Immunic Therapeutics

Developing Selective Oral Therapies in Immunology

NASDAQ: IMUX | February 2023

Cautionary Note Regarding Forward-Looking Statements

This presentation contains “forward-looking statements” that involve substantial risks and uncertainties for purposes of the safe harbor within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These include statements regarding management’s intentions, plans, beliefs, expectations or forecasts for the future, and, therefore, you are cautioned not to place undue reliance on them. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. Immunic undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise, except to the extent required by law. We use words such as “anticipates,” “believes,” “plans,” “expects,” “projects,” “future,” “intends,” “may,” “will,” “should,” “could,” “estimates,” “predicts,” “potential,” “continue,” “guidance,” and similar expressions to identify these forward-looking statements that are intended to be covered by the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995.

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Forward-looking statements included in this presentation are based on information available to Immunic as of the date of this presentation. Immunic does not undertake any obligation to update such forward-looking statements except as required by applicable law.

Our Mission

We are developing a pipeline of next-generation selective oral therapies focused on offering patients with chronic inflammatory and autoimmune diseases new and clinically meaningful treatment options.

Immunic THERAPEUTICS

Leadership Team

Company is Led by an Experienced Management Team

Daniel Vitt, PhD
CEO & President

Duane Nash, MD, JD, MBA
Executive Chairman

Andreas Muehler, MD, MBA
CMO

Hella Kohlhof, PhD
CSO

Patrick Walsh
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Independent Director

Maria Törnsén
Independent Director

Joerg Neermann, PhD
Independent Director

Vincent Ossipow, PhD, CFA
Independent Director

Daniel Vitt, PhD
CEO & President of Immunic

Immunic THERAPEUTICS

Advanced Clinical Pipeline

Three Differentiated Programs in Various Phases of Clinical Development

Program	Target	Preclinical	Phase 1	Phase 2	Phase 3
Vidofludimus Calcium (IMU-838)	DHODH				Relapsing Multiple Sclerosis (RMS) – ENSURE Trials
					Progressive Multiple Sclerosis (PMS) – CALLIPER Trial
Izumerogant (IMU-935)	IL-17 / RORγt				Psoriasis
					Castration-Resistant Prostate Cancer (CRPC)
IMU-856	Intestinal Barrier Function				Celiac Disease

Key Milestones

- Initial phase 1b celiac disease data of IMU-856 expected in mid-2023
- Interim analysis of CALLIPER trial in PMS planned after half of the patients completed 24 weeks of treatment, estimated for H2/2023
- Interim analysis of first ENSURE trial in RMS planned after approximately half of the events occurred, estimated for late 2024
- CALLIPER trial estimated to readout end of 2024
- ENSURE-1 trial estimated to readout end of 2025, ENSURE-2 soon thereafter

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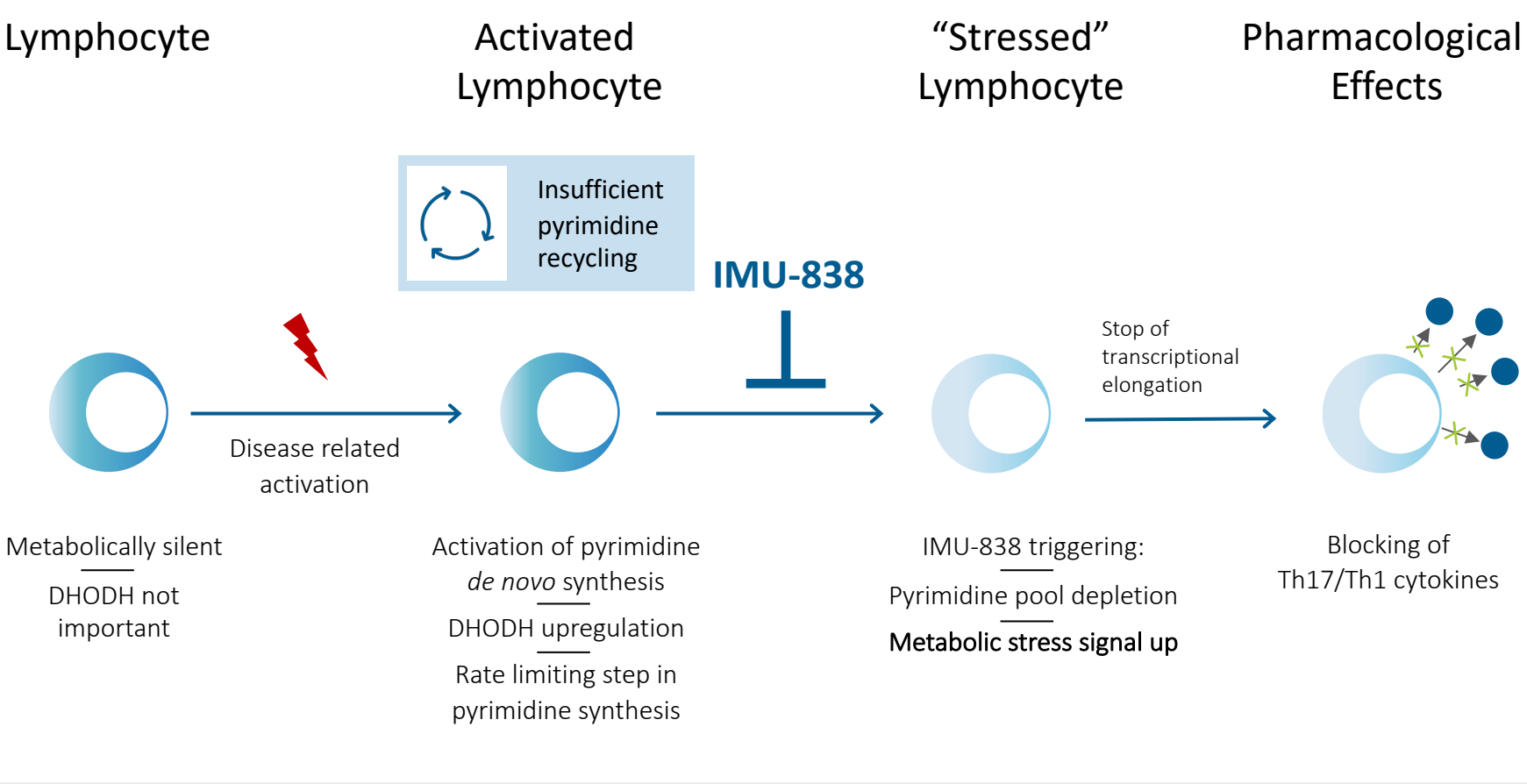
Vidofludimus Calcium Selectively Targets Only Hyperactive Immune Cells



Preserves normal immune cell function and numbers

→ No nonspecific immunosuppression

→ Maintains vaccination efficacy[1]

→ No negative effect observed on white blood cell count or rates of infection or malignancies

Illustration adapted from Tan et al., 2016, Mol Cell 62; [1] Bar-Or A, Freedman MS, Kremenchutzky M, et al. Neurology. 2013;81(6):552-558
DHODH: dihydroorotate dehydrogenase; Th: T helper

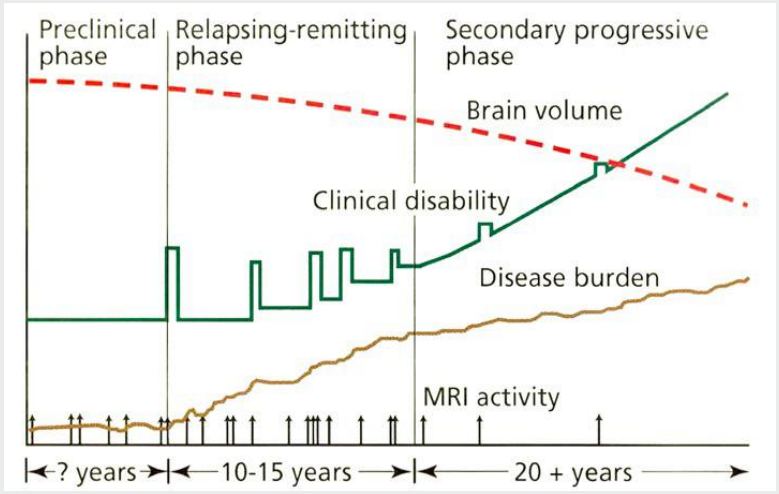
Vidofludimus Calcium in Multiple Sclerosis (MS)

Targeted to Elevate the Standard of Care With a Holistic Solution for the Full Spectrum of MS Patients

For Patients With Lifelong Illness, Disability is a Critical Concern

MS is a Lifelong Disease and Starts Early

- **Lifelong disease** requiring decades of therapy
- ~2.8 million people affected worldwide (~1M in US)[1]
- Often diagnosed in **younger adults** (3:1 women:men)



Therapeutic Goal: Preventing Disability Worsening

- Unmet need is prevention of **disability worsening**
- Historical focus has been on prevention of relapses via broad immunosuppression

Need to Do so Without

- **Problematic side effects**
- **Cumulative health risks**: cancer, infections, cardiovascular and liver disease
- Need for **significant monitoring**

[1] MS International Federation (2020): Atlas of MS. https://www.atlasofms.org/map/global/epidemiology/number-of-people-with-ms; illustration adapted from Fox RJ, Cohen JA. Cleve Clin J of Med, 2001; 68:157–70
PML: progressive multifocal leukoencephalopathy; M: million

Vidofludimus Calcium Aimed to Go Above and Beyond Current Care to Comprehensively Address Patients' Needs

Targeted to Elevate the Standard of Care With a Holistic Solution for MS Patients

Uniquely matched to the multi-faceted neurodegeneration of smoldering and active MS

- Anti-viral effects
- Anti-inflammatory effects
- Neuroprotective effects

Seeks to provide unrivaled safety, tolerability & convenience

- Targeted to set the new standard for patient preference, exceeding all options including glatiramer acetate

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Vidofludimus Calcium Addresses Multiple Drivers of Neurodegeneration in MS Patients

1 Anti-Inflammatory Effects

- ✓ Selectively targets hyperactive immune cells
- ✓ Reduces MRI lesions
- ✓ Reduces relapses
- ✓ Mechanism already shown to reduce brain atrophy

Vidofludimus calcium can target various aspects of 'smoldering' MS

2 Anti-Viral Effects

- ✓ Broad-spectrum antiviral activity established
- ✓ EBV linked to MS
- ✓ Vidofludimus calcium with potent anti-EBV activity

3 Direct Neuroprotective Effects

- ✓ New data showing impact on validated neuroprotective target
- ✓ Impact on serum neurofilament
- ✓ Encouraging clinical signals from phase 2 trial on change in EDSS

EBV: Epstein-Barr Virus; MRI: magnetic resonance imaging; EDSS: Expanded Disability Status Scale

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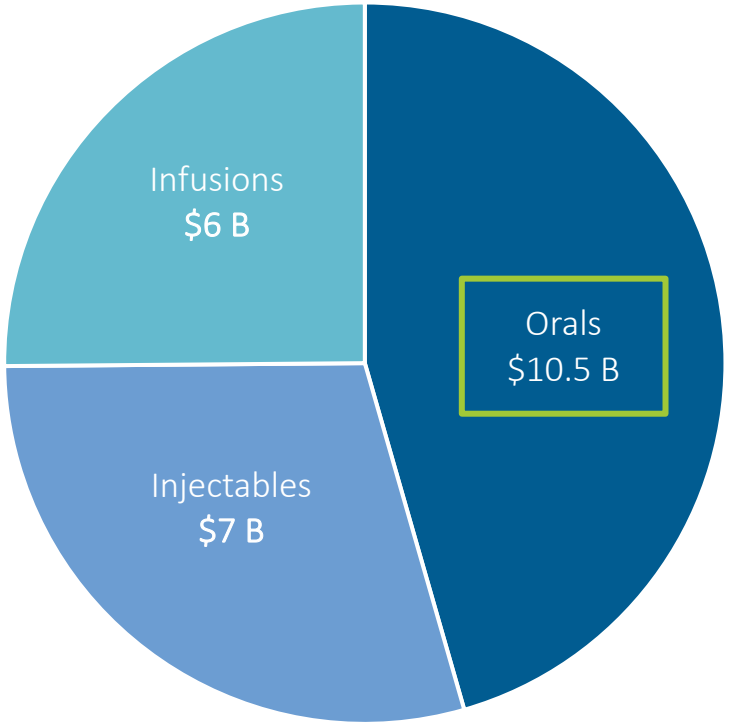
The Global MS Market Exceeds $23B in Annual Sales, With $1B+ Contributions from Multiple Brands

Oral Drugs Represent Most Significant Share of Total Sales in Major Territories (2020)



Most brands are generating in excess of $1 billion in global annual sales in 2021, with most sales coming from the U.S.

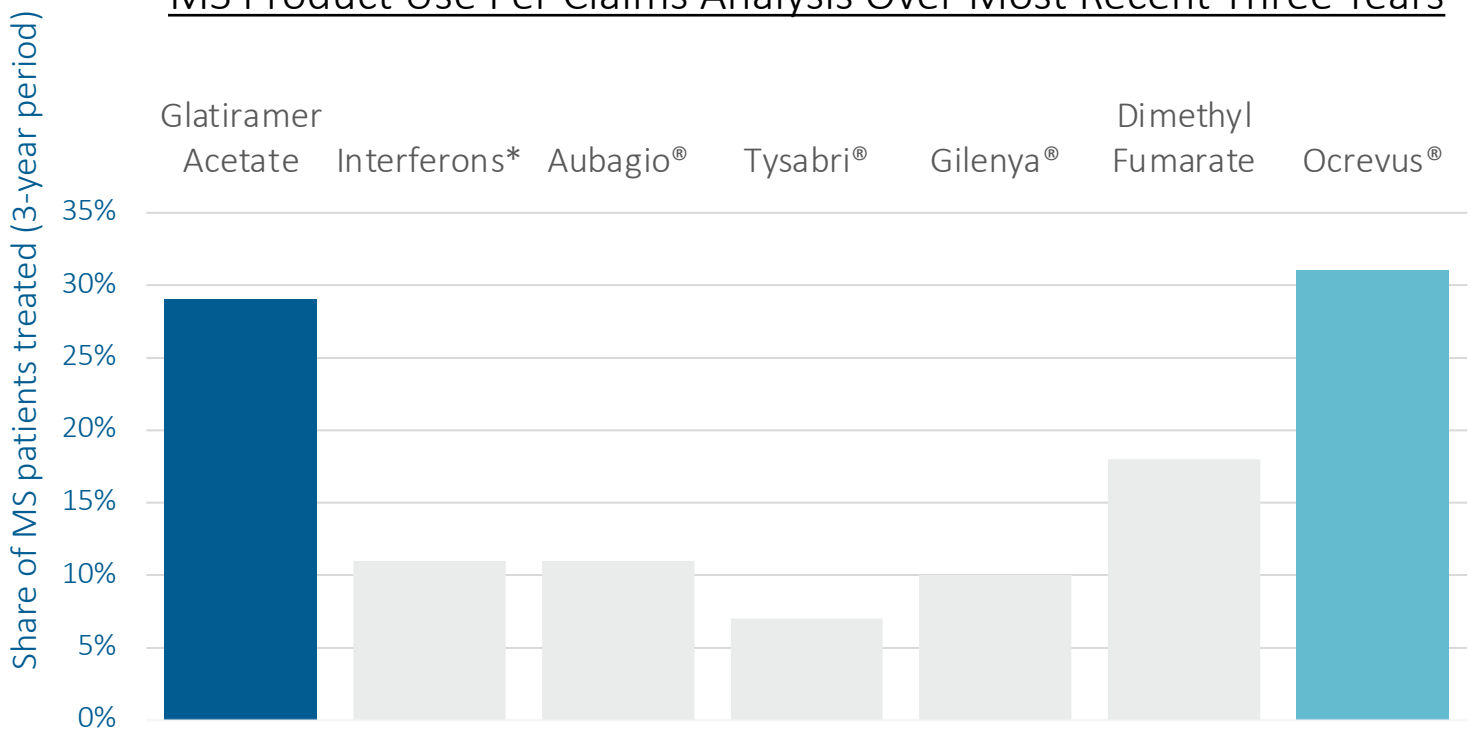
- Ocrevus® – $6.3 billion
- Tecfidera® & Vumerity® – $2.4 billion
- Tysabri® – $2.1 billion
- Gilenya® – $2.8 billion
- Aubagio® – $2.0 billion
- Avonex® & Plegridy® – $1.6 billion
- Rebif® – $1 billion

* Sales numbers in G7 countries (US, UK, Canada, Japan, Germany, France, Italy) in USD billion; S1P: sphingosine-1-phosphate
Source: Multiple Sclerosis Landscape and Forecast by Decision Resources Group Part of Clarivate

The Majority of Patients Have Exposure to Either Glatiramer Acetate or Ocrevus®

- Relapse prevention is NOT the only unmet need
  - Despite lack of effect on relapses, glatiramer acetate is the second most commonly used disease modifying therapy
- Ocrevus® leads the market with a significant impact on relapses and a label in primary progressive MS patients
- Other therapies come with significant tradeoffs in effect size, or more notably, the safety and tolerability profile

