Akari Therapeutics May 2023



Forward-Looking Statements



Certain statements in this presentation constitute "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements reflect the current views of Akari Therapeutics, Plc (the "Company", "we",. "our" and "us") and its plans, intentions, expectations, strategies and prospects, which are based on the information currently available to it and on assumptions it has made. Although we believe that our plans, intentions, expectations, strategies and prospects as reflected in or suggested by those forward-looking statements are reasonable, we can give no assurance that the plans, intentions, expectations or strategies will be attained or achieved. Furthermore, actual results may differ materially from those described in the forward-looking statements and will be affected by a variety of risks and factors that are beyond our control. Such risks and uncertainties for our company include, but are not limited to; needs for additional capital to fund our operations; our ability to continue as a going concern; uncertainties of cash flows and inability to meet working capital needs; an inability or delay in obtaining required regulatory approvals for nomacopan (Coversin) and any other product candidates that may result in unexpected cost expenditures; our ability to successfully develop nomacopan as a treatment for COVID-19 related pneumonia and to successfully commercialize any product in that indication; our ability to obtain orphan drug designation in additional indications; risks inherent in drug development in general, and risks specific to the development of potential treatments for COVID-19-related illnesses; uncertainties in obtaining successful clinical results for nomacopan and any other product candidates and unexpected costs that may result from difficulties enrolling patients in our clinical trials; failure to realize any value of nomacopan and any other product candidates developed or being developed in light of inherent risks and difficulties involved in successfully bringing product candidates to market; inability to develop new product candidates and support existing product candidates; the approval by the FDA and EMA an any other similar foreign regulatory authorities of other competing or superior products brought to market; risks resulting from unforeseen side effects; risk that the market opportunity for nomacopan may not be as large as expected; risks associated with a resurgence of the COVID-19 pandemic; inability to obtain, maintain and enforce patents another intellectual property rights or the unexpected costs associated with such enforcement or litigation: inability to obtain and maintain commercial manufacturing arrangements with third party manufacturers or establish commercial scale manufacturing capabilities: the inability to timely source adequate supply of our active pharmaceutical ingredients from third-party manufacturers on whom the company depends; unexpected cost increases and pricing pressures and risks and other risk factors detailed in our public filings with the U.S. Securities and Exchange Commission; including our most recently filed Annual Report on Form 20-F filed with the SEC.

The statements made in this presentation speak only as of the date stated herein, and subsequent events and developments may cause our expectations and beliefs to change. Unless otherwise required by applicable securities law, we do not intend, nor do we undertake any obligation to update or revise any forward-looking statements contained in this presentation to reflect subsequent information, events, results or circumstances or otherwise. While we may elect to update these forward-looking statements publicly at some point in the future, we specifically disclaim any obligation to do so, whether as a result of new information, future events or otherwise, except as required by law.

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Akari Overview





1. Novel C5+LTB4 inhibitor

Nomacopan is a unique asset inhibiting 2 co-dependent, proinflammatory targets: complement C5 and leukotriene B4 (LTB4)



2. Broad potential

Potential for use in several diseases; commercial flexibility due to multiple routes of administration (subcutaneous, topical, intravitreal, IV)



3. Robust clinical dataset

Extensive clinical and safety data from multiple clinical trials



4. HSCT-TMA Phase 3

Phase 3 clinical trial in pediatric hematopoietic stem cell transplant-related thrombotic microangiopathy (HSCT-TMA); no approved therapies and ~80% mortality; FDA Orphan, Fast Track, and Rare Pediatric Disease designations; potential for adult follow-on indication



5. GA Pre-Clinical

Pre-clinical program investigating PAS-nomacopan in geographic atrophy (GA) with target dose interval of 3 months or longer without increased risk of choroidal neovascularization (CNV)

Leadership Team



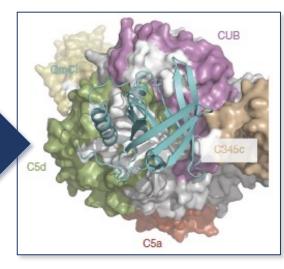


Nomacopan Is a Dual Action Recombinant Protein Discovered In Ticks

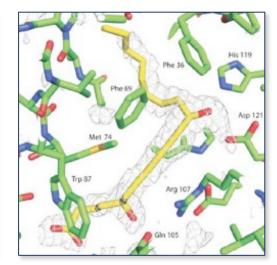


Novel, bispecific nomacopan is a recombinant protein derived from nature via discovery in ticks

Ticks secrete immunomodulatory proteins that help them control host responses (inflammation, pain, itch and blood flow). These are the same responses that may be out of control in certain human autoimmune and inflammatory conditions. High resolution structure of nomacopan (blue) bound to human complement **C5**¹



High resolution structure of nomacopan capture of LTB4 (yellow)²



- Inhibits complement C5 activation similarly to an on-market complement inhibitor ablating effects of terminal complement activation
- Sequesters LTB4, disrupting activation and recruitment of immune modulating cells responsible for damaging inflammation

References

1. Jore MM, Johnson S, Sheppard D, et al. Structural basis for therapeutic inhibition of complement C5. Nat Struct Mol Biol. 2016;23(5):378-386.

