

Welcome to the 1st **inside:diagnostics** of 2024 – with updates and insight about the diagnostics industry from TTP. I'm Dr Giles Sanders, Head of Diagnostics at TTP. At TTP we help companies develop innovative new products and technologies – working with clients bringing innovation, science and engineering from concept to production.



Without doubt 2023 was a challenging year for diagnostics companies of all sizes. Already in 2024 we are hopefully seeing more than green shoots of recovery; these are most visible in the recent quarterly reporting from the top 10 diagnostics companies where the underlying growth of diagnostics continues to become more apparent as the year-on-year loss of Covid revenues decrease.

In the financial reporting it was good to see the growth in Point-of-Care being higher the rest of the industry; for TTP this is an area of continued innovation and we are bringing actionable diagnosis closer to the patient benefits everyone. In the coming year we hope to share more insights and case studies in this area with you.

Sharing our insight

In recent weeks I was part of a panel discussion organised by TTP and DeciBio Consulting – discussing and challenging conventions in precision medicine. It was a great panel that included a founder of GRAIL, a former MD of GE ventures, several Cambridge University academics and an Epigenetic lead from AstraZeneca. We discussed a range of potentially contentious views such as “Single-cell and spatial omics will never make it into the routine clinic” and “The non-oncology opportunities for “liquid biopsy” to drive precision medicine in liver disease, auto-immune, and cardiovascular diseases will surpass oncology in the next 5 years” - it was a lively debate throughout and you can see the whole Webinar here: <https://www.ttp.com/insights/challenging-conventions-in-precision-medicine/> .

In coming issues we hope to share more thoughts on bringing diagnostics closer to the patients – some examples, when it makes sense, and why it can benefit patients, providers payers, and even the environment.

Diagnostics deal flow

M&A Deals 2023 Summary:

During 2023 **inside:diagnostics** reported on 26 separate M&A deals worth more than US\$ 11.9 billion, nearly twice the deal value reported in 2022. In the first half of 2023 there were 14 deals worth more US\$ 567 million. However, only seven disclosed financial terms. The second half of 2023 saw a dramatic change in the size of reported M&A deals, with 12 deals worth more than US\$ 11.3 billion, with only five deals not disclosing financial terms. Two deals account for US\$ 8.8 billion – Thermo Fishers' acquisition of Olink for US\$ 3.1 billion, and Danaher's acquisition of Abcam for US\$ 5.7 billion.

VC Funding 2023 Summary:

Last year **inside:diagnostics** reported on in-vitro diagnostics companies who received US\$ 1.1 bn in VC funding. As we take a closer look at these deals, we see early-stage funding (Series A and Series B) accounting for a substantial share of VC funding in 2023. Later-stage funding at US\$ 178 million is significantly lower than we saw in 2022 and is also reflected in fewer deals (five compared to 14). Overall, average deal sizes are lower than we saw in 2022 and could be a signal that VC are taking a more cautious approach to investments in general.

Summary of 2023 deal flows reported in the diagnostics newsletter : VC funding

VC funding of Diagnostics companies : 2023
VC funding reported in the inside diagnostics newsletters Feb-2023 to Jan 2024

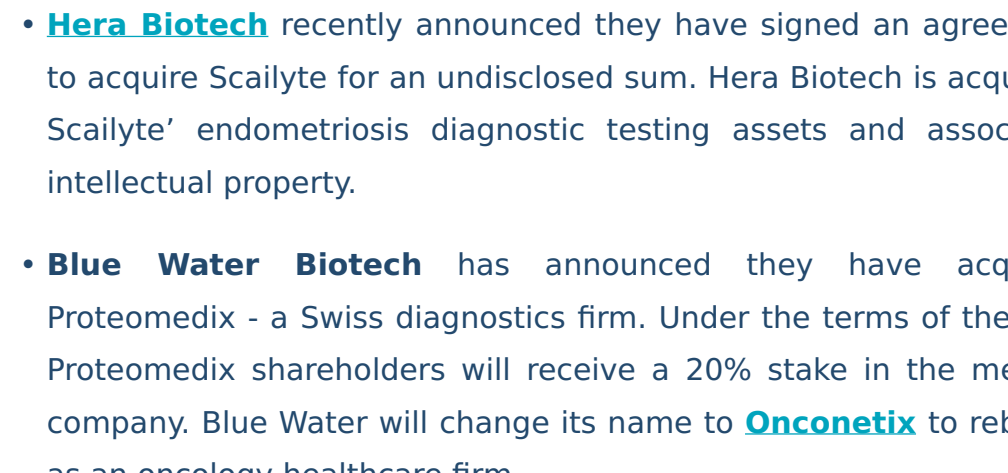
	US\$ million	Deals
Seed funding	80	16
Early-stage funding	541	21
Late-stage funding	178	5
Unspecified VC funding	279	19

Source: (non-disclosed) for analysis

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Comparison 2022 vs 2023 deal flows as reported in the diagnostics newsletter



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M&A

The last month of 2023 and the 1st month of 2024 has seen eight M&A deals worth more than US\$ 1.4 billion. Four of the eight deals did not disclose terms – and our estimate for all eight deals is closer to US\$ 1.8 billion. The largest deal was Bruker's US\$ 967 million acquisition of EliTechGroup in December 2023 – and the only one of four M&A deals in December to disclose terms. January 2024 also saw four M&A deals – worth more than US\$ 497 million.