MS Product Use Per Claims Analysis Over Most Recent Three Years



Vidofludimus calcium has the potential to be the leading treatment choice for all patients not choosing anti-CD20 therapy

Source: Patient treatment exposure data based on proprietary research performed in partnership with Trinity Partners & utilizing Komodo Health claims data analysis, 2022. All % of patients without relapses provided per product labels. Dimethyl fumarate result is an average of the rates from two Phase 3 studies. *Interferons share of patients treated includes combined Avonex® and Rebif®-treated patients. % of patients without relapse at 2 years based on rate for Avonex®.
CD20: B-lymphocyte antigen

The Unmet Needs in MS Encompasses Multiple Patient Segments

725,000 US diagnosed MS patients[1]
Multiple opportunities to address unmet needs of patients

Risk intolerant patients	Patients who need alternatives	Patients with progressive disease	Untreated patients
Raise efficacy standard for established segment	**MoA to match MS pathophysiology**	**Address disability progression**	**Increase treatment rate**
▪ ~30% of treated patients still choosing glatiramer acetate (worst efficacy of all DMTs)[2]	▪ Numerous shortcomings exist with existing DMTs for 30% of patients[2] ▪ Treatment switches common	▪ Biomarker impact rivals Ocrevus® (only DMT with label for primary progressive patients) ▪ Disability progression remains largest unmet need	▪ ~50% of patients with MS do not receive DMT treatment[2,3]

Market Opportunity

$10 B

$1 B

Evidence Supporting Commercial Potential

Completed phase 2 trial (EMPhASIS) & ongoing phase 3 program (ENSURE) | Progressive MS trial (CALLIPER) | Full data package

[1] Company estimates leveraging Briggs, F. B., & Hill, E. (2019). Multiple Sclerosis Journal & Wallin, M. T., Culpepper, W. J., Campbell, J. D., Nelson, L. M., Langer-Gould, A., Marrie, R. A., & Buka, S. L. (2019). Neurology, 92(10), e1029-e1040.
[2] Proprietary research performed in 2022 in partnership with Trinity Partners and utilizing Komodo Health claims data analysis [3] Fox RJ, Cosenza C, Cripps L, Ford P, Mercer M, Natarajan S, Salter A, Tyry T, Cofield SS. Neurology. 2019 Apr 2;92(14):e1634-e1642
DMT: disease modifying therapy; MoA: mode of action; B: billion

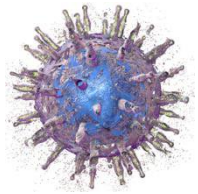
Substantial Progress in Understanding Multiple Sclerosis

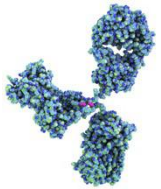
Four Key Publications in 2022 Impacting Our Knowledge – and Options to Treat

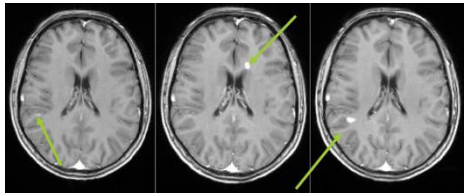
EBV Infection is a prerequisite of MS[1]

Development of **cross-reactive antibodies** against EBNA1 and GlialCAM[2]

PIRA (Progression Independent of Relapse Activity): Major portion of disability worsening is independent of relapses[3]







[1] Bjornevik K. et al., Science. 10.1126/science.abj8222 (2022) [2] Lanz, T.V., et al. Nature 603, 321–327 (2022) [3] Fred D Lublin et al., Brain, 2022;, awac016
EBV: Epstein-Barr Virus

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Key Publications in 2022 Provide Clear Evidence of a Direct Link Between Epstein-Barr Virus and MS

Epstein-Barr Virus (EBV) is Essential for Onset of MS and Involved in Ongoing Autoimmunity[1,2]

- Epidemiologic study showed a **clear association between EBV infection and occurrence of MS**[2]
- **32-fold increased risk** in EBV-infected patients[2]
- **Cross-reactive antibodies between EBV antigen EBNA1 and CNS protein GlialCAM** found in the CSF of MS patients[3,4]
- EBV infection and reactivation seems to be an ongoing trigger for the immune system in MS patients[5]
- MS is not only preceded by EBV infection, but also associated with **broader EBV-specific T cell receptor repertoires**

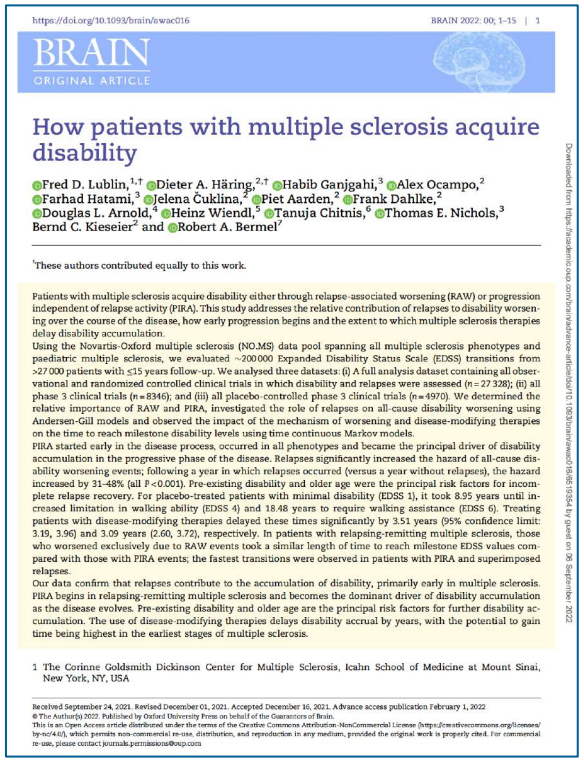
[1] Lublin FD, et al. Brain. 2022 Sep 14;145(9):3147-3161 [2] Bjornevik K. et al., Science. 10.1126/science.abj8222 (2022) [3] Lanz, T.V., et al. Nature 603, 321–327 (2022) [4] Robinson WH, Steinman L. Science. 2022 Jan 21;375(6578):264-265 [5] Schneider-Hohendorf et al. J. Exp. Med. 2022 Vol. 219 No. 11 e20220650; EBV: Epstein-Barr Virus; CNS: central nervous system; CSF: cerebrospinal fluid

Most Disease Progression is Independent of Relapse, Even in Early RMS

Another Key Publication in 2022

New Understanding of Drivers of Long-Term Patient Outcomes[1]

- Longstanding belief that the disability worsening process is only driven by relapse activity in RMS Patients
- New analysis of 35,000+ patients identifies **MS as "smoldering disease"**
  - Occurs in **absence of relapse activity** in RMS patients
  - Contributes to **half of disability accumulation** in RMS
  - **Dominant driver** of disease worsening in SPMS, PPMS
- Elevates the importance of any drug that:
  - Reduces relapse activity AND influences the relapse-independent accumulation of neurological deficits (measured as disability worsening and brain atrophy)



https://doi.org/10.1093/brain/awac016 BRAIN 2022: 00; 1–15 | 1

BRAIN
ORIGINAL ARTICLE

How patients with multiple sclerosis acquire disability

Fred D. Lublin,[1,†] Dieter A. Häring,[2,†] Habib Ganjgahi,[3] Alex Ocampo,[2] Farhad Hatami,[3] Jelena Ćuklina,[2] Piet Aarden,[2] Frank Dahlke,[2] Douglas L. Arnold,[4] Heinz Wiendl,[5] Tanuja Chitnis,[6] Thomas E. Nichols,[3] Bernd C. Kieseier[2] and Robert A. Bermel[7]

[†]These authors contributed equally to this work.

Patients with multiple sclerosis acquire disability either through relapse-associated worsening (RAW) or progression independent of relapse activity (PIRA). This study addresses the relative contribution of relapses to disability worsening over the course of the disease, how early progression begins and the extent to which multiple sclerosis therapies delay disability accumulation.
Using the Novartis-Oxford multiple sclerosis (NO.MS) data pool spanning all multiple sclerosis phenotypes and paediatric multiple sclerosis, we evaluated ~200 000 Expanded Disability Status Scale (EDSS) transitions from >27 000 patients with ≤15 years follow-up. We analysed three datasets: (i) A full analysis dataset containing all observational and randomized controlled clinical trials in which disability and relapses were assessed ($n = 27\,328$); (ii) all phase 3 clinical trials ($n = 8346$); and (iii) all placebo-controlled phase 3 clinical trials ($n = 4970$). We determined the relative importance of RAW and PIRA, investigated the role of relapses on all-cause disability worsening using Andersen-Gill models and observed the impact of the mechanism of worsening and disease-modifying therapies on the time to reach milestone disability levels using time continuous Markov models.
PIRA started early in the disease process, occurred in all phenotypes and became the principal driver of disability accumulation in the progressive phase of the disease. Relapses significantly increased the hazard of all-cause disability worsening events; following a year in which relapses occurred (versus a year without relapses), the hazard increased by 31–48% (all $P < 0.001$). Pre-existing disability and older age were the principal risk factors for incomplete relapse recovery. For placebo-treated patients with minimal disability (EDSS 1), it took 8.95 years until increased limitation in walking ability (EDSS 4) and 18.48 years to require walking assistance (EDSS 6). Treating patients with disease-modifying therapies delayed these times significantly by 3.51 years (95% confidence limit: 3.19, 3.96) and 3.09 years (2.60, 3.72), respectively. In patients with relapsing-remitting multiple sclerosis, those who worsened exclusively due to RAW events took a similar length of time to reach milestone EDSS values compared with those with PIRA events; the fastest transitions were observed in patients with PIRA and superimposed relapses.
Our data confirm that relapses contribute to the accumulation of disability, primarily early in multiple sclerosis. PIRA begins in relapsing-remitting multiple sclerosis and becomes the dominant driver of disability accumulation as the disease evolves. Pre-existing disability and older age are the principal risk factors for further disability accumulation. The use of disease-modifying therapies delays disability accrual by years, with the potential to gain time being highest in the earliest stages of multiple sclerosis.

1 The Corinne Goldsmith Dickinson Center for Multiple Sclerosis, Icahn School of Medicine at Mount Sinai, New York, NY, USA

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[1] Lublin FD, et al. Brain. 2022 Sep 14;145(9):3147-3161
RMS: relapsing multiple sclerosis; SPMS: secondary progressive multiple sclerosis; PPMS: primary progressive multiple sclerosis

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Straightforward Approval Strategy in Multiple Sclerosis

Enables Clear Demonstration of Effect on Smoldering MS

Phase 3 ENSURE Program in RMS[1]

- Two identical pivotal trials in RMS patients
- Goal: Low risk clinical program for regulatory approval of vidofludimus calcium
- Dosage: 30 mg vidofludimus calcium QD

Phase 2 CALLIPER Trial in PMS[2]

- Phase 2 trial in PMS patients
- Goal: Demonstrate vidofludimus calcium's potential for neuroprotective activity in a non-relapse setting
- Dosage: 45 mg vidofludimus calcium QD

Intended to Provide a Straightforward Path Towards Potential Regulatory Approval:

- Immunic believes that the phase 3 ENSURE program provides a straightforward path towards regulatory approval of vidofludimus calcium in RMS.
- CALLIPER is designed to corroborate vidofludimus calcium's neuroprotective potential to support the drug's unique profile.

[1] ClinicalTrials.gov: NCT05134441 & NCT05201638; [2] ClinicalTrials.gov: NCT05054140
RMS: relapsing multiple sclerosis; PMS: progressive multiple sclerosis; QD: quaque die = once-daily

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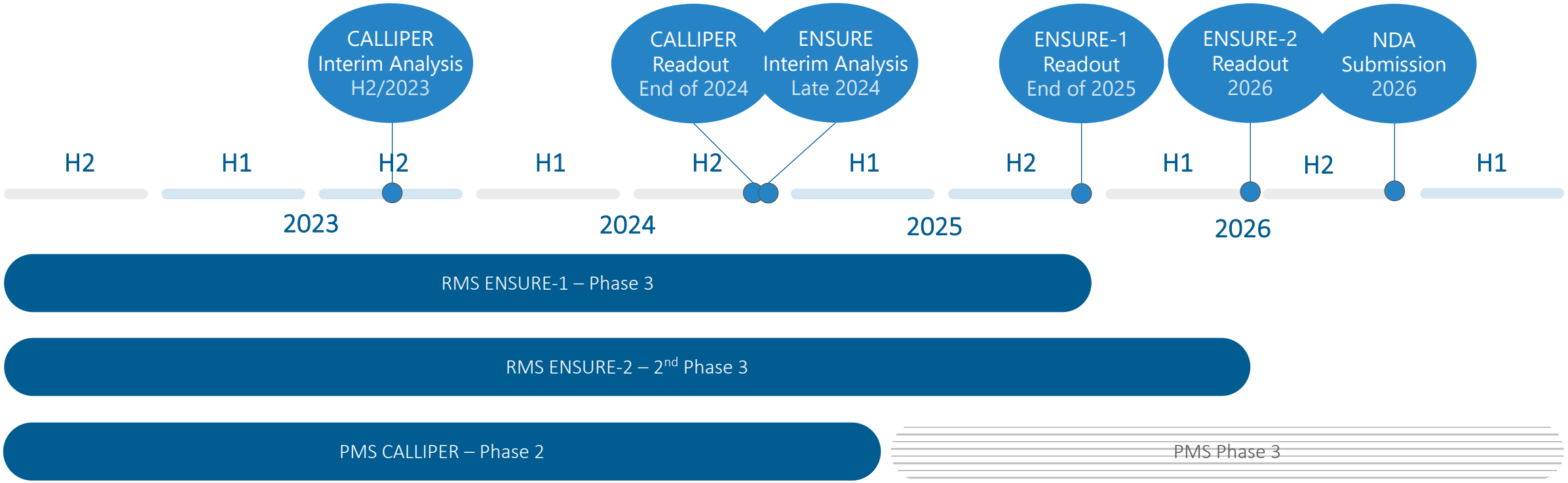
Straightforward Path Towards Potential Approval



These timelines are current estimates and depend on numerous factors which are not always under our direct control.

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ENSURE Program: Ongoing Pivotal Phase 3 Trials in RMS
NCT05134441 & NCT05201638

Coordinating Investigator

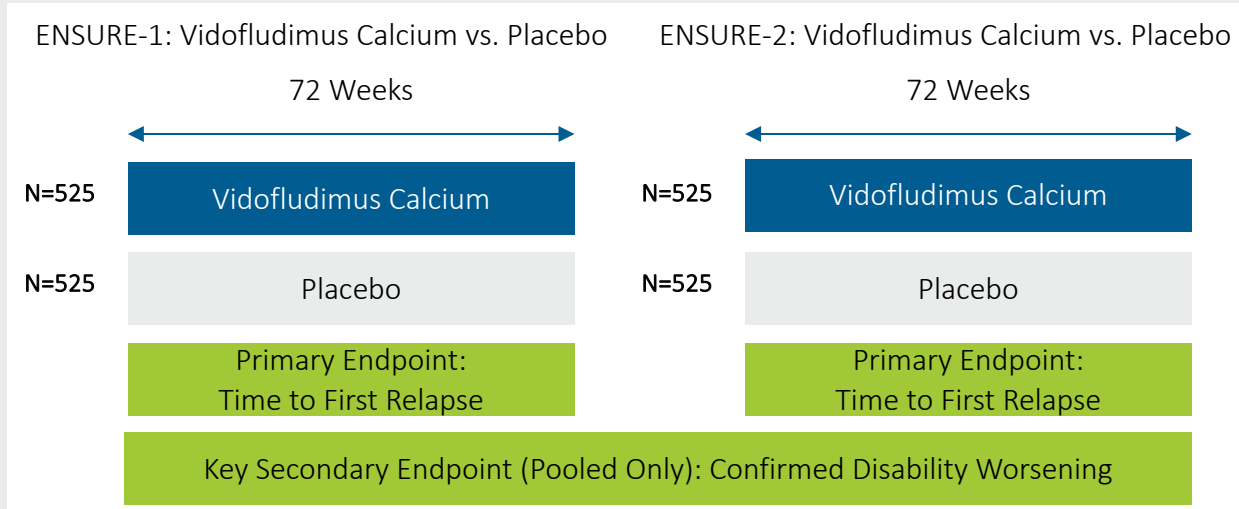
Robert J. Fox, M.D.
Cleveland Clinic

Included Patient Population: Relapsing Forms of MS

- Adult patients aged 18 to 55 years
- Established diagnosis of MS (Revised McDonald criteria 2017)
- Confirmed relapsing MS (1996 Lublin criteria)
- Active disease as defined by Lublin 2014
- EDSS score at screening between 0 to 5.5

Two Multicenter, Randomized, Double-Blind Phase 3 Trials

- Approximately 1,050 patients in each trial
- More than 100 sites in the United States, Latin America, Central and Eastern Europe, and India in each trial
- Randomization to 30 mg vidofludimus calcium or placebo QD



Lublin FD, et al. Neurology. 2014;83(3):278-286
EDSS: Expanded Disability Status Scale; QD: quaque die = once-daily

CALLIPER Trial: Ongoing Phase 2 Trial Intended to Complement the Phase 3 Program in RMS