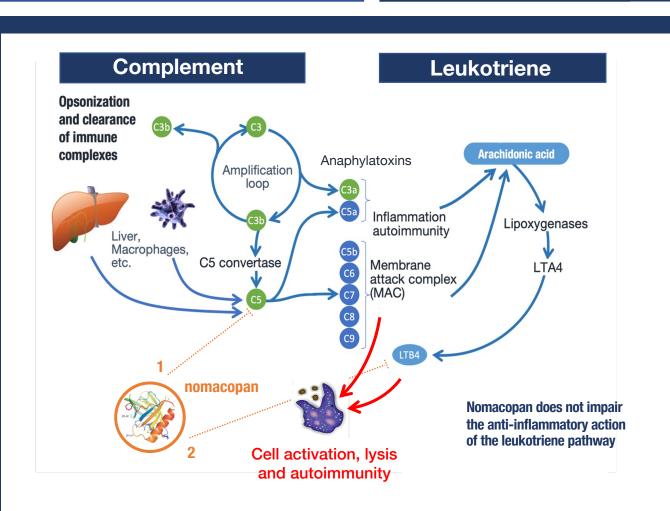
Roversi P, Ryffel B, Togbe D, et al. Bifunctional lipocalin ameliorates

Nomacopan Inhibits Two Pathways That Can Cause Damaging Inflammation, While Preserving Important Immune Functions



C5a, LTB4 and MAC act jointly on neutrophils, macrophages and other cell types that can cause inflammation and damage

- Bispecific mechanism prevents two separate, but related, tissue-damaging effects
- Opsonization (antibody binding) and role of complement in clearance of immune complexes that are needed for healthy immune response remain intact
- LTB4 is a key mediator of inflammation that:
 - o Is independently activated from complement
 - Can amplify the effects of complement activation
 - Has independent potent inflammatory actions
- Nunn MA, Sharma A, Paesen GC et al. Complement inhibitor of C5 activation from the soft tick Ornithodoros moubata. *J Immunol.* 2005; 174:2084-2091



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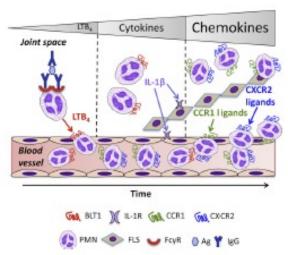
LTB4 & C5 Are Separate Pathways But In Vivo Data Point to Signalling Interplay That Leads to Damaging Inflammation



In vivo study of autoantibody-induced inflammatory arthritis^{1, 2}

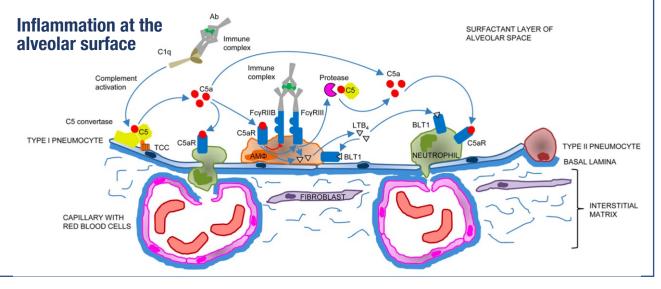
- Neutrophils infiltrate joints by way of multiple chemoattractant receptors, including LTB4 (BLT1) and chemokine receptors
- In the joint, neutrophils perpetuate their own recruitment by releasing LTB4 and IL-1 β
- Complement C5aR activation of neutrophils is required for LTB4 release and early neutrophil recruitment into the joint





In vivo study of immune complex-induced acute lung injury (IC-ALI)³

- · C5 and LTB4 contribute equally to this model of IC-ALI
- C5a receptor signaling regulates Fc receptors promoting inflammation
- Activated alveolar macrophages produce proteases, cytokines & LTB4
- C5a and LTB4 receptor activation upregulate adhesion molecules, recruit & degranulate neutrophils releasing super-oxides, causing further inflammation and microvascular damage



References

- 1. Sadik CD, et al. Neutrophils orchestrate their own recruitment in murine arthritis through C5aR and FcyR signaling. Proc Natl Acad Sci U S A. 2012;109(46):E3177-E3185.
- 2. Sadik CD et al. Lipid-cytokine-chemokine cascades orchestrate leukocyte recruitment in inflammation. J Leuk Biol. 2012; 91(2:207-215.;
- 3. Roversi P, et al. Bifunctional lipocalin ameliorates murine immune complex-induced acute lung injury. J Biol Chem. 2013;288(26):18789-18802

