

Company Highlights

Our Mission: Improving Outcomes in Neonatal Acute & Critical Care





- Founded 2010 by neonatologists & metabolomics scientists
- New management of industry experts succeeding founders in 2021
- Headquartered at BioCampus Cologne, Germany with U.S. subsidiary in incorporation
- Current headcount: 16

- Diagnostics company with focus on unmet needs in neonatal acute and critical care
- First-in-Class HypoxE-Test®: Lead product in R&D for Hypoxic-Ischemic Encephalopathy (HIE) in newborns with a total market potential of €2+ bn
- Metabolomics technology platform with granted biomarker IP
- HIE Biomarker Panel in advanced clinical development with no competition on the horizon
- 11,000+ blood samples for validation of biomarkers and IVD products available from dedicated longitudinal studies
- Technical feasibility of IVD assay format for routine IVD instrumentation demonstrated





InfanDx AG Management Team 70 Years of Combined Industry Experience

Dr. Achim Plum *CEO*

20+ years of industry experience with focus on diagnostic innovation. Former companies include Epigenomics, Schering, Siemens, Curetis, Ares Genetics, SphingoTec.

Academic background in genetics, cell biology and biochemistry



Wolfgang Kintzel

Chairman of the Supervisory Board

20+ years track record in life science innovation and business leadership with companies like Schering, Tyco Healthcare, amaxa, Cellbox Solutions

Academic training in life sciences



COO

on biomarker and IVD development.

Track-record with successful product
approvals in EU, US, and China.

Academic background in biostatistics and computational biology



Dr. Andreas Lischka

Head of Finance

15+ years track record accounting and controlling as well as corporate finance in the biotech industry

Academic background in business administration and human resource management



Key Advisors

Support by Leaders in Neonatology, Metabolomics, and Biostatistics



Prof. Dr. Peter Bartmann
Former Chief Medical Officer,
Children's Hospital at
University Hospital Bonn, Germany
Neonatology, Clinical Trial Management



Prof. Dr. Axel Franz
Senior Neonatologist
Head of Center for Pediatric
Clinical Studies, University
Hospital Tübingen, Germany

Neonatology, Clinical Trial Management



Prof. Dr. Dr. Matthias Keller Chief Medical Officer, Children's Hospital Dritter Orden, Passau Germany

Neonatology, Pediatrics Co-Founder



Prof. Lena Hellström-Westas
Professor for Perinatal Medicine,
Uppsala University,
Sweden

Neonatology, Pediatrics



Metabolomics & Biomarker Expert Co-Founder



Prof. Dr. Matthias Kohl
Head of Institute of Precision
Medicine, University Furtwangen,
Germany

Biostatistics



Prof. Ola Saugstad
Professor Emeritus of
Paediatrics, Director Dept. of
Paediatric Research, University
of Oslo, Norway

Neonatology, Pediatrics







Hypoxic-Ischemic Encephalopathy (HIE)

Causes & Consequences



Hypoxia

Perinatal Asphyxia - birth complication leading to oxygen depriviation around the time of birth



Ischemia

Shortage of blood supply to the infant's brain



Hypoxic-Ischemic Encephalopathy (HIE)

Brain damage as a result of asphyxia and ischemia



Permanent Brain Damage

Lifelong disabilities including cerebral palsy (CP), cognitive disabilities, epilepsy, hearing & vision impairments



Perinatal Asphyxia and Hypoxic-Ischemic Encephalopathy Facts & Figures

Brain injury (hypoxic ischemic encephalopathy, HIE) is the most prevalent outcome from perinatal asphyxia

Most common cause of death and disability in newborns – 23 % of infant mortality worldwide

Often associated with persistent motor, sensory, cognitive impairment

Perinatal asphyxia is the major cause for infantile cerebral palsy (e.g. spasticity) worldwide

>1 mn Babies neurologically injured 0.7 mn babies die

Source: Millar LJ et al. 2017: Frontiers in Cellular Neuroscience; doi: 10.3389/fncel.2017.00078



