cg/ Investment Banking

Canaccord Genuity

European Biopharma Mid-year Market Update

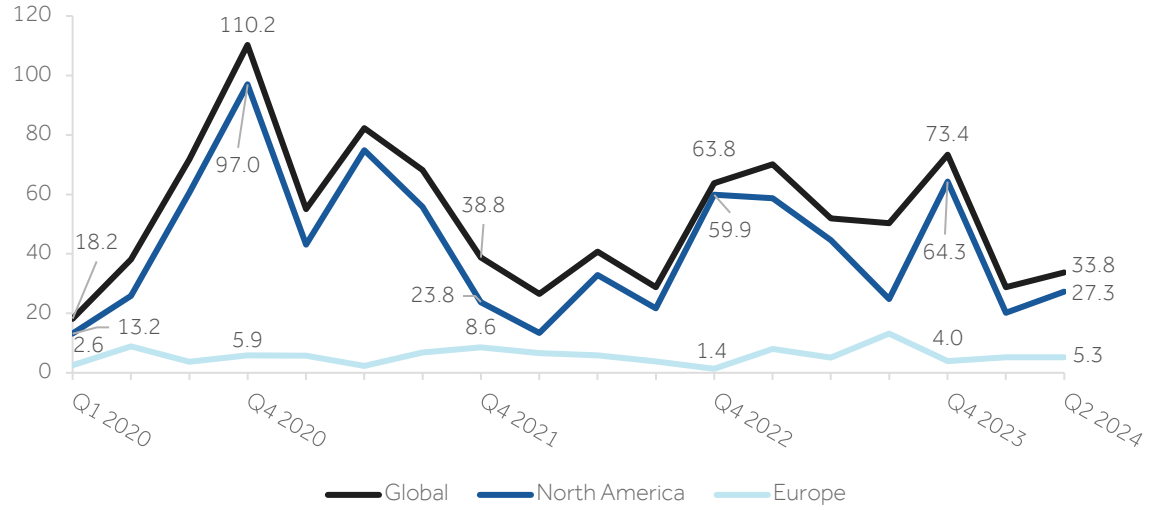
Sector Review: Psychedelics/Mental Health

July 2024

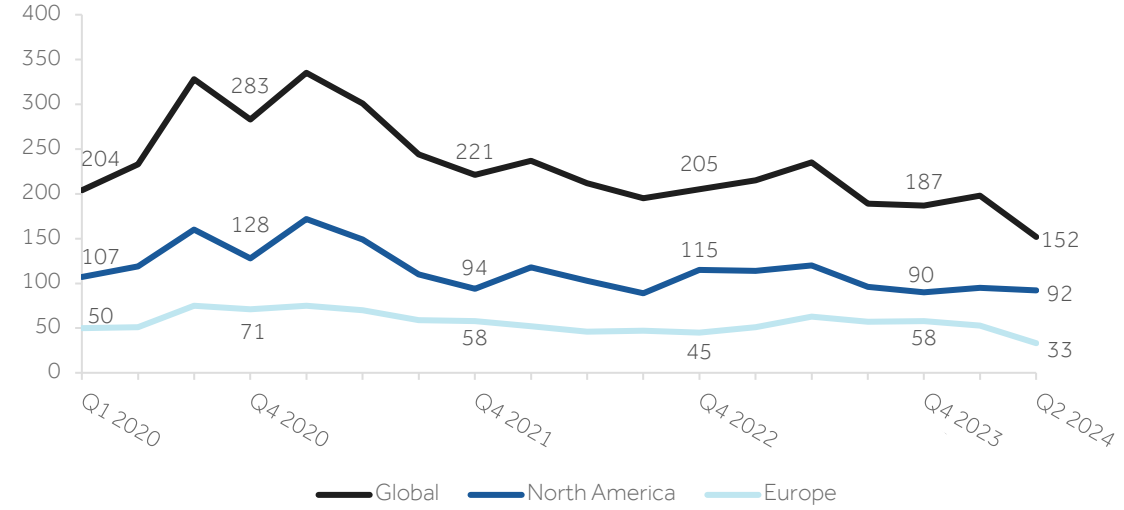
European biotech H1 M&A activity was characterised by a lower deal count but with some large transactions

- The M&A environment for biotech was challenging in 2023 due to macroeconomic headwinds (interest rates, inflation) and geopolitical uncertainties. From an activity level perspective, many transactions were either deferred or failed to reach a conclusion due to floor valuations not being met.
- In H1 2024, we are seeing better signs for M&A and licensing activity with deal activity collectively valued at more than $5 bn per quarter in Europe, a 30% growth compared to the level in Q4 2023. The European market saw a number of large transactions in H1 2024.
- Oncology, autoimmune / immunology & inflammation, and CV&M remained the primary therapeutic area targets for both M&A and strategic collaborations. The majority of M&A activity was in small molecules but for collaborations, it was in cell & gene therapy.
- There are significant blockbuster products from Big Pharma that are about to lose patent protection (i.e. Merck's top selling cancer medicine Keytruda). This patent cliff is expected to propel deal activity as Big Pharma seeks to replace upcoming revenue loss with an uptick in activity in acquisition of pipeline candidates.
- With a reported $500bn war chest, it is widely expected that there will be significant levels of activity both from an internal R&D standpoint as well as acquisition activity.