Coordinating Investigator

Robert J. Fox, M.D.
Cleveland Clinic

Included Patient Population: Progressive Forms of MS

- Adult patients aged 18 to 65 years
- PPMS or SPMS diagnosis (Revised McDonald criteria 2017)
- EDSS score at screening between 3.0 to 6.5
- No evidence of relapse in last 24 months before randomization
- Evidence of disability progression

Multicenter, Randomized, Double-Blind, Placebo-Controlled Phase 2 Trial*

- Approximately 450 patients in more than 70 sites in North America, Western, Central and Eastern Europe
- Randomization to 45 mg vidofludimus calcium or placebo QD
- Primary endpoint: annualized rate of percent brain volume change up to 120 weeks

Treatment Schedule

- Blinded 120-week main treatment period
- Optional, approximately 8-year, open-label extension period
- Interim analysis of serum neurofilament light chain (NfL) and glial fibrillary acidic protein (GFAP) planned after approximately half of the patients have completed 24-weeks of treatment

* NCT05054140
PPMS: primary progressive multiple sclerosis; SPMS: secondary progressive multiple sclerosis; EDSS: Expanded Disability Status Scale; QD: quaque die = once-daily

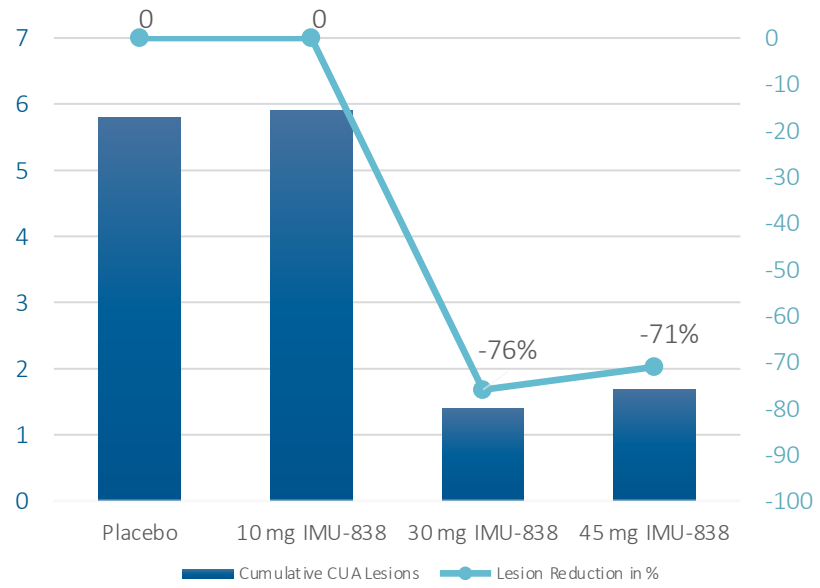
EMPhASIS Trial: Strong Reduction of MRI Lesion Activity

Primary Endpoint Hit With High Significance, Pooled Cohorts 1 & 2

Vidofludimus Calcium Showed Strong Activity on Primary Study Endpoint in Phase 2 Trial

- Double-blind, placebo-controlled, randomized, parallel-group phase 2 trial in RRMS
- Blinded main treatment period of 24 weeks
- Randomized 268 patients in 36 centers across four European countries
- Cohort 1: 30 and 45 mg or placebo
- Cohort 2: 10 mg or placebo
- Extended treatment period of up to 9.5 years to observe long-term safety is ongoing

Study endpoint:
Reduction in cumulative CUA lesions up to week 24



Primary and key secondary endpoints met with high statistical significance (primary: p = 0.0002 / key secondary: p < 0.0001)

As Cohort 2 only allowed MRI machines of 1.5T, pooled data of Cohorts 1 & 2 only include patients that were evaluated at MRI field strength of 1.5 Tesla. Modified full analysis set C1/C2 (N10 = 47, N30 = 65, N45 = 66, NPBO C1 = 59, NPBO C2 = 12)
Data displayed are as adjusted mean values. Estimates are adjusted for baseline volume of T2 lesions and baseline number of Gd+ lesions (0, >=1) using a generalized linear model with a negative binomial distribution and a logarithmic link function. Log transformation of time from first investigational medicinal product (IMP) dose to date of last MRI assessment with non-missing values is used as offset term. RRMS: relapsing-remitting multiple sclerosis; MRI: magnetic resonance imaging; CUA: cumulative unique active, Gd+: gadolinium-enhancing

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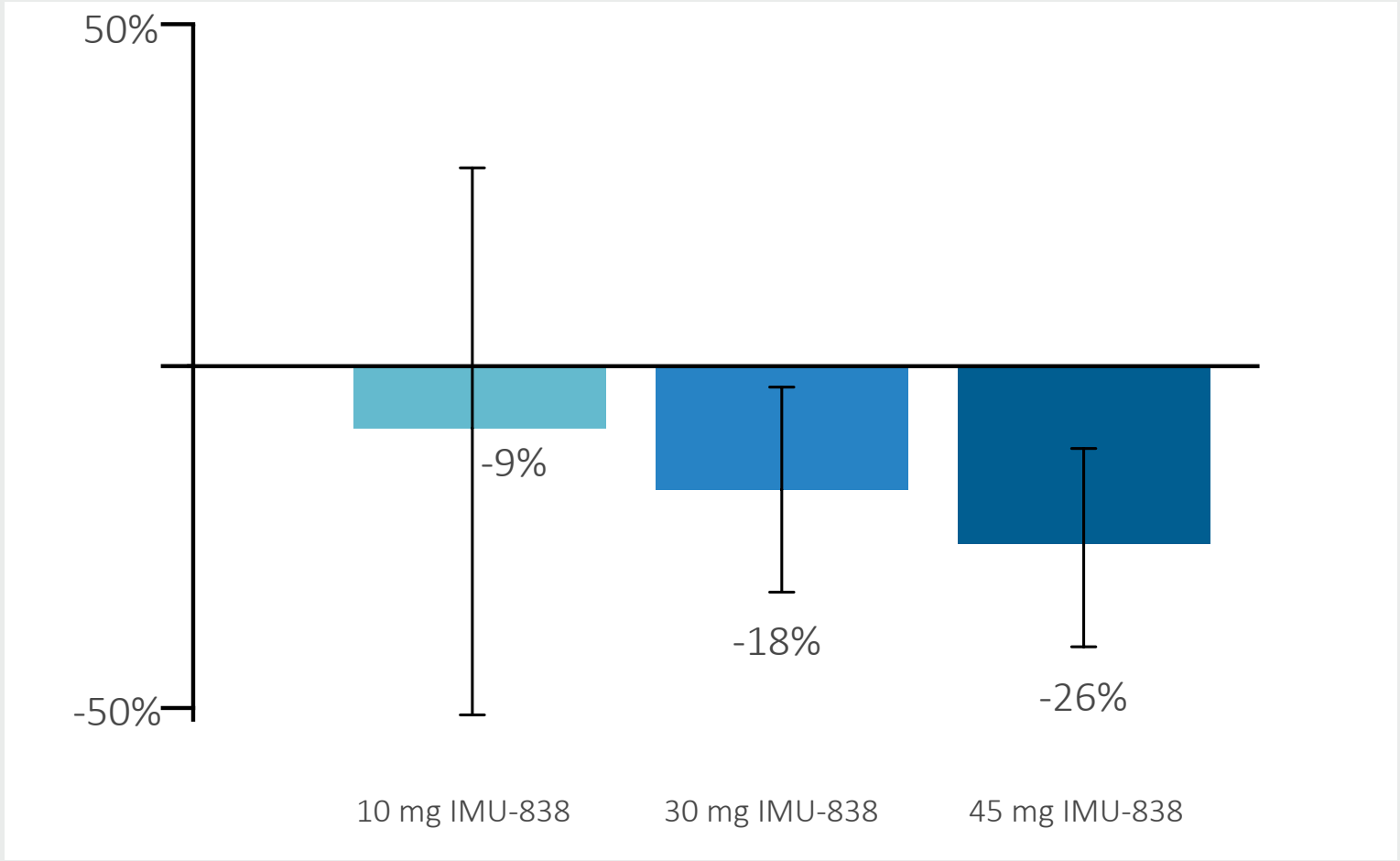
EMPhASIS Trial: Reduction of Serum NfL Concentrations Observed

Versus Placebo After 24 Weeks, Pooled Cohorts 1 & 2



Vidofludimus calcium showed a remarkable reduction in NfL levels in all active doses tested compared with placebo

- The relative change of serum NfL versus placebo is proportional to vidofludimus calcium dose.
- Higher doses are expected to show stronger neuroprotective effects

Displayed are median values of differences between percentage change of serum neurofilament light chain concentration (Hodges-Lehmann estimation), treatment vs. placebo, combined data for Cohort 1 and 2 patients; NfL: neurofilament light chain

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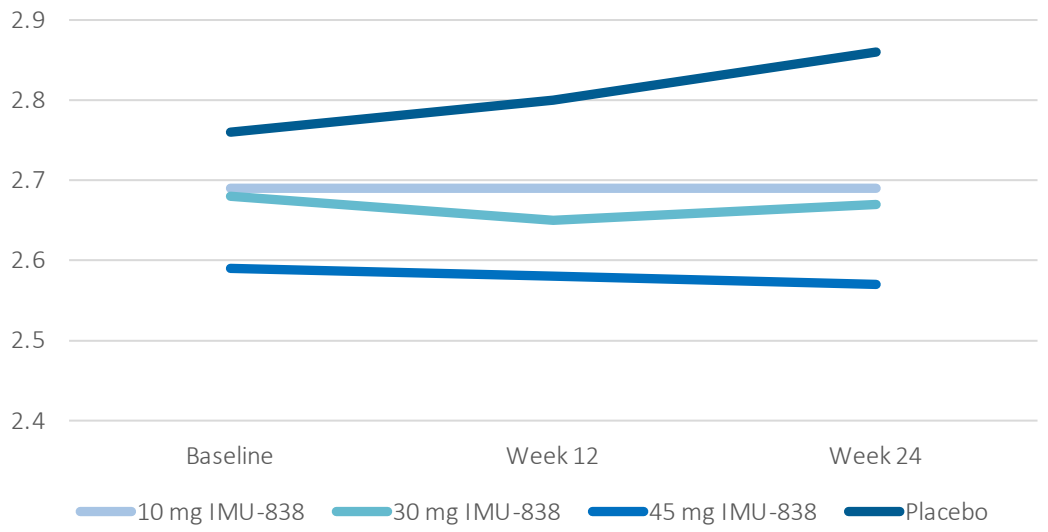
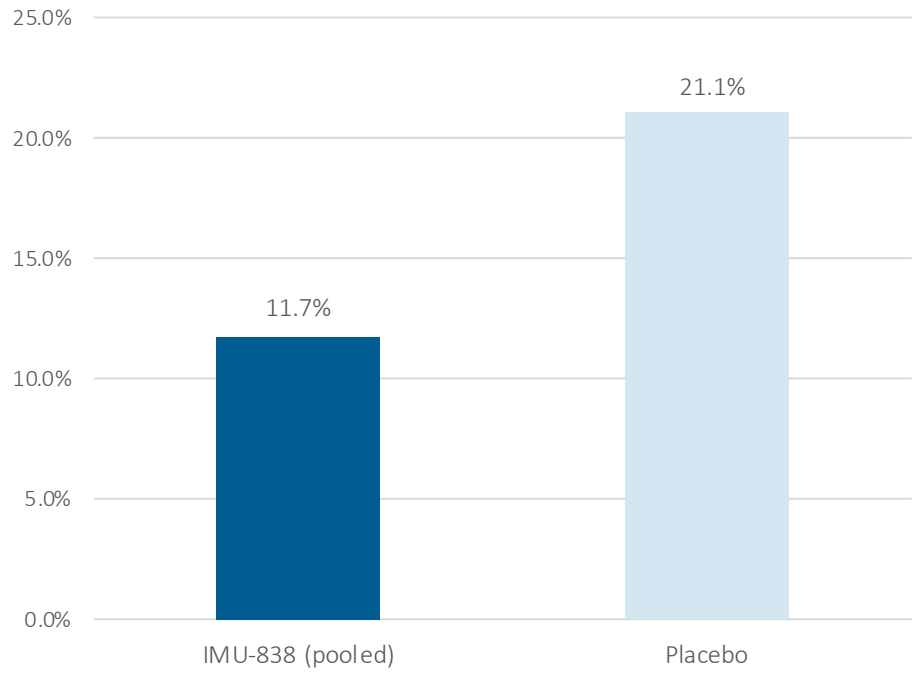
EMPhASIS Trial: Longitudinal Change of EDSS and Unconfirmed EDSS Progressions (Pooled Cohorts 1 & 2)

Change of EDSS From Baseline to Week 24



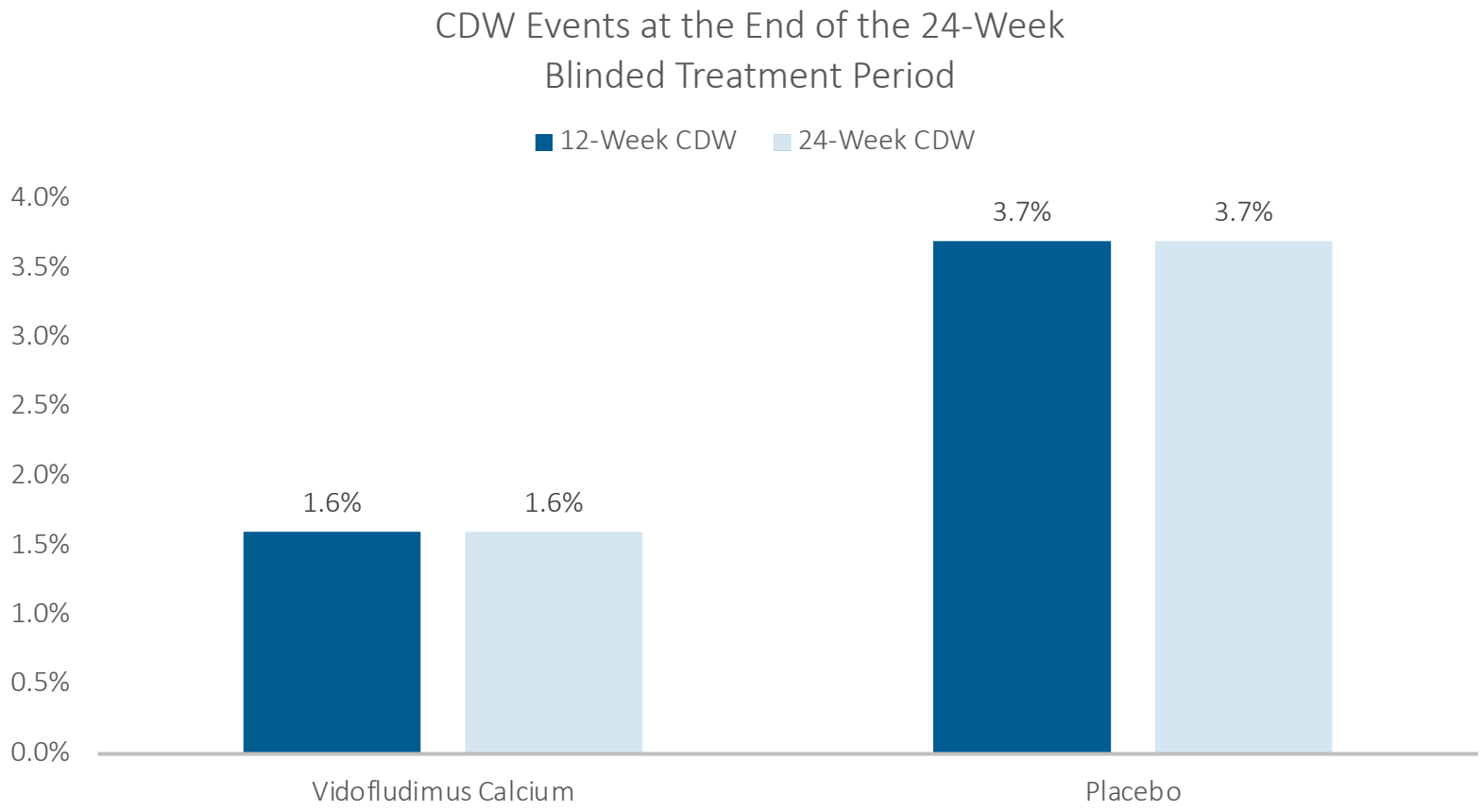
Proportion of Patients With Unconfirmed EDSS Progression up to Week 24



Displayed are mean values, combined data for Cohort 1 and 2 patients
EDSS: Expanded Disability Status Scale

