative:	Mikael Olsson
Capital:	76,476 Swedish Krona
Capital supplied by:	Sysmex Corporation
Employees:	38
Line of business:	Development of <i>in vitro</i> diagnostic products related to drug susceptibility

### References

January 29, 2020 press release entitled “Sysmex Invests in Astrego Diagnostics with a View to Developing New Urinalysis Solutions for the Primary Care Business”

<https://www.sysmex.co.jp/en/news/2020/200129.html>

November 4, 2021 story entitled “What Is Antimicrobial Resistance (AMR)? - Tackling Global Threats and Aiming to Create a Sustainable Society -”

<https://www.sysmex.co.jp/en/stories/index.html>

### Terminology

- 1 Antimicrobial susceptibility test:  
A test to determine the efficacy of various antimicrobial drugs against pathogenic bacteria detected in a sample.
- 2 Urinary tract infections:  
The urinary tract runs between the kidneys and the urethral opening. Inflammations due to the incursion of bacteria into the urinary tract are known as urinary tract infections. Such infections can lead to bladder inflammation and pyelonephritis (inflammation of the kidneys).
- 3 Antimicrobial resistance (AMR):  
This phenomenon occurs when living organisms develop a resistance to a drug, whose efficacy is reduced or nullified as a result. Bacteria that have developed microbial resistance are known as antimicrobial-resistant bacteria.
- 4 “Antimicrobial resistance among uropathogens that cause community-acquired urinary tract infections in women: a nationwide analysis.” *Clinical Infectious Diseases*. 2001;33(1):89–94. doi: 10.1086/320880.
- 5 Identification test:  
A test to determine the name of bacteria that are the source of an infectious disease

detected in a sample.

- 6 “Antimicrobial Resistance: Tackling a crisis for the health and wealth of nations.” The Review on Antimicrobial Resistance, Chaired by Jim O’ Neill.

### **Sysmex's materiality**

Sysmex has identified "Resolution of medical issues through products and services" as one of the issues that we prioritize (materiality) as we work to develop and supply products with high clinical value. Leveraging our proprietary technology and the global network that we have cultivated thus far, we continue to strive to contribute to the development of healthcare and the healthy lives of people.



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