MAA REPORT · HALF-YEARLY

R&D Investment and Output, Korea's Listed Healthcare Sector — H1 2026

R&D, financials, headcount and export sales of 252 listed companies joined to approvals, trials, publications and patents · computed 2026-10-07 · published half-yearly

This report joins the R&D spend disclosed by Korea's listed healthcare companies to the approvals, trials, publications and patents the same companies produced over the same period. Tallies of R&D spend say how much was invested; what it turned into can only be counted once five sources are joined at the company level. Every figure is a tally of primary filings and regulatory or bibliographic records; methods and limitations are disclosed below. Free to quote and reuse with attribution to Medical AI Alliance (MAA), under CC BY 4.0.

First edition 2026-09-24 · Full edition 2026-10-07 · Measured 2026-10-07 · Medical AI Alliance

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What the numbers say

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How to cite this report

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Key findings

KRW 3.08tn
R&D spend, H1 2026
252 companies

+15.3%
Year on year
204 comparable · 115 up · 89 down

10.7%
R&D as % of revenue
244 companies · company median 9.4%

32.5%
Share of R&D at loss-makers
114 of 244 companies

15.8%
Capitalised share of R&D
188 companies with reconciled accounting

27.7%
Export share of sales
Sales table, 137 companies · 38.5% incl. overseas subsidiaries

1. **252 listed healthcare companies spent KRW 3.08tn on R&D in H1 2026**, +15.3% year on year on a like-for-like basis.
2. **A few companies drove the rise.** The ten largest increases made 84% of the net increase, while 89 companies cut spending.
3. **32.5% of R&D is spent by loss-making companies.** 76 of the 114 loss-makers decided equity or bond issues in 2024–2025, worth 1.4x their R&D over the same years.
4. **Biotech spends 30% of revenue on R&D at a -15% operating margin**; pharma & CDMO 8% and 15%.
5. **17 companies disclosed 25 out-licensing deals.** The 15 with a KRW value total KRW 15.26tn; upfronts: KRW 522.9bn (17 deals).
6. **34 companies run phase 3 trials.** 2024–2025: 43 Korean and 52 global phase 3 starts; 224 bioequivalence studies counted separately.
7. **Companies with reconciled accounting capitalise 15.8% of R&D.** Exports are 27.7% of sales on the sales-table basis (38.5% including overseas subsidiaries' sales).
8. **Over 2024–2025, 260 companies spent KRW 11.14tn on R&D; the same period produced 1,874 approvals, 284 Korean trial authorisations and 1,081 papers.** Among the Korean reports we reviewed, the first to join spend and output company by company.

At a glance

I Investment
How much
KRW 3.08tn
+15.3% YoY · top 20 hold 58%

II Profitability
Against revenue
10.7%
114 loss-makers spend 32%

III People
Headcount
+1.4%
88,589 staff · 242 companies

IV Output
What it produced
1,874
2-year approvals · trials 284 · papers 1,081

V Leaders

Who leads

Top 10

Two-year top spenders, one by one

What this report adds

1. **It joins money to output, company by company.** Two years of R&D at 260 companies sit next to the same companies' approvals, trials by phase, papers, patents and licensing deals. The Korean reports we reviewed count spending only.
2. **It shows where the money comes from.** R&D at 114 loss-making companies is set against 353 equity and bond issue decisions on the same company axis.
3. **It names companies and publishes the full data.** An appendix and CSV for all 252 companies let anyone recompute the figures.
4. **It shows its checks.** Ratios are recomputed with the filing form's formula; the 11 companies whose self-reported ratio differs, and every correction, are disclosed. Key figures are cross-checked through two independent paths.
5. **It is fast and regular.** August half-year filings are analysed in October; medical AI is tracked as its own sector.
6. **It counts licensing and pipelines from the filings.** 34 companies with phase 3 trials and 25 out-licensing deals, each read from the source filing and checked against a verbatim quote.

About this survey

Coverage — 252 Korean listed healthcare, biotech and medical-device companies whose H1 2026 R&D spend passed our cross-check. 19 companies whose main business is not healthcare and 10 parents that consolidate listed subsidiaries (nine holding companies and SK Chemicals) are excluded. It covers every index company whose R&D passed our cross-check; those that did not are reported in the method section.

Reference date — 30 June 2026. Income and R&D are January–June totals; headcount is at period end. Prior-year figures are those restated in the 2026 filings.

Breakdowns — five MAA index sectors, and company size as each company declares it in its periodic filing (large 12 · mid-sized 88 · SME 152). Definitions are in the method section.

Interests — MAA member companies are among those covered; membership has no bearing on any figure or ranking. Every number is computed from public filings and databases under the same rules.

Prepared by the Medical AI Alliance (MAA), computed 2026-10-07. The table shows how many companies each item covers; counts differ because only cross-checked values are used.

Item	Source	Companies (n)
R&D spend, change, trend	R&D expense table in half-year and annual filings	252
R&D accounting (expensed / capitalised)	Accounting lines of the same table	188
R&D by nature	Nature lines of the same table	134
Revenue, operating profit	DART financial API (KRW filers)	244

Item	Source	Companies (n)
Domestic vs export sales	Sales table, else regional note	172
Employees	DART employee status (parent)	242
Company size	SME / mid-sized status as self-declared	252
Approvals, trials, papers, patents (2 years)	MFDS, FDA, ClinicalTrials.gov, PubMed, KIPRIS	260

I. R&D investment

How much, where it grew, how it was accounted for

KRW 3.08tn H1 total **+15.3%** YoY **15.8%** Capitalised

- Pharma & CDMO (98 companies) spent 55% of R&D
- Up 15.3% across 204 comparable companies, yet 89 cut spending
- The ten largest increases made up 84% of the net rise

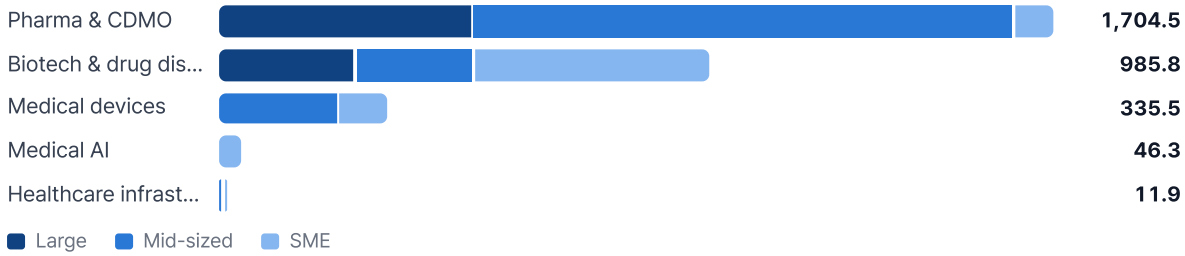
I-1. H1 2026 R&D spend — sector × size

1. H1 2026 R&D spend across 252 companies was **KRW 3.08tn**.
2. By sector, Pharma & CDMO (98 companies) accounted for 55.3%.
3. By size, mid-sized companies (88) spent the most at 51.4%; the 12 large companies spent 25.7%.

Figure I-1

Pharma & CDMO spends 55% of R&D; mid-sized companies 51%

H1 2026 R&D spend by sector and company size, KRW bn · 252 companies



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector \ size (KRW bn)	Large	Mid-sized	SME	All
Pharma & CDMO	518.3 (8)	1,106.2 (52)	80.1 (38)	1,704.5 (98)
Biotech & drug discovery	275.5 (4)	232.6 (10)	477.7 (54)	985.8 (68)
Medical devices	—	240.0 (24)	95.5 (43)	335.5 (67)
Medical AI	—	—	46.3 (12)	46.3 (12)
Healthcare infrastructure	—	— (2)	5.3 (5)	11.9 (7)
All	**793.8 (12)**	**1,585.5 (88)**	**704.8 (152)**	**3,084.1 (252)**

Company counts in brackets. Cells with fewer than three companies are shown as "—".

I-2. Year-on-year change

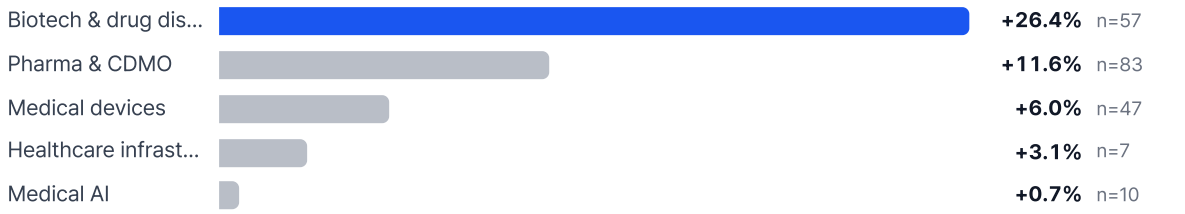
1. Among the 204 companies comparable year on year, R&D spend rose **15.3%**: 115 increased and 89 decreased.
2. Growth was fastest in Biotech & drug discovery (+26.4%) and slowest in Medical AI (+0.7%), among sectors with ten or more companies.

3. Aggregate growth follows the largest spenders; read it alongside the count of companies that rose and fell.

Figure I-2a

Biotech & drug discovery led with +26.4%

Year-on-year change in R&D spend, same companies · by sector

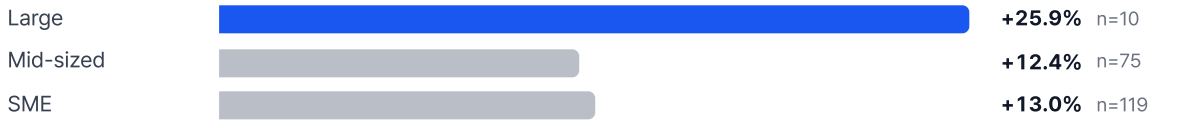


Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Figure I-2b

By size, large companies grew most (+25.9%)

Same basis, by company size



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector \ size	Large	Mid-sized	SME	All
Pharma & CDMO	+23.1% (6)	+8.6% (43)	+8.7% (34)	+11.6% (83)
Biotech & drug discovery	+29.4% (4)	+33.6% (9)	+20.8% (44)	+26.4% (57)
Medical devices	—	+12.5% (21)	-12.8% (26)	+6.0% (47)
Medical AI	—	—	+0.7% (10)	+0.7% (10)
Healthcare infrastructure	—	— (2)	-12.7% (5)	+3.1% (7)
All	**+25.9% (10)**	**+12.4% (75)**	**+13.0% (119)**	**+15.3% (204)**

Growth is computed on the same companies' totals; brackets show companies compared. Companies whose consolidation scope changed (e.g. the Samsung Biologics demerger) are excluded.

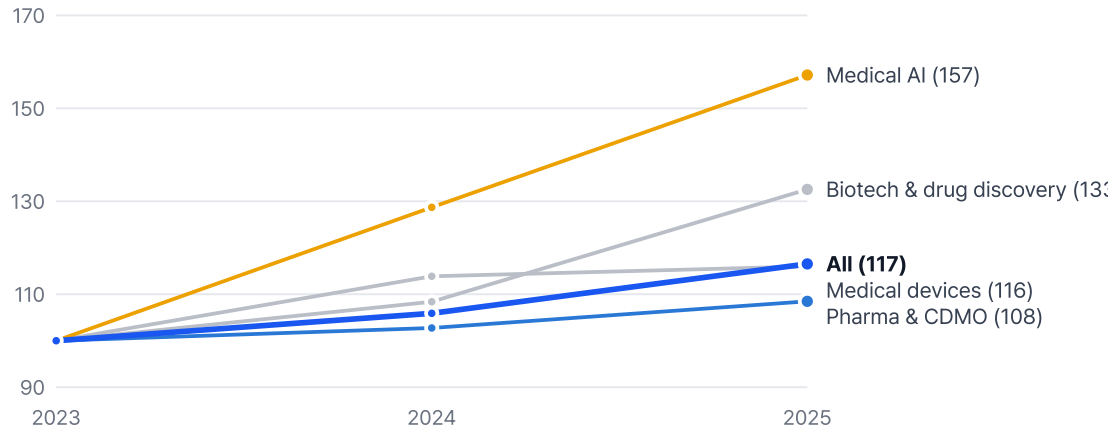
I-3. Trend

1. The same 203 companies with values in all five periods.
2. Annual R&D went from KRW 4.32tn in 2023 to KRW 5.04tn in 2025 (+16.5%).
3. Half-year on half-year: +15.3%.

Figure I-3

In two years Medical AI grew 57%; Pharma & CDMO +8%

Annual R&D index (2023 = 100), same 203 companies · sectors with 10+ companies



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector (KRW bn)	FY2023	FY2024	FY2025	H1 2025	H1 2026
Pharma & CDMO	2,551.8	2,621.8	2,768.1	1,312.3	1,464.5
Biotech & drug discovery	1,207.5	1,308.7	1,600.7	725.1	916.4
Medical devices	477.4	543.6	553.8	263.4	279.1
Medical AI	58.2	74.9	91.4	40.5	40.8
Healthcare infrastructure	27.1	27.8	22.4	11.5	11.9
All	**4,321.9**	**4,576.9**	**5,036.4**	**2,352.9**	**2,712.7**

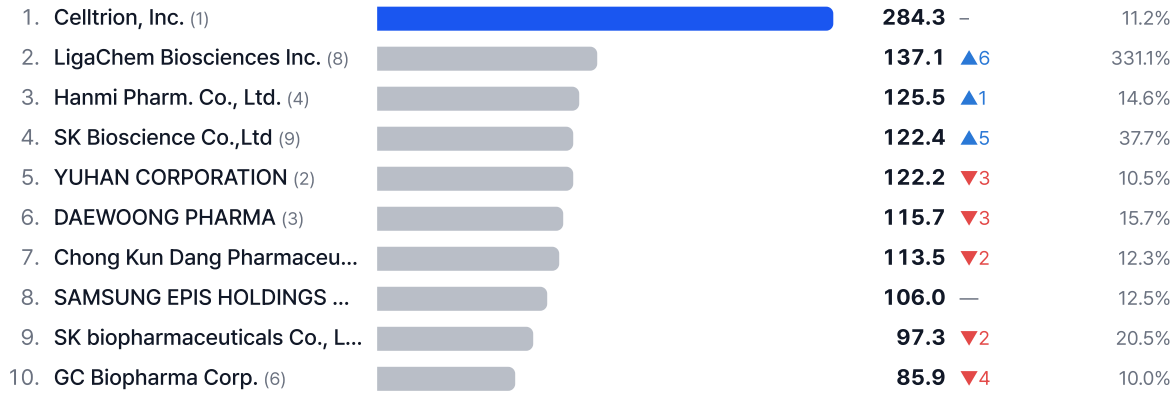
I-4. The twenty largest spenders

1. The top twenty spent KRW 1.79tn, **58.2%** of the total.
2. Celltrion, Inc. leads with KRW 284.3bn.
3. Ratios to revenue vary with stage: large-revenue companies spend more in absolute terms at lower ratios.

