TL1A IP Portfolio Analysis

Executive Summary

This report applies the rDNA.ai four-stage KC scoring pipeline to 260 recent USPTO biopharma patents in the TL1A target class, including 180 patents directly classified into the IBD_CD_UC therapeutic area. Each patent is scored on six Key Component (KC) dimensions on a 1–5 scale and aggregated into a four-scheme ensemble (Meta Baseline / AbbVie / Amgen / Genentech weighting), which determines the patent's investment-grade tier.

Portfolio-level results are summarized below by therapeutic-area cut, by top assignee, and at the patent level for the top decile after a V2 pairwise-tournament calibration. The IBD_CD_UC cut is the strongest in the corpus (mean ensemble 4.119; 58 of 180 patents at TIER 1 PREMIUM), reflecting the concentrated composition-of-matter and platform IP held by Cedars-Sinai (the tulisokibart / PRA023 / MK-7240 humanization family), Pfizer/BMS (the 1D1 / 7D4 / 26B11 parental clones underlying the historic RVT-3101 / PF-06480605 program), Cephalon/Teva (the C320 DR3-selective program and the 320-179 affinity-matured duvakitug / TEV-48574 program co-developed with Sanofi), Prometheus Biosciences (the PRI companion-diagnostic platform), Amgen (the anti-TL1A / anti-TNFα bispecific platform), and Paragon Therapeutics (a 2025 follow-on differentiated against the clinically established competitors).

This is one of an expanding set of target-class KC Quality Analyses generated from a four-stage KC scoring pipeline applied to all USPTO biopharma issued and published patents assigned to each of the 25 most active global biopharma companies from January 2020 through April 2026. A parallel Top-25 Consolidated cross-portfolio analysis covering all 14,552 company patents in the biopharma cohort is available upon request.

Key Component (KC) Scoring Framework

Each patent is scored on six Key Component (KC) dimensions on a 1–5 scale. The ensemble score is the mean of the six dimensions (with confidence and standard deviation tracked alongside).

- **KC1** measures abstract and therapeutic specificity: target specificity, therapeutic positioning, structural disclosure, and technical differentiation.
- **KC2** measures independent-claim quality: scope, structure, enforceability, and enablement vulnerability.
- **KC3** measures dependent-claim quality: fallback hierarchy, embodiment coverage, prosecution flexibility, and structural diversity.
- **KC4** measures novelty and differentiation: prior-art positioning, inventive-step quality, and field positioning.

- **KC5** measures specification enablement: enablement gap, structure-function insight, data breadth, and translational completeness.
- **KC6** measures working examples: working/prophetic example quality, structural diversity, experimental rigor, and in vivo / translational validation.

Portfolio-Level Metrics

- Total TL1A USPTO records ingested: 260 from TL1A_patent_list.csv (USPTO patent publication search carried out in May 2026)
- Title and full-spec classification: Biopharma=260, all with confirmed assignee mapping
- Total Biopharma patents scored: 260
- Average KC scores — KC1: 3.94 KC2: 4.05 KC3: 3.95 KC4: 3.93 KC5: 3.98 KC6: 4.20
- Average ensemble mean across portfolio: 3.983

Investment-grade distribution:

- TIER_1_PREMIUM: 74
- TIER_1_HIGH: 73
- TIER_2_QUALITY: 49
- TIER_3_SPECULATIVE: 39
- TIER_4_RESEARCH: 25

Top Assignees

Rank	Assignee	Patent Count
1	Cedars-Sinai Medical Center	82
2	Gilead Sciences	34
3	Massachusetts General Hospital	20

Rank	Assignee	Patent Count
4	Cephalon/Teva	15
5	University of Miami	14
6	Teva Pharmaceuticals	12
7	Pfizer	11
8	Novo Nordisk	7
9	US Department of Health and Human Services	7
10	Amgen	6
11	Bristol Myers Squibb	5
12	Regeneron Pharmaceuticals	5
13	Paragon Therapeutics	4
14	Shattuck Labs	4
15	Glenmark / Ichnos Sciences	4