EMPhASIS Trial: Confirmed Disability Worsening Events

End of 24-Week Blinded Treatment Period

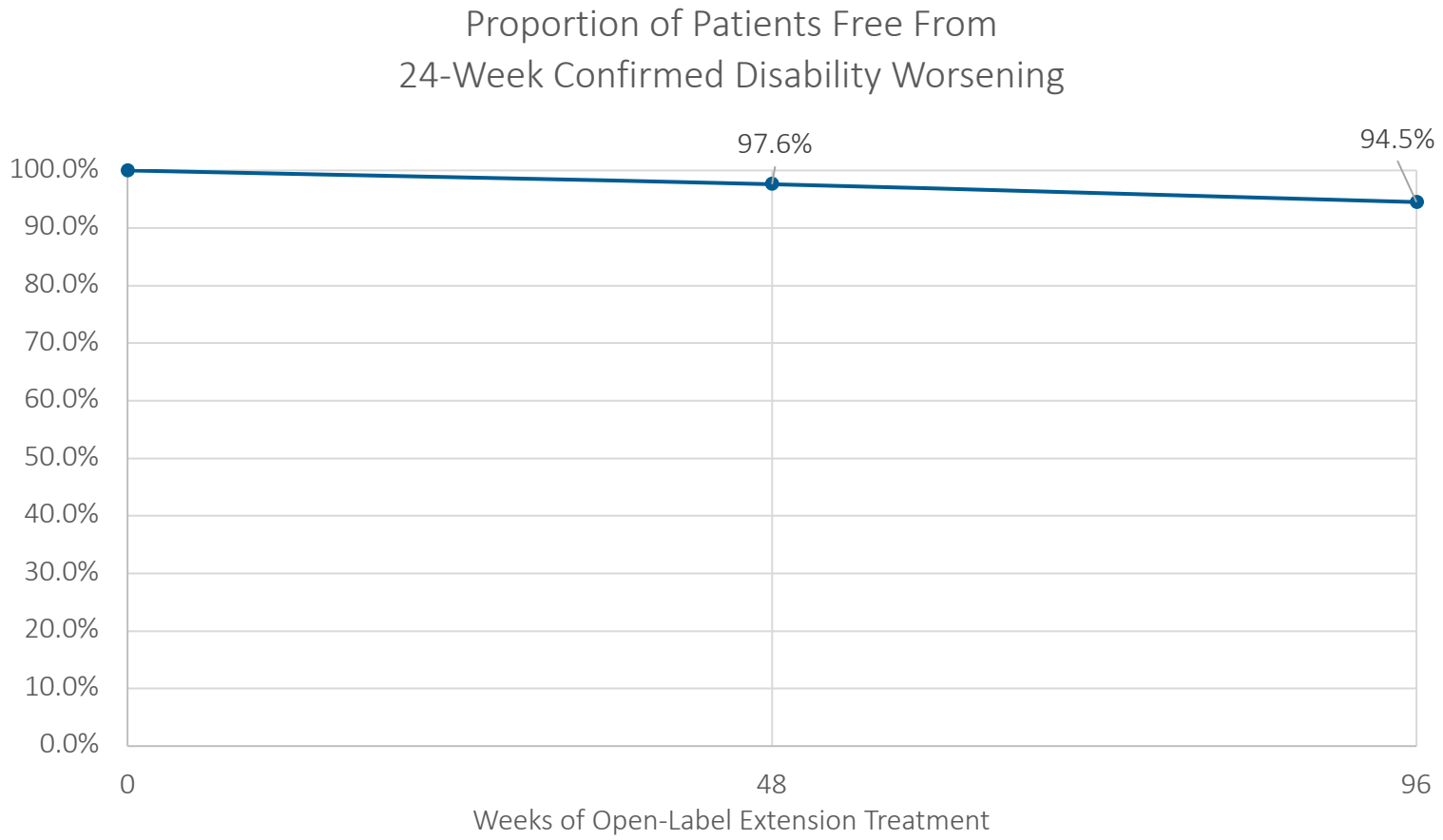


Data confirm a signal in preventing 12-week and 24-week confirmed disability worsening events as compared to placebo. Confirmatory data will be obtained in the phase 3 ENSURE clinical program.

CDW: confirmed disability worsening; EDSS: Expanded Disability Status Scale
Only disability worsenings with a trigger point during the 24-wek blinded treatment period are considered. The EDSS increases during the blinded treatment phase were subsequently confirmed during open-label extension phase of the trial.
Patients at risk in this analysis are 187 for vidofludimus calcium (pooling 10, 30 and 45 mg data) and 81 for placebo.
The trigger event is an EDSS progression defined as an increase in the EDSS compared to Baseline of at least 1.5 points if Baseline EDSS = 0, of at least 1.0 points if Baseline EDSS of 1-5, or of at least 0.5 points if Baseline EDSS ≥ 5.5
12-week CDW: The confirmation event is at least 77 days after the trigger event. At the confirmation event and each assessment between trigger and possible confirmation event, EDSS must be at least as high as at the trigger event.
24-week CDW is are defined analogously, the only difference being the time interval between trigger event and confirmation visit, which is at least 161 days.
Full analysis set pooled cohorts 1&2 (N10 = 47, N30 = 71, N45 = 69, NPBO C1 = 69, NPBO C2 = 12)

EMPhASIS Trial: Interim Analysis Regarding 24-Week CDW Events

Patients Free of 24-Week CDW After 1 and 2 Years of OLE Vidofludimus Calcium Treatment



Data confirm that only a few patients on continuous treatment with vidofludimus calcium develop 24-week confirmed CDW events over a 2-year time frame.

CDW: confirmed disability worsening; EDSS: Expanded Disability Status Scale

Only disability worsenings compared to start of extended treatment are considered. Patients at risk in this analysis are 223 at 48 weeks and 158 for 96 weeks. This includes all patients randomized to either placebo or any dose of vidofludimus calcium. After 24 week of blinded treatment, all patients continued with open-label treatment with either 30 mg or 45 mg vidofludimus calcium. Survival rates and times estimated by the Kaplan-Meier method. 95% CI for rates based on Greenwood's formula.

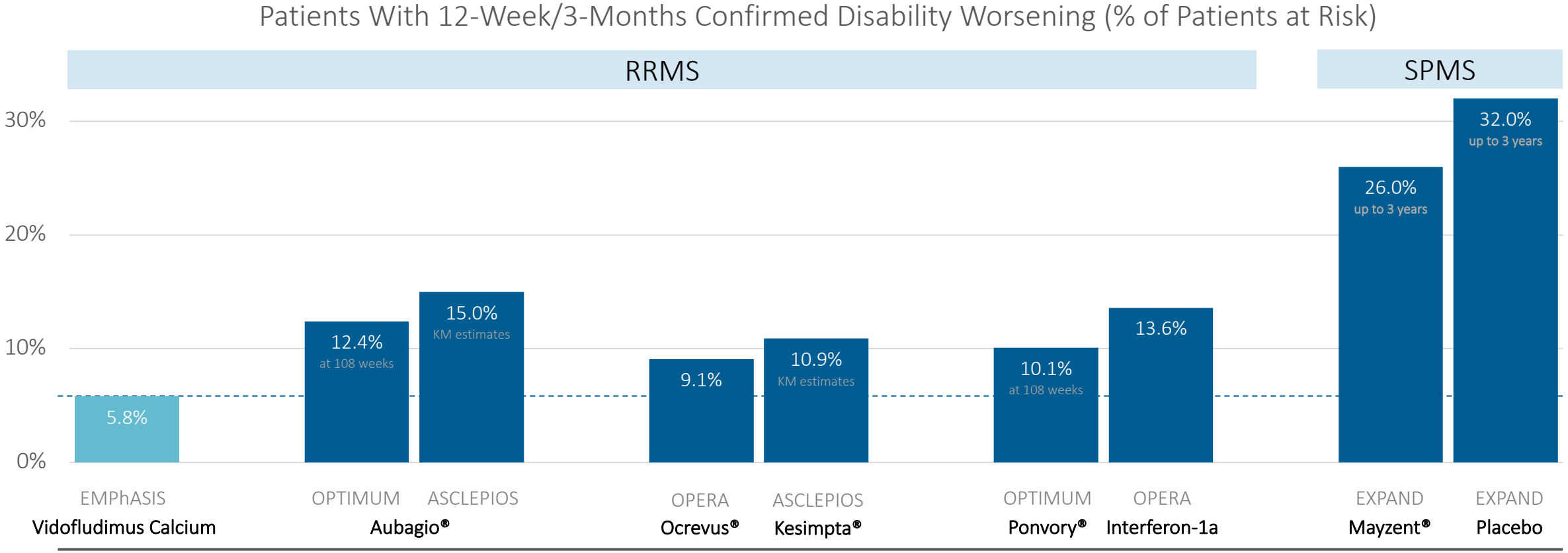
The trigger event is an EDSS progression defined as an increase in the EDSS compared to Baseline of at least 1.5 points if Baseline EDSS = 0, of at least 1.0 points if Baseline EDSS of 1-5, or of at least 0.5 points if Baseline EDSS ≥ 5.5

24-week CDW: The confirmation event is at least 161 days after the trigger event. At the confirmation event and each assessment between trigger and possible confirmation event, EDSS must be at least as high as at the trigger event.

Immunic THERAPEUTICS

12-Week Confirmed Disease Worsening after 2 Years (96 Weeks)

EMPhASIS Data from OLE Interim Analysis 2022 Compared to Examples from Historical Trials



The trigger event is any EDSS progression during the open-label extension (OLE) period defined as an increase in the EDSS compared to start of the OLE period (Baseline) of at least 1.5 points if Baseline EDSS = 0, of at least 1.0 points if Baseline EDSS of 1-5, or of at least 0.5 points if Baseline EDSS ≥ 5.5. Patients with RRMS at risk in this EMPhASIS analysis are 158 at 96 weeks. Data cut-off was Oct 16, 2022. This includes all patients randomized to either placebo or any dose of vidofludimus calcium during the 24-week blinded treatment period and then continued with open-label treatment with either 30 mg or 45 mg vidofludimus calcium. Survival rates and times estimated by the Kaplan-Meier method. 95% CI for rates based on Greenwood's formula.
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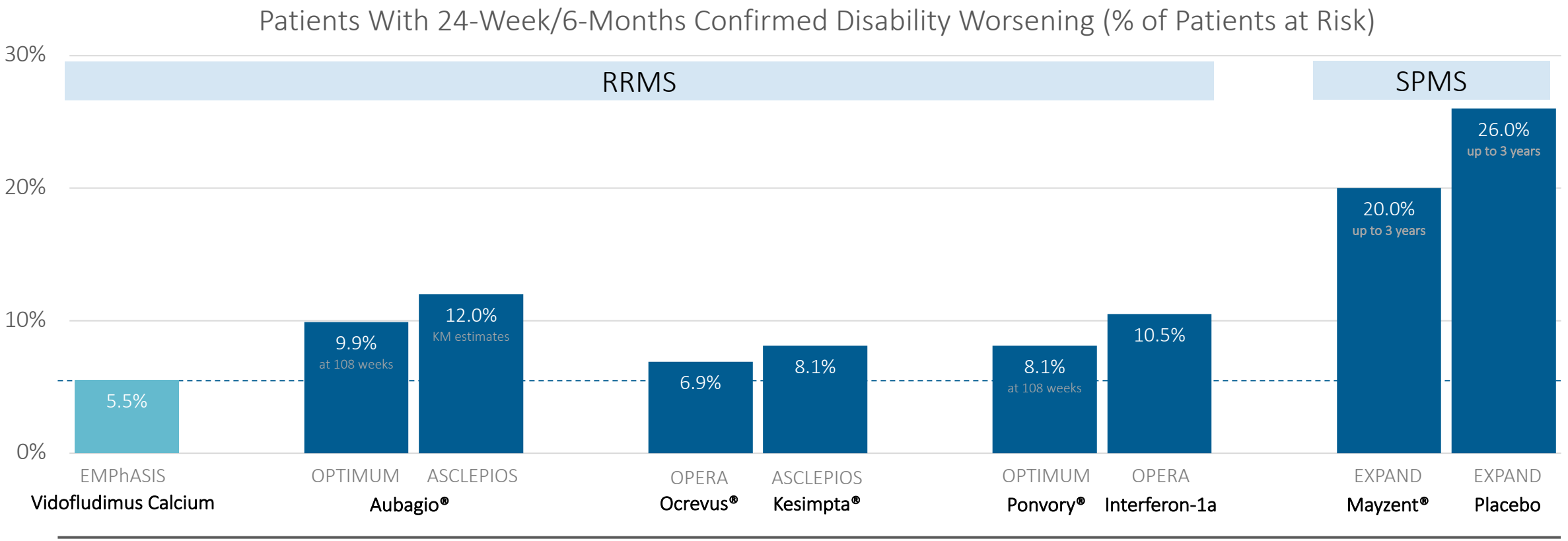
KM: graphical estimates from published Kaplan-Meier curves; EDSS: Expanded Disability Status Scale; RRMS: relapsing-remitting multiple sclerosis; SPMS: secondary progressive multiple sclerosis. All trials performed in relapsing-remitting Multiple Sclerosis. Except EXPAND trial was performed in patients with active and non-active secondary progressive MS (SPMS).
Vidofludimus Calcium: Immunic data; OPTIMUM: Kappos et al. 2021; ASCLEPIOS: Hauser et al. 2020; EXPAND: Kappos et al. 2018; ULTIMATE: Steinman et al. 2022; OPERA: Hauser et al. 2017

24-Week Confirmed Disease Worsening after 2 Years (96 Weeks)

EMPhASIS Data from OLE Interim Analysis 2022 Compared to Examples from Historical Trials



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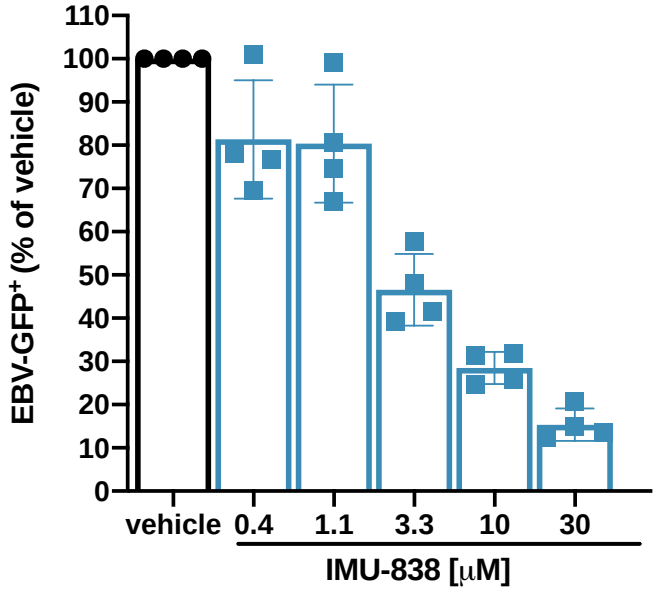
Vidofludimus Calcium: Immunic data; OPTIMUM: Kappos et al. 2021; ASCLEPIOS: Hauser et al. 2020; EXPAND: Kappos et al. 2018; ULTIMATE: Steinman et al. 2022; OPERA: Hauser et al. 2017

Immunic THERAPEUTICS

Vidofludimus Calcium: DHODH Inhibition Provides Broad-Spectrum Antiviral Activity Against Different Pathogenic Viruses

Vidofludimus Calcium Showed Concentration-Dependent Anti-EBV Activity

Anti-Akata-BX1-EBV-GFP Stimulated With hIgG



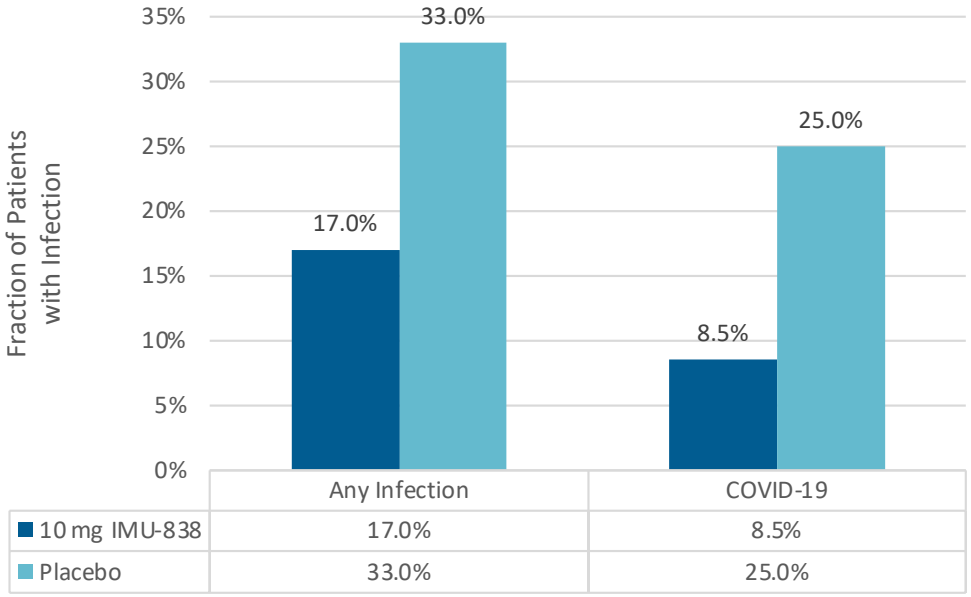
Vidofludimus Calcium Inhibits Epstein-Barr Virus (EBV) Replication and Reactivation

- Viruses rely on the host cell's infrastructure for replication
- Inhibition of DHODH by vidofludimus calcium leads to a depletion of pyrimidine nucleotides that are needed for the
  - Production of viral RNA and DNA (virus genome)
  - And Production of viral proteins (via mRNA)
- By targeting the host cell metabolism, vidofludimus calcium has shown to be active against different RNA and DNA viruses *in vitro* including strong anti-EBV activity