Figure I-4

Top twenty spend 58%; LigaChem Biosciences Inc. up from #8 to #2

Top 20 by H1 2026 R&D, KRW bn · prior-half rank in brackets · right: % of revenue





Prior ranks among comparable companies; "—": not comparable (e.g. demerger) · Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	% of revenue
1	Celltrion, Inc.	Pharma & CDMO	Large	284.3	+23.8%	11.2%
2	LigaChem Biosciences Inc.	Biotech & drug discovery	Mid-sized	137.1	+77.4%	331.1%
3	Hanmi Pharm. Co., Ltd.	Pharma & CDMO	Mid-sized	125.5	+18.2%	14.6%
4	SK Bioscience Co.,Ltd	Biotech & drug discovery	Large	122.4	+80.0%	37.7%
5	YUHAN CORPORATION	Pharma & CDMO	Mid-sized	122.2	+13.8%	10.5%
6	DAEWOONG PHARMA	Pharma & CDMO	Mid-sized	115.7	+8.5%	15.7%
7	Chong Kun Dang Pharmaceutical Corp.	Pharma & CDMO	Mid-sized	113.5	+36.6%	12.3%
8	SAMSUNG EPIS HOLDINGS Co., Ltd.	Pharma & CDMO	Large	106.0	—	12.5%
9	SK biopharmaceuticals Co., Ltd.	Biotech & drug discovery	Large	97.3	+19.2%	20.5%
10	GC Biopharma Corp.	Pharma & CDMO	Mid-sized	85.9	+3.8%	10.0%
11	SAMSUNG BIOLOGICS CO.,LTD.	Pharma & CDMO	Large	81.9	—	3.2%
12	DONG-A ST CO.,LTD	Pharma & CDMO	Mid-sized	55.2	-8.5%	12.9%
13	ABL Bio Inc.	Biotech & drug discovery	SME	48.8	-8.9%	148.6%
14	Kolon TissueGene, Inc.	Biotech & drug discovery	Large	48.0	-11.4%	—
15	MEDIPOSTCO.,LTD.	Biotech & drug discovery	SME	44.0	+28.3%	115.1%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	% of revenue
16	JW PHARMACEUTICAL	Pharma & CDMO	Mid-sized	43.1	-11.5%	10.2%
17	SD BIOSENSOR INC.	Medical devices	Mid-sized	42.9	+18.8%	11.3%
18	HK inno.N Corporation	Pharma & CDMO	Mid-sized	42.6	+12.8%	8.1%
19	Voronoi, Inc.	Biotech & drug discovery	SME	41.7	+95.4%	—
20	JEIL PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	35.9	+68.4%	13.0%

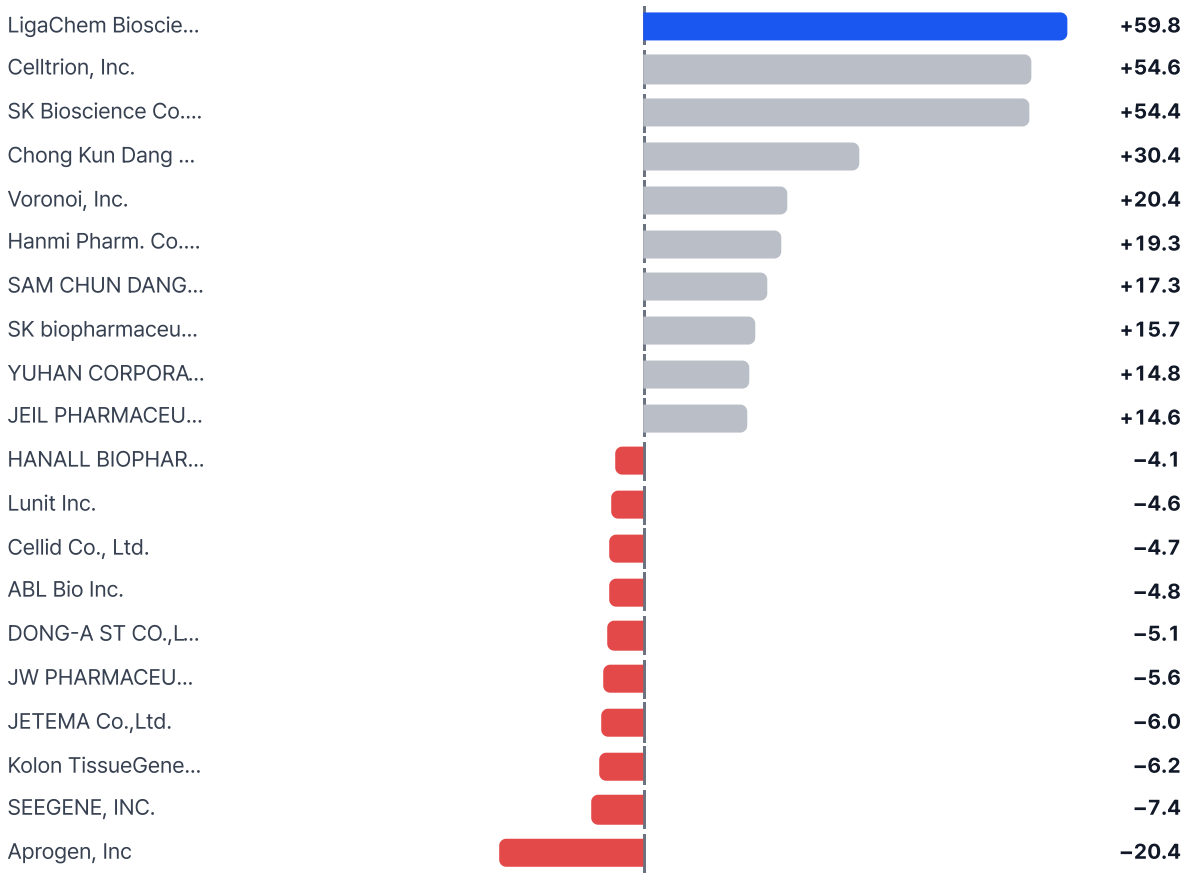
I-5. Largest increases and decreases

1. Net increase across comparable companies: KRW 360.0bn.
2. The ten largest increases sum to KRW 301.4bn, 83.7% of the net rise.

Figure I-5

Ten companies made 84% of the KRW 360.0bn net rise

Ten largest increases and decreases, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Rank	Company	H1 2025 (KRW bn)	H1 2026 (KRW bn)	Change (KRW bn)
1	LigaChem Biosciences Inc.	77.3	137.1	+59.8
2	Celltrion, Inc.	229.7	284.3	+54.6
3	SK Bioscience Co.,Ltd	68.0	122.4	+54.4
4	Chong Kun Dang Pharmaceutical Corp.	83.1	113.5	+30.4
5	Voronoi, Inc.	21.4	41.7	+20.4
6	Hanmi Pharm. Co., Ltd.	106.2	125.5	+19.3
7	SAM CHUN DANG PHARM CO. LTD	4.4	21.7	+17.3
8	SK biopharmaceuticals Co., Ltd.	81.6	97.3	+15.7
9	YUHAN CORPORATION	107.3	122.2	+14.8
10	JEIL PHARMACEUTICAL CO.,LTD	21.3	35.9	+14.6

Rank	Company	H1 2025 (KRW bn)	H1 2026 (KRW bn)	Change (KRW bn)
1	Aprogen, Inc	30.3	9.9	−20.4
2	SEEGENE, INC.	33.6	26.1	−7.4
3	Kolon TissueGene, Inc.	54.2	48.0	−6.2
4	JETEMA Co.,Ltd.	11.3	5.3	−6.0
5	JW PHARMACEUTICAL	48.8	43.1	−5.6
6	DONG-A ST CO.,LTD	60.4	55.2	−5.1
7	ABL Bio Inc.	53.5	48.8	−4.8
8	Cellid Co., Ltd.	8.4	3.7	−4.7
9	Lunit Inc.	19.0	14.4	−4.6
10	HANALL BIOPHARMA CO.,LTD	18.4	14.3	−4.1

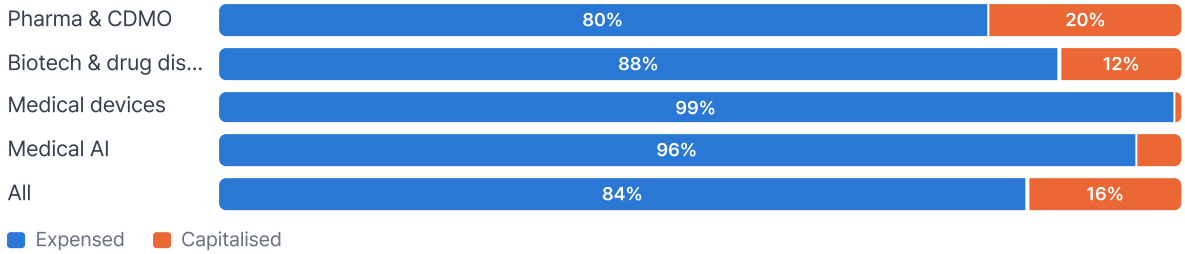
I-6. How R&D is accounted for, and what it buys

1. Among the 188 companies whose accounting lines reconcile (86% of R&D), **15.8%** was capitalised as development cost.
2. Capitalisation defers cost, so the same spend weighs less on current profit.
3. Government grants totalled KRW 57.3bn.

Figure I-6a

Pharma & CDMO capitalises 20% of R&D

Accounting split, 188 reconciling companies (86% of R&D)

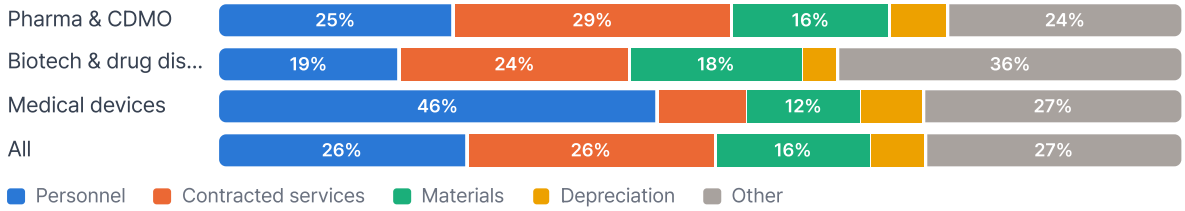


Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Figure I-6b

Personnel and contracted services are about 26% each

By nature, 134 companies (56% of R&D)



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Capitalised share	Large	Mid-sized	SME	All
Pharma & CDMO	38.7% (6)	11.5% (44)	4.0% (27)	19.9% (77)
Biotech & drug discovery	42.8% (3)	4.3% (8)	4.6% (45)	12.5% (56)
Medical devices	—	0.1% (18)	2.0% (32)	0.5% (50)
Medical AI	—	—	4.5% (3)	4.5% (3)
Healthcare infrastructure	—	— (1)	— (1)	— (2)
All	**39.7% (9)**	**9.0% (71)**	**4.3% (108)**	**15.8% (188)**

Only companies whose lines sum to the total (±1%) are included. Grants are not re-allocated.

II. Profitability and funding

R&D against revenue and profit, export sales, and where the money comes from

10.7% R&D / revenue **114** Loss-making **27.7%** Export share

- 32% of R&D is spent by 114 loss-makers
- Biotech & drug discovery has the highest R&D intensity (30.4%)
- Exports are 27.7% of sales on the sales-table basis (38.5% incl. overseas subsidiaries)

II-1. Revenue, operating profit and R&D intensity

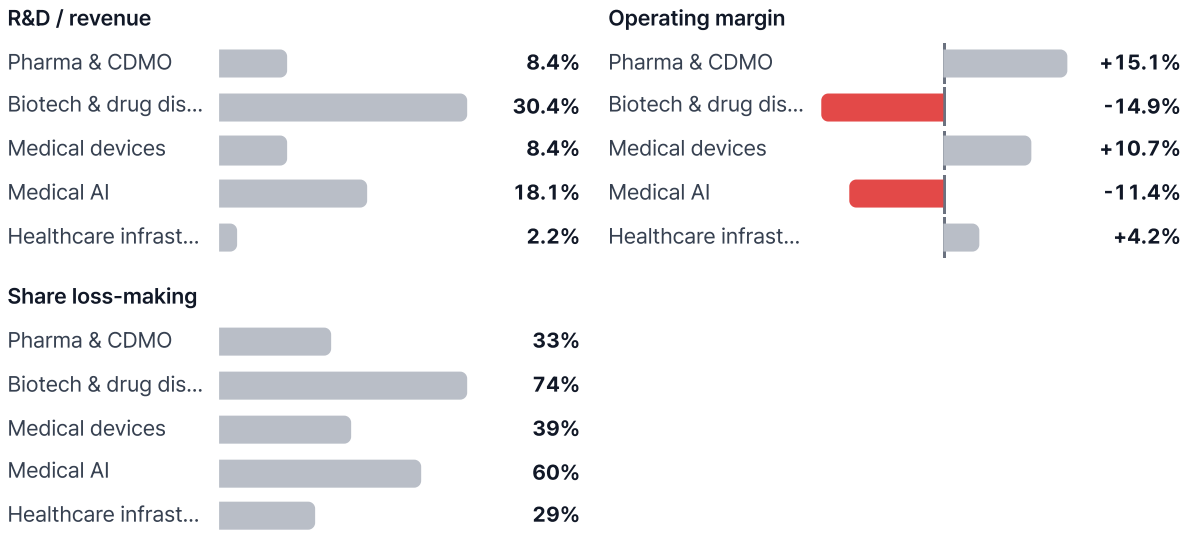
1. The 244 companies with financials had H1 revenue of **KRW 27.96tn** (+13.0% YoY), an operating margin of 10.8% and R&D equal to **10.7%** of revenue.
2. Biotech & drug discovery has both the highest R&D intensity (30.4%) and the lowest operating margin (-14.9%).
3. SMEs: R&D intensity 19.3%, operating margin -11.3%; large companies: 9.8% and 30.7%.

Against the world — in the 2024 EU Industrial R&D Investment Scoreboard (the world's top 2,000 R&D investors), the 437 health-sector companies spent **13.5%** of 2023 sales on R&D, EUR 590.6m per company (about KRW 841.5bn a year at that report's rate). The 252 companies here spent **10.7%** of H1 2026 revenue. Definitions differ: own-funded, annual, global leaders versus pre-grant, half-year, all Korean listed companies (DOI 10.2760/0775231, Table 10).

Figure II-1

Biotech & drug discovery spends 30% of revenue on R&D at a -15% margin

Three measures side by side by sector, each on its own scale · half-year totals



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector	Companies (n)	Revenue (KRW bn)	Revenue YoY	Operating margin	R&D / revenue	Loss-making (n)
Pharma & CDMO	96	20,248.7	+13.6%	15.1%	8.4%	32
Biotech & drug discovery	65	2,954.9	+12.0%	-14.9%	30.4%	48

Sector	Companies (n)	Revenue (KRW bn)	Revenue YoY	Operating margin	R&D / revenue	Loss-making (n)
Medical devices	66	3,966.4	+10.8%	10.7%	8.4%	26
Medical AI	10	239.2	+37.9%	-11.4%	18.1%	6
Healthcare infrastructure	7	548.8	+5.0%	4.2%	2.2%	2
All	**244**	**27,958.0**	**+13.0%**	**10.8%**	**10.7%**	**114**

Size	Companies (n)	Revenue (KRW bn)	Revenue YoY	Operating margin	R&D / revenue	Loss-making (n)
Large	11	7,634.0	+30.2%	30.7%	9.8%	3
Mid-sized	88	16,944.5	+6.3%	6.3%	9.4%	23
SME	145	3,379.5	+19.0%	-11.3%	19.3%	88
All	**244**	**27,958.0**	**+13.0%**	**10.8%**	**10.7%**	**114**

Ratios are computed on totals, so large companies weigh more. Company-level distribution: II-2.

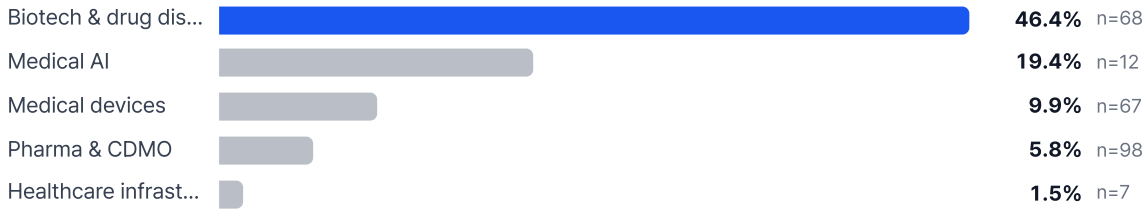
II-2. Distribution of R&D intensity

1. The median company spends **9.4%** of revenue on R&D.
2. The median is highest in Biotech & drug discovery (46.4%) and lowest in Pharma & CDMO (5.8%).
3. **42 companies exceed 50%**, some spending more on R&D than they earn — development-stage companies with little revenue.

Figure II-2

Median company 9.4% — Biotech & drug discovery 46%, Healthcare infrastructure 1%

Median R&D-to-revenue ratio by sector (company level)



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector (n)	<5%	5–10%	10–20%	20–50%	50%+	No revenue	Not available	Median
Pharma & CDMO	41	29	19	2	5	0	2	5.8%
Biotech & drug discovery	9	5	8	12	29	2	3	46.4%
Medical devices	21	13	20	8	5	0	0	9.9%
Medical AI	1	1	3	2	3	0	2	19.4%

Sector (n)	<5%	5–10%	10–20%	20–50%	50%+	No revenue	Not available	Median
Healthcare infrastructure	6	0	0	1	0	0	0	1.5%
All	**78**	**48**	**50**	**25**	**42**	**2**	**7**	**9.4%**

"No revenue": zero half-year revenue. "Not available": no revenue line in the filed financials. From this edition ratios are recomputed on one definition rather than taken as self-reported (see method).

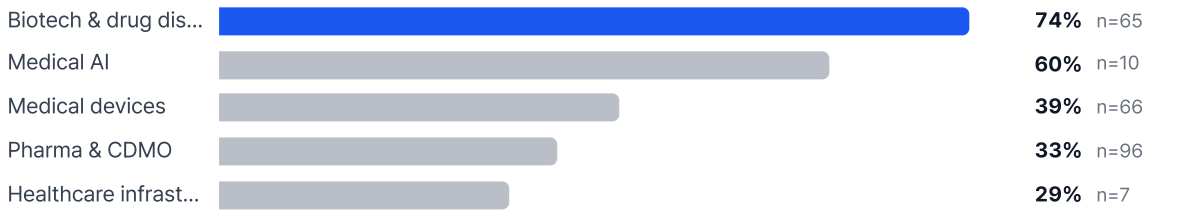
II-3. R&D at loss-making companies

1. **114 of 244 companies** reported an operating loss.
2. They accounted for **32.5%** of R&D spend.
3. Among SMEs, 88 of 145 were loss-making.