Therapeutic Area Analysis

Fifteen therapeutic-area buckets in the TL1A biopharma cohort receive their own KC breakdown. For each area: average KC1–KC6 (1–5 scale), average ensemble mean, average TA-weighted score, and tier distribution. IBD_CD_UC carries TA multiplier 1.05; Fibrosis and Companion_Dx 1.03; Other_Autoimmune_Inflammatory, Pulmonary, Multiple_Sclerosis, Rheumatoid_Arthritis, Dermatology, Autoimmune_Transplant, and SLE_Lupus 1.02; the remaining areas are 1.00.

Therapeutic Area	N	KC1	KC2	KC3	KC4	KC5	KC6	Ens Mean	T1 Prem	T1 High	T2 Qual	T3 Spec	T4 Res
IBD_CD_UC	180	4.12	4.14	4.07	4.09	4.07	4.32	4.119	58	54	40	20	8
Oncology	19	3.58	3.95	3.89	3.79	3.84	4.16	3.824	4	6	3	4	2
Other_Autoimmune_Inflammatory	14	4.36	4.43	4.43	4.29	4.36	4.64	4.387	7	4	2	0	1
Pulmonary	7	3.43	3.71	3.43	3.43	3.71	3.86	3.550	0	2	1	4	0
Companion_Dx	6	4.50	3.83	4.33	4.17	3.83	4.33	4.174	2	2	1	1	0
Dermatology	6	2.67	2.83	2.83	2.67	2.67	2.83	2.739	0	2	0	0	4

Therapeutic Area	N	KC1	KC2	KC3	KC4	KC5	KC6	Ens Mean	T1 Prem	T1 High	T2 Qual	T3 Spec	T4 Res
Autoimmune_Transplant	6	3.00	3.83	3.17	2.83	4.17	4.67	3.403	0	0	2	3	1
SLE_Lupus	5	3.00	3.60	3.00	2.60	2.60	3.00	2.991	0	0	0	3	2
CMC_Manufacturing	5	2.20	3.20	3.00	2.80	3.80	2.80	2.882	0	0	0	1	4
Rheumatoid_Arthritis	4	3.50	4.00	3.50	3.50	3.25	3.75	3.599	1	1	0	1	1
Multiple_Sclerosis	3	4.00	4.33	4.00	4.33	4.00	4.33	4.174	1	2	0	0	0
Fibrosis	2	4.00	4.00	4.00	4.50	4.50	4.00	4.170	1	0	0	1	0
Infectious_Disease	1	2.00	4.00	3.00	4.00	4.00	3.00	3.327	0	0	0	1	0
Ophthalmology	1	3.00	3.00	2.00	3.00	4.00	3.00	2.952	0	0	0	0	1
Metabolic	1	2.00	3.00	3.00	2.00	3.00	2.00	2.465	0	0	0	0	1

Therapeutic Area Narratives

IBD_CD_UC (n=180)

Average ensemble mean: 4.119. Highest KC: KC6 (avg 4.32). Lowest KC: KC5 (avg 4.07). TIER_1_PREMIUM: 58, TIER_1_HIGH: 54. Top 3 patents (by ensemble mean): US20260066079A1; US20210122828A1; US20220259320A1.

Other_Autoimmune_Inflammatory (n=14)

Average ensemble mean: 4.387. Highest KC: KC6 (avg 4.64). Lowest KC: KC4 (avg 4.29). TIER_1_PREMIUM: 7, TIER_1_HIGH: 4. Top 3 patents: US20240309104A1; US20240327532A1; US20240059799A1.

Companion_Dx (n=6)

Average ensemble mean: 4.174. Highest KC: KC1 (avg 4.50). Lowest KC: KC2 (avg 3.83). TIER_1_PREMIUM: 2, TIER_1_HIGH: 2. Top 3 patents: US20230272098A1; US20240209103A1; US20230272061A1.