Left: Marschall et al., Poster ECTRIMS 2021 / Right: Eur J Clin Invest. 2020;50:e13366
EBV: Epstein-Barr Virus; IgG: immunoglobulin G

Vidofludimus Calcium Showed Interesting Hints for Clinical Anti-SARS-CoV-2 Activity and Maintaining Humoral Response

Treatment Corresponds With Decreased Number of Opportunistic SARS-CoV-2 Infections



Phase 2 EMPhASIS Trial in RRMS

Number of reported COVID-19 cases in Cohort 2

Treatment Does Not Interfere With Antibody Development During SARS-CoV-2 Infection

	Day 6		Day 14		Day 28	
	IgA	IgG	IgA	IgG	IgA	IgG
Placebo	84%	88%	94%	94%	97%	99%
Vidofludimus Calcium	86%	93%	97%	97%	95%	100%

Phase 2 CALVID-1 Trial in COVID-19

Proportion of patients with anti-SARS-CoV-2 IgA or IgG antibodies

COVID-19: coronavirus disease 2019; SARS-CoV-2: severe acute respiratory syndrome coronavirus; RRMS: relapsing-remitting multiple sclerosis; QD: quaque die = once-daily; IgA: immunoglobulin A; IgG: immunoglobulin G

Immunic THERAPEUTICS

Unrivaled Safety and Tolerability Profile Observed in Multiple Clinical Trials

- Safety profile similar to placebo: no general safety signals observed in clinical trials so far
- No increased rates of diarrhea, neutropenia, or alopecia
- No increased rates of infections and infestations or hematology values

- Drug exposure tested in more than 1,400 human subjects and patients, to date
- Low rates of adverse events
- No signals for hepatotoxicity or elevations of liver enzymes and no Hy's law cases observed

EMPhASIS Trial: No Signal for an Increase of Infections and Infestations

TEAE of SOC: Infections and Infestations	30 mg IMU-838	45 mg IMU-838	Placebo
Patients With TEAE	18.3%	23.2%	23.2%

TEAE: treatment-emergent adverse events; SOC: system organ class

EMPhASIS Trial: Absence of Hepatotoxicity Signals

Liver Enzyme Elevations	IMU-838 (30 mg and 45 mg pooled)	Placebo
Number of Patients	140	69
ALT or AST >5xULN	2.9% (4)	2.9% (2)
ALT or AST >10xULN	0.7% (1)	1.4% (1)
ALT or AST >15xULN	0.0% (0)	0.0% (0)

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Vidofludimus Calcium's Safety Profile to Date is Unique

	Vidofludimus Calcium [1]	Aubagio® [2]	Ocrevus® [3]	Tecfidera® [4]	Mavenclad® [5]	Gilenya® [6]	Mayzent® [7]	Zeposia® [8]
PML Risk	🟢	🟢	🔴	🔴	🟡	🔴	🟡	🟡
Increased Number of Infections	🟢	🟢	🔴	🔴	🟡	🔴	🟡	🟡
Vaccination Limitations	🟢	🟢	🔴	🟢	🔴	🟡	🟡	🟡
Gastrointestinal Toxicities, Incl. Diarrhea	🟢	🔴	🟡	🔴	🟢	🟢	🟢	🟢
Cardiovascular Risks, Incl. Blood Pressure	🟢	🟡	🟢	🟢	🔴	🔴	🟡	🟢
Lymphopenia	🟢	🟡	🔴	🔴	🔴	🔴	🟡	🟡
Neutropenia	🟢	🔴	🔴	🟢	🔴	🟡	🟡	🟡
Risk of Liver Injury	🟢	!	🟡	🔴	🔴	🔴	🟡	🟡
Rebound Effect	☐	🟢	🟢	🟢	🟢	🔴	🔴	🔴
Increased Risk of Cancer	🟢	🟢	🔴	🟢	!	🟡	🟡	🟡
Macular Edema	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🔴

🟢 Favorable Profile 🟡 Clinical Concern / Risk 🔴 Substantial Risk ! Black Box Warning ☐ No data available

This classification is based on Immunic's assumptions according to clinical trial results regarding likelihood and severity of risk as well as FDA labels of the drugs displayed: [1] https://www.immunic-therapeutics.com/2020/09/11/immunic-inc-publishes-full-unblinded-clinical-data-from-phase-2-emphasis-trial-of-imu-838-in-patients-with-relapsing-remitting-multiple-sclerosis-and-announces-poster-presentation-at-the-msvirtual20/ [2] O'Connor et al., 2011 NEJM [3] oiajfoij. Hauser et al. 2017., NEJM, Montalban et al. 2017, NEJM [4] Gold et al., 2012 NEJM, Fox et al., 2012 NEJM [5] Giovannoni et al., 2010 NEJM [6] Kappos et al., 2010 NEJM, Cohen et al., 2010 NEJM [7] Kappos et al 2018 Lancet [8] Comi et al., 2020 Lancet, Cohen et al., 2020 Lancet

Immunic THERAPEUTICS

EMPhASIS Trial: Patients Feel Well-Treated With Vidofludimus Calcium

Reflected in **Low Discontinuation Rates** for Vidofludimus Calcium-Treated RRMS Patients, Considerably Lower Than Placebo*

	Vidofludimus Calcium	Glatiramer Acetate [1]	Aubagio® [2]	Tecfidera® [3]	Gilenya® [4]	Zeposia® [5]
Administration	Oral	Injectable	Oral	Oral	Oral	Oral
Daily Dose	30 mg QD	20 mg QD	14 mg QD	240 mg TID	1.25 mg QD	1 mg QD
Treatment Period	24 weeks	9 months	36 weeks	24 weeks	6 months	24 weeks
Active Treatment	**2.8%**	**5.9%**	**19.3%**	**15.6%**	**5.4%**	**2.2%**
Placebo	**7.2%**	**5.8%**	**6.6%**	**9.2%**	**6.5%**	**3.3%**

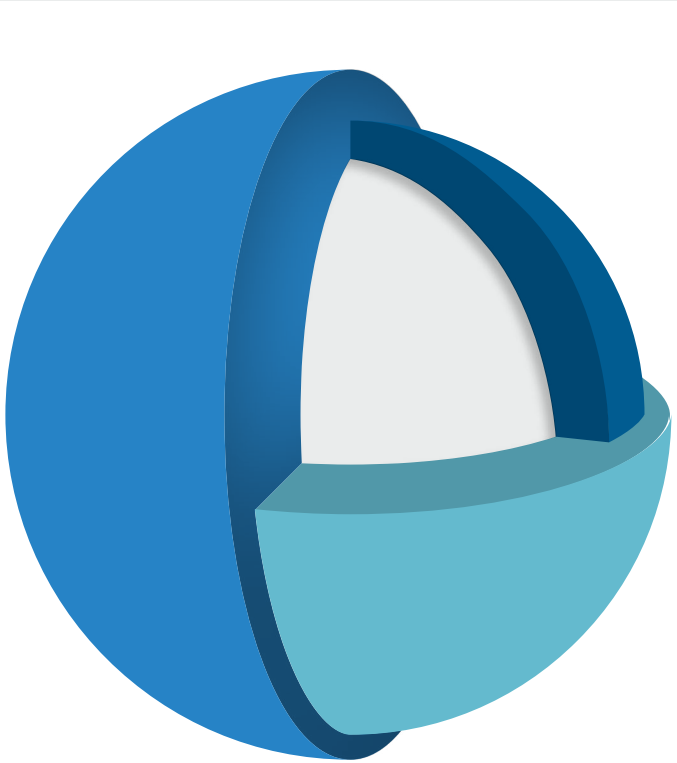
*The table summarizes the data on treatment/study discontinuation rates of the commercial dose in phase 2 trials of RRMS drugs. If the commercial dose was not included in the phase 2 trials, the dose closest to the commercial dose was shown. This high-level comparison is provided for illustrative purposes only, is based on publicly available data and does not purport to be a comprehensive comparison or depiction of the other trials. Larger data sets than presented in this presentation are publicly available for certain of the compounds included on this slide. Please note that these results are taken from placebo-controlled trials, and these medications have not been tested in head-to-head assessments.

[1] Comi et al. Ann Neurol. 2001;49(3):290-297 [2] O'Connor et al. *Neurology*. 2006;66(6):894-900 [3] Kappos et al. Lancet. 2008;372(9648):1463-1472 [4] Kappos et al. N Engl J Med. 2006;355(11):1124-1140 [5] Cohen JA, Arnold DL, Comi G, et al. Lancet Neurol. 2016;15(4):373-381
QD: quaque die = once-daily; TID: ter in die = three times daily; RRMS: relapsing-remitting multiple sclerosis

Immunic THERAPEUTICS

Vidofludimus Calcium: IP Position

Vidofludimus Calcium is Protected by Several Layers of Patents:



- Patent on the specific salt form and pharmaceutical composition of vidofludimus calcium, granted in the United States, Europe and other key markets – expires in 2031
- New patent filed in 2017 on the dosing regimen protecting the applied dosing scheme of the ongoing and planned therapeutic studies – expires in 2038, if granted
- New patent filed in 2018 on the specific polymorph of vidofludimus calcium used in current studies – expires in 2039, if granted
- New patent filed in 2020 on vidofludimus calcium‘s antiviral activity for use in COVID-19 – expires in 2041, if granted
- Another level of protection can be expected by data exclusivity in the United States and in Europe based on vidofludimus calcium’s classification as a New Chemical Entity (NCE)

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Vidofludimus Calcium Targeted to Elevate the Standard of Care With a Holistic Solution for the Full Spectrum of MS Patients

Phase 3 program of vidofludimus calcium in RMS ongoing based on **excellent clinical data** package

- Strong effect on all relevant endpoints in 268 RRMS patients, including anti-inflammatory & neuroprotective effects
- Unrivaled safety, to date, with over 1,400 individuals treated

New third-party data clearly highlights the unmet need of **preventing disability progression**, with relapse-independent disease progression being dominant even in early RRMS

- The understanding of MS has evolved, with evidence showing a smoldering disease that is connected to Epstein-Barr virus and subsequent inflammation & neurodegeneration

Vidofludimus calcium selectively manages all three components needed to **quell smoldering MS**

- Anti-viral effect
- Anti-inflammatory effect
- Neuroprotective impacts

Large market opportunity exists for a therapy that can holistically and sustainably address patients' needs

- Even current market leaders only optimize for one feature
- Current treatment options have serious tolerability downsides

Immunic THERAPEUTICS

Izumerogant: A Potentially Best-in-Class Oral IL-17 Inhibitor

Uniquely Acting and Highly Selective RORγt Inverse Agonist

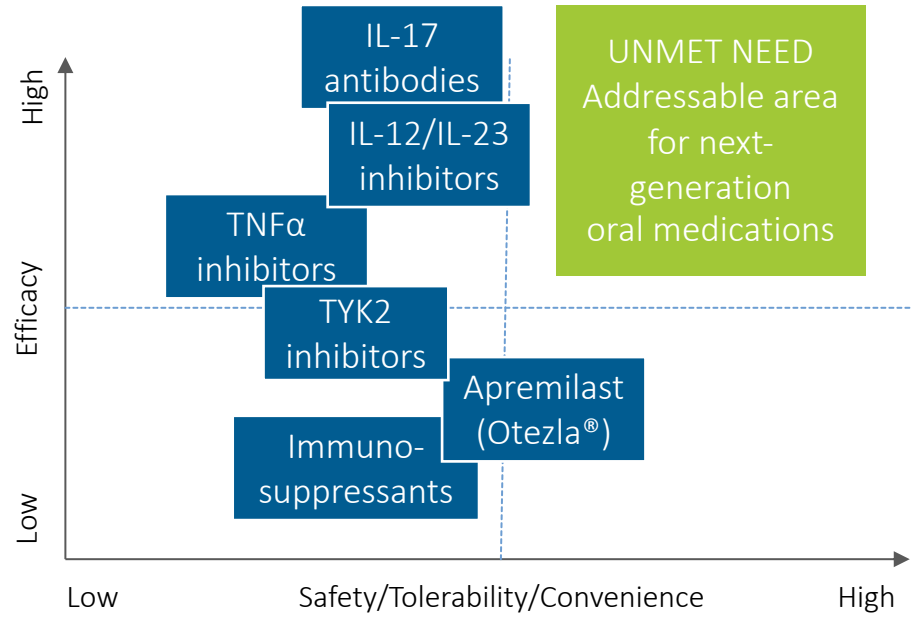
Clear Need for Potent and Specific Inhibition of IL-17 in Multiple Autoimmune Diseases

IL-17 is Significant in Many Autoimmune Diseases

- Imbalance between regulatory T cells (T_{regs}) and Th17 cells contributes to autoimmune diseases, with Th17 cells secreting pro-inflammatory cytokines such as IL-17[1]
- RORγt is a master regulator of Th17 development and expression of IL-17[2]
- Multiple diseases are driven by IL-17; many represent significant market opportunities[3]:
  - Psoriasis (USD 18 billion)
  - Psoriatic arthritis (USD 7 billion)
  - Rheumatoid arthritis (USD 32 billion)

Goal: Develop a Potent, Specific, and Orally Available IL-17 Inhibitor

Unmet Need in Psoriasis Care

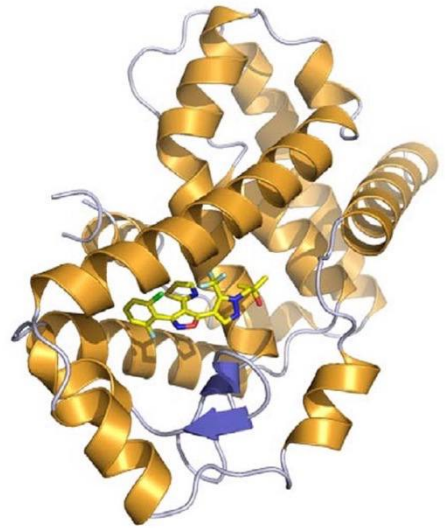


[1] Fasching, Patrizia, et al. Molecules 2017 22.1: 134 [2] Bassolas-Molina, Helena et.al., Front. Immunol., 22 October 2018 [3] DRG Clarivate 2020 G7 Markets
Th: T helper; IL: interleukin; TNF: tumor necrosis factor; TYK2: Tyrosine kinase 2; RORγ: retinoic acid receptor-related orphan nuclear receptor gamma

Izumerogant Inhibits Cytokines Associated With Autoimmune Diseases With an IC_{50} of 3-5 nM in Stimulated Human Lymphocytes

	IC_{50} (µM)
IL-17A	0.005
IL-17F	0.004
IFNγ	0.003
IL-1a and b	no inhibition
IL-4,5,6,8	no inhibition
RORγ (MST)	0.024
RORγ (cellular, reporter assay)	0.020
Th17 differentiation (murine)[1]	0.135

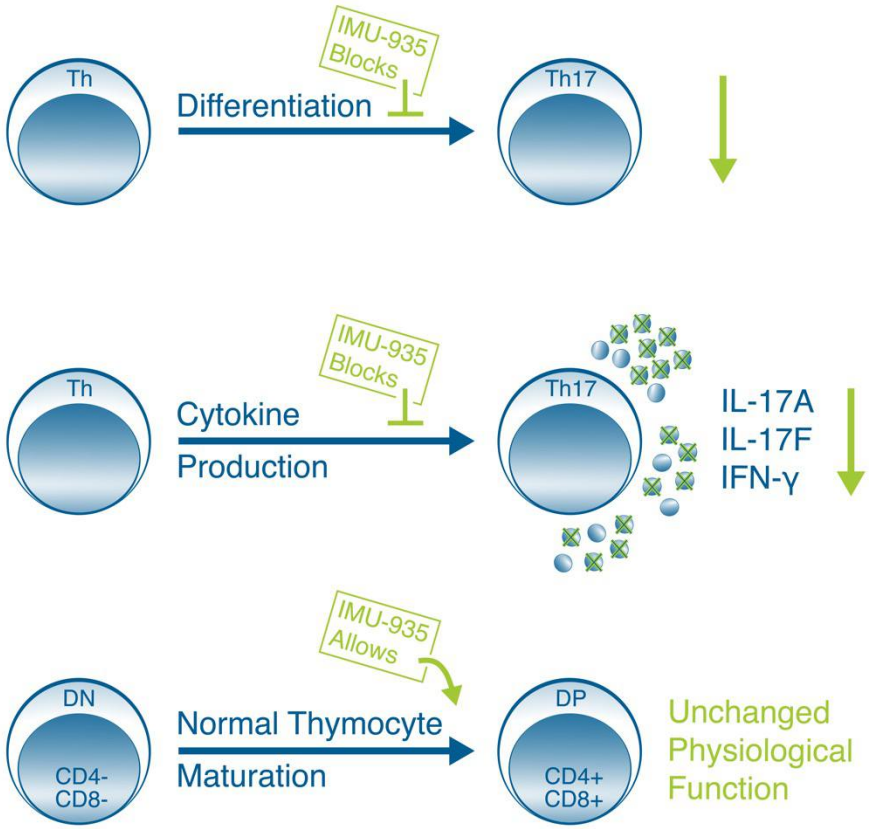
Readout: effect on cytokine production after 48 hours in PBMC