Figure II-3a

114 loss-makers spend 32% of R&D

Share of companies with an operating loss, by sector



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Figure II-3b

61% of SMEs are loss-making

Share loss-making, by company size



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector	Loss-making (n)	All (n)	Share
Pharma & CDMO	32	96	33.3%
Biotech & drug discovery	48	65	73.8%
Medical devices	26	66	39.4%
Medical AI	6	10	60.0%
Healthcare infrastructure	2	7	28.6%
All	**114**	**244**	**46.7%**

Size	Loss-making (n)	All (n)	Share
Large	3	11	27.3%

Size	Loss-making (n)	All (n)	Share
Mid-sized	23	88	26.1%
SME	88	145	60.7%
All	**114**	**244**	**46.7%**

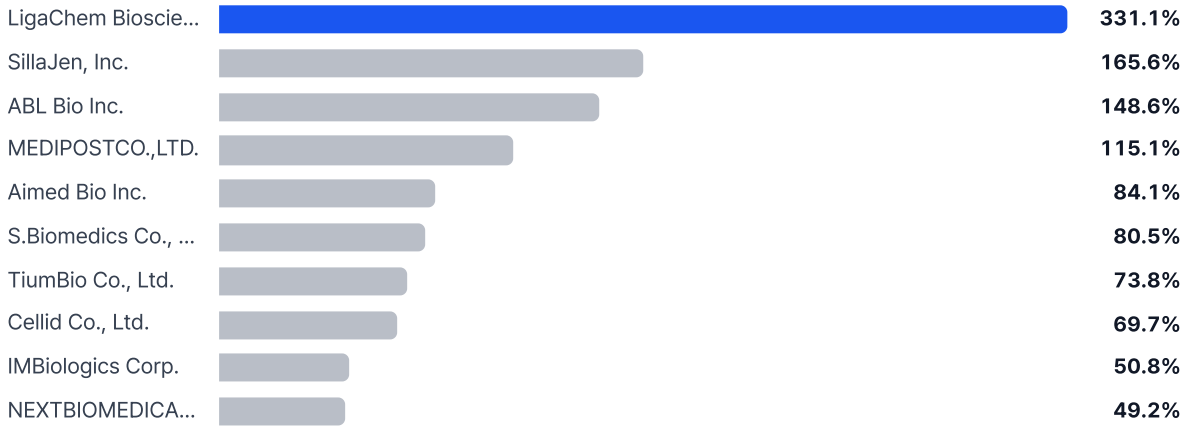
II-4. Highest R&D intensity

Companies with at least KRW 5bn of half-year revenue, ranked by R&D intensity (small revenue makes ratios swing). LigaChem Biosciences Inc. is highest at 331.1%.

Figure II-4

LigaChem Biosciences Inc. spends 331% of revenue on R&D

Top ten by R&D intensity · half-year revenue at least KRW 5bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Rank	Company	Sector	Revenue (KRW bn)	R&D (KRW bn)	R&D / revenue
1	LigaChem Biosciences Inc.	Biotech & drug discovery	41.4	137.1	331.1%
2	SillaJen, Inc.	Biotech & drug discovery	5.1	8.4	165.6%
3	ABL Bio Inc.	Biotech & drug discovery	32.8	48.8	148.6%
4	MEDIPOSTCO.,LTD.	Biotech & drug discovery	38.2	44.0	115.1%
5	Aimed Bio Inc.	Biotech & drug discovery	28.7	24.1	84.1%
6	S.Biomedics Co., Ltd.	Pharma & CDMO	9.2	7.4	80.5%
7	TiumBio Co., Ltd.	Biotech & drug discovery	7.4	5.5	73.8%
8	Cellid Co., Ltd.	Biotech & drug discovery	5.3	3.7	69.7%

Rank	Company	Sector	Revenue (KRW bn)	R&D (KRW bn)	R&D / revenue
9	IMBiologics Corp.	Biotech & drug discovery	7.2	3.7	50.8%
10	NEXTBIOMEDICAL Co., Ltd.	Medical devices	9.1	4.5	49.2%

II-5. Domestic and export sales

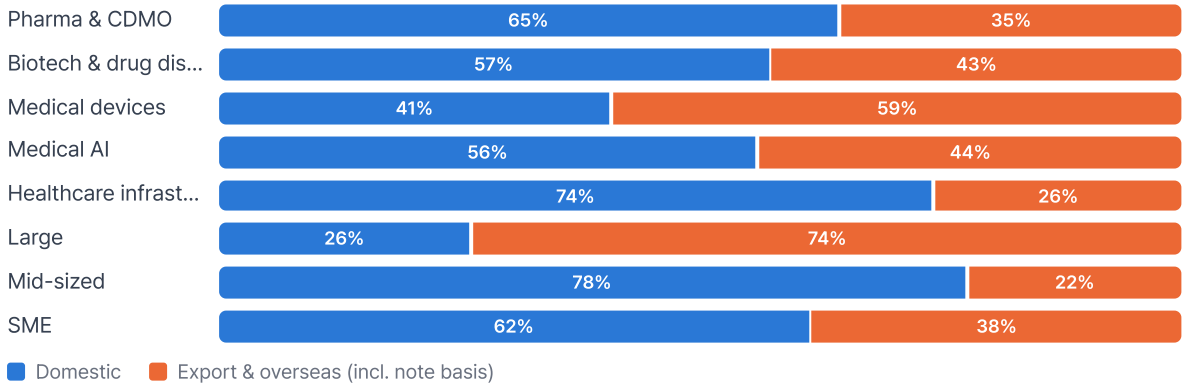
1. Across the 137 companies whose sales table splits domestic and export sales, exports were **27.7%** (the same definition as the Korea Biotechnology Industry Organization survey).
2. Adding 35 companies whose split comes from the regional note (including overseas subsidiaries' local sales; Celltrion, Samsung Biologics) gives 38.5% for 172 companies — the figure and tables below use this combined base.
3. On the combined base, Medical devices is highest by sector (59.2%) and large companies by size (73.8%).

Read with care — exports come from the sales table where available, otherwise from the regional note, whose overseas revenue includes overseas subsidiaries' local sales and is broader than exports. Celltrion and Samsung Biologics are on the note basis, which lifts the large-company figure.

Figure II-5

Medical devices earns 59% of sales from exports or overseas, the highest sector (combined base)

Domestic vs export, 172 companies (83% of revenue) · by sector and size



Includes 35 on note basis — see box · Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector	Companies (n)	Domestic (KRW bn)	Export & overseas (KRW bn)	Export & overseas share	From notes (n)
Pharma & CDMO	77	12,525.1	6,874.9	35.4%	17
Biotech & drug discovery	32	590.5	439.5	42.7%	7
Medical devices	49	1,179.5	1,710.8	59.2%	9
Medical AI	9	151.8	119.0	43.9%	2

Sector	Companies (n)	Domestic (KRW bn)	Export & overseas (KRW bn)	Export & overseas share	From notes (n)
Healthcare infrastructure	5	329.6	113.4	25.6%	0
All	**172**	**14,776.6**	**9,257.6**	**38.5%**	**35**

Size	Companies (n)	Domestic (KRW bn)	Export & overseas (KRW bn)	Export & overseas share	From notes (n)
Large	8	1,789.8	5,044.2	73.8%	4
Mid-sized	70	11,470.1	3,265.6	22.2%	12
SME	94	1,516.6	947.8	38.5%	19
All	**172**	**14,776.6**	**9,257.6**	**38.5%**	**35**

The domestic/export split in the half-year sales table is used first (137 companies); where it is absent, the regional revenue note is used (35). The note's overseas revenue includes local sales of overseas subsidiaries and is broader than exports — Celltrion and Samsung Biologics are on the note basis.

II-6. Capital raising — equity and bonds

1. From January 2024 to June 2026, 353 equity and bond issues worth **KRW 8.95tn** were decided.
2. Working capital is the main stated use (66.6%); 86.0% of the amount was private or third-party placement.
3. Counted at the decision; actual proceeds may be cancelled or reduced.

Figure II-6a

KRW 8.95tn over 2.5 years — KRW 3.60tn (2024), KRW 2.90tn (2025), KRW 2.44tn (H1 2026)

Issue decisions by period and type, KRW bn

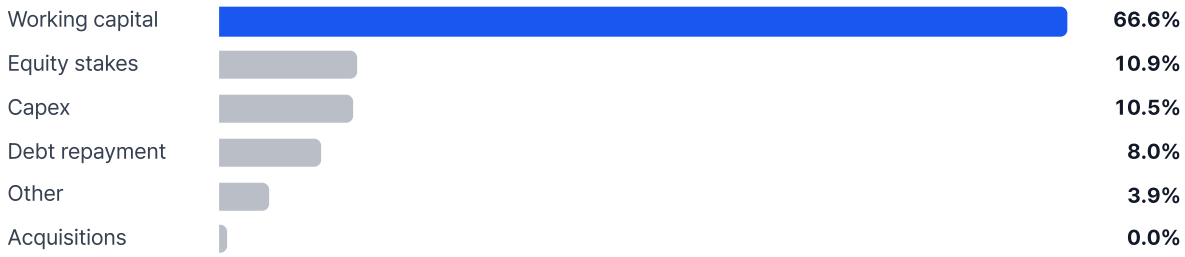


Source: DART material-event reports (share and bond issuance decisions), Jan 2024–Jun 2026 · Analysis: MAA

Figure II-6b

67% of proceeds are earmarked for working capital

Stated use of proceeds



Source: DART material-event reports (share and bond issuance decisions), Jan 2024–Jun 2026 · Analysis: MAA

Sector	Companies	Raisers	Raised (KRW bn)	2-yr raised / 2-yr R&D
Pharma & CDMO	98	45	2,303.3	25.8%
Biotech & drug discovery	68	45	5,007.8	114.2%
Medical devices	67	31	1,129.7	71.6%
Medical AI	12	7	413.9	193.5%
Healthcare infrastructure	7	4	92.9	87.6%
All	**252**	**132**	**8,947.7**	**59.4%**

12 decisions without a stated amount are counted but not summed. "2-yr raised / 2-yr R&D" divides 2024–2025 decisions by the same companies' 2024–2025 R&D; it does not mean the money funded R&D.

II-7. How loss-makers keep funding research

1. **76 of the 114 companies loss-making in H1 2026 (67%)** decided an equity or bond issue in 2024–2025; 37 of 130 profitable companies did.
2. Loss-makers' 2024–2025 issue decisions equal **142%** of their R&D over the same years; for profitable companies, 19%.
3. Medical AI is highest at 194% (sectors with 10+ companies).

Figure II-7a

Loss-makers decided to raise 1.4x their R&D

2024–2025 issue decisions ÷ same-period R&D, grouped by H1 2026 operating result

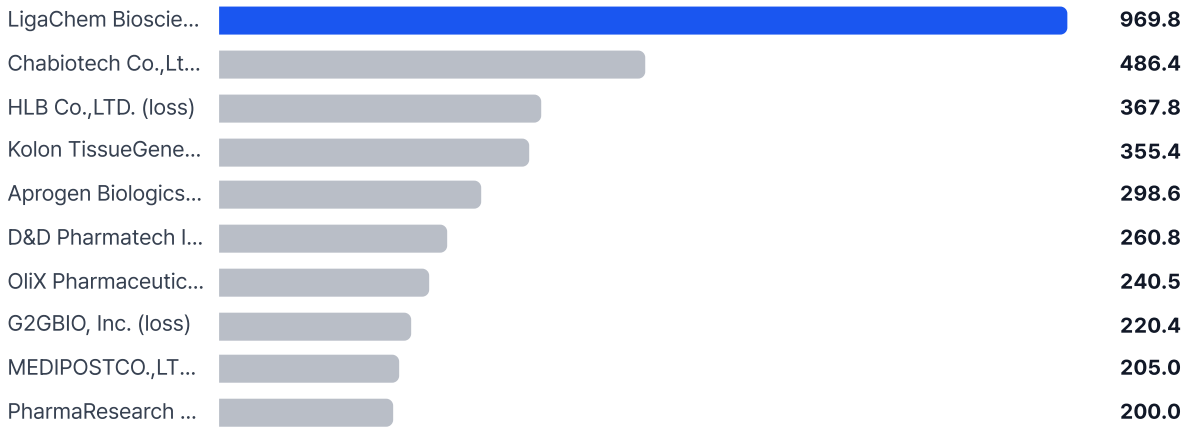


Source: DART material-event reports (share and bond issuance decisions), Jan 2024–Jun 2026 · Analysis: MAA

Figure II-7b

LigaChem Biosciences Inc. decided the most, KRW 969.8bn

Top ten by issue decisions, KRW bn · Jan 2024–Jun 2026 · (loss) = loss-making in H1 2026



Source: DART material-event reports (share and bond issuance decisions), Jan 2024–Jun 2026 · Analysis: MAA

Grouped by H1 2026 operating result (244 companies with revenue and operating profit, as in II-3), not by results at the time of issue. Counted at the decision; actual proceeds may differ.

III. People

Parent-company headcount, set against R&D. R&D headcount has no standard disclosure

88,589 Employees **+1.4%** YoY

- 88,589 staff at 242 companies, +1.4% year on year
- Medical AI is lowest at -2.7% (sectors with 10+ companies)

III-1. Headcount and change

1. The 242 companies with both years employed **88,589**, +1.4% year on year.
2. Medical devices grew most (+2.4%); Medical AI was lowest (-2.7%), among sectors with ten or more companies.
3. R&D change (I-2) and headcount change cover different companies and perimeters (group vs parent), so their pace is not compared directly.

Figure III-1

Headcount +1.4% — only Medical AI fell

Parent-company headcount at period end, year-on-year change · companies with both years



Source: DART half-year filings and employee data · Analysis: MAA

Sector	Companies (n)	H1 2025	H1 2026	Change
Pharma & CDMO	96	57,943	58,609	+1.1%
Biotech & drug discovery	66	11,211	11,375	+1.5%
Medical devices	62	14,621	14,971	+2.4%
Medical AI	11	1,648	1,604	-2.7%
Healthcare infrastructure	7	1,955	2,030	+3.8%
All	**242**	**87,378**	**88,589**	**+1.4%**

Size	Companies (n)	H1 2025	H1 2026	Change
Large	11	13,131	13,733	+4.6%
Mid-sized	86	55,143	55,582	+0.8%
SME	145	19,104	19,274	+0.9%

Size	Companies (n)	H1 2025	H1 2026	Change
All	242	87,378	88,589	+1.4%

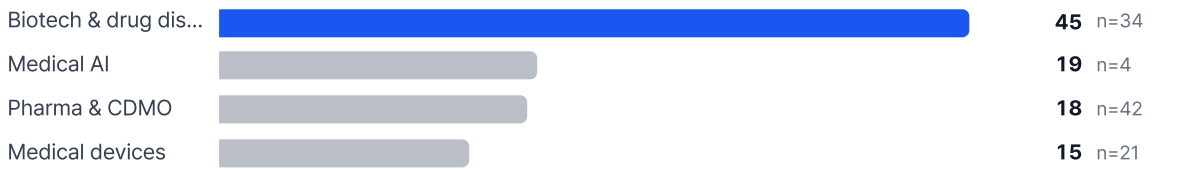
III-2. R&D per employee

1. Among the 102 companies reporting R&D on a parent-only basis, H1 R&D per employee was **KRW 23m** on totals; the company median was KRW 16m.
2. Because headcount is parent-only, companies reporting consolidated R&D are excluded — dividing group R&D by parent staff would overstate it.

Figure III-2

Biotech & drug discovery spends the most per head, KRW 45m

H1 R&D per employee, KRW m · 102 companies reporting parent-only R&D



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Sector	Companies (n)	Per head (KRW m)	Median (KRW m)
Pharma & CDMO	42	18	10
Biotech & drug discovery	34	45	43
Medical devices	21	15	14
Medical AI	4	19	17
Healthcare infrastructure	—	—	—
All	102	23	16

Size	Companies (n)	Per head (KRW m)	Median (KRW m)
Large	3	37	11
Mid-sized	33	19	13
SME	66	31	21
All	102	23	16

IV. Investment and output

Two years of R&D spend (2024–2025) joined, company by company, to the approvals, trials, publications and patents disclosed over the same period — what R&D-only tallies cannot show.

KRW 11.14tn Two-year R&D **1,874** Approvals **1,081** Papers

- The top 10% (26) hold 61% of R&D and 65% of global trials
- Per KRW 10bn, approvals peak in Medical devices, papers in Medical AI
- 34 companies in phase 3 · 25 out-licensing deals
- 7 companies disclosed no output at all

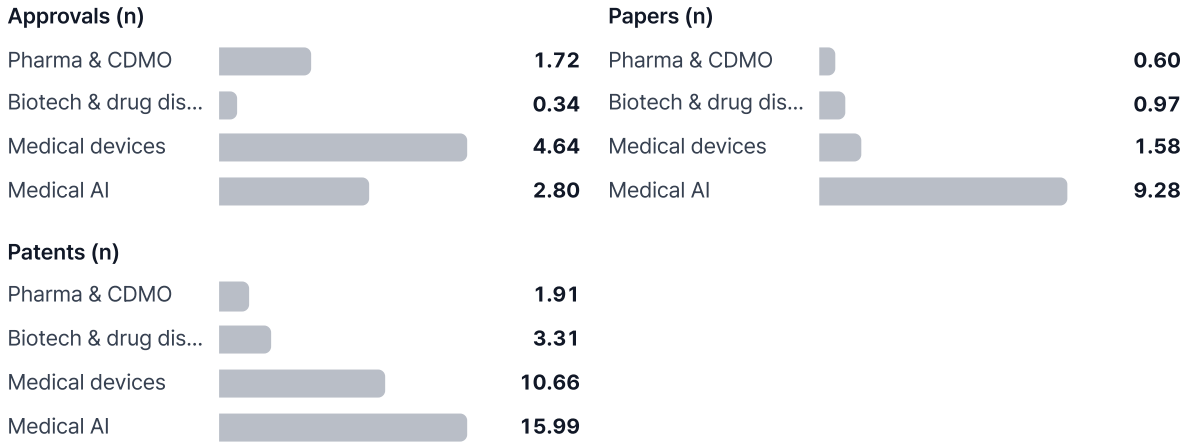
IV-1. Two years of spend and disclosed output, by sector

Pharma & CDMO (97 companies) accounts for 56.8% of 2024–2025 R&D. Per KRW 10bn, the leading sector is Medical devices for approvals, Pharma & CDMO for Korean trials, Medical AI for global trials, Medical AI for publications and Medical AI for patents.