- **Bruker** is reported to have entered an agreement to acquire EliTechGroup for Eur 870 million (US\$ 970 million). The acquisition aims to strengthen Bruker's position in molecular diagnostics.
- **Roche** has announced they have entered into a definitive agreement to acquire certain point-of-care technologies from LumiraDx for US\$ 295 million, along with an additional payment of up to US\$ 55 million to fund the business until the transaction closes. According to Roche Diagnostics' CEO the addition of the LumiraDx tech will enable Roche to transform testing at the point-of-care.
- **Veracyte** has completed their acquisition of C2i Genomics for US\$ 95 million – US\$ 70 million upfront and up to US\$ 25 million based on meeting milestones over the next two years. The acquisition will add whole-genome minimal residual disease (MRD) capabilities to Veracyte's diagnostics platform and expand the company's ability to serve patients across the cancer care continuum.
- **Natera** recently announced they have completed the acquisition of certain Invitae reproductive, carrier screening and non-invasive prenatal screening assets for US\$ 52.5 million. The deal covers US\$ 10 million upfront payment made by Natera to Invitae, and a further US\$ 42.5 million in potential milestone payments.
- **Hera Biotech** recently announced they have signed an agreement to acquire Scailyte for an undisclosed sum. Hera Biotech is acquiring Scailyte' endometriosis diagnostic testing assets and associated intellectual property.
- **Blue Water Biotech** has announced they have acquired Proteomedix - a Swiss diagnostics firm. Under the terms of the deal Proteomedix shareholders will receive a 20% stake in the merged company. Blue Water will change its name to **Onconetix** to rebrand as an oncology healthcare firm.
- **Imaware** recently announced they have acquired Binx Health's at-home consumer testing business - terms of the deal were not disclosed. The acquisition intends to expand the company's position in the home health market. Binx Health will retain its point-of-care molecular diagnostics business.

Other acquisitions:

- **PerkinElmer** has announced they have acquired Covaris, a leading developer of solutions to empower life science innovations - terms of the transaction were not disclosed. According to the company this merger will accelerate Covaris' growth potential and expand PerkinElmer's existing life sciences portfolio into the high-growth diagnostics end market. Both companies are majority owned by New Mountain Capital.

VC Funding

The period Dec 2023 – end of Jan 2024 has seen more than US\$ 195 million of VC funding flow into in-vitro diagnostics companies. Early-stage companies received more than US\$ 74 million, late-stage companies received more than US\$ 14 million. In addition, US\$ 96 million in funding was committed without mentioning a specific funding round. This included a corporate funding round with Epicore Biosystems receiving an undisclosed amount, as well as including a strategic investment from Denka Company. Genetic Signature also raised US\$ 10.8 million through issuing new shares and a rights issue.

Seed funding:

- **VenomAid Diagnostics** : 2023 The company, based in Lyngby (DK), is focused on commercialising in vitro diagnostics for snakebite testing that can help guide the selection of appropriate antivenoms.
- **Lura Health** has recently reported to have raised Seed funding – amount unknown. The Cambridge (US) based business is developing a non-invasive continuous health monitoring platform using saliva as a diagnostic fluid. Using sensors integrated into existing orthodontic devices that continuously measure analytes in saliva, and automatically transmit information to a smartphone.

Early-stage funding (Series A – Series B):

- **ThunderBio Innovations** has announced they have raised US\$ 14 million in Series B financing. The Jiaxing (CN) based business is focused on developing a range of diagnostics equipment based on microfluidics chip technologies.
- **NowDx** recently announced they have received US\$ 12 million in a Series B funding round. The Arkansas (US) based company said it will use the funding to further the development of over-the-counter and point-of-care diagnostics tests.
- **Circular Genomics** has announced they have raised US\$ 8.3 million in Series A financing. The Albuquerque (US) based company develops diagnostics for psychiatric and neurological disorders based on the analysis of circular RNAs. Circular Genomics said it will use the funds to build and scale commercial operations as it prepares to launch its first product, a blood-based test that predicts patient responses to selective serotonin reuptake inhibitors.
- **Superfluid Dx** – recently announced they have raised US\$ 8.2 million in Series A financing led by WRQ Sciences. WRQ Sciences has acquired majority ownership in the Alzheimer's Disease (AD) diagnostics company, Molecular Stethoscope, Inc., which is now renamed Superfluid Diagnostics, Inc. Superfluid's goal is to build the most accurate diagnostic for neuro-degenerative diseases by harnessing the power of cell-free mRNA.
- **Sapphiros** has announced they have received US\$ 3 million in Series B financing from OraSure Technologies, and have entered a strategic distribution agreement with the Company. Financial terms of the deal were not disclosed. The partnership will connect Sapphiros' product pipeline with OraSure's commercial distribution. OraSure has secured exclusive distribution rights to certain products in Sapphiros' development pipeline. Sapphiros, based in Boston (US), has developed sample collection, next-generation detection systems, computational biology, and printed-electronics to help consumers access diagnostic results.