Risk Factors for Asphyxia & HIE

Numerous Complications Put Newborns at Risk

Risk Factors for Asphyxia potentially leading to HIE



- High risk pregnancies
- Umbilical cord issues
- Placenta or uterine complications
- Cervical issues
- Oligohydramnios and Polyhydramnios
- Infections
- Intrauterine growth restrictions
- Labor and delivery errors
- Neonatal health mismanagement



https://hiehelpcenter.org/medical/causes-risk-factors/



Hypoxic-Ischemic Encephalopathy (HIE) Therapy by Therapeutic Hypothermia







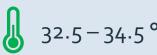




Neonatal Therapeutic Hypothermia

- Therapeutic NICU1 intervention to prevent or alleviate permanent brain damage
- Reduced metabolic rate allows brain to recover.
- Only guideline-recommended therapy for HIE with no significant adverse physiological side effects when performed adequately (but can affect mother-child bonding)
- Very resource-intensive and expensive...
- ... but cost-effective in truly eligible patient population & reimbursed in many healthcare systems







But:

Therapeutic Hypothermia needs to be initiated within 6 hours of birth to be effective

¹ NICU = Neonatal Intensive Care Unit



Decision-Making in HIE Today

Diagnostic Dilemma – No Conclusive HIE Diagnosis within 6-Hour Window

Baseline diagnostics

(standard procedure)

combination of APGAR, pH value, base deficit only 40% to 60% predictive value

Perinatal risk factors / Complications during labor

6-hour limit! Apply therapy?



Instrument-based diagnostics

aEEG*

Reliable data after 24 h – too late

MR-Imaging Reliable data after 3-9 days – far too late

Accept unnecessary therapy

Accept serious disabilities

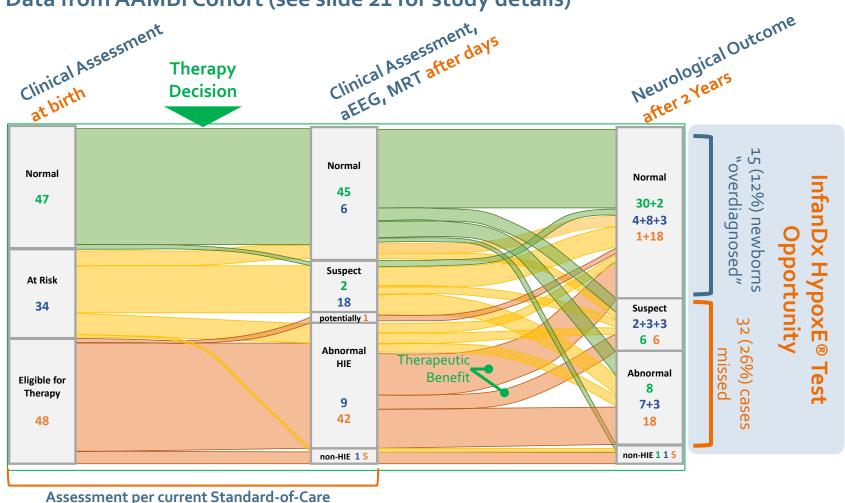
* aEEG = amplitude integrated electroencephalography



Decision-Making in HIE Today

Current Diagnostic Practice Leads to Significant Misdiagnosis





- "For all patient groups, clinical assessment and standard parameters (APGAR scores, umbilical cord blood pH and lactate) did not enable accurate prediction of longer-term neurodevelopmental outcome and hence insufficiently indicated the need for neuroprotective therapies."
- "The AAMBI cohort provides the opportunity to study metabolomic biomarkers for better identification of hypoxic-ischemic brain injury."

Prof. Dr. Axel Franz

Neonatologist, AAMBI Study PI University Hospital Tübingen Germany

Presented at:







The InfanDx HypoxE®-Test Our Solution to Solve the Diagno

Our Solution to Solve the Diagnostic Dilemma in HIE



InfanDx HypoxE® Test



A First-in-Class Blood Test for HIE...

- Indicating brain damage reliably,
- ... on a small blood sample take at birth,
- ... analyzed within <1 hour on standard diagnostic equipment,
- ... for a very affordable prize.



With Unique Technology Position

- Metabolomics biomarkers,
- ... associated with Asphyxia and HIE,
- ... protected by 4 granted patent families, and
- ... no competition on the horizon.