Figure IV-1

Same money, different output — approvals in Medical devices, papers and patents in Medical AI

Disclosed output per KRW 10bn by sector · 2024–2025 (patents 2023–2024) · sectors with 10+ companies



Source: DART, MFDS, US FDA, ClinicalTrials.gov, PubMed, KIPRIS, 2024–2025 · Analysis: MAA

Sector	Companies (n)	R&D (KRW bn)	approvals (n)	Korean trials (n)	global trials (n)	publications (n)	patents (n)
Pharma & CDMO	97	6,332.2	1,091	231	201	378	1,116
Biotech & drug discovery	75	3,296.1	112	46	45	320	961
Medical devices	69	1,279.8	594	4	14	202	1,241
Medical AI	12	182.1	51	0	6	169	235
Healthcare infrastructure	7	50.2	26	3	1	12	83

Sector · per KRW 10bn	approvals (n)	Korean trials (n)	global trials (n)	publications (n)	patents (n)
Pharma & CDMO	1.72	0.36	0.32	0.60	1.91
Biotech & drug discovery	0.34	0.14	0.14	0.97	3.31
Medical devices	4.64	0.03	0.11	1.58	10.66
Medical AI	2.80	0.00	0.33	9.28	15.99
Healthcare infrastructure	5.18	0.60	0.20	2.39	15.11
All	**1.68**	**0.25**	**0.24**	**0.97**	**3.60**

Sector leaders are chosen among sectors with at least 10 companies — small denominators swing. Patents are published 18 months after filing, so 2023–2024 filings are divided by 2023–2024 R&D.

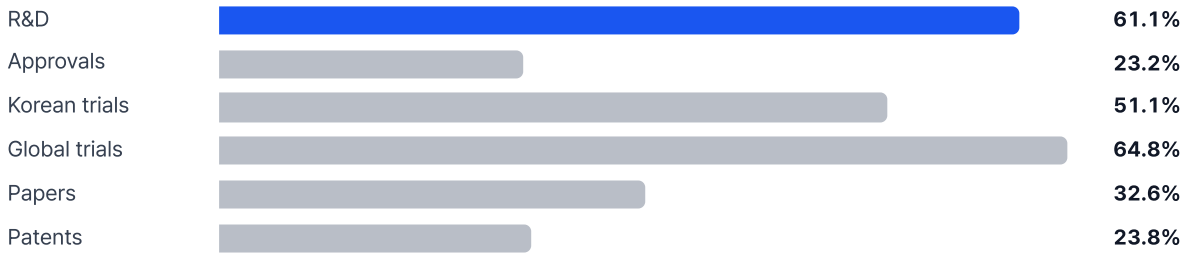
IV-2. Concentration

The top 10% of spenders (26 companies) account for 61.1% of two-year R&D. They also hold 64.8% of global trial starts and 51.1% of Korean trial authorisations — the costlier the stage, the more concentrated. Approvals (23.2%) and patents (23.8%) are broadly spread.

Figure IV-2

Top 10% hold 61% of R&D; global trials 65% even more; approvals 23%, patents 24% broadly spread

Share held by the top 10% of spenders (26 companies) · 2024–2025



Source: DART, MFDS, US FDA, ClinicalTrials.gov, PubMed, KIPRIS, 2024–2025 · Analysis: MAA

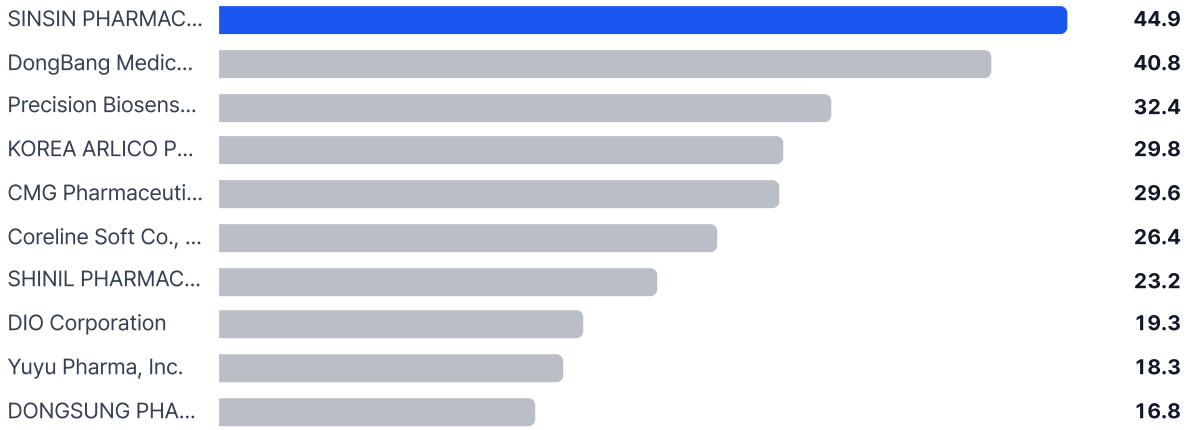
IV-3. Approvals and trials per KRW 10bn

Companies with at least KRW 5bn of two-year R&D, ranked by approvals (top) and Korean trial authorisations (bottom) per KRW 10bn. **This is not an efficiency measure** — a generic and a new drug, or a Class 2 certification and a Class 4 approval, each count as one. It shows what form of public record the spend took.

Figure IV-3

SINSIN PHARMACEUTICAL Co., LTD. leads with 44.9 approvals per KRW 10bn

Approvals per KRW 10bn, companies with at least KRW 5bn of two-year R&D — not an efficiency measure



Source: DART, MFDS, US FDA, ClinicalTrials.gov, PubMed, KIPRIS, 2024–2025 · Analysis: MAA

Rank	Company	Two-year R&D (KRW bn)	approvals (n)	Per KRW 10bn (n)
1	SINSIN PHARMACEUTICAL Co., LTD.	5.3	24	44.9
2	DongBang Medical Co., Ltd.	5.9	24	40.8
3	Precision Biosensor Inc.	6.2	20	32.4
4	KOREA ARLICO PHARM CO.,LTD.	10.1	30	29.8
5	CMG Pharmaceutical Co., Ltd.	17.6	52	29.6
6	Coreline Soft Co., Ltd	6.1	16	26.4
7	SHINIL PHARMACEUTICAL CO., LTD.	8.6	20	23.2
8	DIO Corporation	9.3	18	19.3
9	Yuyu Pharma, Inc.	8.2	15	18.3
10	DONGSUNG PHARMACEUTICAL CO.,LTD	8.3	14	16.8

Rank	Company	Two-year R&D (KRW bn)	Korean trials (n)	Per KRW 10bn (n)
1	SINSIN PHARMACEUTICAL Co., LTD.	5.3	2	3.7
2	C&R Research Inc.	6.3	2	3.2
3	KOREA ARLICO PHARM CO.,LTD.	10.1	3	3.0
4	REYON PHARMACEUTICAL CO., LTD	7.7	2	2.6
5	Aprogen Biologics Inc.	23.7	5	2.1
6	SEOUL PHARMA CO.,LTD	5.4	1	1.9
7	Daehan Nupharm Co.,Ltd.	16.8	3	1.8
8	DAEWON PHARMACEUTICAL CO.,LTD	101.1	18	1.8
9	Boryung Corporation	124.7	22	1.8

Rank	Company	Two-year R&D (KRW bn)	Korean trials (n)	Per KRW 10bn (n)
10	Hana Pharm. Co., Ltd.	29.3	5	1.7

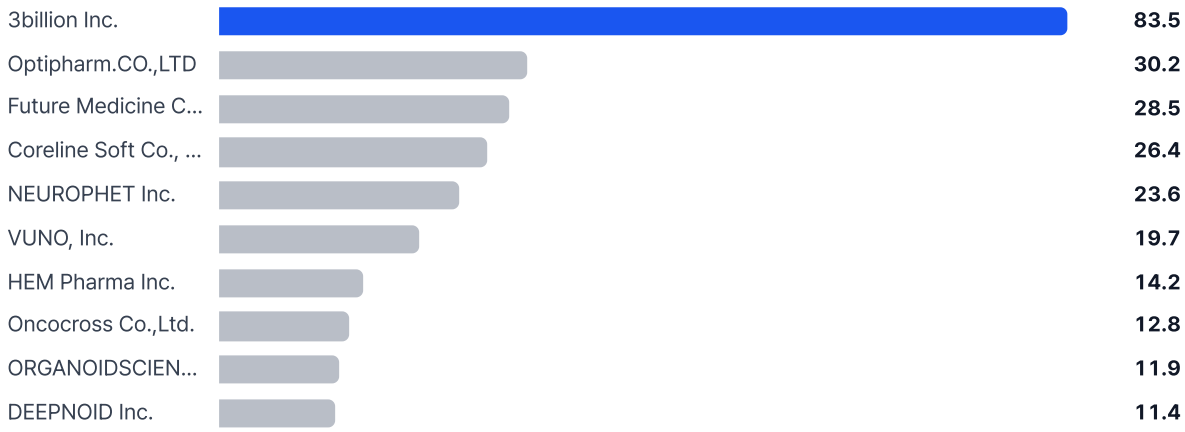
IV-4. Publications per KRW 10bn

On the same basis, PubMed-indexed publications per KRW 10bn. Medical AI companies feature prominently.

Figure IV-4

3billion Inc. leads with 83.5 papers per KRW 10bn

Papers per KRW 10bn, companies with at least KRW 5bn of two-year R&D — not an efficiency measure



Source: DART, MFDS, US FDA, ClinicalTrials.gov, PubMed, KIPRIS, 2024–2025 · Analysis: MAA

Rank	Company	Two-year R&D (KRW bn)	publications (n)	Per KRW 10bn (n)
1	3billion Inc.	7.7	64	83.5
2	Optipharm.CO.,LTD	8.9	27	30.2
3	Future Medicine Co., Ltd.	6.7	19	28.5
4	Coreline Soft Co., Ltd	6.1	16	26.4
5	NEUROPHET Inc.	12.7	30	23.6
6	VUNO, Inc.	11.2	22	19.7
7	HEM Pharma Inc.	7.1	10	14.2
8	Oncocross Co.,Ltd.	6.3	8	12.8
9	ORGANOIDSCIENCES LTD.	11.0	13	11.9
10	DEEPNOID Inc.	12.3	14	11.4

IV-5. Companies with no disclosed output

7 companies with KRW 26.4bn of two-year R&D had no approval, trial, publication or patent disclosed over the same period (Pharma & CDMO 3 · Medical AI 1 · Healthcare infrastructure 1 · Biotech & drug

discovery 1 · Medical devices 1). Many are early-stage or file through overseas partners, so they are not named.

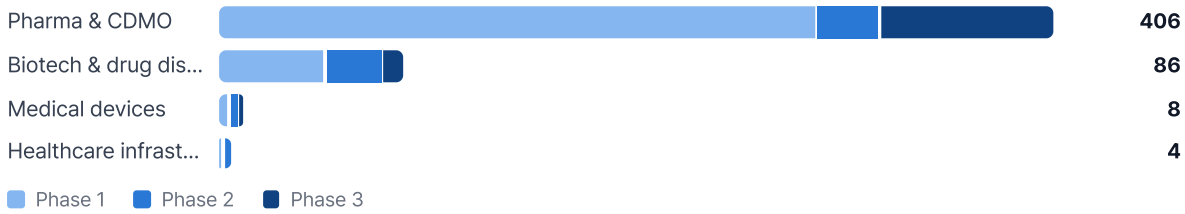
IV-6. Pipeline by phase

1. 2024–2025 Korean authorisations (excluding bioequivalence): phase 1 208, phase 2 32, **phase 3 43**; global starts: phase 1 140, phase 2 29, **phase 3 52**.
2. 224 bioequivalence studies (for generics) are counted separately.
3. **34 companies** have a phase 3 trial; 53 global phase 3 trials are ongoing.

Figure IV-6a

Mostly phase 1 — 95 phase 3 trials, Korea and global combined

Korean authorisations + global starts, 2024–2025, by phase and sector (excl. bioequivalence)

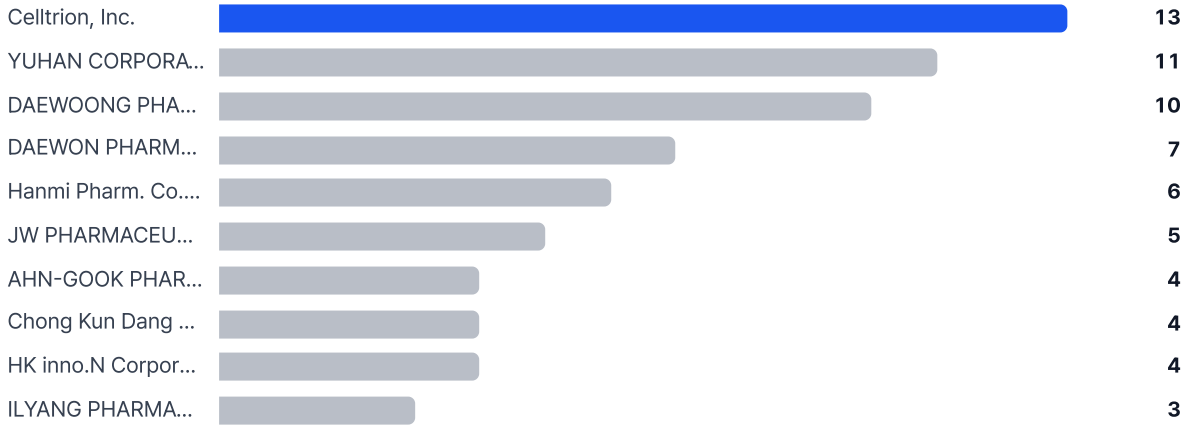


Source: MFDS trial authorisations · ClinicalTrials.gov, 2024–2025 · Analysis: MAA

Figure IV-6b

Phase 3 is concentrated — Celltrion, Inc. leads with 13

Top companies by phase 3 trials, 2024–2025



Source: MFDS trial authorisations · ClinicalTrials.gov, 2024–2025 · Analysis: MAA

Sector	KR P1	KR P2	KR P3	KR other	GI P1	GI P2	GI P3	GI other	BE
Pharma & CDMO	177	16	38	0	115	13	47	26	201
Biotech & drug discovery	27	13	5	1	24	13	4	4	13
Medical devices	3	1	0	0	1	2	1	10	10
Medical AI	0	0	0	0	0	0	0	6	0
Healthcare infrastructure	1	2	0	0	0	1	0	0	0
All	**208**	**32**	**43**	**1**	**140**	**29**	**52**	**46**	**224**

Combined phases count at the higher phase. "Other" covers phase 4 and studies without a phase (e.g. device trials); IV-1 totals equal the sum including "other". Global trials only where the company or a confirmed subsidiary is the lead sponsor. Ongoing counts are as of the computation date.

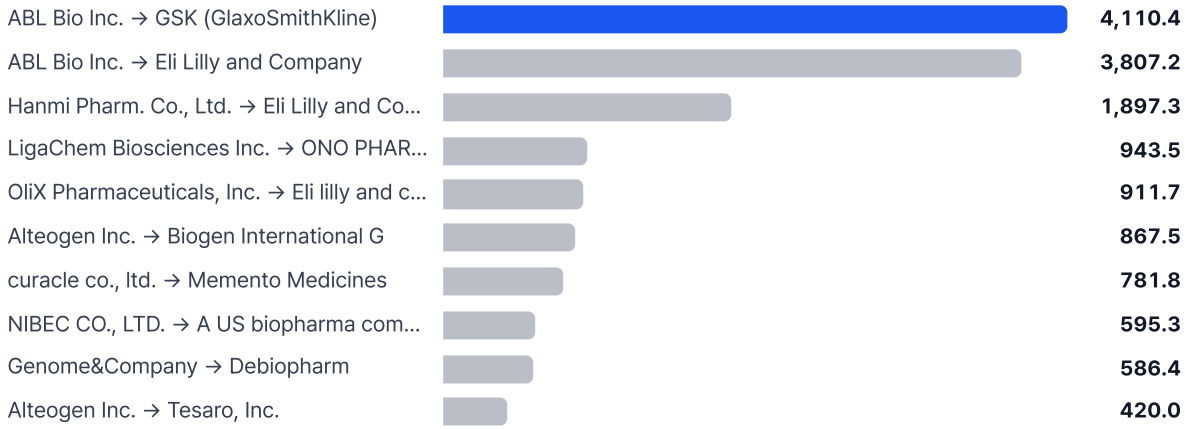
IV-7. Licensing — when research earns money

1. From January 2024 to June 2026, **17 companies disclosed 25 out-licensing deals**; 23 in-licensing deals and 13 terminations.
2. The 15 deals with a disclosed KRW value total **KRW 15.26tn**; the 17 with a disclosed upfront total KRW 522.9bn. The 3 deals stated only in foreign currency are not summed, and 6 deals kept amounts confidential.
3. Headline deal values are mostly contingent milestones; only upfronts and milestones achieved are received.