Multiple_Sclerosis (n=3)

Average ensemble mean: 4.174. Highest KC: KC2 / KC4 / KC6 (avg 4.33). Lowest KC: KC1 / KC3 / KC5 (avg 4.00). TIER_1_PREMIUM: 1, TIER_1_HIGH: 2. Top 3 patents: US12269891B2; US20220112299A1; US20250243290A1.

Fibrosis (n=2)

Average ensemble mean: 4.170. Highest KC: KC4 / KC5 (avg 4.50). Lowest KC: KC1 / KC2 / KC3 / KC6 (avg 4.00). TIER_1_PREMIUM: 1. Top 3 patents: US20240336691A1; US20180156781A1.

Oncology (n=19)

Average ensemble mean: 3.824. Highest KC: KC6 (avg 4.16). Lowest KC: KC1 (avg 3.58). TIER_1_PREMIUM: 4, TIER_1_HIGH: 6. Top 3 patents: US20210340268A1; US20240101693A1; US20230383003A1.

Rheumatoid_Arthritis (n=4)

Average ensemble mean: 3.599. Highest KC: KC2 (avg 4.00). Lowest KC: KC5 (avg 3.25). TIER_1_PREMIUM: 1, TIER_1_HIGH: 1. Top 3 patents: US20170260245A1; US10683338B2; US20220227787A1.

Pulmonary (n=7)

Average ensemble mean: 3.550. Highest KC: KC6 (avg 3.86). Lowest KC: KC1 / KC3 / KC4 (avg 3.43). TIER_1_HIGH: 2. Top 3 patents: US20190106486A1; US20180186888A1; US20180319889A1.

Autoimmune_Transplant (n=6)

Average ensemble mean: 3.403. Highest KC: KC6 (avg 4.67). Lowest KC: KC4 (avg 2.83). TIER_2_QUALITY: 2, TIER_3_SPECULATIVE: 3. Top 3 patents: US20230257386A1; US20240217990A1; US20230365594A1.

Infectious_Disease (n=1)

Average ensemble mean: 3.327. Highest KC: KC2 / KC4 / KC5 (avg 4.00). Lowest KC: KC1 (avg 2.00). TIER_3_SPECULATIVE: 1. Top patent: US20230242624A1.

SLE_Lupus (n=5)

Average ensemble mean: 2.991. Highest KC: KC2 (avg 3.60). Lowest KC: KC4 / KC5 (avg 2.60). TIER_3_SPECULATIVE: 3, TIER_4_RESEARCH: 2. Top 3 patents: US11661431B2; US20220389034A1; US12070455B2.

Ophthalmology (n=1)

Average ensemble mean: 2.952. Highest KC: KC5 (avg 4.00). Lowest KC: KC3 (avg 2.00). TIER_4_RESEARCH: 1. Top patent: US20220002411A1.

CMC_Manufacturing (n=5)

Average ensemble mean: 2.882. Highest KC: KC5 (avg 3.80). Lowest KC: KC1 (avg 2.20). TIER_3_SPECULATIVE: 1, TIER_4_RESEARCH: 4. Top 3 patents: US20190046956A1; US10688412B2; US11426706B2.

Dermatology (n=6)

Average ensemble mean: 2.739. Highest KC: KC2 / KC3 / KC6 (avg 2.83). Lowest KC: KC1 / KC4 / KC5 (avg 2.67). TIER_1_HIGH: 2, TIER_4_RESEARCH: 4. Top 3 patents: US20190119407A1; US20190135928A1; US20200079769A1.

Metabolic (n=1)

Average ensemble mean: 2.465. Highest KC: KC2 / KC3 / KC5 (avg 3.00). Lowest KC: KC1 / KC6 (avg 2.00). TIER_4_RESEARCH: 1. Top patent: US20180296658A1.