Late-stage funding (Series C – Series F):

- **Diagens** recently announced they have raised US\$ 14.1 million in a Series C funding round. The Hangzhou (CN) based business is focused on developing a range of diagnostics testing solutions.

Venture funding (Unknown series):

- **Cleveland Diagnostics** has announced they have received US\$ 75 million in private financing. The Cleveland (US) based company said they will use the funding to further development and commercialisation of its portfolio of cancer early detection tests, including the Company's IsoPSA test for prostate cancer.
- **Perosphere Technologies** has recently raised US\$ 7.5 million in financing. The Danbury (US) based business is developing a point-of-care coagulometer pharmacodynamic diagnostic tool with broad sensitivity across drug classes.
- **Genomtec** recently received PLN 21.6 million (US\$ 5.5 million) in funding from the Polish Agency for Enterprise Development. Genomtec, based in (PL), will use the funds to develop an automated system for detecting clinical oncology mutations based on lab-on-chip solutions and isothermal nucleic acid amplification techniques.
- **Durin Technologies** has announced the company has raised US\$ 3.5 million in a funding round. Durin Technologies, based in New Jersey (US), said it will use the funds to support commercialisation of diagnostic tests for Alzheimer's and Parkinson's disease, as well as the development of additional diagnostics.
- **Burst Diagnostics** has recently raised US\$ 2.4 million in funding. The Colorado (US) based business is engaged in develop a point-of-care diagnostic device based on a capillary-driven immunoassay (CaDI) microfluidic device. The company aims to produce STI, Strep and respiratory tests.
- **Ricovr Healthcare** has raised US\$ 2 million in a financing round. The Princeton (US) based company is developing real-time THC detection within five minutes using saliva.

Other funding:

- **Genetic Signatures** has raised AU\$ 15.9 million (US\$ 10.8 million) through the placement and rights issue of 43 million shares. The New South Wales (AU) based business develops and manufactures real-time PCR infectious disease tests said they intend to use the funds to support regulatory reviews and commercialisation of its molecular diagnostics products.

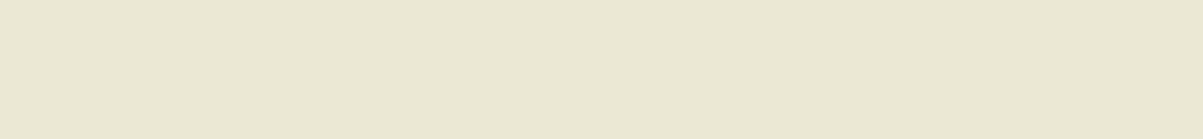
Corporate

- **Epicore Biosystems** recently raised an undisclosed amount in funding. The funding included an undisclosed strategic investment from Denka Company – a Japanese multinational technology and materials business. Epicore Biosystems, based in Cambridge, Mass. (US) has developed a wearable microfluidic platform that is “skin-like” and capable of analysing small droplets of sweat for proteomics, inflammatory markers, hydration, and health biomarkers. According to the company this new investment is the first of a larger series and will be used to support the scale and distribution of Epicore's wearable solutions within Japan and in the broader Asia market.

TTP News

Recently our Cell and Gene team has been looking at whether mRNA vaccine development and manufacture could leverage and learn from tools in the diagnostic arena – in particular considering if the point-of-care sample to answer devices in diagnostics could be used. You can read about it here:

<https://www.ttp.com/insights/personalised-mrna-therapies-pose-a-qc-challenge/>



Jobs at TTP

Do keep an eye on [TTP vacancies](#); some of our initiatives will be looking for capable people this year!

In diagnostics we are looking for an experienced technical project leader and the job description can be found here: <https://www.ttp.com/careers/vacancies/c1fe05c520/>

Dates for your diary

ECCMID 2024: 27-30 April 2024

Fira Gran Via (North Access), Barcelona, Spain
<https://www.eccmid.org>

ADLM (formerly AACC) 2024: July 28- August 1

McCormick Place Convention Center, Chicago, IL
<https://meeting.aacc.org/2024>

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