Figure IV-7

ABL Bio Inc. signed the largest, KRW 4.11tn

Largest out-licensing deals with a disclosed KRW value, KRW bn



Source: KRX disclosures (material management matters), Jan 2024–Jun 2026 · Analysis: MAA

Date	Company	Counterparty	Total (KRW bn)	Upfront (KRW bn)
2025-04-07	ABL Bio Inc.	GSK (GlaxoSmithKline)	4,110.4	73.9
2025-11-12	ABL Bio Inc.	Eli Lilly and Company	3,807.2	58.5
2026-06-01	Hanmi Pharm. Co., Ltd.	Eli Lilly and Company	1,897.3	112.9
2024-10-10	LigaChem Biosciences Inc.	ONO PHARMACEUTICAL CO., LTD.	943.5	—
2025-02-07	OliX Pharmaceuticals, Inc.	Eli lilly and company	911.7	—
2026-03-25	Alteogen Inc.	Biogen International GMBH	867.5	30.0
2026-05-11	curacle co., ltd.	Memento Medicines	781.8	5.8
2025-05-28	NIBEC CO., LTD.	A US biopharma company (undisc	595.3	10.9

Date	Company	Counterparty	Total (KRW bn)	Upfront (KRW bn)
2024-06-03	Genome&Company	Debiopharm	586.4	6.9
2026-01-20	Alteogen Inc.	Tesaro, Inc.	420.0	29.5
2024-05-02	MOA Life Plus Co. Ltd.	Elevai Labs, Inc.	180.7	1.5
2024-06-26	ISU Abxis Co., Ltd.	A US oncology developer (undis	118.5	4.2
2024-09-09	ENCell Co., Ltd.	Lucy Biotech	25.9	2.0
2024-11-07	KANGSTEM BIOTECH CO., LTD.	Yuyoung Pharm	14.0	—
2025-12-16	SyntekaBio,Inc.	Panoros Bioscience	2.5	0.5
2025-03-04	AbClon Inc.	TCT Health Technology	n/d	—
2024-07-30	Alteogen Inc.	Sandoz AG	n/d	—
2024-11-08	Alteogen Inc.	Daiichi Sankyo	n/d	28.0
2025-03-17	Alteogen Inc.	MedImmune, LLC	n/d	29.1
2025-03-17	Alteogen Inc.	MedImmune Limited	n/d	36.4
2026-03-16	G2GBIO, Inc.	Samsung Bioepis · Epis NexLab	n/d	—
2024-10-10	LigaChem Biosciences Inc.	ONO PHARMACEUTICAL CO., LTD.	n/d	—
2025-12-16	OSCOTECInc.	ADEL and Sanofi	n/d	55.3
2026-06-01	OSCOTECInc.	Agios Pharmaceuticals, Inc.	n/d	37.5
2025-05-13	Y-Biologics, Inc	LigaChem Biosciences	n/d	—

Only KRW amounts stated in the filing are used (no exchange rate applied by us). Amendments, assignments and duplicate filings are excluded. Two deals with the same partner on the same day count separately (LigaChem–ONO: the LCB97 asset deal and the multi-target ADC research deal). Each filing was read and every figure checked against a verbatim quote of the source.

V. The largest spenders up close

The ten largest two-year spenders — trend, financial context and disclosed output

KRW 4.39tn Two-year R&D, top ten **39.4%** Share of all

- Celltrion, Inc. leads with KRW 902.4bn over two years

V-1. Celltrion, Inc.

Celltrion, Inc. spent KRW 284.3bn on R&D in H1 2026 (+23.8% YoY), 11.2% of revenue. Over two years it spent KRW 902.4bn; disclosed output over the same period: Approvals 20 · Korean trials 18 · Global trials 13 · Papers 36 · Patents 46.

Figure V-1

R&D trend — H1 2026 +23.8%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Large · consolidated
H1 revenue (KRW bn)	2,538.7
H1 operating profit (KRW bn)	773.7
Capitalised share of R&D	55.7%
Employees (period end)	3,172
Export share	72.6% (note basis)

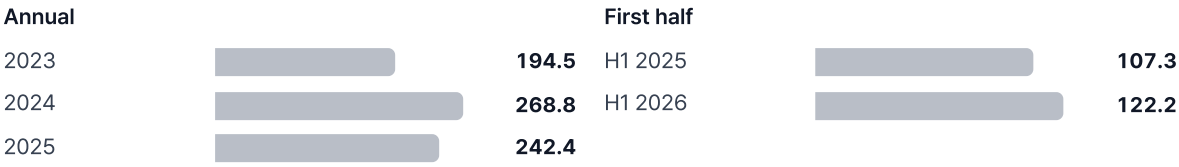
V-2. YUHAN CORPORATION

YUHAN CORPORATION spent KRW 122.2bn on R&D in H1 2026 (+13.8% YoY), 10.5% of revenue. Over two years it spent KRW 511.2bn; disclosed output over the same period: Approvals 31 · Korean trials 9 · Global trials 26 · Papers 27 · Patents 55.

Figure V-2

R&D trend — H1 2026 +13.8%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Mid-sized · consolidated
H1 revenue (KRW bn)	1,166.2
H1 operating profit (KRW bn)	75.7
Capitalised share of R&D	0.8%
Employees (period end)	2,145
Export share	19.5%

V-3. DAEWOONG PHARMA

DAEWOONG PHARMA spent KRW 115.7bn on R&D in H1 2026 (+8.5% YoY), 15.7% of revenue. Over two years it spent KRW 454.5bn; disclosed output over the same period: Approvals 50 · Korean trials 17 · Global trials 21 · Papers 27 · Patents 87.

Figure V-3

R&D trend — H1 2026 +8.5%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Mid-sized · separate
H1 revenue (KRW bn)	735.9
H1 operating profit (KRW bn)	104.6
Capitalised share of R&D	10.9%
Employees (period end)	1,972

Item	Value
Export share	20.6%

V-4. Hanmi Pharm. Co., Ltd.

Hanmi Pharm. Co., Ltd. spent KRW 125.5bn on R&D in H1 2026 (+18.2% YoY), 14.6% of revenue. Over two years it spent KRW 438.8bn; disclosed output over the same period: Approvals 23 · Korean trials 9 · Global trials 12 · Papers 72 · Patents 114.

Figure V-4

R&D trend — H1 2026 +18.2%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Mid-sized · consolidated
H1 revenue (KRW bn)	860.2
H1 operating profit (KRW bn)	184.7
Capitalised share of R&D	7.3%
Employees (period end)	2,424
Export share	21.4%

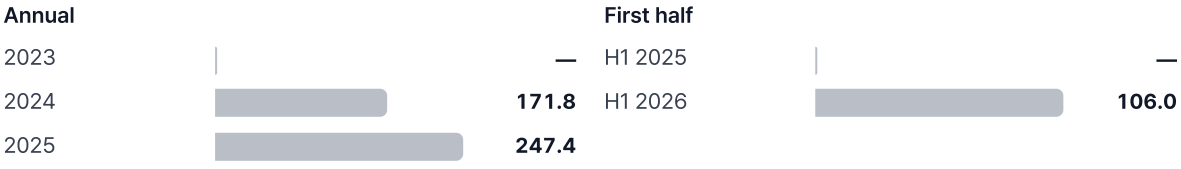
V-5. SAMSUNG EPIS HOLDINGS Co., Ltd.

SAMSUNG EPIS HOLDINGS Co., Ltd. spent KRW 106.0bn on R&D in H1 2026, 12.5% of revenue. Over two years it spent KRW 419.2bn; disclosed output over the same period: Approvals 13 · Korean trials 0 · Global trials 2 · Papers 22 · Patents 10. Its consolidation scope changed (e.g. a demerger), so period values cover different perimeters.

Figure V-5

R&D trend — periods cover different perimeters

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Large · consolidated
H1 revenue (KRW bn)	845.8
H1 operating profit (KRW bn)	149.3
Capitalised share of R&D	34.2%
Employees (period end)	10
Export share	94.0%

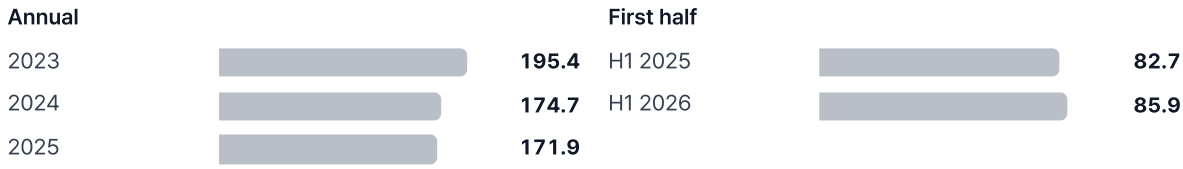
V-6. GC Biopharma Corp.

GC Biopharma Corp. spent KRW 85.9bn on R&D in H1 2026 (+3.8% YoY), 10.0% of revenue. Over two years it spent KRW 346.6bn; disclosed output over the same period: Approvals 36 · Korean trials 5 · Global trials 3 · Papers 14 · Patents 27.

Figure V-6

R&D trend — H1 2026 +3.8%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Mid-sized · consolidated
H1 revenue (KRW bn)	856.7
H1 operating profit (KRW bn)	13.5
Capitalised share of R&D	7.6%
Employees (period end)	2,422
Export share	32.6%

V-7. Chong Kun Dang Pharmaceutical Corp.

Chong Kun Dang Pharmaceutical Corp. spent KRW 113.5bn on R&D in H1 2026 (+36.6% YoY), 12.3% of revenue. Over two years it spent KRW 343.2bn; disclosed output over the same period: Approvals 55 · Korean trials 16 · Global trials 22 · Papers 7 · Patents 75.

Figure V-7

R&D trend — H1 2026 +36.6%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Mid-sized · consolidated
H1 revenue (KRW bn)	926.2
H1 operating profit (KRW bn)	32.7
Capitalised share of R&D	28.1%
Employees (period end)	2,285
Export share	4.0%

V-8. SK biopharmaceuticals Co., Ltd.

SK biopharmaceuticals Co., Ltd. spent KRW 97.3bn on R&D in H1 2026 (+19.2% YoY), 20.5% of revenue. Over two years it spent KRW 335.6bn; disclosed output over the same period: Approvals 0 · Korean trials 0 · Global trials 1 · Papers 3 · Patents 29.

Figure V-8

R&D trend — H1 2026 +19.2%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Biotech & drug discovery · Large · consolidated
H1 revenue (KRW bn)	475.3
H1 operating profit (KRW bn)	186.8
Capitalised share of R&D	—
Employees (period end)	278

Item	Value
Export share	—

V-9. LigaChem Biosciences Inc.

LigaChem Biosciences Inc. spent KRW 137.1bn on R&D in H1 2026 (+77.4% YoY), 331.1% of revenue. Over two years it spent KRW 330.4bn; disclosed output over the same period: Approvals 0 · Korean trials 0 · Global trials 1 · Papers 3 · Patents 33.

Figure V-9

R&D trend — H1 2026 +77.4%

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Biotech & drug discovery · Mid-sized · consolidated
H1 revenue (KRW bn)	41.4
H1 operating profit (KRW bn)	-109.4
Capitalised share of R&D	0.0%
Employees (period end)	190
Export share	—

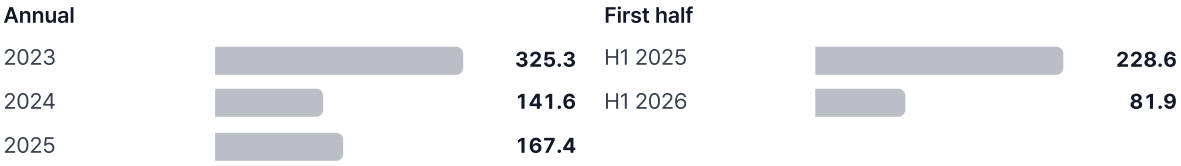
V-10. SAMSUNG BIOLOGICS CO.,LTD.

SAMSUNG BIOLOGICS CO.,LTD. spent KRW 81.9bn on R&D in H1 2026, 3.2% of revenue. Over two years it spent KRW 309.0bn; disclosed output over the same period: Approvals 0 · Korean trials 0 · Global trials 0 · Papers 3 · Patents 21. Its consolidation scope changed (e.g. a demerger), so period values cover different perimeters.

Figure V-10

R&D trend — periods cover different perimeters

Annual and half-year R&D, KRW bn



Source: DART half-year filings (August 2026) and financial API · Analysis: MAA

Item	Value
Sector · size · basis	Pharma & CDMO · Large · consolidated
H1 revenue (KRW bn)	2,578.0
H1 operating profit (KRW bn)	1,167.2
Capitalised share of R&D	0.0%
Employees (period end)	5,573
Export share	83.3% (note basis)

What the numbers say

1. **R&D is concentrated.** The top twenty account for 58.2% of H1 spend; on a two-year basis the top 10% (26 companies) account for 61.1%. Sector totals move with these companies.
2. **32.5% of R&D comes from loss-making companies** — spending not covered by that period's operating profit.
3. **The same spend is accounted for differently.** 15.8% was capitalised overall, with wide differences by sector and company — relevant when comparing profits.
4. **Self-reported ratios are not always comparable.** For 11 companies the disclosed R&D ratio departs from the filing form's own formula (pre-grant R&D ÷ revenue). This report recomputes all ratios on one definition.

Method and limits

R&D spend — the "total R&D expense" line of half-year and annual filings, before government grants, consolidated where available. Only values that pass a cross-check (e.g. against the disclosed ratio) are used: a verified census, not a sample.

Non-healthcare companies excluded — 19 companies whose company-wide R&D is mostly unrelated to healthcare: AHNLAB,INC. (security software) · Chunbo Co., Ltd. (battery & display materials) · CJ CHEILJEDANG CORP. (food) · COSMAX BTI, INC. (cosmetics holding company) · COSMAX NBT, INC. (dietary supplements) · HLSCIENCE Co., LTD (dietary supplements) · HYUNDAI ELEVATOR CO.,LTD (elevators) · INTOPS CO., LTD. (handset & appliance parts) · KOLMAR KOREA CO.,LTD (cosmetics contract manufacturing) · Kwangdong Healthbio Co., Ltd. (dietary supplements) · NOVAREX Co., Ltd. (dietary supplements) · NUON CO., LTD. (dietary supplements) · PAKERS CO., Ltd. (printer parts & lighting) · RN2 Technologies Co., Ltd. (telecom components) · S&D Co., Ltd (supplement ingredients) · SBSUNGBO Co., Ltd. (agrochemicals) · SK Innovation Co., Ltd. (refining & batteries) · Wonlk Co.,LTD (quartz & semiconductor parts) · WOOREE BIO CO., LTD (dietary supplements).

Holding companies and parents — 10 companies that consolidate listed subsidiaries (nine holding companies and SK Chemicals, parent of SK bioscience) are excluded to avoid double counting: DAEWOONG CO.,LTD · CHONGKUNDANG HOLDINGS CORP. · GC Corp. · JW HOLDINGS CORPORATION · JEIL PHARMA HOLDINGS INC. · ILDONG HOLDINGS CO.,LTD · Huons Global Co., Ltd. · Dong-A Socio Holdings Co.,Ltd · Hanmi Science Co.,Ltd · SK Chemicals Co., Ltd.. Samsung Epis Holdings, whose subsidiary is unlisted, is included.

Year-on-year comparison — only companies with both half-year values on the same consolidation basis. Samsung Biologics (scope changed by the November 2025 demerger) and Samsung Epis Holdings (no prior-year value) are excluded from the comparison.

Output — approvals: MFDS Class 2 device certifications, Class 3–4 device approvals and drug approvals, plus US FDA 510(k) and drug approvals. Class 1 devices, which are only notified without review (242 in the period), are not counted as approvals. Korean trials: MFDS trial authorisations. Global trials: ClinicalTrials.gov start dates. Publications: PubMed author affiliation. Patents: KIPRIS filings, domestic and foreign. Window 2024–2025; patents 2023–2024.

Matching and subsidiaries — records are matched by business registration number or exact corporate name; similarity matching is never used. Approvals, trials and patents filed by subsidiaries whose control is confirmed in filings are counted under the listed parent. Publications are counted by the listed company's own author affiliation only and exclude subsidiary-affiliated papers — except Samsung Epis Holdings, a holding company whose research is carried out entirely by its wholly owned subsidiary Samsung Bioepis, which is counted by that affiliation.

Direction of error — approvals filed by overseas affiliates or partners, CRO-sponsored trials, records of unconfirmed subsidiaries, papers published under a subsidiary's affiliation and global trials whose sponsor name differs sharply from the company name can be missed (undercount). Conversely, patents are counted per filing, so one invention filed in several countries counts several times (overcount), and exact-name matching can rarely attach the wrong company. In this edition 465 global trials at 12 companies, previously missed through name variants, were linked after source checks.