Co-crystal structure (Resolution 2.6 A) of a closely related derivative compound binds to hydroxycholesterol binding site of RORγ

PBMC: Peripheral Blood Mononuclear Cells; Th: T helper; IL: interleukin; IFN: interferon; MST: microscale thermophoresis
[1] Zuoming Sun, City of Hope, 2019

Izumerogant Selectively Inhibits Th17 Differentiation and IL-17 Secretion

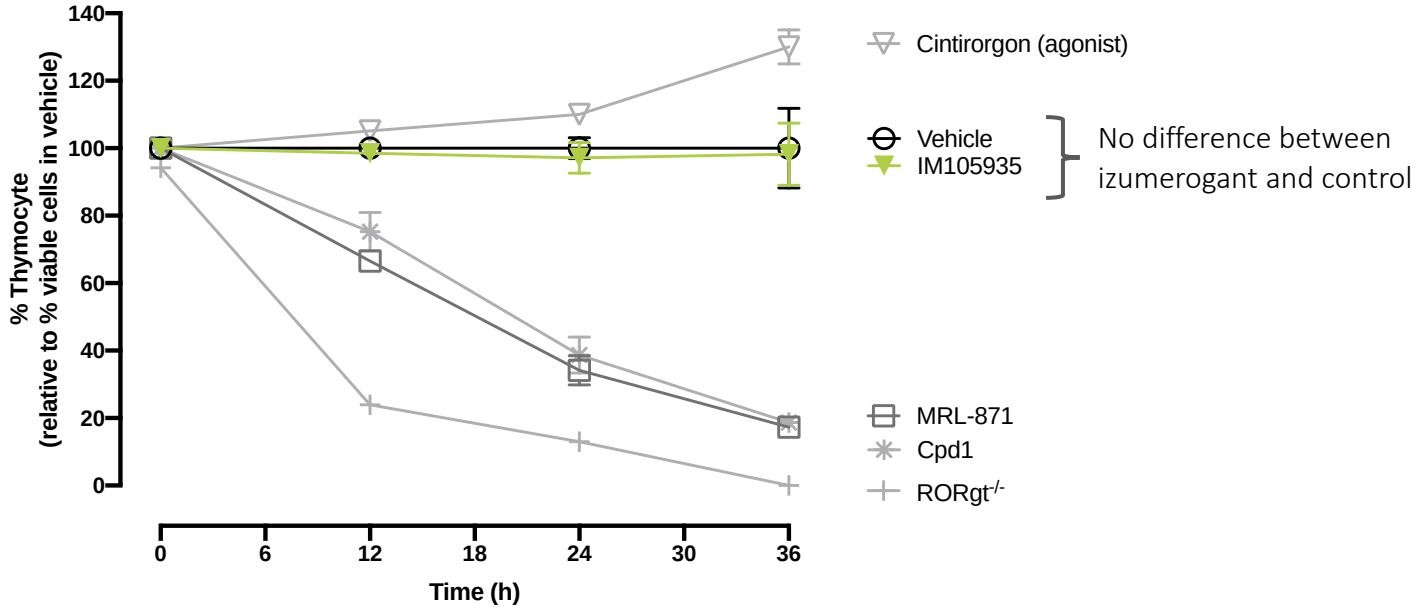


- The differentiation towards Th17 cells is inhibited by izumerogant
- The production of IL-17A and IL-17F is inhibited by izumerogant
- The physiological maturation of T cells within the thymus is not affected by izumerogant

Th: T helper; IL: interleukin; IFN: interferon; DN: double-negative; DP: double-positive; CD: cluster of differentiation

Izumerogant Does Not Induce Thymocyte Apoptosis

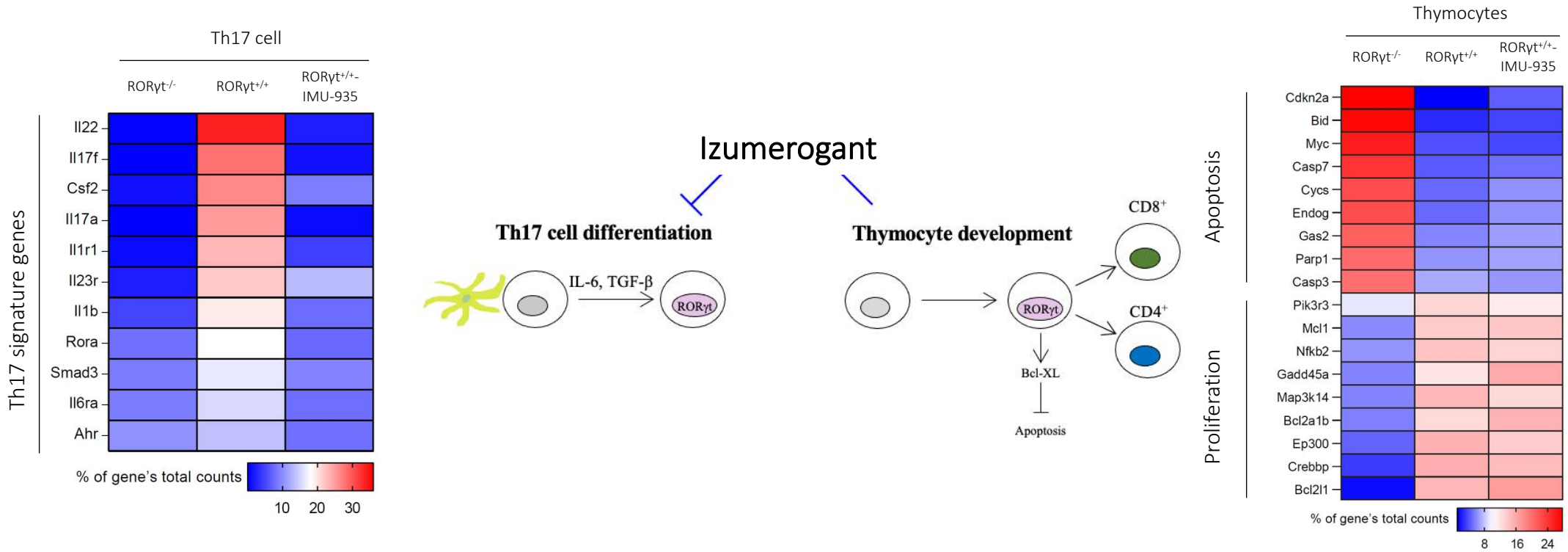
In Contrast to Izumerogant, Comparator Compounds Have a Negative Impact on Thymocyte Viability and Therefore Bear the Risk of Lymphoma.



Impact on thymocyte viability at 1000 nM

Sun, Zuoming. City of Hope, 2021, unpublished

Izumerogant Blocks Th17 Differentiation But Allows Normal Thymocyte Maturation: Gene Expression Profiles



Similar gene expression pattern for Th17 signature genes in **RORγt knockout and wild type cells treated with izumerogant**

Different gene expression pattern for apoptosis and proliferation signature genes in **RORγ knockout** and **izumerogant treatment**, but similar for RORγ+/+

Zuoming Sun, City of Hope, 2021

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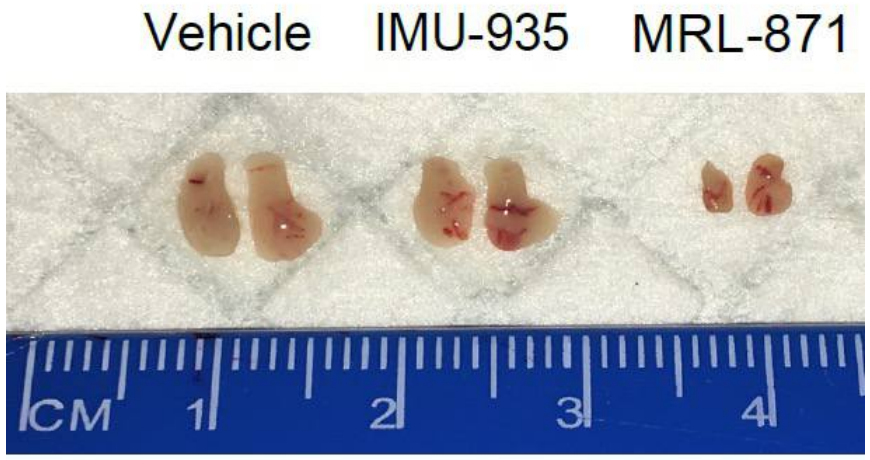
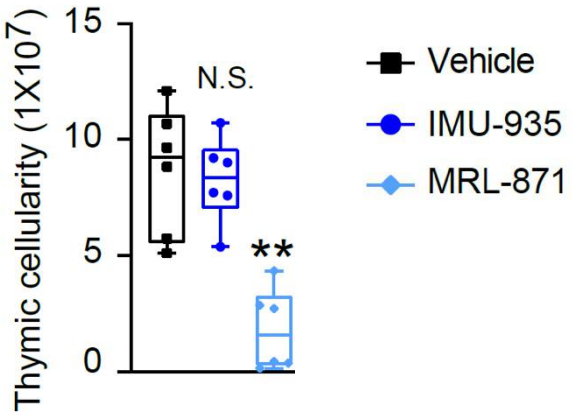
Izumerogant Allows Normal Thymocyte Maturation *In Vivo*
Acute Model, 3 Days of Treatment

- Izumerogant (100 mg/kg BID), and MRL-871 (100 mg/kg BID) were tested for 3 days in C57BL/6j mice





In contrast to MRL-871, **izumerogant does not impact thymus size, thymocyte cell numbers or thymocyte maturation** in an acute mouse model.

Guo et al., 2016, Cell Reports (MRL-871), Guntermann et al., 2017, JCI Insight (Cpd1), Mahalingam et al., 2019, Clin Cancer Res. (Cintirorgon)
Sun, Zuoming. City of Hope, 2021, unpublished

Phase 1 Clinical Trial: Trial Design and Current Status

PART A ✓

Evaluation of
single ascending doses (SAD)

Healthy human subjects randomized to receive single dose of izumerogant or placebo

- Dose escalation completed: 100, 200, 300 and 400 mg of izumerogant
- 79 subjects enrolled
- Izumerogant was well-tolerated and showed dose-linear PK

PART B ✓

Evaluation of
multiple ascending doses (MAD)

Healthy human subjects randomized to receive 14-day treatment of izumerogant or placebo

- Dose escalation completed: 150 mg QD and 150 mg BID of izumerogant
- 15 subjects enrolled
- Izumerogant was well-tolerated and steady-state was achieved after 3-6 days of dosing

PART C

Evaluation of
moderate-to-severe psoriasis patients receiving 28-day treatment of
izumerogant or placebo

- 150 mg QD and 150 mg BID of izumerogant
- 41 patients enrolled
- Detailed evaluation of group-level interim analysis ongoing

PK: pharmacokinetic; QD: quaque die = once-daily; BID: bis in die = two times daily

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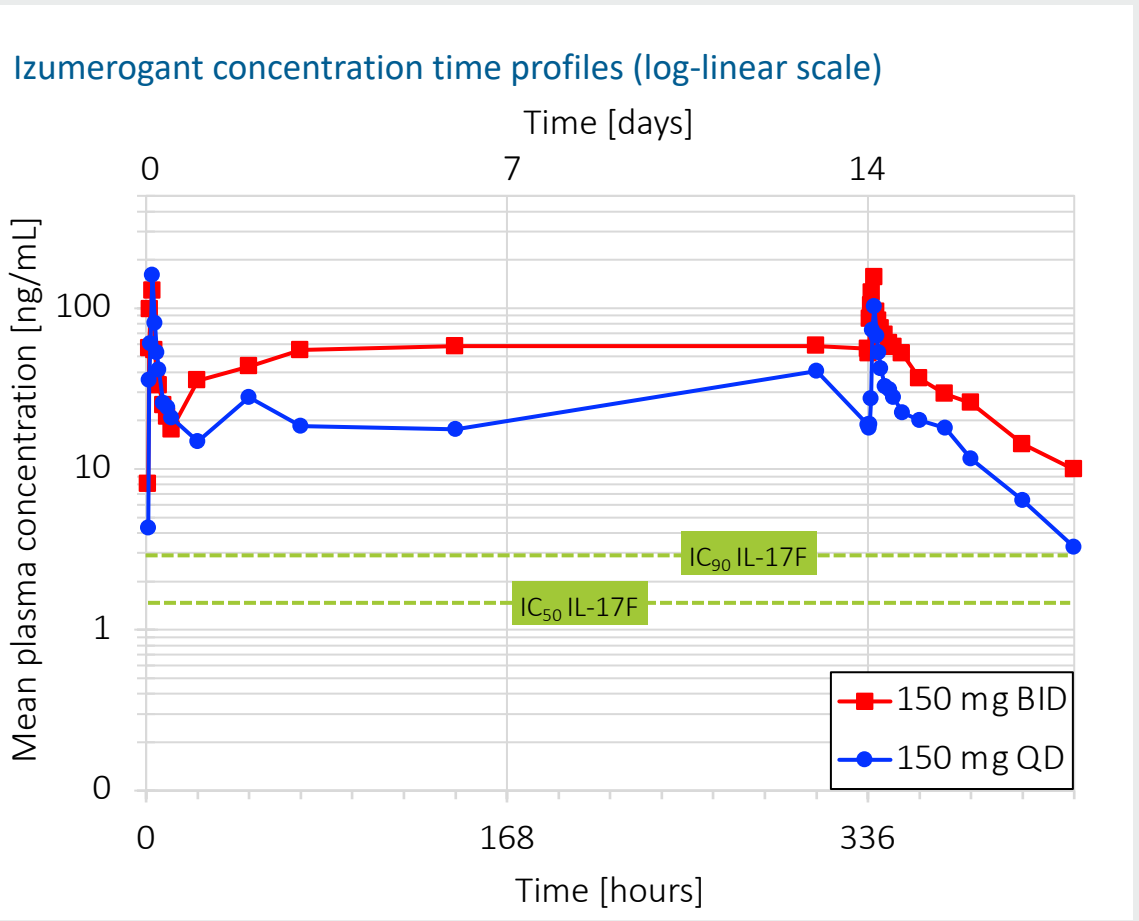
Phase 1 Clinical Trial: Pharmacokinetic Results

Part B: Summary of QD and BID Dosing Regimen for Izumerogant



Favorable PK Properties for izumerogant at Steady-State Observed

Pharmacokinetic parameters in steady-state (mean)	150 mg QD	150 mg BID
$C_{max, ss}$ (ng/mL)	124	206
$C_{min, ss}$ (ng/mL)	15.7	48.5
$T_{max, ss}$ (hr)	2.8	2.4
$t_{1/2, ss}$ (hr)	29.0	38.0
AUC_{last} (hr*ng/mL)	1540	3040

Non-compartmental analysis

- Fast achievement of steady-state within first week and stable steady-state trough levels over 14-day treatment period.
- Accumulation factors of 1.29 (150 mg QD) and 2.21 (150 mg BID) allowing predictable trough levels.

Interim data, PK analysis ongoing
QD: quaque die = once-daily; BID: bis in die = two times daily; PK: pharmacokinetic; ss: steady-state; C_{max}: maximum plasma drug concentration; T_{max}: time to reach maximum plasma concentration; hr: hours; $t_{1/2}$: half-life; AUC_{last}: area under the concentration-time curve from dosing to last measurement
Accumulation factors were calculated as the relationship of $AUC_{0\text{-}tau}$ of Day 14/Day 1 (after first dosing).