Transaction value, Q1 2020 – Q2 2024 (in $ bn)



Deal volume, Q1 2020 – Q2 2024 (number of deals)



Source: Mergermarket data, Fierce Biotech, EY, M&A Explorer by White & Case based on Dealogic data

Improving deal making environment with robust BD activity observed

Factors impacting deal making

- UK and Continental European capital markets improving: Corporate earnings have been good, and the inflation outlook has improved prompting expectations of interest rate cuts on the horizon. Also, the markets had experienced fund redemptions in the previous year which dampened price performances, but this has now stabilised.
- Biotech strategies: Many companies are navigating in an environment where fewer options are available. The current funding strategies being pursued include PIPEs, debt financing , royalty monetization, and M&A with the aim to reaching a value inflection point.
- Patent wall consideration: Several big pharma companies are facing significant revenue gaps in the coming years, creating a need to address innovation deficits. Biopharma may turn to larger, scale-multiplying M&A to address these gaps.
- IPO market still to fully reopen: Professional specialist investors are investing in the public markets, but recent biotech IPOs have had a mixed performance. The hope is that the environment becomes more favourable later in the year or in early 2025 post US election and potential rate cuts. Nevertheless, companies with novel technologies in favoured therapeutic areas have received investments from private capital.
- Therapeutic heatmap: investor interest remains strong around diabetes/ weight loss GLP-1 drugs, precision & natural medicine, and CNS. Within CNS, psychedelics are a new frontier that is being explored for treatment options for mental health conditions.

Recent Conferences

Bio-US, San Diego	Bio International Convention	
Bio-Europe, Barcelona	BIO-EUROPE®	
Breaking Convention, London		

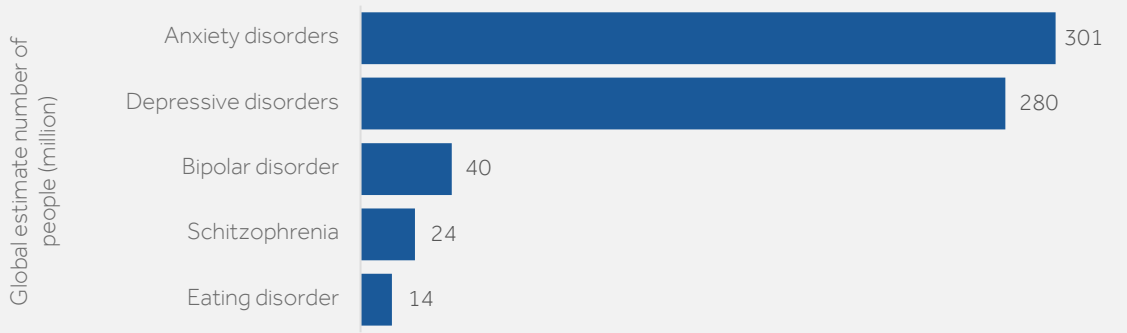
Key Takeaways

- Conference turnout at record numbers
- Strong attendance by Asian companies looking for partnership deals to expand into US and Europe
- Reshoring of R&D and manufacturing to the US and Europe
- Deal makers very interested in cancer immunotherapies, CGTs, metabolic diseases, CNS indications and AL/ML segments

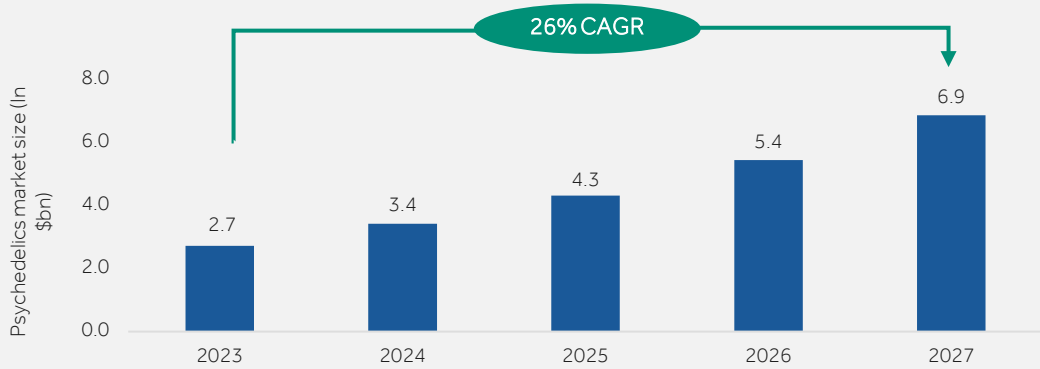
Sector review: Mental health/psychedelics market

The mental health market is growing, and novel drugs are emerging in the space

There are more than 970 million people living with mental health disorders[1]...



...with a growing unmet market; novel drugs such as psychedelics are expected to reach $6.9 bn market size by 2027[2]...