Company size — as each company declares it in its periodic filing (SME / mid-sized status). SMEs meet the Framework Act on SMEs criteria (sector revenue thresholds — KRW 80bn for drug and device manufacturing — total assets under KRW 500bn, independence); mid-sized companies meet the Mid-sized Enterprises Act criteria; large companies are neither. A statutory three-year grace period means some SMEs have large revenue.

Financials — half-year revenue and operating profit from the DART financial API, on the same consolidated or separate basis as each company's R&D. 1,016 values match the XBRL in the filings, a consistency check within one source that cannot catch currency or unit errors — non-KRW filers are screened out separately.

R&D intensity — total R&D expense before grants ÷ revenue × 100, the formula set by the filing form. For 11 companies the self-reported ratio departs from it (usually computed after grants), so the recomputed value is used. The first edition (September 2026) used self-reported ratios for sector medians; from this edition all ratios are recomputed.

Accounting and nature — from the same table as the R&D total, only where lines sum to the total (±1%). Grants are not re-allocated across lines.

Domestic vs export — the sales table's split (domestic + export = total = reported revenue, ±3%) first; otherwise the regional revenue note (domestic / overseas), which includes overseas subsidiaries' local sales. The CSV states which source each company uses.

Headcount — parent-company staff at period end, including fixed-term. Subtotal rows are removed by structure (a row equal to the sum of the others), not by label, to avoid double counting. R&D headcount has no standardised disclosure and is not reported.

Pipeline — Korean MFDS trial authorisations (2024–2025) and ClinicalTrials.gov studies with the company as lead sponsor, by start date (2024–2025). Bioequivalence studies, run to launch generics, are counted separately from Korean trials (the first edition mixed them). Combined phases count at the higher one.

Capital raising — rights issues, placements, convertible bonds, bonds with warrants and exchangeable bonds decided in material-event reports (Jan 2024–Jun 2026, board resolution date). Amounts sum the stated uses of proceeds and count at the decision; actual proceeds may differ. Bonus issues are excluded. "Raised / R&D" does not imply the money funded R&D.

Licensing — each KRX disclosure of material management matters was read; only new deals are counted (amendments, assignments and duplicates excluded). Only KRW amounts stated in the filing are used; foreign-currency-only amounts are left blank. Headline values are mostly contingent milestones.

Population — of the 422 index companies, 281 have an R&D table that passed our cross-check, 65 did not pass, 60 have no R&D disclosure or DART code, and 16 were excluded (non-December year-end or holding company). Of the 270 with a verified H1 2026 value, 18 non-healthcare companies are removed, leaving 252. Companies verified but without an H1 value (e.g. those filing an annual report instead) appear only in

the two-year metrics (IV). Financials are used only when filed in KRW (Kolon TissueGene reports in US dollars and is left out of financial tables).

Korean reports compared — "the Korean reports we reviewed" are the Korea Biotechnology Industry Organization's listed-company survey, KBIOIS in-depth analyses and briefs, and press tallies of half-year R&D (e.g. Medipana). Where a consolidated subsidiary is separately listed (e.g. Celltrion and Celltrion Pharm), both are counted unless the parent is a holding company, so totals may overlap slightly.

Table cells — cells with fewer than three companies are shown as "—": they would reveal a single company and are not representative. Ratios on totals weigh large companies more.

Edition history — first edition 2026-09-24 (R&D and disclosed output) → full edition 2026-10-07 (this one). Added: financials, people, export sales, capital raising, pipeline and licensing; R&D intensity recomputed with the filing-form formula; bioequivalence removed from Korean trials; 465 global trials at 12 companies and three sector classifications corrected. Corrections are logged.

Verification — ranked figures were recounted from the raw collection files. R&D was checked against the ratio companies state in the same table; capital raising against the count of decision filings in the disclosure index; licensing amounts against verbatim quotes of the filing (independent paths). Financial API values were also matched to the filings' XBRL, which confirms consistency within one source. Reported errors are recomputed and corrected with a visible history.

Appendix. Company table

All 252 companies, ordered by H1 2026 R&D spend: investment and financials above, two-year output below (same ranking). Company data with more columns (revenue, operating profit, headcount, export share) can be downloaded as CSV from "Download company data" at the top of the report or at medicalaialliance.org/reports/rnd-invest-2026h1.csv.

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
1	Celltrion, Inc.	Pharma & CDMO	Large	284.3	+23.8%	11.2%
2	LigaChem Biosciences Inc.	Biotech & drug discovery	Mid-sized	137.1	+77.4%	331.1%
3	Hanmi Pharm. Co., Ltd.	Pharma & CDMO	Mid-sized	125.5	+18.2%	14.6%
4	SK Bioscience Co.,Ltd	Biotech & drug discovery	Large	122.4	+80.0%	37.7%
5	YUHAN CORPORATION	Pharma & CDMO	Mid-sized	122.2	+13.8%	10.5%
6	DAEWOONG PHARMA	Pharma & CDMO	Mid-sized	115.7	+8.5%	15.7%
7	Chong Kun Dang Pharmaceutical Corp.	Pharma & CDMO	Mid-sized	113.5	+36.6%	12.3%
8	SAMSUNG EPIS HOLDINGS Co., Ltd.	Pharma & CDMO	Large	106.0	—	12.5%
9	SK biopharmaceuticals Co., Ltd.	Biotech & drug discovery	Large	97.3	+19.2%	20.5%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
10	GC Biopharma Corp.	Pharma & CDMO	Mid-sized	85.9	+3.8%	10.0%
11	SAMSUNG BIOLOGICS CO.,LTD.	Pharma & CDMO	Large	81.9	—	3.2%
12	DONG-A ST CO.,LTD	Pharma & CDMO	Mid-sized	55.2	-8.5%	12.9%
13	ABL Bio Inc.	Biotech & drug discovery	SME	48.8	-8.9%	148.6%
14	Kolon TissueGene, Inc.	Biotech & drug discovery	Large	48.0	-11.4%	—
15	MEDIPOSTCO.,LTD.	Biotech & drug discovery	SME	44.0	+28.3%	115.1%
16	JW PHARMACEUTICAL	Pharma & CDMO	Mid-sized	43.1	-11.5%	10.2%
17	SD BIOSENSOR INC.	Medical devices	Mid-sized	42.9	+18.8%	11.3%
18	HK inno.N Corporation	Pharma & CDMO	Mid-sized	42.6	+12.8%	8.1%
19	Voronoi, Inc.	Biotech & drug discovery	SME	41.7	+95.4%	—
20	JEIL PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	35.9	+68.4%	13.0%
21	Orum Therapeutics, Inc.	Biotech & drug discovery	SME	35.2	+62.5%	1,000%+
22	Boryung Corporation	Pharma & CDMO	Mid-sized	28.6	-10.4%	5.4%
23	SEEGENE, INC.	Medical devices	Mid-sized	26.1	-22.2%	9.9%
24	Aimed Bio Inc.	Biotech & drug discovery	SME	24.1	—	84.1%
25	IL DONG PHARMACEUTICAL CO., LTD.	Pharma & CDMO	Mid-sized	23.9	+38.6%	8.3%
26	PharmaResearch Co., Ltd.	Medical devices	Mid-sized	23.8	+48.8%	7.3%
27	DAEWON PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	23.6	-4.5%	7.6%
28	Medy-Tox Inc.	Pharma & CDMO	Mid-sized	22.3	+1.1%	17.3%
29	SAM CHUN DANG PHARM CO. LTD	Pharma & CDMO	Mid-sized	21.7	+390.3%	16.0%
30	HLB Co.,LTD.	Biotech & drug discovery	Mid-sized	21.7	-15.8%	46.5%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
31	HUONS CO., LTD.	Pharma & CDMO	Mid-sized	21.5	+9.1%	7.4%
32	GI Innovation Inc.	Biotech & drug discovery	SME	21.2	+26.8%	—
33	i-SENS, Inc.	Medical devices	Mid-sized	20.7	+39.4%	12.6%
34	OliX Pharmaceuticals, Inc.	Biotech & drug discovery	SME	18.5	+40.7%	—
35	KOREA UNITED PHARM INC	Biotech & drug discovery	Mid-sized	17.6	+3.6%	11.6%
36	ILYANG PHARMACEUTICAL CO.,LTD	Biotech & drug discovery	Mid-sized	17.4	+21.5%	13.3%
37	DongKookPharmaceuticalCo.,Ltd.	Pharma & CDMO	Mid-sized	17.3	+15.7%	4.0%
38	Qurient Co., Ltd.	Biotech & drug discovery	SME	16.5	+64.7%	429.3%
39	SAMJIN PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	16.3	-3.1%	11.1%
40	Mezzion Pharma Co., Ltd.	Biotech & drug discovery	SME	15.8	+128.6%	375.2%
41	KYONGBO PHARMACEUTICAL CO., LTD.	Pharma & CDMO	Mid-sized	15.2	+42.8%	10.8%
42	OSCOTECInc.	Biotech & drug discovery	SME	15.0	+20.6%	26.7%
43	BUKWANG PHARMACEUTICAL IND CO.,LTD	Pharma & CDMO	Large	14.9	+27.9%	14.3%
44	CLASSYS Inc.	Medical devices	Mid-sized	14.6	+37.3%	7.6%
45	Lunit Inc.	Medical AI	SME	14.4	-24.3%	31.5%
46	HANALL BIOPHARMA CO.,LTD	Pharma & CDMO	Mid-sized	14.3	-22.4%	16.9%
47	ST PHARM CO., LTD.	Pharma & CDMO	Mid-sized	13.8	+18.8%	7.9%
48	Rznomics Inc.	Biotech & drug discovery	SME	13.5	—	1,000%+
49	GC CELL CORPORATION	Biotech & drug discovery	Mid-sized	13.4	-2.4%	16.9%
50	D&D Pharmatech Inc.	Biotech & drug discovery	SME	13.1	+0.9%	1,000%+
51	Genexine, Inc.	Biotech & drug discovery	SME	12.8	+19.9%	920.1%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
52	Inventage Lab Inc.	Biotech & drug discovery	SME	12.7	+30.6%	1,000%+
53	Vieworks Co., Ltd.	Medical devices	Mid-sized	12.5	-3.9%	10.3%
54	Curocell Inc.	Biotech & drug discovery	SME	12.2	-24.2%	—
55	DONGWHA PHARM.CO.,LTD	Pharma & CDMO	Mid-sized	12.0	-3.5%	4.5%
56	Boditech Med Inc.	Medical devices	Mid-sized	11.8	+24.8%	12.6%
57	BIONEERCORPORATION	Medical devices	Mid-sized	11.3	+54.9%	6.3%
58	HANDOK Inc.	Pharma & CDMO	Mid-sized	11.2	-1.7%	4.1%
59	SHINPOONG PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	10.9	—	9.2%
60	Chabiotech Co.,Ltd.	Biotech & drug discovery	Mid-sized	10.8	-11.0%	1.7%
61	Samyang Biopharm Corporation	Medical devices	Mid-sized	10.3	—	15.4%
62	OSANG HEALTHCARE CO.,LTD.	Medical devices	Mid-sized	10.0	-3.9%	23.8%
63	Aprogen, Inc	Pharma & CDMO	Mid-sized	9.9	-67.4%	13.7%
64	Huvitz Co., Ltd.	Medical devices	Mid-sized	9.8	-8.5%	17.3%
65	Peptron, Inc.	Biotech & drug discovery	SME	9.6	+25.9%	280.4%
66	EuBiologics Co., Ltd.	Biotech & drug discovery	SME	9.5	+46.7%	19.4%
67	Hana Pharm. Co., Ltd.	Pharma & CDMO	Mid-sized	9.5	+14.8%	7.7%
68	LivsMed Inc.	Medical devices	SME	9.4	—	41.3%
69	Hugel, Inc.	Pharma & CDMO	Large	8.7	+21.2%	3.4%
70	AHN-GOOK PHARMACEUTICAL Co., Ltd.	Pharma & CDMO	Mid-sized	8.7	-8.7%	4.6%
71	SillaJen, Inc.	Biotech & drug discovery	SME	8.4	+62.1%	165.6%
72	Celltrion Pharm Inc.	Pharma & CDMO	Large	8.4	+20.0%	3.0%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
73	BioNote, Inc.	Medical devices	Mid-sized	8.3	+17.0%	12.1%
74	DRTECH Corporation	Medical devices	SME	8.3	+23.7%	12.0%
75	ValueAddedTechnologyCo.,Ltd.	Medical devices	Mid-sized	8.1	+39.3%	6.1%
76	WHANIN PHARM CO.,LTD	Pharma & CDMO	Mid-sized	8.0	-31.0%	5.6%
77	CJ Bioscience	Biotech & drug discovery	Large	7.9	-14.3%	469.9%
78	ISU Abxis Co., Ltd.	Biotech & drug discovery	Mid-sized	7.7	-2.8%	31.7%
79	KANGSTEM BIOTECH CO., LTD.	Biotech & drug discovery	SME	7.6	—	527.3%
80	QuadMedicine Inc.	Pharma & CDMO	SME	7.5	+2.8%	—
81	S.Biomedics Co., Ltd.	Pharma & CDMO	SME	7.4	+59.1%	80.5%
82	MYUNGIN PHARM.CO., LTD	Pharma & CDMO	Mid-sized	7.4	—	5.0%
83	KOLON LIFE SCIENCE Inc.	Pharma & CDMO	Large	7.2	+4.4%	7.2%
84	AbClon Inc.	Biotech & drug discovery	SME	7.1	-4.8%	334.5%
85	KWANGDONG PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	7.0	-2.4%	1.4%
86	STCUBE	Biotech & drug discovery	SME	7.0	+50.9%	242.8%
87	YUNGJIN PHARM. CO., LTD	Pharma & CDMO	Large	6.8	+15.8%	5.4%
88	SELVAS AI Inc.	Medical AI	SME	6.7	+32.1%	11.1%
89	CKD Bio Corp.	Pharma & CDMO	Mid-sized	6.6	+5.4%	8.0%
90	PharmGen Science, Inc.	Pharma & CDMO	Mid-sized	6.4	—	7.0%
91	KolmarBNH Co., Ltd	Healthcare infrastructure	Mid-sized	6.1	+23.3%	2.3%
92	MedPacto, Inc.	Biotech & drug discovery	SME	5.9	—	249.3%
93	GENORAY Co., LTD.	Medical devices	SME	5.9	-3.5%	11.3%
94	Genome&Company	Biotech & drug discovery	SME	5.9	-8.6%	48.9%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
95	meerecompanyIncorporated	Medical devices	SME	5.8	-14.4%	12.9%
96	KyungdongPharm	Pharma & CDMO	Mid-sized	5.7	-8.6%	5.7%
97	InBody Co., Ltd.	Medical devices	Mid-sized	5.6	—	3.9%
98	TiumBio Co., Ltd.	Biotech & drug discovery	SME	5.5	+11.6%	73.8%
99	JETEMA Co.,Ltd.	Medical devices	SME	5.3	-53.5%	14.6%
100	Humedix Co., Ltd.	Pharma & CDMO	Mid-sized	5.2	+4.7%	5.7%
101	ENCell Co., Ltd.	Pharma & CDMO	SME	5.1	—	433.8%
102	Daehan Nupharm Co.,Ltd.	Pharma & CDMO	Mid-sized	4.9	-28.2%	4.4%
103	SUHEUNG CO.,LTD.	Biotech & drug discovery	Mid-sized	4.8	+7.9%	2.3%
104	FutureChem Co., Ltd.	Pharma & CDMO	SME	4.8	+87.8%	44.7%
105	DAE HWA PHARM CO., LTD	Pharma & CDMO	Mid-sized	4.7	-11.0%	6.0%
106	WON TECH CO.,Ltd.	Medical devices	Mid-sized	4.6	—	5.2%
107	CUREXO, INC.	Medical devices	Mid-sized	4.5	-5.2%	11.4%
108	NEXTBIOMEDICAL Co., Ltd.	Medical devices	SME	4.5	+15.6%	49.2%
109	Shaperon Inc.	Biotech & drug discovery	SME	4.2	-5.0%	1,000%+
110	NEUROPHET Inc.	Medical AI	SME	4.1	—	325.4%
111	SEERS Co., Ltd.	Medical AI	SME	4.1	+62.2%	6.7%
112	G2GBIO, Inc.	Pharma & CDMO	SME	3.9	+0.4%	202.0%
113	CMG Pharmaceutical Co., Ltd.	Pharma & CDMO	SME	3.9	-15.0%	7.3%
114	Kukje Pharma Co., Ltd.	Pharma & CDMO	Mid-sized	3.9	—	4.2%
115	HLB PHARMACEUTICAL CO., LTD.	Biotech & drug discovery	SME	3.8	+33.9%	3.0%
116	curacle co., ltd.	Biotech & drug discovery	SME	3.8	—	46.2%
117	DENTIUM	Medical devices	Mid-sized	3.8	-15.1%	3.3%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
118	Pharmicell Co.,Ltd.	Biotech & drug discovery	SME	3.7	+7.1%	4.9%
119	Daebonglsco.,Ltd	Pharma & CDMO	SME	3.7	+2.3%	5.9%
120	Cellid Co., Ltd.	Biotech & drug discovery	SME	3.7	-56.1%	69.7%
121	IMBiologics Corp.	Biotech & drug discovery	SME	3.7	—	50.8%
122	INFINITT Healthcare Co., Ltd.	Medical AI	SME	3.6	-2.1%	14.4%
123	MEDIANA Co.,LTD	Medical devices	SME	3.6	—	9.6%
124	KOREA ARLICO PHARM CO.,LTD.	Medical devices	Mid-sized	3.5	+50.1%	3.7%
125	ORGANOIDSCIENCES LTD.	Biotech & drug discovery	SME	3.4	+19.4%	464.4%
126	Sam-A Pharm. Co. Ltd	Pharma & CDMO	SME	3.4	+36.9%	9.3%
127	Synergy Innovation Co., Ltd.	Medical devices	SME	3.4	—	5.8%
128	ARIBIOLAB	Biotech & drug discovery	SME	3.3	-27.6%	1,000%+
129	CORESTEMCHEMON Inc.	Pharma & CDMO	SME	3.3	-33.5%	33.4%
130	Tego Science, Inc.	Biotech & drug discovery	SME	3.2	+85.7%	99.5%
131	Bio Solution Co.,Ltd.	Biotech & drug discovery	SME	3.1	-20.9%	36.5%
132	THERAGEN ETEX CO.,LTD.	Pharma & CDMO	Mid-sized	3.0	—	2.2%
133	JW LIFESCIENCE CORPORATION	Pharma & CDMO	Mid-sized	3.0	+3.3%	2.6%
134	Cellbion Co., Ltd	Pharma & CDMO	SME	3.0	+18.4%	274.5%
135	VUNO, Inc.	Medical AI	SME	3.0	-0.7%	24.4%
136	Noul Co., Ltd.	Medical devices	SME	2.9	-28.7%	219.1%
137	DEEPNOID Inc.	Medical AI	SME	2.9	+32.5%	173.3%
138	QuantaMatrix Incorporated	Medical devices	SME	2.8	—	202.2%
139	NIBEC CO., LTD.	Medical devices	SME	2.8	-41.2%	24.3%
140	Y-Biologics, Inc	Biotech & drug discovery	SME	2.7	—	149.5%
141	L&C BIO Co., Ltd	Pharma & CDMO	SME	2.7	+35.7%	4.8%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
142	SAMIL PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	2.6	—	2.6%
143	KOMIPHARM INTERNATIONAL CO., LTD.	Pharma & CDMO	SME	2.5	+43.4%	8.8%
144	CG Invites Co., Ltd.	Biotech & drug discovery	SME	2.5	-30.8%	28.2%
145	Micro Digital Co., Ltd.	Medical devices	SME	2.5	—	67.2%
146	HEM Pharma Inc.	Healthcare infrastructure	SME	2.4	+16.3%	25.6%
147	CELL BIOTECH CO ., LTD	Pharma & CDMO	SME	2.4	-0.1%	8.5%
148	Amicogen, Inc.	Biotech & drug discovery	SME	2.4	-35.2%	9.4%
149	SyntekaBio,Inc.	Medical AI	SME	2.4	+119.6%	284.9%
150	IT-CHEM Co., Ltd.	Pharma & CDMO	SME	2.3	—	8.4%
151	MYUNGMOON PHARM CO.,LTD	Pharma & CDMO	Mid-sized	2.3	+8.7%	2.3%
152	COSMO ROBOTICS CO., Ltd	Medical devices	SME	2.3	—	91.7%
153	METABIOMED.CO.,LTD	Medical devices	SME	2.3	—	4.5%
154	iNtRON Biotechnology, Inc.	Biotech & drug discovery	SME	2.3	—	58.2%
155	Xcell Therapeutics Inc.	Pharma & CDMO	SME	2.2	+45.7%	75.6%
156	CAREGEN CO.,LTD.	Biotech & drug discovery	SME	2.2	+23.7%	5.3%
157	SELVAS Healthcare, Inc.	Medical devices	SME	2.2	+11.5%	14.7%
158	SHINIL PHARMACEUTICAL CO., LTD.	Pharma & CDMO	SME	2.2	—	—
159	Kolmar BioTech, Inc.	Pharma & CDMO	Mid-sized	2.1	—	9.7%
160	MITECH CO.,LTD.	Medical devices	SME	2.1	—	5.8%
161	3billion Inc.	Biotech & drug discovery	SME	2.1	—	29.1%
162	T&L Co., LTD.	Medical devices	SME	2.0	+4.5%	2.0%
163	Optipharm.CO.,LTD	Medical devices	Mid-sized	2.0	-3.2%	16.9%
164	ANTEROGEN CO., LTD.	Biotech & drug discovery	SME	2.0	+13.0%	46.4%
165	REYON PHARMACEUTICAL CO., LTD	Pharma & CDMO	Mid-sized	2.0	+31.7%	2.8%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
166	HLB PANAGENE Co., LTD.	Medical devices	SME	2.0	-13.5%	29.1%
167	Eutilex Co.,Ltd.	Biotech & drug discovery	SME	2.0	—	110.7%
168	NanoenTek,Inc.	Medical devices	SME	1.9	+3.5%	8.5%
169	HLB Genex, Inc.	Pharma & CDMO	SME	1.9	—	14.9%
170	SAMSUNG PHARMACEUTICAL.CO.,Ltd.	Pharma & CDMO	SME	1.9	+17.5%	10.2%
171	ASTERASYS Co., Ltd.	Medical devices	SME	1.9	+35.7%	10.0%
172	BioPlus Co., Ltd	Pharma & CDMO	SME	1.9	+13.8%	3.6%
173	Corentec Co., Ltd.	Medical devices	SME	1.8	+1.3%	4.7%
174	Binex Co., Ltd.	Pharma & CDMO	Mid-sized	1.8	+183.7%	2.4%
175	DIO Corporation	Medical devices	Mid-sized	1.7	-31.8%	4.1%
176	KUKJEON Co.,Ltd	Pharma & CDMO	SME	1.7	+9.0%	2.3%
177	JW SHINYAK CORPORATION	Biotech & drug discovery	Mid-sized	1.7	—	4.0%
178	CU MEDICAL SYSTEMS Inc.	Medical devices	SME	1.7	+33.6%	4.8%
179	PROTIA INC.	Medical devices	SME	1.7	+25.4%	18.1%
180	T&R Biofab Co., Ltd	Biotech & drug discovery	SME	1.6	-27.3%	9.0%
181	DONGSUNG PHARMACEUTICAL CO.,LTD	Pharma & CDMO	Mid-sized	1.6	-10.4%	4.0%
182	Icure Pharmaceutical Incorporation	Healthcare infrastructure	SME	1.6	+10.0%	2.3%
183	Gencurix Inc.	Medical devices	SME	1.6	—	31.4%
184	Aprogen Biologics Inc.	Pharma & CDMO	Mid-sized	1.6	—	6.9%
185	JPI Healthcare Co., Ltd.	Medical devices	SME	1.6	-23.1%	6.9%
186	Oncocross Co.,Ltd.	Medical AI	SME	1.6	-12.9%	—
187	VIVOZON PHARMACEUTICAL CO., LTD.	Pharma & CDMO	SME	1.5	-24.7%	5.6%
188	Precision Biosensor Inc.	Medical devices	SME	1.5	+0.7%	11.3%
189	Coreline Soft Co., Ltd	Medical AI	SME	1.5	-1.9%	—
190	Yuyu Pharma, Inc.	Pharma & CDMO	Mid-sized	1.4	-35.3%	2.7%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
191	ENZYCHEM LIFESCIENCES CORPORATION	Biotech & drug discovery	SME	1.4	-26.7%	3.7%
192	GC Medical Science Corporation	Medical devices	Mid-sized	1.4	-19.5%	2.8%
193	MEKICS Co., Ltd	Medical devices	SME	1.4	—	18.8%
194	DongKook Life Science Co., Ltd.	Medical devices	Mid-sized	1.4	+22.8%	2.4%
195	Acryl Inc.	Medical AI	SME	1.4	—	11.4%
196	Raphas Co., Ltd.	Medical devices	SME	1.4	—	9.5%
197	SINSIN PHARMACEUTICAL Co., LTD.	Pharma & CDMO	SME	1.3	-9.1%	2.1%
198	SEOUL PHARMA CO.,LTD	Pharma & CDMO	Mid-sized	1.3	-7.7%	5.6%
199	Plasmapp Co., Ltd.	Medical devices	SME	1.3	-23.5%	23.2%
200	CHOONG ANG VACCINE LABORATORY	Biotech & drug discovery	SME	1.3	-5.0%	5.3%
201	JIN YANG PHARMACEUTICAL. CO., LTD	Pharma & CDMO	Mid-sized	1.3	+11.1%	2.0%
202	GFC Life Science Co., Ltd.	Biotech & drug discovery	SME	1.3	+36.3%	12.2%
203	GENEMATRIX INC.	Biotech & drug discovery	SME	1.3	-13.8%	23.4%
204	AMINOLOGICS CO.,LTD.	Pharma & CDMO	SME	1.2	+13.7%	8.9%
205	Daejung Chemicals & Metals Co., Ltd	Pharma & CDMO	SME	1.2	+2.2%	1.9%
206	Dynamic solution Co.,Ltd.	Medical devices	SME	1.1	-24.2%	15.6%
207	Pangen Biotech Inc.	Biotech & drug discovery	SME	1.1	+51.6%	14.4%
208	Helixmith Co., Ltd	Biotech & drug discovery	SME	1.1	-32.5%	81.0%
209	KOREA PHARMA Co., Ltd.	Pharma & CDMO	SME	1.1	-22.6%	2.2%
210	KOREAN DRUG CO., LTD.	Pharma & CDMO	SME	1.1	+11.0%	3.5%
211	SEWOONMEDICAL CO,. LTD.	Medical devices	SME	1.0	+215.8%	3.1%
212	KYUNG NAM PHARM.CO.,LTD.	Pharma & CDMO	SME	1.0	-3.8%	3.1%
213	Autech Corporation	Medical devices	Mid-sized	0.9	+35.6%	2.1%
214	EOFlow Co., Ltd.	Medical devices	SME	0.8	—	373.2%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
215	BITComputer	Medical AI	SME	0.8	+11.5%	4.2%
216	L&K BIOMED CO., LTD.	Medical devices	SME	0.8	—	10.3%
217	P&K Skin Research Center Co.,Ltd.	Biotech & drug discovery	SME	0.8	+2.5%	6.2%
218	DongBang Medical Co., Ltd.	Medical devices	SME	0.8	-46.7%	1.2%
219	RecensMedical, Inc.	Medical devices	SME	0.8	—	28.5%
220	DaehanPharmaceutical	Pharma & CDMO	Mid-sized	0.7	-40.0%	0.6%
221	ILSUNG IS CO., LTD.	Pharma & CDMO	SME	0.7	+30.5%	2.0%
222	POONGJEON PHARMACY CO.,LTD.	Biotech & drug discovery	SME	0.7	-56.1%	2.4%
223	WooGeneB&GCO.,Ltd	Pharma & CDMO	SME	0.6	+11.8%	3.9%
224	DAIHAN SCIENTIFIC CO., Ltd	Healthcare infrastructure	SME	0.6	+18.9%	1.5%
225	Alpha AI Co.,Ltd.	Medical devices	SME	0.5	+17.8%	7.9%
226	DreamCIS INC.	Healthcare infrastructure	Mid-sized	0.5	-5.5%	1.4%
227	HLB bioStep Co.,Ltd.	Biotech & drug discovery	SME	0.5	-23.2%	1.7%
228	MOA Life Plus Co. Ltd.	Biotech & drug discovery	SME	0.5	+116.3%	10.4%
229	MEZOO Co., Ltd.	Medical devices	SME	0.5	—	4.9%
230	BIOBIJOU Co., Ltd.	Biotech & drug discovery	Mid-sized	0.5	+33.1%	2.6%
231	LabGenomics. Co., Ltd.	Medical devices	SME	0.5	-55.3%	1.4%
232	ChoA Pharmaceutical Co., LTD.	Pharma & CDMO	SME	0.5	-31.3%	1.5%
233	SHINHUNG CO.,LTD	Medical devices	Mid-sized	0.4	-13.6%	0.8%
234	UNION KOREA PHARM CO.,Ltd	Pharma & CDMO	SME	0.4	-17.5%	3.2%
235	TELCON RF PHARMACEUTICAL. Inc.	Pharma & CDMO	SME	0.4	-5.0%	0.9%
236	HIGH TECH PHARM CO.,LTD.	Pharma & CDMO	Mid-sized	0.4	+44.1%	0.9%
237	BLUEMTEC CO., LTD.	Healthcare infrastructure	SME	0.3	-55.6%	0.3%
238	HWAIL PHARM. CO., LTD	Pharma & CDMO	Mid-sized	0.3	—	0.7%