InfanDx HypoxyE-Test Value Proposition

Parents

- Best care for their baby
- Minimize uncertainty
- Affordable in case of non-reimbursement
- Corresponds to the recommendations of parent organizations (e.g. EFCNI)



Neonatologists

- Urgent medical need
- Certainty about therapy decision
- Avoid legal liability



Hospitals

- "Best Practice" reputation boosts marketing
- Exclude uncertainty, justify reimbursement
- Affordable in case of non-reimbursement
- Avoid legal liability



Insurances

- Save on decreased morbidity
- Avoid unnecessary treatments

Regulatory

- Solve urgent medical need in orphan disease
- Clear socio-economic benefit
- > US\$ 2 bn savings p.a. in the US alone
- Existing therapy aids regulatory assessment







InfanDx HypoxE-Test®

Market Potential Comparable to Top-Selling Current Diagnostic Tests



15 - 20 million newborns as intended use population

- Critical births (risk group defined according to clinical guidelines)
- Hospital deliveries
- US, EU and most developed emerging countries
- Total annual births worldwide: 140 million in 2019

Up to € 2 billion Total Addressable Market (TAM)

- Test ASP < €100
- Instruments as upside

€ 500+ million initial Servicable Addressable Market (SAM)

- With targeted IVD platforms in EU, USA, RoW (w/o LMICs)
- Distribution based sales channel targeting hospitals
- KOL support in key regions





InfanDx HypoxE-Test®

Product Concept – Rapid Near-Patient Testing for Any Setting







Fully automated test on standard Clinical Chemistry Analyzers



Result interpretation & cDSS¹ (SaaS)



< 1 Hour Turnaround Time (TAT) – Actual Test: 15-20 min





Broadly Used

Analyzers

by Partners



Targeted Settings

- STAT²/Satellite labs near delivery room
- Point-of-care testing in delivery room/NICU

IVD Instrument Platform Access

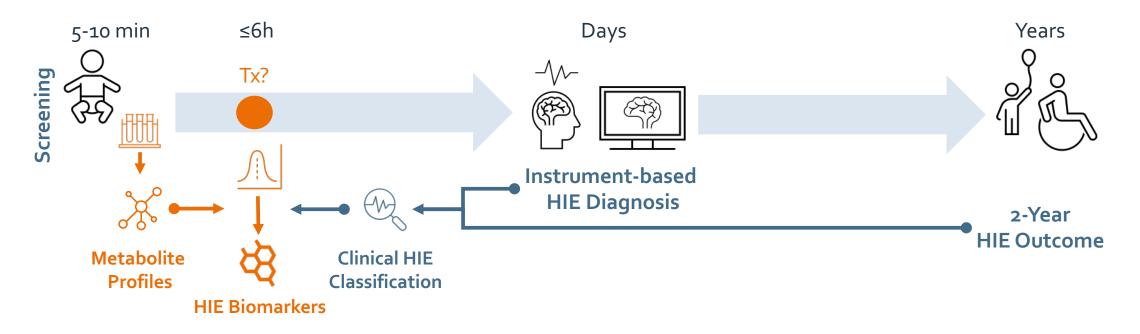
- IVD Platform partners identified
- Requirement engineering completed
- Feasibility studies ongoing

¹cDSS: clinical Decision Support System | ²Short Turnaround Time



AAMBI

Biomarker Identification & Validation in Two Dedicated European Cohorts Thousands of Samples Sufficient for *all* Required Biomarker and IVD Validation



- Biomarker identification
- 155 study subjects
- 3,200 blood samples available in InfanDx BioBank
- Study closed & data curated
- Biomarkers identified/confirmed in Q1-2022

BANON

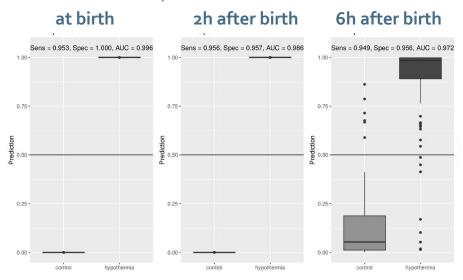
- Biomarker panel optimization & validation
- IVD test validation (IVDR)
- 553 study subjects
- 8,000 blood samples available in InfanDx BioBank
- 2-year follow-up finalized in Q1-2022
- Panel validation in Q3-2022