Overview of selected psychedelic drug pipeline*

Candidate	Company Name	Development Phase	Psychedelic	Indication
APEX-52	Apex Labs	P2b	Psylocibin	Depression & anxiety
APEX-90	Apex Labs	P2b	Psylocibin	Depression with PTSD
BPL-003	Beckley Psytech	P2b	DMT	Treatment-resistant depression (TRD)
COMP360	COMPASS	P3	Psylocibin	Treatment-resistant depression (TRD)
GH001	GH Research	P2b	DMT	Treatment-resistant depression (TRD)
AWKW-001	Awakn	P3	Ketamine	Alcohol use disorder (AUD)
MDMA	lykos	PDUFA is Aug'24	MDMA	Post-traumatic stress disorder (PTSD)
MM-120	MindMed	P2b	LSD	Generalised anxiety disorder
PSIL 201	Usona	P3	Psylocibin	Major depressive disorder (MMD)
Spravato	janssen	Commercialised	Esketamine	Depression
SYNP-101	B-MORE	P2b	Psylocibin	Alcohol use disorder (AUD)

Factors impacting psychedelics market growth

Success of clinical trials: Companies received boost after positive clinical trials in 2021. As several studies in the sector reach later stages in trials, incentivisation towards the sector will continue

Reimbursement routes: Reimbursement will determine financial accessibility and influence pharmaceutical investments in the market, shaping the overall adoption within the healthcare system

Drug applications: Increasing investigation of psychedelics for a wider number of disorders, with currently over 10 indications being studied, might continue to drive sector interest

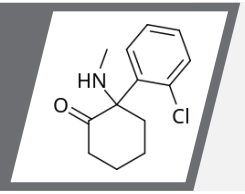
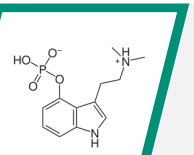
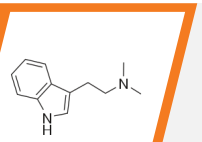
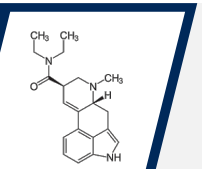
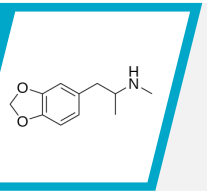
Exclusivity of intellectual property: Companies will continue to seek clinical strategies , novel formulation and innovative trial designs to attempt to secure patent exclusivity that will ensure commercial attractiveness

Supply chain: As psychedelics are controlled substances, there is a potential hurdle to supply chain distribution. Considering risks of abuse, requirements for safe storage and prescription are yet to be defined

Source: 1. IHME, Global Burden of Disease, 2. KPMG Psychedelic drugs report, Data Breach Market Insight Reports, CG analysis.
Notes: *Included assets in clinical stage, P2b and above; in alphabetical order

Sector review: Mental health/psychedelics market

Most common psychedelics drugs that are being developed for therapeutic use

Psychedelic drug	Background	Mechanism of action	Potential indications
Ketamine 	• Synthetic psychedelic • First synthesised in 1962 • Legally used as an anaesthetic	• Blockade of neuronal receptors, NMDA receptors • Subanaesthetic doses can produce psychedelic effects	• Depression, bipolar disorder, anxiety, suicidal ideation, addiction, autism, chronic pain, arthritis and fibromyalgia
Psilocybin 	• Naturally occurring psychedelic • Produced by >200 species of mushroom • Illegal in most countries	• Metabolised to psilocin, serotonin 5-HT2A antagonist • Dose-dependent effects can include complex hallucinations	• Depression, anxiety, PTSD, OCD, cluster headaches, Alzheimer's disease
DMT 	• Natural/synthetic psychedelic • Derived from plants, such as *P. viridis*, *Banisteriopsis caapi* • First synthesised in 1931	• Partial agonist of serotonin receptors, 5-HT2A • Rapidly metabolized, one of the components of ayahuasca	• Depression and addiction
LSD 	• Synthetic psychedelic • First synthesised in 1938 • Like DMT, LSD is classed as a Schedule I drug by the US FDA	• Binds to serotonin and dopamine receptors, 5-HT2A • Extremely potent hallucinogen and has long half-life, c.12 hours	• Depression, anxiety, addiction cluster headaches, Alzheimer's, Tourette's and ADHD
MDMA 	• Synthetic psychedelic • First synthesised in 1912 • Awarded breakthrough therapy designation by the FDA in 2017	• Increases reuptake and release of serotonin and norepinephrine • Increased oxytocin release • Can lead to altered perception	• PTSD, autism, obesity, narcolepsy, and ADHD

Source: Technology Networks, "An Introduction to Five Psychedelics: Psilocybin, DMT, LSD, MDMA and Ketamine", as of November 16, 2021, by Ruairi J Mackenzie

Sector interest observed through many late-stage clinical development programs which are centred around Psylocibin themed drugs…

Psychedelic development pipeline map > Phase 2

Therapies derived or analogue to:

	Ketamine	Psylocibin	DMT	LSD	MDMA
PTSD	SEELOS THERAPEUTICS, Clexio Biosciences	Apex Labs, COMPASS Navigating Mental Health Pathways	N/A	N/A	lykos THERAPEUTICS, TACTOGEN
Depression disorders	janssen, Johnson & Johnson, Spravato (esketamine)	Cybin, COMPASS Navigating Mental Health Pathways, Otsuka, Usona Institute, BRAXIA, Apex Labs	Beckley Psytech, bioMind The next generation of pharma., GH Research	N/A	N/A
Alcohol use disorder	Awakn	Incannex, CLAIRVOYANT, B-MORE	Beckley Psytech	N/A	N/A
Anxiety disorders	N/A	Apex Labs, DIAMOND THERAPEUTICS	Cybin, bioMind The next generation of pharma.	MindMed	N/A
*Others	N/A	ceruvia LIFESCIENCES, COMPASS Navigating Mental Health Pathways, NOVA MENTIS LIFE SCIENCE, TRYP THERAPEUTICS, Psyence, Reset Pharma	GH Research	MindMed	N/A

**Nova Mentis Life Science is developing a treatment for Fragile X Syndrome, Tryp therapeutics for Fibromyalgia, Compass Pathways for Anorexia Nervosa, MindMed for cluster headaches, Psyence for adjustment Disorder, GH Research for bipolar disorder, Ceruvia for OCD and Reset Pharma for demoralization in patients with cancer.*

- Generally, treatment has been well tolerated and effective for PTSD
- The FDA's Psychopharmacologic Drugs Advisory Committee voted against recommending Lykos' MDMA asset for severe PTSD mainly due to concerns over the clinical trial methodology. The FDA will make a final decision in August.