Rank	Company	Sector	Size	H1 2026 (KRW bn)	YoY	R&D / revenue
239	SLSBio(Specialty Lab Solution Bio) Co., Ltd	Biotech & drug discovery	SME	0.3	+0.3%	14.7%
240	GeneOne Life Science, Inc.	Pharma & CDMO	SME	0.3	-67.2%	6.9%
241	HUMASIS CO., LTD.	Medical devices	SME	0.3	-29.2%	1.8%
242	C&R Research Inc.	Healthcare infrastructure	SME	0.3	-75.2%	1.0%
243	Daesung Microbiological Labs. Co. Ltd	Pharma & CDMO	SME	0.3	+36.2%	2.7%
244	TDSPHARM Co., Ltd.	Pharma & CDMO	SME	0.3	-9.6%	1.9%
245	Finemedix Co., Ltd.	Medical devices	SME	0.3	-19.9%	4.3%
246	SCL Science Inc.	Medical devices	SME	0.3	—	1.7%
247	IVIM Technology, Inc.	Pharma & CDMO	SME	0.2	-38.7%	8.1%
248	GREEN LIFESCIENCE CO., LTD.	Pharma & CDMO	SME	0.2	-31.6%	0.6%
249	CTC BIO, INC.	Pharma & CDMO	Mid-sized	0.2	-65.7%	0.3%
250	RollingStone Co., Ltd.	Medical devices	SME	0.2	—	0.3%
251	JMT CO.,Ltd.	Medical devices	SME	0.1	-32.9%	0.1%
252	NATURECELL CO.,LTD.	Pharma & CDMO	SME	0.1	+38.2%	0.6%

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
1	Celltrion, Inc.	902.4	20	18	13	36	46
2	LigaChem Biosciences Inc.	330.4	0	0	1	3	33
3	Hanmi Pharm. Co., Ltd.	438.8	23	9	12	72	114
4	SK Bioscience Co.,Ltd	262.0	0	2	1	16	40
5	YUHAN CORPORATION	511.2	31	9	26	27	55
6	DAEWOONG PHARMA	454.5	50	17	21	27	87
7	Chong Kun Dang Pharmaceutical Corp.	343.2	55	16	22	7	75
8	SAMSUNG EPIS HOLDINGS Co., Ltd.	419.2	13	0	2	22	10
9	SK biopharmaceuticals Co., Ltd.	335.6	0	0	1	3	29
10	GC Biopharma Corp.	346.6	36	5	3	14	27

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
11	SAMSUNG BIOLOGICS CO.,LTD.	309.0	0	0	0	3	21
12	DONG-A ST CO.,LTD	251.6	17	10	16	12	35
13	ABL Bio Inc.	167.5	0	1	1	8	20
14	Kolon TissueGene, Inc.	222.7	0	0	0	0	5
15	MEDIPOSTCO.,LTD.	129.3	0	0	0	5	1
16	JW PHARMACEUTICAL	191.2	18	12	10	0	51
17	SD BIOSENSOR INC.	166.0	66	0	0	4	45
18	HK inno.N Corporation	163.1	10	5	7	6	34
19	Voronoi, Inc.	76.5	0	0	3	4	45
20	JEIL PHARMACEUTICAL CO.,LTD	86.5	21	1	3	0	26
21	Orum Therapeutics, Inc.	85.7	0	0	0	0	12
22	Boryung Corporation	124.7	31	22	27	2	3
23	SEEGENE, INC.	135.6	4	0	0	68	115
24	Aimed Bio Inc.	38.7	0	0	0	0	14
25	IL DONG PHARMACEUTICAL CO., LTD.	46.0	31	2	1	0	55
26	PharmaResearch Co., Ltd.	57.4	7	0	2	1	10
27	DAEWON PHARMACEUTICAL CO.,LTD	101.1	37	18	7	3	11
28	Medy-Tox Inc.	86.6	1	0	0	12	13
29	SAM CHUN DANG PHARM CO. LTD	36.5	8	1	0	1	6
30	HLB Co.,LTD.	101.2	1	0	0	0	8
31	HUONS CO., LTD.	76.7	41	12	5	11	7
32	GI Innovation Inc.	68.7	0	1	1	5	27
33	i-SENS, Inc.	64.1	28	0	0	1	99
34	OliX Pharmaceuticals, Inc.	47.2	0	0	1	3	14
35	KOREA UNITED PHARM INC	67.1	9	11	4	4	15
36	ILYANG PHARMACEUTICAL CO.,LTD	57.9	32	7	8	4	2
37	DongKookPharmaceuticalCo.,Ltd.	60.6	61	3	1	3	8
38	Qurient Co., Ltd.	43.3	0	0	1	5	8
39	SAMJIN PHARMACEUTICAL CO.,LTD	71.0	26	2	0	2	18
40	Mezzion Pharma Co., Ltd.	37.7	0	1	0	0	1