Biomarkers Targeted by InfanDx HypoxE-Test® Biomarkers in AAMBI – Excellent Single Biomarker Performance

Interim Analysis

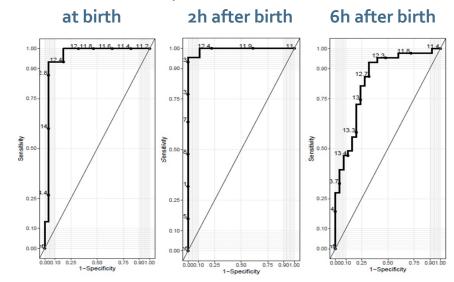
(Biomarker Example)



 Numerous candidate biomarkers identified in interim analysis that clearly distinguish patients eligible for hypothermal therapy from controls (by standard of care)

Final Univariate Analysis

(Biomarker Example)



 Numerous biomarkers confirmed/ identified in final univariate analysis that are highly informative in the critical timeframe on presence of HIE as defined by composite classifier based on instrument-based diagnosis and neurological assessment after 2-year follow-up

Panel design (combination of 5-7 biomarkers) and interpretative algorithm to be finalized in Q1/2-2022



InfanDx HypoxE-Test®

Product Strategy – Market Introduction Starting in Mid-2022

G1 Market • Reference method for IVD benchmarking and further studies LC-MS • Basis for introduction of Laboratory Developed Tests (LDTs) in EU and US LDT • Early access program for reference sites and studies • Key opinion leader & early adopter Laboratory • Test for broad selling to hospital labs ClinChem • Uses most common diagnostic instruments **IVD Lab Test** • TAT1< 1 h • For EU, US, and RoW1 Point-of-Care Point-of-Care test for broad commercialization beyond labs ClinChem • Rapidly growing market segment **IVD POC Test** • TAT <20 min • For EU, RoW

Targeted Launches

EU fromQ3-2022 US from Q1-2023





((Q₄-2024

¹TAT: Turnaround Time | ²RoW: Rest of World

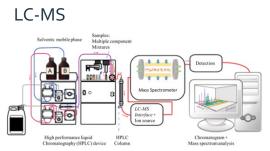
InfanDx HypoxE-Test® Feasibility Studies for G1 and G2 Products

LC-MS & Biochemical Assay feasibility demonstrated for several candidate biomarkers

Assay Principle

Feasibility Data on Candidate Biomarkers

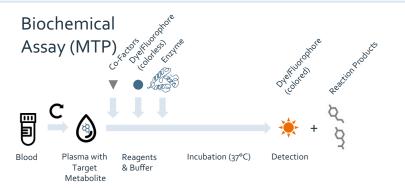




| Metabolite | Accuracy (recovery S) | | | LOQ (CV = 15%) | LLOQ (S/N = 10) | LOD (S/N = 3) |
|------------|-----------------------|-------|-----------|-------------------|--------------------|------------------|
| | Intra-Assay- Error | | Linearity | μМ | nM | nM |
| | m | Dm | r² | | | |
| Α | 1.0014 | 2.46% | 0.9946 | 0.499 | 0.56 | 0.06 |
| В | 1.0011 | 1.85% | 0.9969 | 0.404 | 39.00 | 33.00 |
| С | 1.0002 | 2.79% | 0.993 | 1.033 | 2.75 | 0.53 |
| D | 1.0000 | 0.10% | 1.0000 | 0.080 | 34.00 | 18.00 |
| E | 0.9999 | 0.43% | 0.9999 | 0.055 | 7.49 | 1.67 |
| F | 1.0000 | 0.40% | 0.9999 | 0.036 | 31.00 | 17.00 |
| G | 1.0000 | 3.28% | 0.9914 | 25.000 | 1527.00 | 166.00 |
| H | 0.9996 | 5.58% | 0.9847 | 419,000 | | |

- Time to result in less than 2 hours feasible
 >> aiming at further shortening to 1 hour
- Implemented on standard lab equipment (Research-use Only)
- Can be confectioned to minimize handling steps and allow single sample handling