- The use of psylocibin for depression disorders is currently the most widely investigated
- Compass Pathways' COP360 is currently in Phase 3 clinical trials and the other players completing Phase 2
- The only FDA-approved psychedelic is Spravato by Janssen, used for treatment resistant depression
- In Q1 2024, Spravato WW revenue was $225 million, a 72.2% increase over Q1 2023

- Investigation of the potential use of psychedelics spans across multiple psychiatric and neurological conditions
- Assisted therapy during administration has been used across most clinical studies

Canaccord Genuity has advised multiple players in psychedelics

Cybin
Sole Lead Underwriter & Sole Lead Bookrunner (Bought Deal)

COMPASS Navigating Mental Health Pathways
Lead Manager (IPO)

eleusis
Exclusive Financial Advisors (Sell side)
Beckley Psytech

Source: The Use of Psychedelics in the Treatment of Medical Conditions [PMC9567237]; Fierce Biotech [(fiercebiotech.com]
Notes: Only companies past Phase 2 clinical trials have been included in the table

...as well as through increased transaction activity

Date	October 2022	September 2023	October 2023	May 2024
Acquirer / Target	Beckley Psytech / eleusis	Otsuka / Mindset Pharma	Cybin / Small Pharma	abbvie / GILGAMESH
Description	• Beckley Psytech acquired Eleusis, a UK/US based a company focused on psychedelics drug discovery, clinical development and care delivery design • Adds ELE-101, an intravenous formulation of psilocin, ready for P1	• Otsuka acquired Mindset, a Canada based drug R&D company with expertise in psychiatric and neurological disorders • Developing a new class of agonists that activate the serotonin 5-HT2A receptor for PTSD and TRD • Otsuka will further develop several new 5-HT2A agonists in N. America and Europe	• Cybin acquired Small Pharma, a UK based company focused on short-duration psychedelics • Developing deuterated N,N-dimethyltryptamine (dDMT) pipeline with two advanced programs for depression and anxiety disorders • Small Pharma has >30 patents granted and >160 pending	• Collaboration and option-to-license agreement to develop next-generation therapies for psychiatric disorders • Leverages AbbVie's expertise in psychiatry and Gilgamesh's innovative research platform for neuroplastogens
Deal structure	• Undisclosed	• C$80m ($59m) all-cash; c.15% premium to closing	• $23m in cash + 0.2409 common shares of Cybin	• $65m upfront + up to $1.95bn in option fees and milestones + tiered royalties
Rationale	• Provides access to a library of novel psychedelic compounds which Beckley will add to their pipeline of differentiated NCEs for use in psychiatry and beyond	• The takeover is part of Otsuka's strategy to bolster its pipeline in psychiatric and neurological disorders areas	• Cybin's and Small Pharma's combined N,N-dimethyltryptamine (DMT) and dDMT programs create the largest complimentary dataset of systematic research on short-duration psychedelics	• AbbVie and Gilgamesh to research and develop a portfolio of therapeutics for psychiatric disorders • Upon exercise of the option, AbbVie will lead development and commercialisation activities

Source: Company's press releases, Mergermarket data

An insider's perspective on the psychedelic sector and how best to succeed

Carmel Reilly's prior experience includes the role of CEO and founder of Neurocentrx Pharma, an Edinburgh based biotech company which is developing oral ketamine formulations for mood disorders. She has a scientific background, broad commercialisation experience and has successfully raised funding from investors

Insights from...

Carmel Reilly | *Founder, Neurocentrx*

neurocentrx

Sector interest

What is driving sector interest in the psychedelic drugs market?

- The validation of a successful regulatory approval route by Janssen obtaining regulatory approval for treatment resistant depression has served to encourage drug developers targeting depression that similar trial designs might succeed
- Clinical trials continue to be successful, leading to higher optimism across the sector
- Raised financial expectations of potential pipeline candidates which have been encouraged by the success of drugs such as Spravato, which is on track to reach $1 billion in sales
- The lack of new therapies in the psychiatry field creating a space for new psychedelic candidates to potentially target this large unmet market need

Commercial scope

Are psychedelic drugs mainly targeted to CNS type disorders, or do you think there is a wider application?

- Currently, they are mostly being investigated for CNS disorders, but trials are targeting a range of psychiatric conditions such as bipolar disorder, anorexia, PTSD[1], MDD[2], TRD[3], post-partum depression, and some neurological conditions such as Parkinson's Disease, and muscle disorders
- There may be a wider application when pathways targeted by these drugs are better understood, particularly for some anti-inflammatory properties as some evidence for this exists for ketamine
- It is also possible that some pathways targeted by psychedelics might be involved in gut function, but this has not been extensively investigated

Legal framework

How far along is the legal framework of psychedelics for therapeutic use?