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
41	KYONGBO PHARMACEUTICAL CO., LTD.	38.6	19	6	0	2	16
42	OSCOTECInc.	49.1	0	1	1	0	12
43	BUKWANG PHARMACEUTICAL IND CO.,LTD	54.6	5	0	0	0	0
44	CLASSYS Inc.	39.1	7	0	4	3	72
45	Lunit Inc.	72.4	1	0	1	64	60
46	HANALL BIOPHARMA CO.,LTD	69.0	3	1	2	0	9
47	ST PHARM CO., LTD.	45.8	0	0	0	8	43
48	Rznomics Inc.	26.1	0	1	2	2	7
49	GC CELL CORPORATION	51.7	0	1	3	4	20
50	D&D Pharmatech Inc.	48.3	0	0	0	3	9
51	Genexine, Inc.	49.1	0	1	2	7	14
52	Inventage Lab Inc.	37.7	0	0	1	4	52
53	Vieworks Co., Ltd.	52.5	8	0	0	1	75
54	Curocell Inc.	64.6	0	1	0	0	6
55	DONGWHA PHARM.CO.,LTD	49.9	30	0	0	1	7
56	Boditech Med Inc.	37.8	63	0	0	3	55
57	BIONEERCORPORATION	41.2	3	1	0	14	10
58	HANDOK Inc.	49.5	7	4	3	3	4
59	SHINPOONG PHARMACEUTICAL CO.,LTD	30.6	18	2	0	0	4
60	Chabiotech Co.,Ltd.	42.3	3	1	1	0	10
61	Samyang Biopharm Corporation	—	—	—	—	—	—
62	OSANG HEALTHCARE CO.,LTD.	41.0	31	0	0	0	11
63	Aprogen, Inc	110.7	0	0	0	0	2
64	Huvitz Co., Ltd.	42.6	3	0	0	3	84
65	Peptron, Inc.	29.2	1	0	0	2	8
66	EuBiologics Co., Ltd.	28.5	1	3	2	9	2
67	Hana Pharm. Co., Ltd.	29.3	20	5	0	1	4
68	LivsMed Inc.	24.9	16	0	0	2	102
69	Hugel, Inc.	30.0	1	0	2	2	11
70	AHN-GOOK PHARMACEUTICAL Co., Ltd.	40.2	11	5	6	0	4

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
71	SillaJen, Inc.	30.2	0	0	0	3	12
72	Celltrion Pharm Inc.	33.8	19	0	0	1	1
73	BioNote, Inc.	30.8	0	0	0	2	0
74	DRTECH Corporation	33.0	22	0	0	2	41
75	ValueAddedTechnologyCo.,Ltd.	28.8	9	0	0	0	35
76	WHANIN PHARM CO.,LTD	46.8	21	4	0	0	5
77	CJ Bioscience	40.9	0	0	0	20	2
78	ISU Abxis Co., Ltd.	29.7	0	1	0	3	4
79	KANGSTEM BIOTECH CO., LTD.	26.7	0	1	0	6	29
80	QuadMedicine Inc.	29.9	0	0	1	7	5
81	S.Biomedics Co., Ltd.	17.2	0	0	0	8	3
82	MYUNGIN PHARM.CO., LTD	28.6	15	2	0	0	0
83	KOLON LIFE SCIENCE Inc.	15.6	0	0	0	0	4
84	AbClon Inc.	27.8	0	0	0	1	14
85	KWANGDONG PHARMACEUTICAL CO.,LTD	30.4	12	0	0	4	13
86	STCUBE	24.3	0	2	2	1	0
87	YUNGJIN PHARM. CO., LTD	25.5	9	3	0	1	2
88	SELVAS AI Inc.	20.5	0	0	0	0	6
89	CKD Bio Corp.	26.7	2	0	0	2	19
90	PharmGen Science, Inc.	28.5	9	0	0	0	7
91	KolmarBNH Co., Ltd	24.3	0	0	0	1	26
92	MedPacto, Inc.	30.1	0	0	0	7	8
93	GENORAY Co., LTD.	23.0	7	0	0	0	3
94	Genome&Company	26.9	0	0	1	10	11
95	meerecompanyIncorporated	28.3	1	0	0	0	30
96	KyungdongPharm	24.6	23	2	0	0	1
97	InBody Co., Ltd.	24.1	6	0	0	1	16
98	TiumBio Co., Ltd.	21.3	0	0	0	1	4
99	JETEMA Co.,Ltd.	39.5	8	0	2	2	15
100	Humedix Co., Ltd.	18.6	7	1	1	1	2
101	ENCell Co., Ltd.	17.1	0	1	2	12	23
102	Daehan Nupharm Co.,Ltd.	16.8	11	3	0	0	5

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
103	SUHEUNG CO.,LTD.	17.3	22	0	0	3	13
104	FutureChem Co., Ltd.	15.1	0	2	0	4	2
105	DAE HWA PHARM CO., LTD	23.5	11	1	0	0	5
106	WON TECH CO.,Ltd.	14.9	23	0	0	3	15
107	CUREXO, INC.	19.9	1	0	0	1	70
108	NEXTBIOMEDICAL Co., Ltd.	14.8	4	0	0	1	5
109	Shaperon Inc.	19.7	0	1	1	11	17
110	NEUROPHET Inc.	12.7	6	0	2	30	9
111	SEERS Co., Ltd.	11.0	2	0	1	11	33
112	G2GBIO, Inc.	15.8	0	0	2	2	43
113	CMG Pharmaceutical Co., Ltd.	17.6	52	1	1	2	13
114	Kukje Pharma Co., Ltd.	11.2	10	0	2	0	1
115	HLB PHARMACEUTICAL CO., LTD.	11.4	11	1	0	0	4
116	curacle co., ltd.	20.4	0	0	1	4	3
117	DENTIUM	16.8	0	0	0	0	49
118	Pharmicell Co.,Ltd.	14.6	0	1	1	3	8
119	Daebonglsco.,Ltd	13.2	0	0	0	1	25
120	Cellid Co., Ltd.	32.8	0	1	0	10	29
121	IMBiologics Corp.	11.8	0	0	0	0	10
122	INFINITT Healthcare Co., Ltd.	17.4	3	0	1	1	3
123	MEDIANA Co.,LTD	9.5	2	0	0	3	15
124	KOREA ARLICO PHARM CO.,LTD.	10.1	30	3	1	0	3
125	ORGANOIDSCIENCES LTD.	11.0	0	0	0	13	18
126	Sam-A Pharm. Co. Ltd	11.6	2	1	0	0	4
127	Synergy Innovation Co., Ltd.	—	—	—	—	—	—
128	ARIBIOLAB	19.0	0	1	0	0	0
129	CORESTEMCHEMON Inc.	20.9	0	1	0	13	19
130	Tego Science, Inc.	8.5	1	1	2	1	2
131	Bio Solution Co.,Ltd.	14.3	0	0	0	0	11
132	THERAGEN ETEX CO.,LTD.	10.4	10	1	0	0	20
133	JW LIFESCIENCE CORPORATION	11.1	1	0	0	0	2
134	Cellbion Co., Ltd	12.3	2	1	1	2	3
135	VUNO, Inc.	11.2	14	0	1	22	44

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
136	Noul Co., Ltd.	18.8	0	0	0	5	18
137	DEEPNOID Inc.	12.3	3	0	0	14	24
138	QuantaMatrix Incorporated	10.0	0	0	0	2	3
139	NIBEC CO., LTD.	14.7	1	0	2	3	20
140	Y-Biologics, Inc	15.3	0	0	0	1	13
141	L&C BIO Co., Ltd	8.3	3	0	2	4	5
142	SAMIL PHARMACEUTICAL CO.,LTD	14.1	6	0	0	1	1
143	KOMIPHARM INTERNATIONAL CO., LTD.	7.1	0	0	0	6	2
144	CG Invites Co., Ltd.	15.9	0	0	0	1	6
145	Micro Digital Co., Ltd.	5.4	1	0	0	0	12
146	HEM Pharma Inc.	7.1	0	0	1	10	32
147	CELL BIOTECH CO ., LTD	9.0	0	1	0	10	12
148	Amicogen, Inc.	21.8	0	0	0	5	19
149	SyntekaBio,Inc.	5.2	0	0	0	2	27
150	IT-CHEM Co., Ltd.	11.1	0	0	0	0	2
151	MYUNGMOON PHARM CO.,LTD	—	—	—	—	—	—
152	COSMO ROBOTICS CO., Ltd	9.6	3	0	2	0	22
153	METABIOMED.CO.,LTD	10.0	10	0	0	0	3
154	iNtRON Biotechnology, Inc.	8.1	0	0	0	0	19
155	Xcell Therapeutics Inc.	8.4	0	0	0	0	6
156	CAREGEN CO.,LTD.	13.1	0	0	0	2	70
157	SELVAS Healthcare, Inc.	7.4	5	0	0	1	2
158	SHINIL PHARMACEUTICAL CO., LTD.	8.6	20	0	0	0	1
159	Kolmar BioTech, Inc.	11.4	0	0	0	0	1
160	MITECH CO.,LTD.	7.7	10	0	0	0	1
161	3billion Inc.	7.7	0	0	0	64	13
162	T&L Co., LTD.	10.3	0	0	0	3	9
163	Optipharm.CO.,LTD	8.9	1	0	0	27	12
164	ANTEROGEN CO., LTD.	7.2	1	0	1	0	3
165	REYON PHARMACEUTICAL CO., LTD	7.7	6	2	0	0	1
166	HLB PANAGENE Co., LTD.	8.7	4	0	0	0	0

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
167	Eutilex Co.,Ltd.	24.1	0	0	0	1	8
168	NanoenTek,Inc.	8.1	2	0	0	0	4
169	HLB Genex, Inc.	17.4	0	0	0	0	9
170	SAMSUNG PHARMACEUTICAL.CO.,Ltd.	5.5	5	0	0	0	0
171	ASTERASYS Co., Ltd.	5.9	4	0	0	0	4
172	BioPlus Co., Ltd	6.3	1	0	0	0	2
173	Corentec Co., Ltd.	8.1	8	0	0	8	23
174	Binex Co., Ltd.	2.4	9	0	0	0	2
175	DIO Corporation	9.3	18	0	0	0	13
176	KUKJEON Co.,Ltd	6.6	0	0	0	1	6
177	JW SHINYAK CORPORATION	6.6	4	0	0	0	0
178	CU MEDICAL SYSTEMS Inc.	4.9	1	0	0	0	1
179	PROTIA INC.	5.3	6	0	0	0	4
180	T&R Biofab Co., Ltd	10.0	13	0	0	7	35
181	DONGSUNG PHARMACEUTICAL CO.,LTD	8.3	14	1	0	0	2
182	Icure Pharmaceutical Incorporation	6.1	7	0	0	0	19
183	Gencurix Inc.	8.7	1	0	0	4	4
184	Aprogen Biologics Inc.	23.7	18	5	0	0	0
185	JPI Healthcare Co., Ltd.	9.3	1	0	0	1	15
186	Oncocross Co.,Ltd.	6.3	0	0	0	8	7
187	VIVOZON PHARMACEUTICAL CO., LTD.	6.9	8	1	0	0	0
188	Precision Biosensor Inc.	6.2	20	0	0	2	7
189	Coreline Soft Co., Ltd	6.1	16	0	0	16	22
190	Yuyu Pharma, Inc.	8.2	15	0	0	1	2
191	ENZYCHEM LIFESCIENCES CORPORATION	8.0	0	1	0	3	4
192	GC Medical Science Corporation	6.6	10	0	0	0	1
193	MEKICS Co., Ltd	5.8	9	0	0	0	4
194	DongKook Life Science Co., Ltd.	4.8	11	0	0	0	0
195	Acryl Inc.	3.1	6	0	0	1	26
196	Raphas Co., Ltd.	4.0	0	0	0	11	18

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
197	SINSIN PHARMACEUTICAL Co., LTD.	5.3	24	2	0	0	4
198	SEOUL PHARMA CO.,LTD	5.4	8	1	0	0	0
199	Plasmapp Co., Ltd.	7.7	5	0	0	6	29
200	CHOONG ANG VACCINE LABORATORY	5.7	0	0	0	1	4
201	JIN YANG PHARMACEUTICAL. CO., LTD	4.3	13	6	0	0	2
202	GFC Life Science Co., Ltd.	3.6	2	0	0	6	46
203	GENEMATRIX INC.	6.1	2	1	0	1	4
204	AMINOLOGICS CO.,LTD.	4.1	0	0	0	0	3
205	Daejung Chemicals & Metals Co., Ltd	—	—	—	—	—	—
206	Dynamic solution Co.,Ltd.	6.8	2	0	0	0	7
207	Pangen Biotech Inc.	3.4	0	0	0	1	3
208	Helixmith Co., Ltd	11.6	0	0	0	3	13
209	KOREA PHARMA Co., Ltd.	4.8	14	2	0	1	1
210	KOREAN DRUG CO., LTD.	4.2	6	0	0	1	2
211	SEWOONMEDICAL CO,. LTD.	2.1	2	0	0	0	0
212	KYUNG NAM PHARM.CO.,LTD.	4.2	22	0	0	0	1
213	Autech Corporation	3.4	0	0	0	0	2
214	EOFlow Co., Ltd.	2.9	1	0	0	0	74
215	BITComputer	—	—	—	—	—	—
216	L&K BIOMED CO., LTD.	2.8	11	0	0	0	3
217	P&K Skin Research Center Co.,Ltd.	3.3	0	0	0	3	1
218	DongBang Medical Co., Ltd.	5.9	24	0	0	0	4
219	RecensMedical, Inc.	5.9	5	0	0	2	55
220	DaehanPharmaceutical	4.0	1	0	0	0	0
221	ILSUNG IS CO., LTD.	2.6	9	0	0	0	0
222	POONGJEON PHARMACY CO.,LTD.	9.5	0	0	0	0	5
223	WooGeneB&GCO.,Ltd	2.6	0	0	0	8	5
224	DAIHAN SCIENTIFIC CO., Ltd	2.2	2	0	0	0	0
225	Alpha AI Co.,Ltd.	2.0	2	0	0	0	6
226	DreamCIS INC.	2.4	17	1	0	1	2

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
227	HLB bioStep Co.,Ltd.	2.5	0	0	0	3	1
228	MOA Life Plus Co. Ltd.	1.4	0	0	0	1	3
229	MEZOO Co., Ltd.	1.6	2	0	1	9	5
230	BIOBIJOU Co., Ltd.	2.1	7	0	0	0	10
231	LabGenomics. Co., Ltd.	4.6	10	0	0	2	1
232	ChoA Pharmaceutical Co., LTD.	3.2	13	0	0	0	5
233	SHINHUNG CO.,LTD	1.6	27	0	0	0	0
234	UNION KOREA PHARM CO.,Ltd	2.2	6	0	0	0	1
235	TELCON RF PHARMACEUTICAL. Inc.	1.4	1	0	0	0	0
236	HIGH TECH PHARM CO.,LTD.	1.4	0	0	0	1	0
237	BLUEMTEC CO., LTD.	—	—	—	—	—	—
238	HWAIL PHARM. CO., LTD	1.5	0	0	0	0	3
239	SLSBio(Specialty Lab Solution Bio) Co., Ltd	—	—	—	—	—	—
240	GeneOne Life Science, Inc.	5.5	0	0	0	3	1
241	HUMASIS CO., LTD.	2.2	3	0	0	0	0
242	C&R Research Inc.	6.3	0	2	0	0	4
243	Daesung Microbiological Labs. Co. Ltd	—	—	—	—	—	—
244	TDSPHARM Co., Ltd.	1.3	2	0	0	0	1
245	Finemedix Co., Ltd.	1.1	12	0	0	0	14
246	SCL Science Inc.	4.1	3	0	0	1	15
247	IVIM Technology, Inc.	1.6	0	0	0	4	5
248	GREEN LIFESCIENCE CO., LTD.	—	—	—	—	—	—
249	CTC BIO, INC.	3.0	7	0	0	0	4
250	RollingStone Co., Ltd.	4.1	0	0	0	0	3
251	JMT CO.,Ltd.	0.6	6	0	0	0	3
252	NATURECELL CO.,LTD.	0.4	0	1	0	0	1
·	Alteogen Inc.	116.1	1	0	0	2	18
·	Ensol Biosciences Inc.	8.1	1	0	0	1	9
·	Femtobiomed Inc.	3.2	0	0	0	0	3
·	Future Medicine Co., Ltd.	6.7	0	0	0	19	9
·	Hancom Lifecare Inc.	4.6	0	0	0	0	10

Rank	Company	Two-year R&D (KRW bn)	Approvals (n)	Korean trials (n)	Global trials (n)	Papers (n)	Patents (n)
·	MEDYSSEY CO.,LTD	2.0	4	0	0	0	4
·	Moogene Medi Co., Ltd.	2.8	0	1	0	2	12
·	NovMetaPharma Co., Ltd.	5.1	0	0	0	3	39
·	ProGen, Co,, LTD.	29.3	0	1	2	2	2
·	UXN Co., Ltd.	7.6	0	0	0	0	15

Two-year R&D and output cover 2024–2025 (patents: 2023–2024 filings). "·" rows have two-year values but no H1 2026 value and are included in two-year totals. "—" marks companies without both years, or with no disclosed output, which are not named (IV-5).