Top-Decile Calibration: Pairwise Tournament Results

The top decile (n=26) of the TL1A biopharma cohort was re-judged against the V2 rubric using full-spec patent packets (abstract + key independent / dependent claims + total claim count + description summary), and the cohort was run through a complete 325-pair pairwise tournament. The V2 calibration replaced the prior uniform top-decile plateau (every patent KC=5, ta_weighted=5.25) with a discriminating ranking; calibrated ensemble distribution: mean 4.234, range 3.438–5.000.

Top-Decile Assignee Ranking

Top-decile assignees are ranked by frequency in the calibrated top-decile cohort, then by best calibrated patent rank, then by average calibrated ensemble mean.

Rank	Assignee	Count	Best Patent Rank	Avg Cal Rank	Avg Cal Ens
1	Cedars-Sinai Medical Center	12	2	13.08	4.243
2	Pfizer	5	6	11.60	4.244
3	Teva Pharmaceuticals	4	14	15.50	3.934
4	Amgen	2	18	18.50	4.140

Rank	Assignee	Count	Best Patent Rank	Avg Cal Rank	Avg Cal Ens
5	Prometheus Biosciences	1	1	1.00	5.000
6	Cephalon/Teva	1	10	10.00	4.612
7	Paragon Therapeutics	1	26	26.00	3.438

Bottom-Decile Assignee Ranking

Bottom-decile assignees are ranked by frequency in the bottom TL1A biopharma decile, then by weaker average original ensemble score.

Rank	Assignee	Count	Avg Original Score	Weakest Score
1	Gilead Sciences	18	2.233	2.000
2	Cephalon/Teva	4	2.775	2.000
3	Massachusetts General Hospital	2	2.878	2.878
4	Sanford Burnham Prebys	1	1.775	1.775
5	Legend Medical / Rimonci	1	2.000	2.000

Top 15 Tournament Calibration TL1A Patents

#1 US20260066079A1 — Prometheus Biosciences

Methods, systems, and kits for treatment of inflammatory diseases targeting TL1A

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=5, KC5=5, KC6=5; calibrated ensemble=5.000; pairwise record=25-0.

Prometheus PRI companion-diagnostic specification is the cleanest top-decile winner: a first-in-class Predictive Response Index for anti-TL1A patient selection with quantitative PPV ≥29%, weighted-summation PRI math, 1–8 SNP models, and 747 total claims spanning treatment, diagnostic workflow, computer-implemented systems, and PRI computation. Platform breadth (UC / CD / fibrostenotic / fibrotic) and direct linkage to RVT-3101 / PF-06480605 give it pole position on commercial differentiation, novelty (no companion-Dx prior art for TL1A), and enablement (validated SNP panels with PPV cutoffs).

#2 US11292848B2 — Cedars-Sinai Medical Center

Humanized antibodies to TNF-like ligand 1A (TL1A) and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=5, KC6=5; calibrated ensemble=4.763; pairwise record=24-1.

Granted parent of the tulisokibart (PRA023 / MK-7240) composition-of-matter family. Six-CDR + framework-minimal-modification (IGHV1-46*02 / IGKV3-20) composition claim, 347 total claims, reduced-effector-function Fc variants, ≥80% monomeric fraction, ≥20 μg/mL CHO expression, viscosity 4–30 mPa·s up to 170 mg/mL. Underpins Merck's $10.8B Prometheus acquisition; Phase 3 ARTEMIS-UC and APOLLO-CD in flight. Calibrated below the PRI companion-Dx because TL1A antibody novelty is moderated by dense academic and BMS / Pfizer prior art.

#3 US11999789B2 — Cedars-Sinai Medical Center

Humanized antibodies to TNF-like ligand 1A (TL1A) and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=5, KC6=5; calibrated ensemble=4.763; pairwise record=23-2.

Granted continuation of 11292848 with method-of-treatment claims (claim 32) and CDR-plus-Fc independent claim 43; 349 total claims. Same composition-of-matter spine, broader method coverage, CHO / Protein A / SEC / AEX manufacturing, anti-TNF / anti-integrin / IL-23 / JAK combination embodiments. Calibrated immediately behind 11292848 because the parent carries the broader genus and earlier priority.