- Quite far along – for ketamine, an approved drug, a legal framework already exists
- In Canada, the market for cannabinoids is quite developed and their use for medicinal purposes was initially legalised in 2016
- Many psychedelics such as psilocybin, MDMA, mescaline and others are in late-stage clinical trials, therefore, the legal framework exists to support those investigations
- Janssen have had FDA /EMA approval for Ketamine with Spravato – which paves the way for therapies that have no prior approval
- Some issues remain with respect to the variability in how insurers, other payors or governments decide to pay for treatment

Risk of substance abuse

Regulators are concerned about psychedelic drug prescriptions being abused. How are drug developers addressing this concern?

- For any drugs class, it is difficult to prevent all cases of self-abuse, so there are mechanisms to limit access and monitor delivery
- For psychiatric indications, we expect limited specialist prescriptions as they are not first line therapies
- Generally, there are many mechanisms to control for substance abuse. For example:
  - Administration in an in-clinic supervised setting
  - Control of quantity of drug supplied as they already are for other drugs that are more commonly abused
  - For potential abuse in at-home settings, there are technologies that monitor use

[1]PTSD: Post Traumatic Stress Disorder, [2] Major Depressive Disorder, [3]Treatment Resistant Depression

An insider's perspective on the psychedelic sector and how best to succeed (cont'd)

The market is changing rapidly, and new funds are entering the space to collaborate and develop mental health therapies

Insights from...

Carmel Reilly | *Founder, Neurocentrx*

neurocentrx

Geographies of focus

Which geographies hold the most potential for future growth and why?

- In this early wave, the geographies of focus will continue to be the US, Europe, Japan, Canada, Australia and New Zealand due to the regulatory landscape
- For the next wave, I would look at some South American countries that have good healthcare infrastructure and payment routes
- Many countries will likely have concerns around manufacturing control and abuse which will lead to some challenges in market penetration

Sector participation

Given the changing regulatory environment in recent years, do you see interest from major pharma?

- There are large pharma players that are already established in the field such as Janssen, and other companies with a large CNS[1] pipeline, such as Otsuka, which have also entered the space
- Recently, in May 2024, AbbVie announced a licencing collaboration with Gilgamesh, and Novo Holdings announced it will be co-leading a funding round for Reunion Neurosciences
- Expect continued growth in interest from specialty pharma and the mid to large biopharma based on the sales potential and their complementary pipelines focusing on CNS disorders

Fundraising guidance for a lead investor

When going into fundraising mode, a company will typically require a lead Investor. What should a psychedelic company do to improve the odds of securing a good lead Investor?

- Not focus only on traditional pharma VCs and look to other venture or private equity funds
- For investors, the regulatory approval route is important, and it comes down to the clinical trial plan and the indication being pursued
- Having an exit plan that is not dependent on a major big pharma acquisition but looks to specialty pharma or mid to large sized pharma to provide a range of credible options

Exit opportunities

When looking at exit routes, the IPO route has not been available for quite some time now. What are the current exits for companies in the space?

- Sale into a pharma company with a large pipeline in CNS/ mood disorders that is keen to grow sales in a space that has limited new therapeutic options – or build the pipeline and grow a big CNS biopharma, publicly listing at a later stage
- Possibilities to merge with other companies in the space as there are many players now in the industry. This could then lead to a combined listing or to a listing at a later stage of development
- Exit to a large psychedelics focused platform such as atai Life Sciences, which has been set up to acquire and develop companies in the space

Investors in psychedelics

What guidance would you offer biotech psychedelic firms when seeking investment in the current climate?

- The market is changing very rapidly with new funds getting interested in psychedelics, as there is growing understanding of the large revenue potential in the space
- Build connections with funds such as JP Morgan, Helena, Steven & Alex Cohen, True Ventures, Satori Neuro and many others who have been active in this space to understand market interest and seek collaboration opportunities

[1]CNS: Central Nervous System

Regulatory, market access and commercialisation considerations in psychedelic drug development

Jaspreet is a clinician and venture partner bringing over 15 years of experience to Life Sciences companies. She is the CEO & Co-founder of AxialBridge, providing strategic services from pre-clinical and clinical trial management services up to commercialization, including regulatory & market access strategies

Insights from...

Jaspreet Grewal | *CEO & co-founder of AxialBridge*

AxialBridge

Development roadmap

What are key areas that should be incorporated into the planning process when developing a roadmap for psychedelic drug development?

- Clinical safety, especially for vulnerable individuals, and regulatory hurdles are key considerations in psychedelic drug development
- Preclinical concerns include dosing strategies, abuse potential, and thorough documentation
- Active placebos and nocebo effects are challenges that also need to be considered in a development roadmap due to potential bias in clinical trials
- Psychological support and psychotherapy inclusion vary by regulatory authority; for instance, the FDA requires justification for psychotherapy, whereas Health Canada mandates it for psychedelic studies
- Regulatory requirements differ by jurisdiction, complicating market access and clinical planning
- The industry's complexity often leads organizations to initially focus on specific countries or academic studies before expanding

Regulatory and market access

Are there particular complexities for psychedelics with respect to potential regulatory or market access issues?