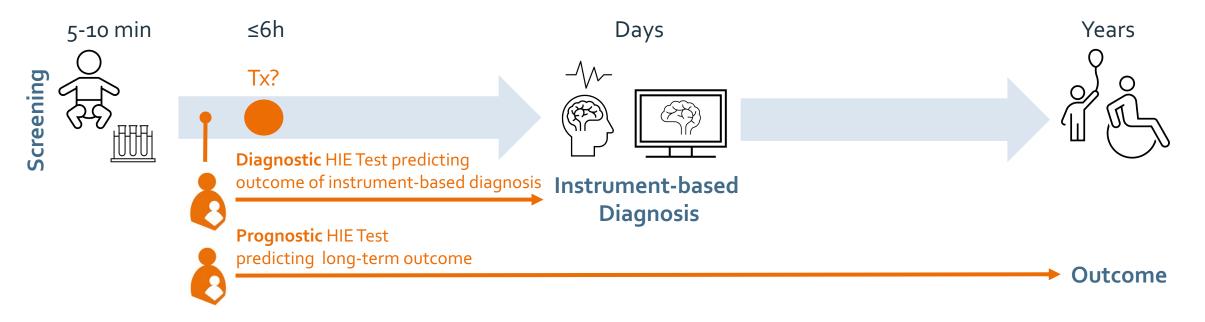
| Number | Metabolite | LOD/LOQ | Intra-Assay CV | Inter-Assay CV | Recovery |
|--------|------------|--------------|-------------------|-------------------|---------------------------------|
| 1 | А | 320 /500 μM | 1.8 % | 5.8% | 84 ± 4.4% |
| 2 | В | 5.28/15.3 μM | 1.77% | 6.8% | 95 ± 1.5% |
| 3 | с | 41/78 μM | 2.3 % | 6.6% | 94.25 ± 11% |
| 4 | D | 30.4/200 μM | 3.54 % | 3.73 % | 103 ± 15% |
| 5 | E | 4 μΜ | 1% | 7.2% | 115±4% |
| 6 | F | 3/6.8 μM | 0.68% | 11% | im progress (plasma Validation) |
| 7 | G | 0.88/14 μM | 1.12% | 4.64 % | im progress (plasma Validation) |
| 8 | н | 15 µM | 2.68% | 4.1% | 99% |
| 9 | - 1 | 5μМ | 1.02% | 2.5% | 89% |
| 10 | J | 25µM | 2.4% | 4.5% | 83% |
| 11 | к | 10µM | 3.4% | 2.5% | 80% |
| 12 | L | - | - | - | In Progress (plasma Validation) |
| 13 | м | | | - | In Progress (plasma Validation) |

- If enzymes are available, assay development is straight-forward
- All assays show excellent performance in multititer plate (MTP) format
- Customization to G2 IVD Platform for laboratory use ongoing
- G3 POC Assay adaption to follow



US Strategy

Aim for Early Market Entry with Diagnostic Claim – Add Prognostic Claim Later



Clinical Trial

- Compare HIE Test on blood sample against classifier based on instrument-based diagnostic
 - > 1st FDA Submission (aiming at *De Novo* pathway)
- Validate prognostic claim against 2-year outcome
 - > 2nd FDA Submission (PMA pathway)

- Q4-2021: Incorporation of a US-subsidiary
- H1-2022: FDA pre-submission meeting (targeted)¹
- O3-2022: Set-up of Clinical Operations in USA
- Q4-2022: Initiation of US-Trial

¹Subject to FDA availability (Covid-19)





Business Plan

Go-2-Market – The Big Picture

EUROPEAN & RoW MARKET ENTRY in 2022/23

SAM

About EUR 200 million of initial Serviceable Available Market (SAM) for InfanDx products

Market Segment

Initial focus on Tier 1 Reference Sites in EU ('Lighthouses') for KOL support followed by Tier 2/3 Hospitals in EU and Tier 1-3 in RoW

Products

Tier 1 (Early Adopters): G1 LDT (2022)

Tier 1/2: G2 IVD Lab (2023) Tier 3: G3 IVD PoC (2024)