#4 US20210122828A1 — Cedars-Sinai Medical Center

Humanized antibodies to TNF-like ligand 1A (TL1A) and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=5, KC6=4; calibrated ensemble=4.690; pairwise record=22-3.

Publication of the IGHV1-46*02 / IGKV3-20 humanization family granted as 11292848. 358 total claims, same six-CDR composition + reduced-effector Fc spine, modifications enumerated at heavy-chain positions 1 / 45 / 47 / 55 / 78 / 80 / 82 / 89 / 91. Calibrated below the granted counterparts because publication-only status and overlap with 11292848 / 11999789 reduce independent commercial leverage.

#5 US20240336691A1 — Cedars-Sinai Medical Center

Anti-TL1A antibody compositions and methods of treatment in the lung

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=5, KC6=4; calibrated ensemble=4.690; pairwise record=21-4.

PRA023 / tulisokibart pulmonary extension: monomeric+trimeric TL1A binding (60:40 circulating ratio), 50–250 mg/mL high-concentration SC formulation with viscosity <20 cP, induction-maintenance dosing, PBPK model integrating FcRn recycling, and demonstrated reversal of established fibrosis. 363 claims spanning IPF / SSc-ILD / COPD / asthma / viral-induced lung fibrosis. Top of the lung-extension cohort; calibrated behind the foundational antibody composition because formulation / lifecycle scope is narrower.

#6 US9683998B2 — Pfizer

Tumor necrosis factor-like ligand 1A specific antibodies and compositions and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=4, KC4=4, KC5=5, KC6=4; calibrated ensemble=4.540; pairwise record=20-5.

Granted Pfizer / BMS parental composition: 1D1, 7D4, 26B11 with KD ≤5 nM (preferred ≤100 pM), 1D1 1.31 affinity-matured; co-crystal structure of three 1D1 scFv with TL1A trimer (FIG. 5) defines the DR3-blocking epitope. 307 claims with humanized IgG1 / IgG2 / IgG4-S228P variants and pharmaceutical compositions. Strong structural anchor and crystal-structure-defined epitope; calibrated below the Cedars foundational antibody on commercial-asset weight (no clinical asset advanced from this lineage relative to tulisokibart) but above narrower lifecycle filings.

#7 US20180052175A1 — Pfizer

Tumor necrosis factor-like ligand 1A specific antibodies and compositions and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=4, KC4=4, KC5=5, KC6=4; calibrated ensemble=4.540; pairwise record=19-6.

Pfizer / BMS publication of 1D1 1.31 affinity-matured antibody (NF-κB IC50 ~54 pM), with chronic DSS colitis, T-cell transfer colitis, OVA asthma and CIA arthritis in vivo data plus alanine-scan epitope mapping and X-ray crystallography. 337 claims across composition, composition+carrier, nucleic acid / vector / host cell, and method-of-treatment for IBD / asthma / MS / psoriasis / RA. Calibrated immediately behind 9683998 because it is the publication of an overlapping family and slightly less commercially established.

#8 US20220259320A1 — Cedars-Sinai Medical Center

Humanized antibodies to TNF-like ligand 1A (TL1A) and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=5, KC6=4; calibrated ensemble=4.690; pairwise record=18-7.

Publication of the 11999789 / 11292848 humanization family. 358 claims, same six-CDR + framework-minimal-modification composition, IgG1 / IgG2 / IgG4 Fc variants enumerated at positions 297 / 279 / 228 / 235 / 237 / 234 / 233 / 328 / 327 / 329 / 331 / 236 / 238 / 248 / 254. Calibrated behind the granted counterparts and the publication US20210122828 because the family already has two granted patents at higher rank in this cohort.

#9 US20240309104A1 — Cedars-Sinai Medical Center

Compositions comprising humanized antibodies to TNF-like ligand 1A (TL1A) and uses thereof

Calibrated KC profile: KC1=5, KC2=5, KC3=5, KC4=4, KC5=4, KC6=4; calibrated ensemble=4.587; pairwise record=17-8.