- Early clinical trials, especially in Canada, saw many upfront approvals but also numerous inspections, causing delays in study starts and ethics approvals due to the novelty of the drugs
- Simultaneous learning curves among regulatory agencies, clinicians, principal investigators (PIs), sites, and clinical research organizations (CROs) contributed to delays in study initiation and ethics approval processes
- Considerations span from selecting the appropriate investigational product and sites to deciding on the regulatory pathway
- Increased harmonization between regulatory agencies and global E-submissions may reduce submission and approval timelines

Geographical considerations

How are regulatory and market access issues different between geographies?

- Market access, reimbursement issues, and cost-effectiveness vary significantly between countries, influenced by factors like unmet medical needs and healthcare utilization costs
- Significant variations exist in the IMPD[1] requirements between Canada, the EMA[2], and the MHRA[3], necessitating tailored preparation for each jurisdiction
- Prescriber trends and clinical capacities differ between regions, so thorough review before starting a clinical plan is crucial
- Variation in prescriber practices between the US and Europe impacts clinical trial strategies and requires careful consideration during clinical planning and execution

[1]IMPD: Investigational Medicinal Product Dossier
[2]EMA: European Medicines Agency
[3]MHRA: Medicines and Healthcare products Regulatory Agency

Regulatory, market access and commercialisation considerations in psychedelic drug development (cont'd)

Rapid market entrance without considering reimbursement criteria and medical community needs can disrupt the industry

Insights from...

Jaspreet Grewal | *CEO & co-founder of AxialBridge*

AxialBridge

Commercialisation partners

At which stage should biotech's engage with a regulatory/market access firm?

- It is best to engage in the early stages of development, especially in terms of clinical protocols, indication selection, data safety and monitoring plans for adverse events
- It allows for implementation oversight and feedback mechanisms for suppliers, ensuring compliance with facility GMP and licenses for controlled substances
- Giving consideration to regulatory and market access requirements helps establish long-term plans for scaling operations to commercial levels
- Involving partners early also allows for integration of clinical and business planning to create a comprehensive roadmap to anticipate potential challenges throughout the development process

Learnings from cannabinoid industry

In relation to psychedelics, are there useful parallels from the cannabinoid experience?

- We have to bear in mind that the cannabis industry includes recreational, medical, and biotech sectors; psychedelics are strictly pharmaceutical, with no intermediate categories like wellness
- Rapid market entrance without considering reimbursement criteria and medical community needs can disrupt the industry
- Taking the UK as an example, few NHS patients have access to medical cannabis. Many use private prescriptions, creating inequality for individuals who can't afford private prescriptions
- For cannabinoids there was inadequate funding and infrastructure for developing Cannabis-based products for medicinal use (CBPMs) in the UK post-legalization
- It is unlikely that psychedelics with be legalized for recreational use; but there is the potential for regulatory uncertainty similar to cannabis
- Collaborating with regulators will be important to effectively navigate regulatory requirements and advance clinical pipelines

Regulatory changes

Are there any recent or impending regulatory changes that biotech's should be aware of?

- A UK's Advisory Council on the Misuse of Drugs advocates relaxing UK laws to facilitate psychedelic research, citing positive clinical trial outcomes and advancements in the field
- Canada has updated its clinical trial guidelines for schedule 1 drugs, paving the way for increased acceptance of psychedelic research trials
- Anticipated harmonization in the US regulatory framework may follow suit, leveraging successful precedents and best practices from approved trials in other jurisdictions to expedite approval processes

H1 M&A transaction activity involving European HQ targets

Selected M&A transactions

Announced date	Acquirer	Target	Target country	Deal value (mn)	Upfront (mn)	Contingent (mn)	Therapeutic area
6/6/2024	GSK	elsie BIOTECHNOLOGIES	Switzerland	c.£39 ($50)	NA	NA	Immuno-oncology
29/05/2024	MERCK	EyeBio	United Kingdom	$3,000	$1,300	$1,700	Ophthalmology
28/05/2024	AsahiKASEI	calliditas THERAPEUTICS	Sweden	SEK 11,800 ($1,120)	NA	NA	Immunosuppressants/ Rare diseases
16/05/2024	Johnson&Johnson	PROTEOLOGIX	Switzerland	$850	NA	NA	Dermatology
02/05/2024	novo nordisk	Cardior	Germany	€1,025 ($1,111)	NA	NA	Cardiovascular
14/03/2024	AstraZeneca	AMOLYT PHARMA	France	$1,050	$800	$250	Endocrine/ Rare diseases
05/02/2024	NOVARTIS	morphosys	Germany	€2,700 ($2,900)	NA	NA	Immuno-oncology
30/01/2024	NOVARTIS	Calypso biotech	Switzerland	$425	$250	$175	Gastro-Intestinal
24/01/2024	KYOWA KIRIN	Orchard therapeutics	United Kingdom	JPY 70,700 ($478)	NA	NA	Immunostimulants/ Rare diseases
02/1/2024	Tome BIOSCIENCES	Replace Therapeutics	Switzerland	$185	$65	$120	Genetic disorders

Source: Evaluate Pharma as of 30th June 2024, only deals with disclosed deal terms are shown
Notes: FX as of the announcement date