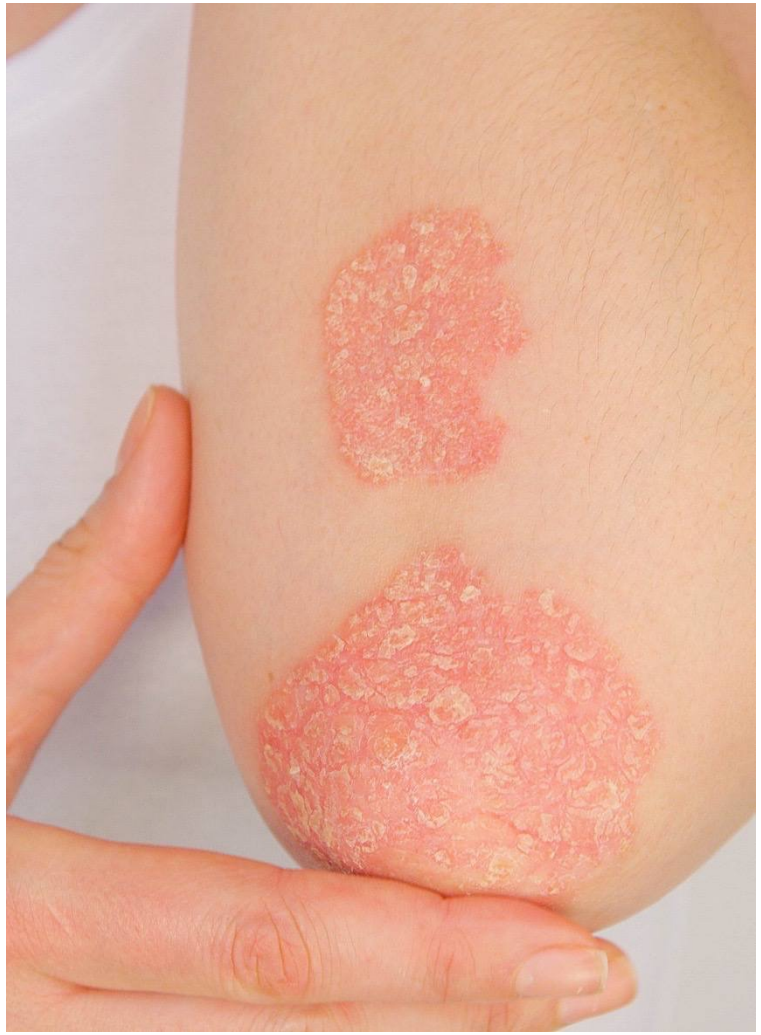
Phase 1 Clinical Trial: Summary of Safety and Tolerability Findings
Part B

Daily Dosing of Izumerogant in Healthy Human Subjects Over 14 Days Was Found to Have a Favorable Safety and Tolerability Profile

- No serious adverse events
- No dose-dependency in adverse events
- No maximum tolerated dose reached
- No trends for post-dose changes in any laboratory parameter
- No adverse events regarding any laboratory parameter
- No medically relevant changes in vital signs or 12-lead electrocardiograms as compared to placebo

Izumerogant Phase 1 Clinical Trial

Part C in Moderate-to-Severe Psoriasis Patients



Identifying Therapeutic Activity of Izumerogant in Moderate-to-Severe Psoriasis Patients

- 28-day double-blind, placebo-controlled dose escalation trial to evaluate safety, tolerability, pharmacodynamics, pharmacokinetics and exploratory efficacy of izumerogant in patients with moderate-to-severe psoriasis
- Initial two dose cohorts of 150 mg QD and 150 mg BID of izumerogant did not yet achieve clinical proof-of-concept
  - Group-level interim analysis revealed unexpected high placebo rate; two active arms did not separate from placebo at four weeks
  - Administration of izumerogant and placebo were safe and well-tolerated, no new safety signals observed
  - Immunic expects to continue izumerogant development in psoriasis and will determine next steps for the program
  - Immunic plans to provide further updates and guidance on potential next steps towards end of Q1/2023

QD: quaque die = once-daily; BID: bis in die = two times daily

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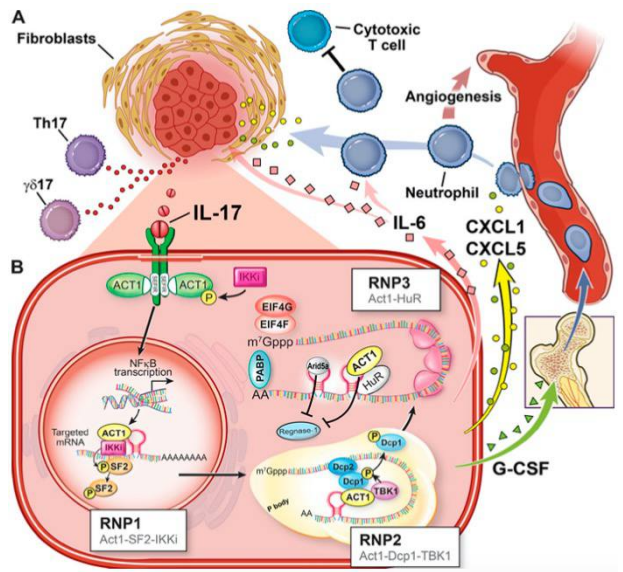
Izumerogant As Treatment Option in Castration-Resistant Prostate Cancer Targeting Key Resistance Mechanism

Inhibition of RORγ

- The androgen-receptor mutant variant AR-V7 lacks the ligand-binding domain – which is the target of enzalutamide and abiraterone – and remains constitutively active as a transcription factor.
- Izumerogant represses the mutated androgen receptor AR-V7 expression – and subsequent target genes.

Inhibition of IL-17 by RORγt Regulation

- IL-17 contributes to the formation, growth and metastasis of cancers.
  - Induces mitogenic signaling



RORγ in Myeloid-Derived Suppressor Cells

- Myeloid-specific expression of RORγ marks advanced cancer inflammation.
- Expansion of circulating RORγ+ myeloid cells is associated with an increased number of MDSCs. Inhibition of RORγ in myeloid cells reprograms cancer myelopoiesis in favor of effector APCs with antitumoral effects.[1]
- IL-17 mediates the induction, recruitment and expansion of MDSCs.

AR-V7: androgen receptor variant 7/mutated form; MDSC: myeloid-derived suppressor cells; APC: antigen presenting cells; Th: T helper; IL: interleukin

[1] Strauss et al., Cellular & Molecular Immunology (2021); Illustration: Zhao, J., Chen, X., Herjan, T., Li, X.; J Exp Med 6 January 2020; 217 (1): e20190297

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Phase 1 Clinical Trial of Izumerogant in CRPC
NCT05124795

Open-Label Dose Escalation Trial to Evaluate Safety, Tolerability, Anti-Tumor Activity, and Pharmacokinetics of Izumerogant in Patients With Progressive, Metastatic CRPC

- Main treatment will be single agent izumerogant for 3 cycles of 28 days each
- Dose escalation follows a Bayesian optimal interval (BOIN) design
- An expansion cohort can be added at a therapeutically active dose level
- Patients who benefit can receive extended treatment
- At each dose level:
  - A safety analysis after 28 days will be performed to consider start of next dose
  - An interim activity analysis after 3 months of treatment will be performed
  - A main cohort analysis will be performed when the last patient in treatment reaches the 6 months follow-up visit
- Initial safety data available show a promising safety profile, with only benign adverse events and no dose limiting toxicities
- More comprehensive update on safety and potential signs of anti-tumor activity is planned to be provided as soon as data from the dose expansion part are available

Principal Investigator

Johann Sebastian de Bono, M.D., Ph.D.

Regius Professor of Cancer Research and Professor in Experimental Cancer Medicine

The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust

London, United Kingdom

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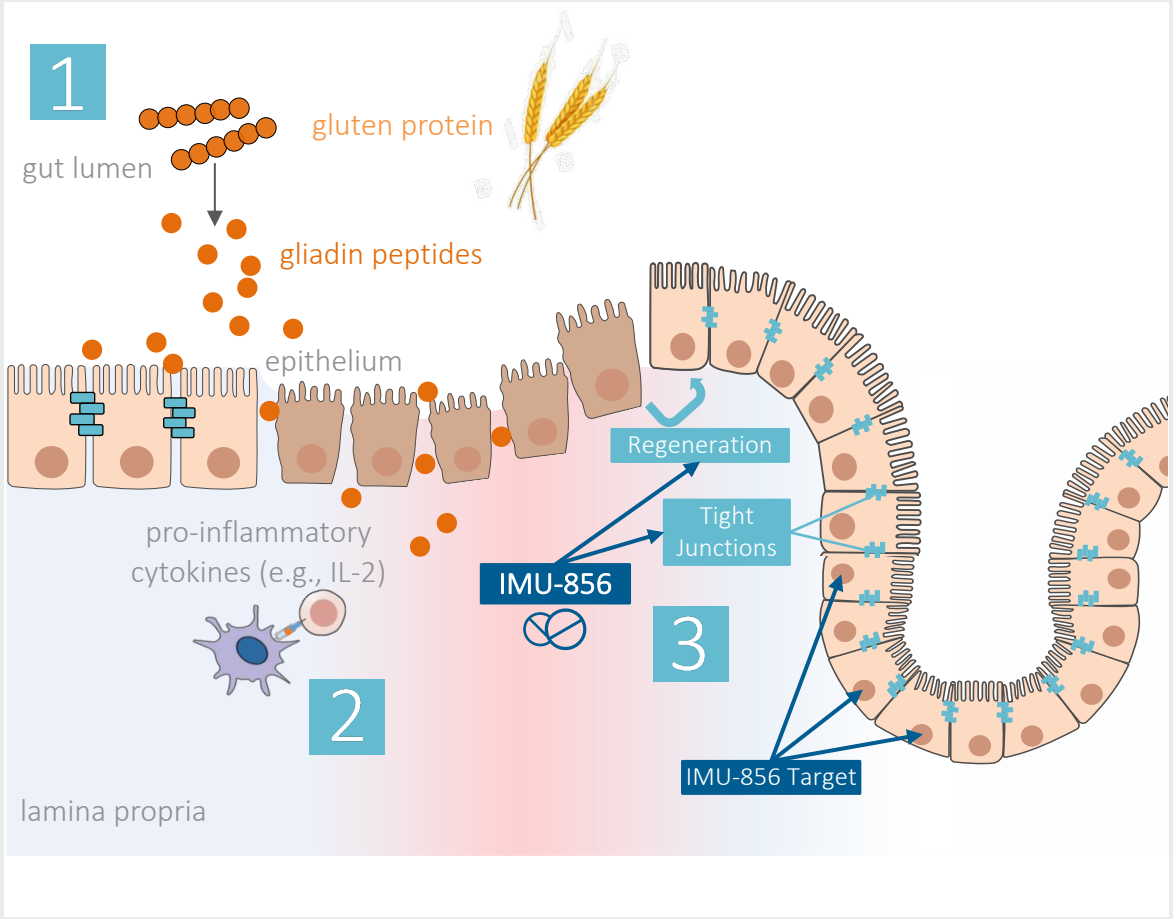
IMU-856

Restoring Intestinal Barrier Function

Celiac Disease is a Serious Autoimmune Disease



Celiac disease is a multifactorial, complex autoimmune disease caused by an immune reaction against a degradation product of gluten and is strongly associated with specific HLA class II gene variants (HLA-DQ2 and -DQ8)[1]

1
- Gluten is degraded into gliadin peptides which are taken up by the bowel epithelium (trans- or paracellular)

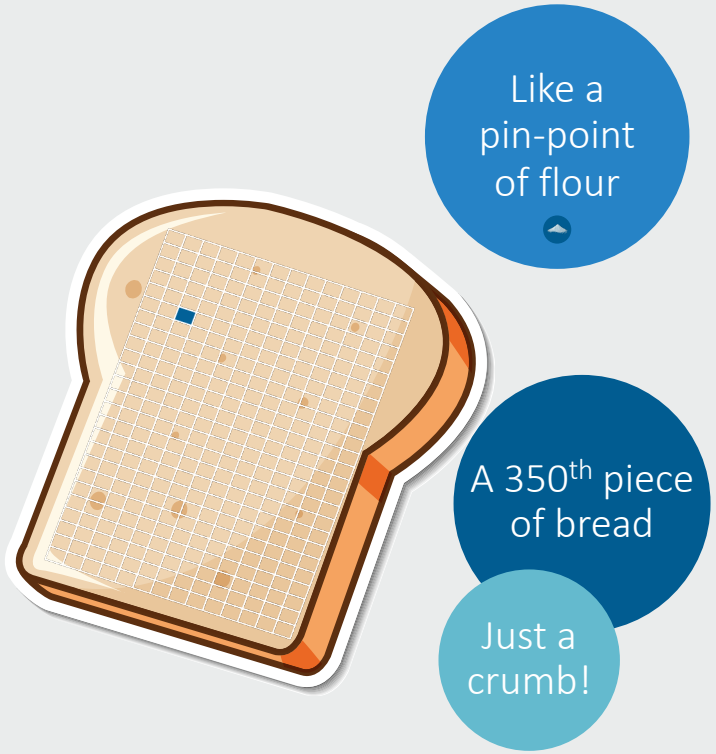
2
- In patients with a specific HLA protein (DQ2 and DQ8) composition, deaminated gliadin (by TG2) is recognized and can trigger an immune response which leads upon continued gliadin uptake to
  - ✓ Increased intestinal permeability
  - ✓ Epithelial and mucosal damage with negative changes of the gut architecture, including villous atrophy leading to malabsorption of nutrients

3
- Hypothesis for IMU-856's mode of action:
  - Improves intestinal barrier function and restores permeability
  - Restores villous architecture by triggering regenerative processes of the epithelial lining

HLA: human leukocyte antigen; TG2: tissue transglutaminase 2
Picture: self-drawn; [1] Caio et al. BMC Medicine (2019) 17:142

Celiac Disease Currently Has No Adequate Treatment Options

How much is 10 mg of gluten?



10 mg of gluten is the total limit for all foods combined for the entire day.

The Only Option Today is a Gluten Free Diet[1]

- The only established therapeutic option is a life-long strict adherence to a gluten free diet, which involves complete avoidance of proteins from wheat, barley, and rye.
- There is a high risk of accidental and inadvertent gluten intake, often due to a wide gluten cross contamination.
- A threshold of 10 mg gluten/day[1] is considered safe for patients with celiac disease.

Symptomatic Patients Despite Gluten Free Diet

- Between 24% and 47% of patients show signs and symptoms of ongoing active celiac disease (OACD) despite strict gluten free diet[2], most likely due to:
  - Continuous (inadvertent) gluten exposure
  - Slow response to gluten withdrawal
- These patients are the main target for celiac disease medications.

Picture and Ref [1]: https://nationalceliac.org/celiac-disease-questions/understanding-gluten-levels/; [2] Lebwohl et al., Aliment Pharmacol Ther. 2014 March ; 39(5): 488–495

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Patients Across the Spectrum of Celiac Disease Need Access to a Drug Treatment to Address Persistent Disease Activity Despite GFD

Patients With Celiac Disease Are Often Wrongly Diagnosed in Early Stages, Leading to Poorer Prognosis on Gluten Free Diet

Active Celiac Disease

- Numerous, intense gastrointestinal symptoms
- Antibody stimulation in response to gluten / gliadin
- >12 months for antibody normalization if GFD effective
- Histologic remission possible in 1-2 years

Persistent Villous Atrophy

- Marked by enterocyte atrophy (barrier fully compromised)
- Often seen in 25-50% of patients, despite long-term GFD
- Histologic recovery rare

Refractory Disease

- Persistent malabsorption and associated comorbidities, persistent villous atrophy
- High mortality due to lymphoma

Treatments available	Gluten Free Diet (GFD)	Maintaining GFD	Immunosuppression

Benjamin Lebwohl, Sanders, and Green 2018; B. Lebwohl et al. 2014; Caio et al. 2019; Nasr et al. 2016
GFD: gluten free diet

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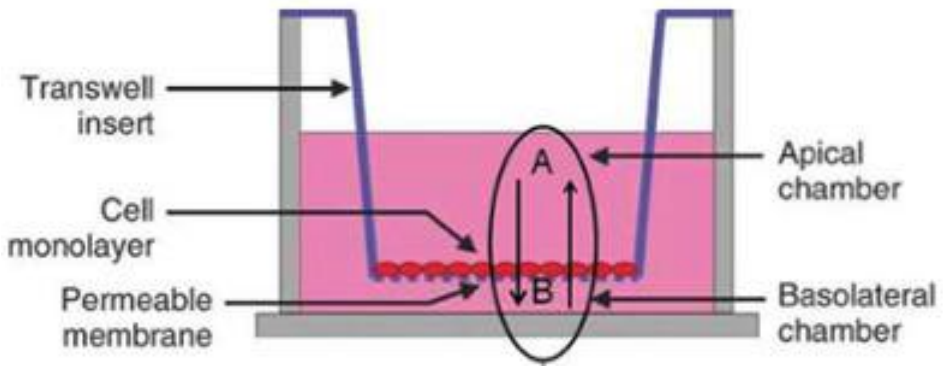
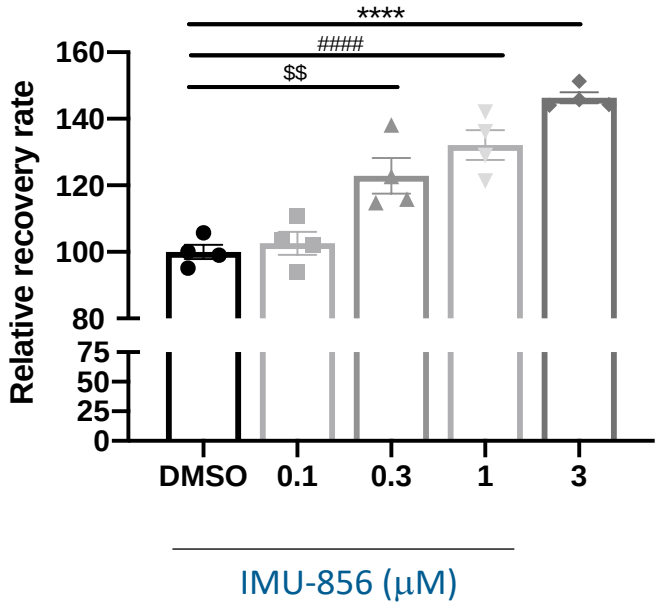
IMU-856 Improves Intestinal Barrier Function

Intestinal permeability was measured as TEER after barrier-disrupting stimulation in Caco-2 cells



TNFα



48 hours of TNFα challenge followed by 144 hours of IMU-856 treatment

IMU-856 was able to restore epithelial barrier integrity after destructive cytokine challenge