Tulisokibart-class composition + ≤9 mL volume + ≥150 mg/mL concentration + 500–1000 mg induction → 100–500 mg maintenance dosing claims; monomer+trimer binding emphasis. 353 claims. Calibrated behind the foundational antibody composition because dosing / formulation scope is the principal differentiator and the underlying composition is already covered upstream.

#10 US20220185902A1 — Cephalon/Teva

Antibodies that specifically bind to TL1A

Calibrated KC profile: KC1=5, KC2=5, KC3=4, KC4=4, KC5=5, KC6=5; calibrated ensemble=4.612; pairwise record=16-9.

Cephalon / Teva 320-179 duvakitug parent: six-CDR composition (SEQ ID 15 / 28 / 17 / 29 / 19 / 30) + VH / VL alternative composition with proviso exclusions, 88 claims. ~10–40× potency gain over parental 320-0, KD ~40 pM by KinExA, dual DR3 / DcR3 inhibition. TF-1 caspase, SPR, multi-species cross-reactivity (human / cyno / mouse / rat / guinea pig / cat / dog / pig / rabbit), TNBS / OVA / DSS in vivo. Granted as US12162946B2; positive Phase 2b UC / CD readouts in 2024; co-developed with Sanofi under the October 2023 collaboration that splits global development costs and net profits in major markets and assigns Phase 3 leadership to Sanofi. Calibrated near the top of the second tier on novelty + in vivo + commercial validation.

#11 US11440954B2 — Cedars-Sinai Medical Center

Optimized anti-TL1A antibodies

Calibrated KC profile: KC1=5, KC2=4, KC3=4, KC4=4, KC5=4, KC6=4; calibrated ensemble=4.225; pairwise record=15-10.

Granted Cedars / Prometheus optimized series: HCDR3 V102M / K / Q / W and LCDR3 S92D / E / H / N / Q variants on the 5C3D11-derived chimera grafted onto IGH1-4*602 / IGKV3-20*01. 192 total claims, ≥2× affinity vs L8 reference, IFN-γ inhibition

in human + cyno whole blood, no cross-reactivity to TRAIL / LIGHT / Fas. Calibrated below the foundational humanization family because scope is narrower (specific HCDR3 / LCDR3 variant series) and clinical asset value rolls up to tulisokibart already covered by 11292848.

#12 US20150132311A1 — Pfizer

Tumor necrosis factor-like ligand 1A specific antibodies and compositions and uses thereof

Calibrated KC profile: KC1=5, KC2=4, KC3=4, KC4=4, KC5=4, KC6=4; calibrated ensemble=4.225; pairwise record=14-11.

Earliest Pfizer / BMS publication (2015) of the 1D1 / 7D4 / 26B11 family that gave rise to 9683998 + 20180052175. 321 claims with composition + pharmaceutical composition + method-of-treatment for IBD / asthma / MS / psoriasis / RA. Calibrated below the granted 9683998 and the affinity-matured 20180052175 because it is the original publication; structural depth and HDM model data overlap with the granted descendant.

#13 US20220390463A1 — Pfizer

Tumor necrosis factor-like ligand 1A specific antibodies and compositions and uses thereof

Calibrated KC profile: KC1=5, KC2=4, KC3=4, KC4=3, KC5=4, KC6=4; calibrated ensemble=3.987; pairwise record=13-12.

Late (2022) Pfizer / BMS publication adding 1D1 1.27–1.34 affinity-matured variants and method-of-treatment scope (IBD / asthma / MS / psoriasis / RA). 259 claims. Calibrated behind the earlier publications and the granted 9683998 because the underlying parental clone composition is anticipated by the same family upstream; novelty within-family is moderate.

#14 US20140255302A1 — Teva Pharmaceuticals

Antibodies against TL1a and uses thereof

Calibrated KC profile: KC1=5, KC2=4, KC3=4, KC4=4, KC5=4, KC6=4; calibrated ensemble=4.225; pairwise record=12-13.