H1 licensing transaction activity involving European HQ licensors

Selected licensing transactions

Announced date	Licensee	Licensor	Product	Status on deal date	Therapeutic area	Territory[1]	Deal value (mn)	Upfront (mn)	Royalties
30/05/2024	Adaptimmune	Galapagos	Uza-cel	Phase I	Oncology	Global	$665	$100	Mid-single to low double-digit on net sales
28/05/2024	Bristol Myers Squibb	prothena	PRX019	Pre-clinical	Neurodegenerative disorders	WW rights	$698	$80	Tiered royalties on net sales
13/05/2024	Takeda	AC Immune	ACI-24	Phase II	Alzheimer's disease	WW option	$2,200	$100	Tiered double-digit royalties on net sales
16/04/2024	abbvie	MedinCell	AbbVie-Medincell Research Project 1	Research project	Multiple	WW co-development	$1,935	$35	Mid-single/ low-double-digit royalties on net sales
11/04/2024	HARMONY BIOSCIENCES	bioprojet	TPM-1116	Pre-clinical	Narcolepsy	US and Latin America rights	$393	$26	Mid-teen royalties on net sales
06/03/2024	GILEAD	Merus	Gilead-Merus Antibody Research Project	Pre-clinical	Oncology	WW option	$1,556	$56 + $25 equity investment	Tiered mid-single/ low-double digits
28/02/2024	abbvie	OSE IMMUNOTHERAPEUTICS	OSE-230	Pre-clinical	Immunology	WW rights	$713	$48	Tiered royalties on net sales
09/02/2024	日本新薬	vicore pharma	Buloxibutid	Phase II	Lung diseases	Japan rights	$285	$10	Tiered royalties on net sales
08/02/2024	Kowa	nicox	NCX 470	Phase III	Ophthalmology	Japan rights	€30.5 ($33)	€3 ($3)	Tiered royalties from 7% to 12% on net sales
08/02/2024	BIONTECH	Autolus	AUTO6NG	Pre-clinical	Oncology	WW co-development	$200	NA	NA
23/01/2024	novo nordisk	eracal	ERA-379	Research project	Obesity	WW rights	€235 ($255)	NA	Royalties on net sales

Source: Evaluate Pharma as of 30th June 2024, only deals with disclosed deal terms are shown
Notes: FX as of the announcement date
[1]Right territory

H1 fundraising activity for European HQ biotechs

Selected fundraising

Financing date	Company	Profile	Investment ($m)	Financing round	Country	Investors
14/06/2024	ElmediX	Oncology; hyper-thermal therapy	5.4	Series A	Belgium	Undisclosed investors
11/6/2024	Tacalyx	Oncology	15.0	Seed Capital	Germany	Thuja Capital Management, Bhoehringer Ingelheim, Kurma Partners, High-Tech Grunderfonds, Coparion, Idinvest Partners, Creathor Venture Funds, Max Planck Society
11/6/2024	Bright Peak Therapeutics	Immuno-oncology	90.0	Series C	Switzerland	Johnson & Johnson Innovation – JJDC, Venrock, KB Investment, Northleaf Capital Partners, Versant Ventures, Fidelity Management & Research Company, RA Capital, Qatar Investment Authority, Invus, Alexandria Venture Investments, undisclosed inverstors
3/6/2024	Biophta	Ophtamology	7.0	Seed Capital	France	UI investissement, Eisai, GO Capital, Unither Parmaceuticals, HTL
29/05/2024	Adcendo	Oncology	17.4	Series A	Denmark	Dawn Biopharma, Novo Holdings, Ysios Capital Partners, RA Capital Management, HealthCap, Glide Healthcare, Pontifax
23/05/2024	Grey Wolf Therapeutics	Immuno-oncology	50.0	Series B	UK	ICG, Pfizer Venture Investments, Andera Partners, Canaan Partners, Earlybird, Oxford Science Enterprises, British Patient Capital
21/05/2024	Pheon Therapeutics	Oncology	120.0	Series B	UK	TCGX, BVF Partners, Lightspeed Venture Partners, Perceptive Advisors, Atlas Venture, Brandon Capital Partners, Forbion Capital Partners, Research Corporation Technologies
20/05/2024	Sania Therapeutics	Gene therapies; neural circuits	5.0	Undisclosed	UK	Undisclosed investors
7/5/2024	BioVersys	Infections	1.7	Series C	Switzerland	GlaxoSmithKline and undisclosed investors
7/5/2024	Memo Therapeutics	Antibody candidates; vaccines	6.2	Series C	Switzerland	Ysios Capital Partners, Kurma Partners, Pureos Bioventures, Swisscanto, Vesalius Ventures, Adjuvant Capital, Verve Capital Partners, Schroders, GF Group, Fresenius Medical Care, Redalpine
23/04/2024	Apmonia Therapeutics	Peptide therapies	2.9	Undisclosed	France	Undisclosed investors
22/04/2024	SynOx Therapeutics	Tenosynovial giant cell tumours	75.0	Series B	Ireland	Forbion Capital Partners, HealthCap, Bioqube Ventures
18/04/2024	Pathios Therapeutics	Immuno-oncology	25.0	Series B	UK	Bristol-Myers Squibb, CannaVes, Brandon Capital, existing investors
17/04/2024	Theolytics	Oncology; viral therapies	24.5	Undisclosed	UK	Sound Bioventures Management, Merck Ventures, Taiho Ventures, Epidarex Capital, Oxford Science Enterprises, University of Oxford
5/4/2024	EnteroBiotix	Infections	34.0	Undisclosed	UK	Thairm Bio, Kineticos Life Sciences, Scottish Investment Bank, Scottish Enterprise
21/03/2024	Nouscom	Immuno-oncology	10.0	Series C	Switzerland	Angelini Ventures
21/03/2024	Eisbach Bio	Oncology	4.5	Series A	Germany	Cancer Focus Fund