TEER: transepithelial electrical resistance; Caco-2 cells: human intestinal epithelial cell line; TNF: tumor necrosis factor; DMSO: dimethyl sulfoxide

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Phase 1 Clinical Trial: Trial Design and Current Status

PART A

Evaluation of single ascending doses (SAD)

Healthy human subjects randomized to receive single dose of IMU-856 or placebo

- Planned dose escalation completed: 10, 20, 40, 80, 120 and 160 mg of IMU-856
- 45 subjects enrolled (IMU-856: N=33)
- IMU-856 was well-tolerated and showed dose-linear pharmacokinetics

PART B

Evaluation of multiple ascending doses (MAD)

Healthy human subjects randomized to receive 14-day treatment of IMU-856 or placebo

- Planned dose escalation completed: 40, 80 and 160 mg QD of IMU-856
- 26 subjects enrolled (IMU-856: N=19)
- IMU-856 was well-tolerated and steady-state trough levels were achieved within first week of dosing

PART C

Evaluation of patients with celiac disease receiving 28-day treatment of IMU-856 or placebo

- Dosing: 80 and 160 mg QD of IMU-856
- Approximately 42 patients planned to be enrolled
- Currently ongoing
- Initial data expected in mid-2023

QD: quaque die = once-daily

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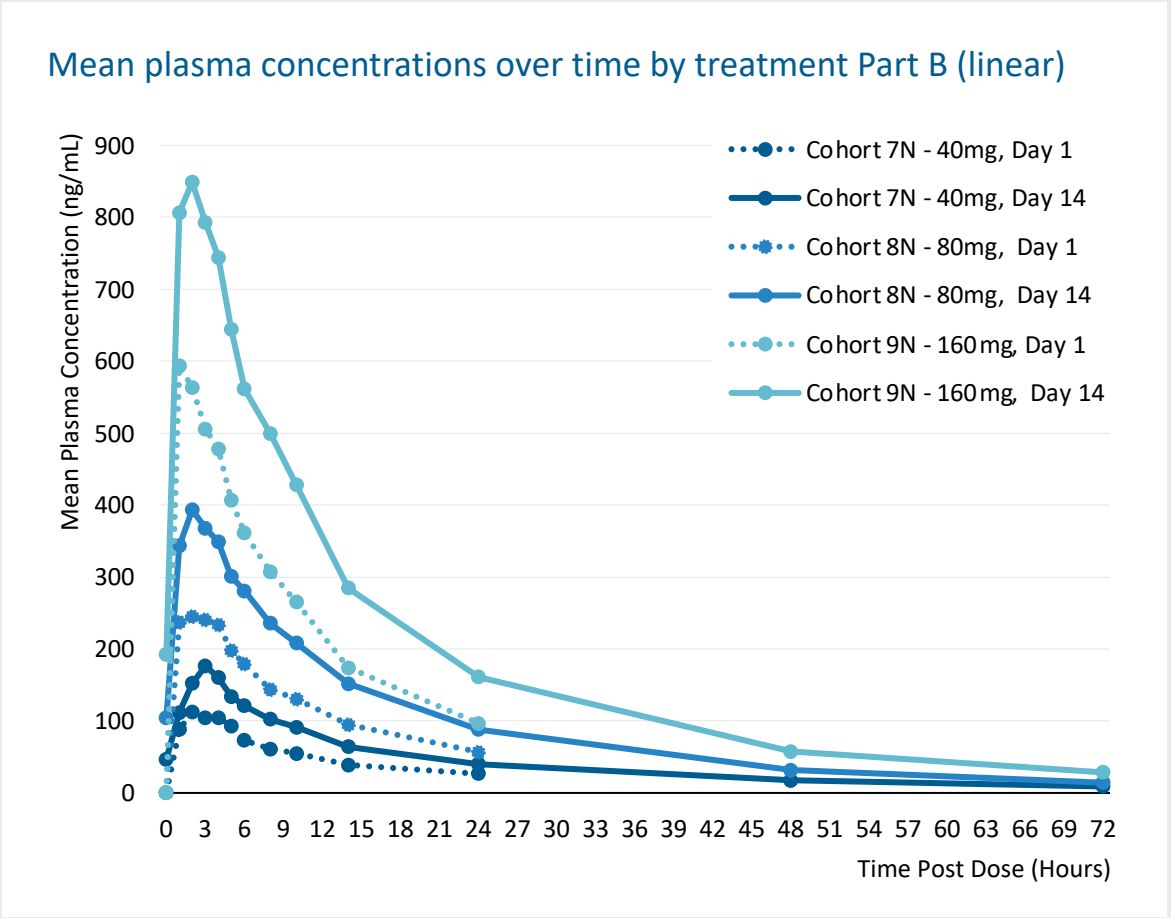
Dose-Linear Pharmacokinetics in Multiple Dosing

Part B, Multiple Ascending Doses, Day 1 and 14



- Terminal plasma half-life at steady state (Day 14 values) 17 to 21 hours comparable to single dose
- Linear pharmacokinetics also after multiple dosing with dose-proportional increase in plasma C_{max} and AUC
- Accumulation factor of ~1.5 allowing predictable trough levels and drug exposure after once-daily oral administration

Value (mean)	Day 1			Day 14, steady state		
	Cohort 7N 40 mg	Cohort 8N 80 mg	Cohort 9N 160 mg	Cohort 7N 40 mg	Cohort 8N 80 mg	Cohort 9N 160 mg
C_{max} (ng/mL)	131	269	653	184	400	913
T_{max} (h)	2.40	2.20	1.83	3.00	2.65	2.17
$T_{1/2}$ (h)	10.8	10.5	8.9	21.5	17.7	17.4
$AUC_{0\text{-}tau}$ (h*ng/mL)	1300	3048	6190	2067	4829	9853

Cmax: maximum plasma drug concentration; h: hours; Tmax: time to reach maximum plasma concentration; T1/2: terminal elimination half-life; AUC0-tau: area under the drug concentration-time curve from time zero to 24 hours

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Multiple Doses of IMU-856 in Healthy Human Subjects Found to Have a Favorable Safety and Tolerability Profile

- No IMP-related serious adverse events
- No dose-dependency in adverse events
- No maximum tolerated dose reached
- No trends for post-dose changes in any laboratory parameter
- No medically relevant changes in vital signs, physical examination or 12-lead electrocardiograms as compared to placebo
- Pharmacokinetics well suited for once-daily administration and stable predictable trough levels

IMP: investigational medicinal product

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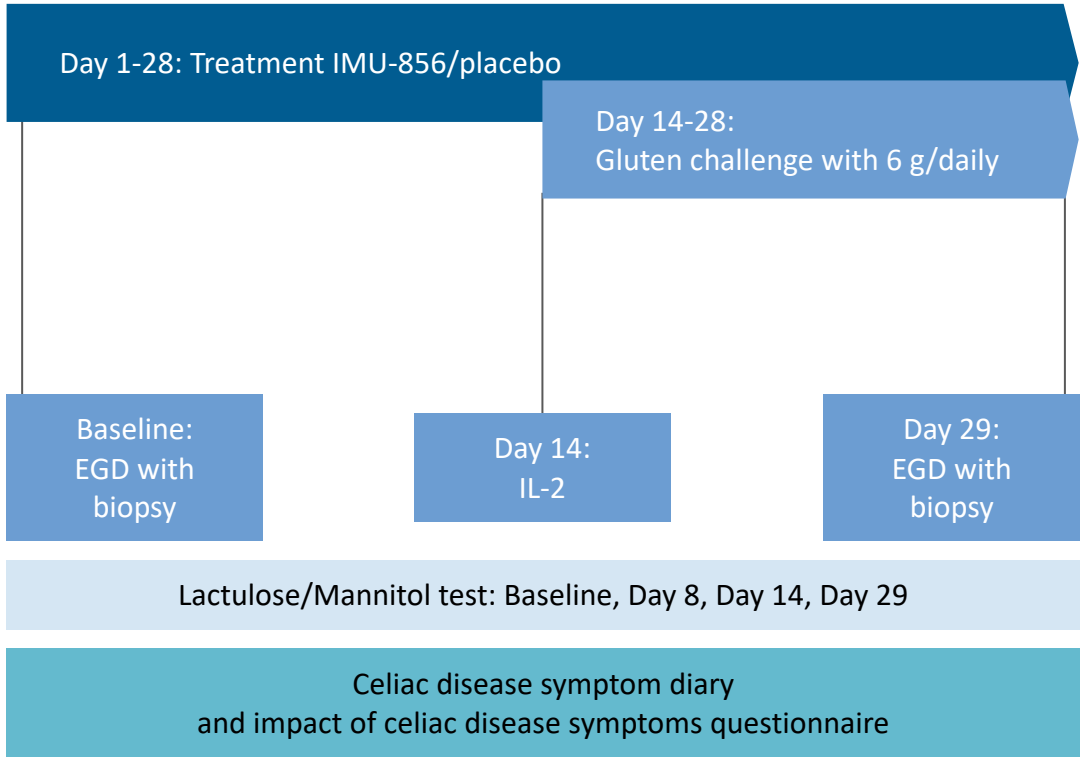
Phase 1 Clinical Trial of IMU-856

Part C in Patients with Celiac Disease During Periods of GFD and Gluten Challenge

Proof-of-Concept Study

- Part C includes a well-controlled celiac disease patient population, designed to assess safety and tolerability of IMU-856 as well as pharmacokinetics
- Study measures acute disease marker change of serum IL-2 levels after first challenge with gluten
- Further assessments include chronic disease markers (Vh:CrD) and patient reported outcomes
- Performed at sites in Australia and New Zealand

Flow Chart of Part C in Celiac Disease



IL-2: interleukin-2; VH:CrD: villous hight to crypt depth ratio, one of the main histological assessments of small bowel architecture; EGD: esophagogastroduodenoscopy

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Interleukin-2 Correlates With Onset and Severity of Symptoms

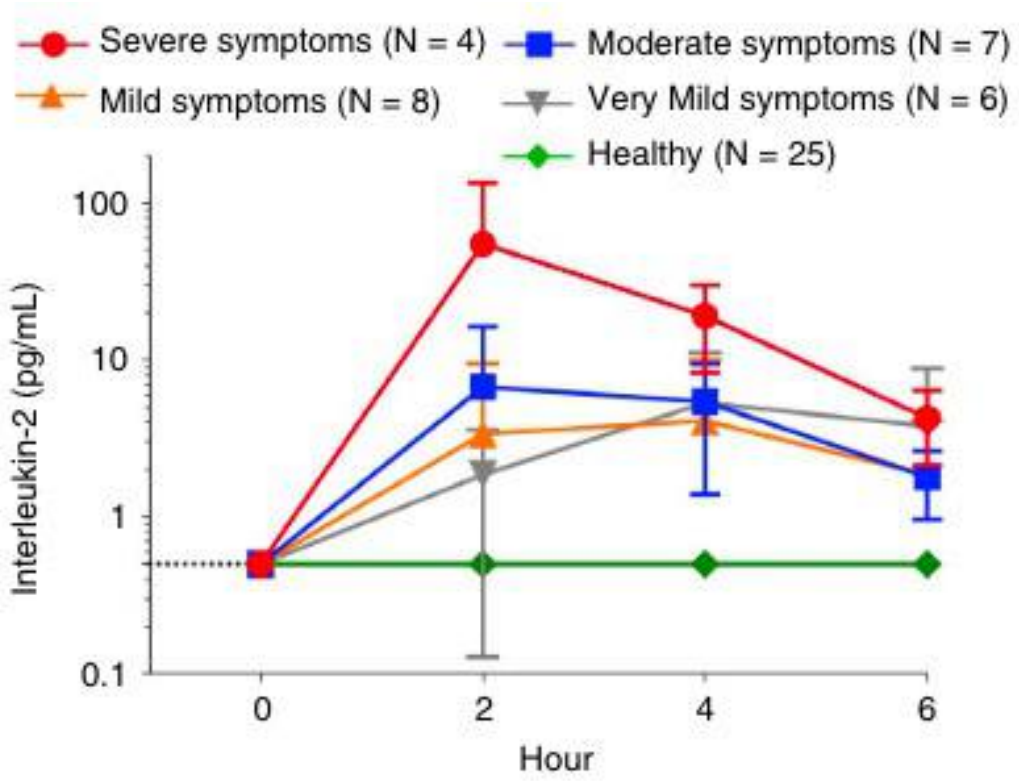


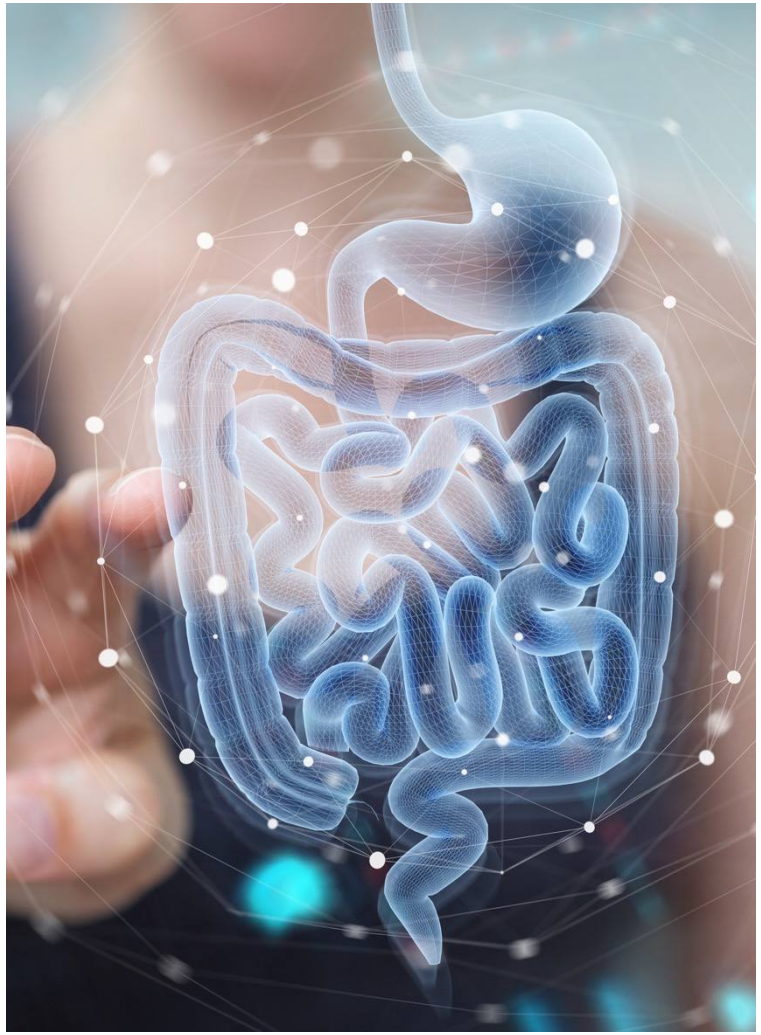
Figure Ref [1]

Serum Interleukin-2 elevations correlate with onset and severity of symptoms after gluten exposure in patients with celiac disease[1]

Elevated as early as 2 hours post gluten challenge (peak level at 4 hours)[2]

[1] Tye-Din et al., Aliment Pharmacol Ther. 2019;50:901–910 [2] Goel et al., 2019 British Society for Immunology, Clinical and Experimental Immunology, 199: 68–78

IMU-856 Could Present a New and Innovative Approach for the Treatment of Gastrointestinal Diseases



- IMU-856 showed a **favorable safety, tolerability and pharmacokinetic profile** in the single and multiple ascending dose portions of the phase 1 clinical trial in healthy human subjects with no investigational medicinal product-related serious adverse events.
- IMU-856 was safe and well-tolerated in single and 14-day repeated oral dosing in healthy human subjects. No maximum tolerated dose was reached and the investigated doses are expected to exceed the required therapeutic dosing of IMU-856.
- IMU-856 is currently being tested in a third portion of the phase 1 clinical trial in patients with celiac disease – setting the stage for a potential **first-in-class oral celiac disease therapy**.
- IMU-856 may offer **extensive potential beyond** celiac disease in other autoimmune diseases.

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Immunic Therapeutics

Summary

Summary: Three Differentiated Programs in Clinical Development

Advanced clinical pipeline:
three differentiated investigational medicines in various phases of clinical development

Oral IL-17 inhibitor izumerogant:
huge potential in psoriasis and beyond; additionally being tested in CRPC patients

RMS phase 3 program of vidofludimus calcium ongoing, intended to provide a straightforward path towards regulatory approval

IMU-856 for intestinal barrier function:
proof-of-concept trial in celiac disease ongoing; initial data expected in mid-2023

PMS phase 2 trial of vidofludimus calcium ongoing, designed to corroborate vidofludimus calcium's neuroprotective potential

Cash runway into Q4/2024
Cash position: USD 116.4 million (as of Dec 31, 2022)
Shares outstanding: 44,403,838 (as of Feb 17, 2023)

Summary: Several Clinical Data Readouts Expected in 2023

IMU-856	Initial phase 1b celiac disease data expected in mid-2023
IMU-838	Interim analysis of phase 2 CALLIPER trial in progressive multiple sclerosis estimated for H2/2023
IMU-935	Update and guidance on potential next steps for phase 1 trial in psoriasis towards end of Q1/2023

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Thank You!

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