InfanDx: "SEEDING"

- Commercial proof-of-concept
- EU / US / RoW



US MARKET ENTRY IN 2023/2026

SAM

About EUR 100 million of initial Serviceable Available Market (SAM) for InfanDx products

Market Segments

Initial focus on Tier 1 Reference Sites ('Lighthouses') for KOL support followed by other Tier 1 and the Tier 2 Hospitals

Products

LICENSING: "HARVESTING"

- High-volume markets building on commercial proof-of-concept.
- Further geographic expansion into China and RoW

G1 LDT for early adopters starting from 2023 followed by G2 IVD in 2026

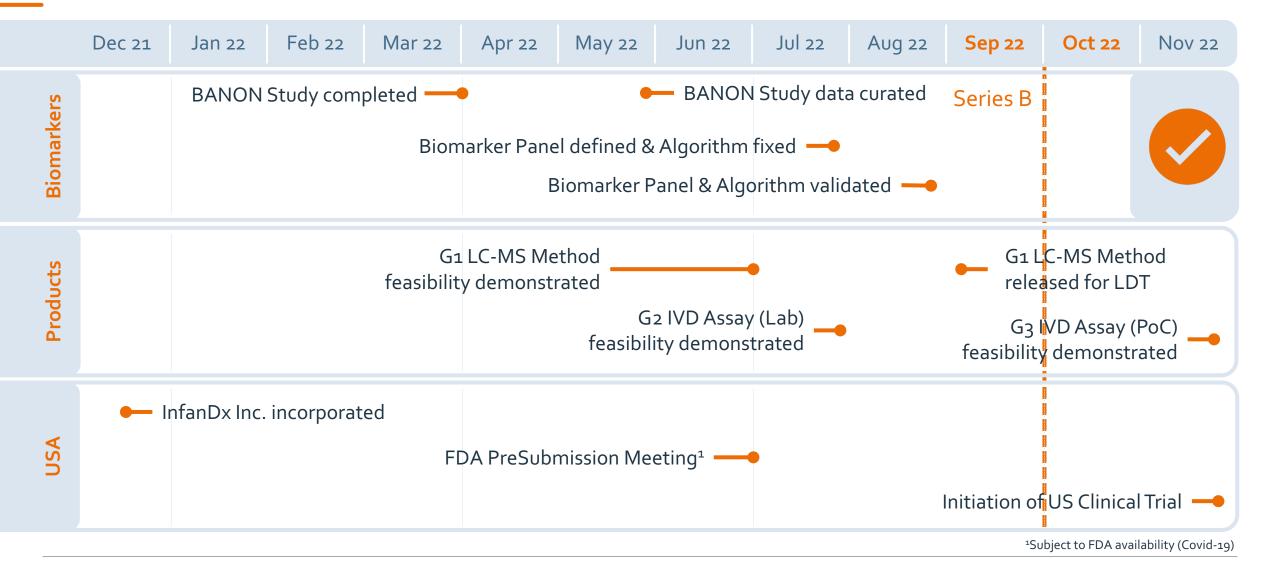
Alternative study design may expedite timeline for IVD launch in US