Source: Evaluate Pharma as of 30th June 2024
Notes: FX as of the announcement date

H1 fundraising activity for European HQ biotechs (cont'd)

Selected fundraising

Financing date	Company	Profile	Investment ($m)	Financing round	Country	Investors
18/03/2024	Senisca	Age related diseases	4.7	Seed Capital	UK	Longevity Venture Partners, QantX, R42group, Trend Investment, APEX Ventures, LifeSpan Vision Ventures
14/03/2024	Tubulis	Protein-drug conjugates	138.8	Series B	Germany	EQT Life Sciences, Nextech Invest, Frazier Life Sciences, Deep Track Capital, Andera Partners, BioMed Ventures, Fund+, Bayern Kapital, Evotec, Coparion, Seventure Partners, Occident Group, High-Tech Gründerfonds
14/03/2024	Asgard Therapeutics	Immuno-oncology	32.7	Series A	Sweden	RV Invest, Johnson & Johnson Innovation – JJDC, Novo Holdings, Boehringer Ingelheim Venture Fund, Industrifonden
27/02/2024	Curve Therapeutics	Oncology	51.4	Series A	UK	Pfizer, Columbus Venture Partners, British Patient Capital, Advent Life Sciences, Epidarex Capital
26/02/2024	Baseimmune	Infections	11.3	Series A	UK	Merck & Co, IQ Capital, Hoxton Ventures, Creator Fun, Beast Ventures, MAKI.VC
12/2/2024	Ability Pharmaceuticals	Oncology	7.6	Series B	Spain	CTI Life Sciences Fund, Inveready, European Innovation Council, Fitalen, CDTI, undisclosed investors
1/2/2024	Vivet Therapeutics	Gene therapies; orphan	5.3	Undisclosed	France	Bpifrance
1/2/2024	NeoPhore	Immuno-oncology	12.2	Series B	UK	Sixth Element Capital, Claris Ventures, Astellas Pharma, 3B Future Health Fund, 2inves, Neva SGR, LIFTT, Simon Fiduciaria
30/01/2024	Aqemia	Oncology	32.4	Series A	France	Wendel Growth, Bpifrance, Eurazeo, Elaia
25/01/2024	Oncodesign	Oncology	2.3	Undisclosed	France	European Regional Development Fund (ERDF)
23/01/2024	Hephaistos-Pharma	Oncology	2.2	Seed Capital	France	Xista Science Ventures Management, Fondation Fournier-Majoie
23/01/2024	Calluna Pharma	Inflammation; fibrotic diseases	80.8	Series A	Norway	Forbion Capital Partners, Sarsia Seed, P53, Investinor
19/01/2024	Relation Therapeutics	Precision medicine; gene therapy	40.3	Undisclosed	UK	Undisclosed investors
17/01/2024	AnaCardio	Cardiology	4.8	Undisclosed	Sweden	Flerie Invest, 3B Future Health Fund, Karolinska Development, Frees Fund, Investor (Anne-Helene Ljungstrom | Aston Advisor- Director)
16/01/2024	Stalicla	Precision medicine; autism spectrum disorder (ASD)	13.6	Series B	Switzerland	SPRIM Global Investments, undisclosed investors
11/1/2024	Nodus Oncology	Oncology; gene therapy	2.3	Seed Capital	UK	Khan Technology Transfer Fund, Cumulus Oncology
9/1/2024	Acousia Therapeutics	Stem cell therapies for hearing loss	NA	Undisclosed	Germany	Esperante
2/1/2024	Apollo Therapeutics	Oncology; inflammation; rare diseases	33.5	Series C	UK	Patient Square Capital, M&G Investments, Rock Springs Capital, undisclosed investors

Source: Evaluate Pharma as of 30th June 2024
Notes: FX as of the announcement date

H1 PIPE fundraising activity for European companies

Selected PIPE fundraising

Date	Company	Profile	Investment ($m)	Country	Investors
27/06/2024	Eliem Therapeutics	Inflammatory autoimmune	120.0	UK/US	RA Capital Management, Deep Track Capital, Boxer Capital, Janus Henderson Investors, Pontifax and Samsara Biocapital
04/06/2024	Akari Therapeutics	Inflammatory autoimmune	7.6	UK/US	Ray Prudo, Samir Patel and new investors
23/05/2024	Bicycle Therapeutics	Oncology; bicyclic peptides therapeutics	555.0	UK	Deep Science Ventures, EcoR1 Capital, Fairmount Funds Management, Forbion Capital Partners, Perceptive Advisors, RA capital, undisclosed investors
13/03/2024	Aprea Therapeutics	Precision oncology	34.0	Sweden	Sphera Global Healthcare Fund, StonePine Capital, Nantahala Capital Management, DAFNA Capital Management, Exome Asset Management, undisclosed investors
21/02/2024	Biofrontera	Dermatology	16.0	Germany	Rosalind Advisors
5/2/2024	Silence Therapeutics	Rare diseases; siRNAs (short interfering RNAs)	120.0	UK	5AM Ventures, Frazier Healthcare Partners, Logos Capital, Nextech Invest, Redmile Group, TCGX, Vivo Capital

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