Original Teva (2011 priority) DR3-selective DcR3-sparing TL1a-binding protein publication: VH / VL pairing SEQ ID 42 / 46, EC50 0.1 nM–10 fM range, R32+R85 epitope on TL1A, EAE / colitis / asthma / arthritis indications, 190 claims. Distinguished from the 320-179 duvakitug program by its DcR3-sparing emphasis. Calibrated mid-cohort on novelty (DcR3-sparing rationale) but lower on commercial validation than tulisokibart / duvakitug.

#15 US20160333104A1 — Teva Pharmaceuticals

Antibodies against TL1a and uses thereof

Calibrated KC profile: KC1=5, KC2=4, KC3=4, KC4=3, KC5=4, KC6=4; calibrated ensemble=3.987; pairwise record=11-14.

Teva continuation of the DR3-selective C320 program (2016): same VH / VL SEQ 42 / 46 composition, same R32+R85 epitope, IgG4 reduced-effector format, IBD / RA / MS / asthma indications. 193 claims. Calibrated behind the 2014 publication because the underlying composition is anticipated within-family and commercial value resolves to the 320-179 duvakitug program covered upstream by US20220185902.

Methodology

The initial TL1A analysis ingested 260 USPTO records, all classified as Biopharma with confirmed assignee mapping. The 260 biopharma patents were assigned to one of fifteen therapeutic-area buckets (IBD_CD_UC, Other_Autoimmune_Inflammatory, Companion_Dx, Multiple_Sclerosis, Fibrosis, Oncology, Rheumatoid_Arthritis, Pulmonary, Autoimmune_Transplant, Infectious_Disease, SLE_Lupus, Ophthalmology, CMC_Manufacturing, Dermatology, Metabolic).

All KC scoring was performed by LLM agents reading the local full-spec corpus (abstract + independent claims + dependent claims + specification body). Ensemble scoring applied four weighting schemes (Meta Baseline / AbbVie / Amgen / Genentech) aggregated into ensemble_mean ± ensemble_std with HIGH / MODERATE / LOW confidence. Tier thresholds are absolute (TIER 1 PREMIUM ≥ 4.5; TIER 1 HIGH 4.0–4.49; TIER 2 QUALITY 3.5–3.99; TIER 3 SPECULATIVE 3.0–3.49; TIER 4 RESEARCH < 3.0).

The top-decile calibration cohort was operationalized as the 26 patents in the top decile of the TL1A biopharma cohort (TL1A_Decile_Cohorts.csv). The original top-decile plateau assigned all 26 patents KC1–KC6=5 and TA-weighted score=5.25. The V2 calibration intentionally re-read the top-decile patent packets against the V2 rubric (24 sub-dimensions A1–W4), derived KC composites by the rubric-specified rule (KC1 and KC5 = median of sub-dimensions, KC2–KC4 and KC6 = holistic), and ran a complete pairwise tournament (325 pairs) to separate the Prometheus PRI companion-diagnostic and Cedars / Prometheus tulisokibart composition-of-matter foundational filings from the Pfizer / BMS parental-clone publications, the Cephalon / Teva 320-179 duvakitug program, the Amgen anti-TL1A / anti-TNFα bispecific, and lifecycle / continuation filings. The same-LLM, separate-session protocol is consistent with the KRAS, GLP-1, and Epigenome exemplars in the rDNA.ai LinkedIn series. Detailed calibration outputs are available in Top_Decile_KC_Calibration_20260508/ (TL1A_Top_Decile_V2_Calibrated_KC_Scores.csv, TL1A_Top_Decile_Pairwise_Tournament.csv, TL1A_Top_Decile_Assignee_Rankings.csv, TL1A_Bottom_Decile_Assignee_Rankings.csv, TL1A_Bottom_Decile_V2_Calibrated_KC_Scores.csv) and in the companion TL1A_IP_Portfolio_Analysis_V2_Calibrated.docx report.