2021/22 Near-Term Value-Drivers

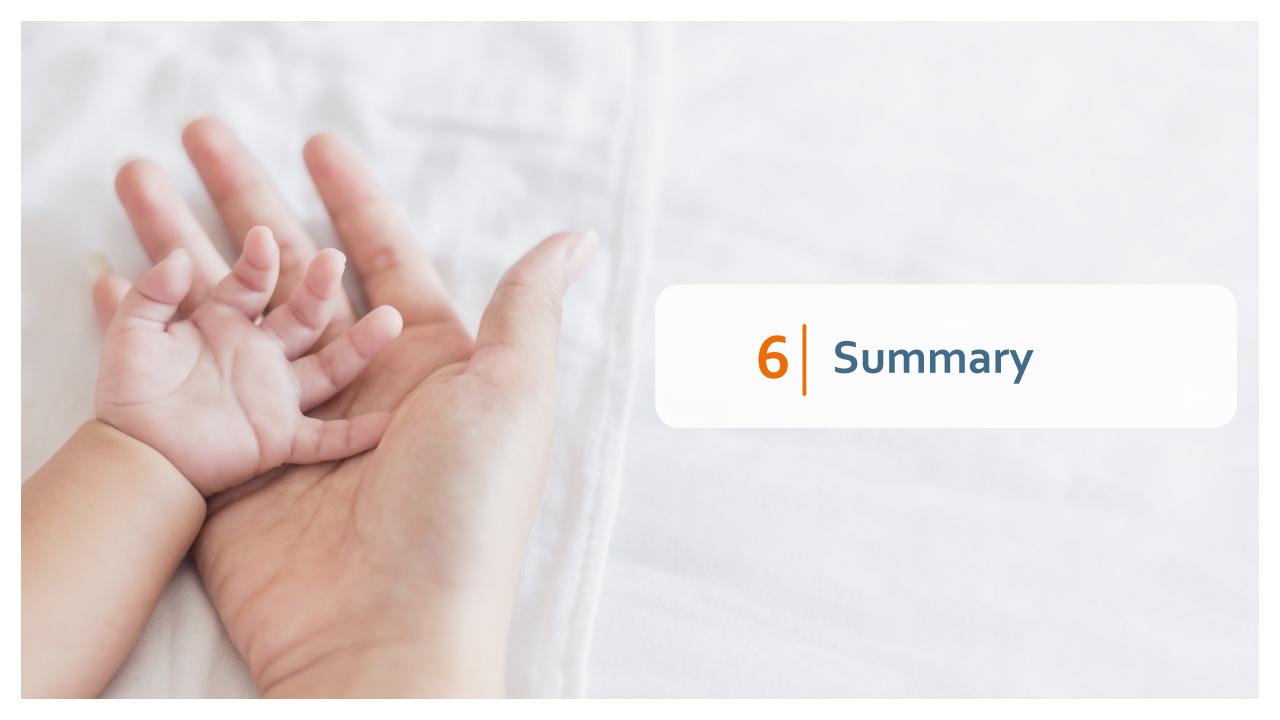
Numerous Key Milestones Scheduled in the Run-Up to a Series B



Milestones & Exit Options

Industry-typic Value-Inflection Points and De-Risking Leading to Exits

| VALIDATION BY | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | |
|---------------|--------------------------|-------------------------|------------|------------------------|----------------|-----------------|--|
| SCIENCE | Final Biomarker Panel | Biomarkers validated | | | | | |
| PATENTS | 4 Patent Families | Further IP to be filed | | | | | |
| KOL SUPPORT | | LDT (EU) | LDT (USA) | | | | |
| CE-IVD (IVDR) | | | G2 IVD LAB | G ₃ IVD POC | | | |
| USA-FDA | | | | | — | G2 IVD LAB | |
| LICENSING | | | | | 1st Deal | | |
| MARKET | | | | | Commercial PoC | EBIT Break Even | |
| EXIT OPTIONS | (US) IPO M&A | | | | | | |



InfanDx' Equity StorySummary

- Mission: Diagnostic innovation to improve outcomes in neonatal acute & critical care
- Lead product in R&D: First-in-Class HypoxE-Test® for early diagnosis of Hypoxic-Ischemic Encephalopathy (HIE)
- Attractive market opportunity:
 - 10% to 15% of all newborns at risk
 - € 2 billion TAM | € 500+ million SAM
- Progressive business model:
 - Established IVD reagent business combined with Software-as-a-Service (SaaS) for clinical decision support
 - Market "Seeding" with own products | "Harvesting" by licensing
- Low-risk product strategy: Leveraging widely used diagnostics platforms for rapid commercial deployment
- Biomarkers found: Individual biomarkers identified | panel design in Q1/2-2022 | validation in Q3-2022
- Unique competitive position: strong IP position with granted patents on biomarkers | no visible competition
- Near-term market introductions: LDT in EU from Q3-2022 | CE-IVD from Q4-2023
- Further strategic focus on US: US clinical trial for FDA submission starting in Q4-2022 | LDT from early 2023
- **Defined commercial strategy:** Targeting commercial proof-of-concept by 2025 and EBIT break-even by 2026





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