Near-Term Potential, Promising Pre-Clinical Program

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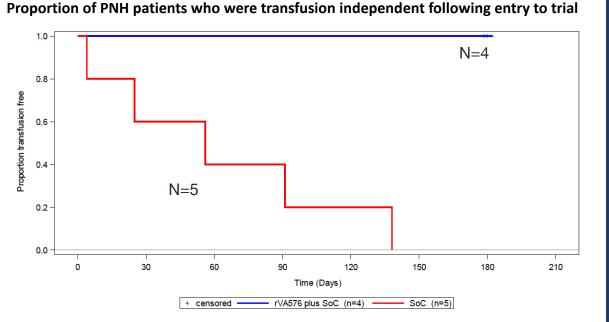
Indication	Candidate/ Formulation	Designations	Pre-Clinical	Phase 1	Phase 2	Phase 3 Parts A & B
Pediatric hematopoietic stem cell transplant– related thrombotic microangiopathy (HSCT-TMA)	Nomacopan/ subcutaneous	FDA Orphan Drug, Fast Track and Rare Pediatric Disease designations				Advancing to pivotal Part B in >2 years age cohorts, on track to begin enrollment in Q4. Part A remains open for enrollment in <2 years age cohort
Adult hematopoietic stem cell transplant– related thrombotic microangiopathy (HSCT-TMA)	Nomacopan/ subcutaneous	FDA Orphan Drug Designation			Study enrollment expected to open in 2024	
Geographic atrophy (GA)	Long-acting PAS-nomacopan/ intravitreal injection		IND filing expected in 1H 2024			

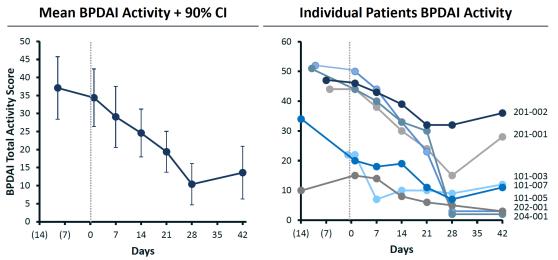
Previous Areas of Clinical Development, Including PNH and BP, Support Current Development Pathways



- In addition to current areas of focus, Akari has conducted clinical research in several other areas, including Phase 2/3 clinical trials of subcutaneous nomacopan for treatment of bullous pemphigoid (BP) and paroxysmal nocturnal hemoglobinuria (PNH)
- This research set a solid foundation for the current Phase 3 clinical trial in pediatric HSCT-TMA
- In a Phase 3 study in PNH, 100% of untreated patients were transfusion dependent while 0% of nomacopan patients were transfusion dependent
 - >32 patient years of nomacopan exposure in PNH in 19 patients

- In clinical studies of nomacopan in BP, 7 of 9 patients responded to nomacopan¹
 - 3 showed >80% reduction in BPDAI by day 42 (BP disease activity)





All prior treatment, including steroids, withdrawn ~one week prior to initiation of treatment with nomacopan. Lesional mometasone was administered to Day 21.

THROMBOTIC MICROANGIOPATHIES (TMAs)



Nomacopan May Be the First Treatment for Pediatric HSCT-TMA, a Condition with Mortality Up to 80%





- TMA following a stem cell transplant procedure is a rare but serious complication of HSCT that appears to involve complement activation, inflammation, tissue hypoxia and blood clots, leading to progressive organ damage and death
- Mortality in patients who develop severe transplantrelated TMA is 80% (across both adults and children)¹
- Currently, there are no approved treatment options in the U.S. or Europe
- 1. Rosenthal J. Hematopoietic cell transplantation-associated thrombotic microangiopathy: a review of pathophysiology, diagnosis, and treatment. *J Blood Med.* 2016;7:181-186.
- 2. Jodele S, et al. Eculizumab therapy in children with severe hematopoietic stem cell transplantation-associated thrombotic microangiopathy. *Biol Blood Marrow Transplant.* 2014;20(4):518-525.
- 3. Licht C, et al. Efficacy and safety of eculizumab in atypical hemolytic uremic syndrome from 2-year extensions of phase 2 studies. *Kidney Int.* 2015;87(5):1061-1073.
- 4. Greenbaum LA, et al. Éculizumab is a safe and effective treatment in pediatric patients with atypical hemolytic uremic syndrome. Kidney Int. 2016;89:701-711. *Kidney Int.* 2016;90(3):709
- Schols S, Nunn MA, Mackie I et al. Succesful treatment of a PNH patient non-responsive to eculizumab with novel complement C5 inhibitor covers (nomacopan). Br J Hematol. 2020; 188: 332-340.
- Jodele S, et al. Complement blockade for TA-TMA: lessons learned from a large pediatric cohort treated with eculizumab. *Blood*. 2020;135(13):1049-1057.

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7. Takatsuka H, et al. Predicting the severity of intestinal graft-versus-host disease from leukotriene B4 levels after bone marrow transplantation. *Bone Marrow Transplant.* 2000;26(12):1313-1316.

1. Efficacy

Efficacy of complement C5 inhibition by eculizumab is supported in HSCT-TMA² and atypical hemolytic uremic syndrome (aHUS) ^{3,4}, another TMA; efficacy of nomacopan C5 inhibition supported by clinical PNH research⁵

2. Dosing

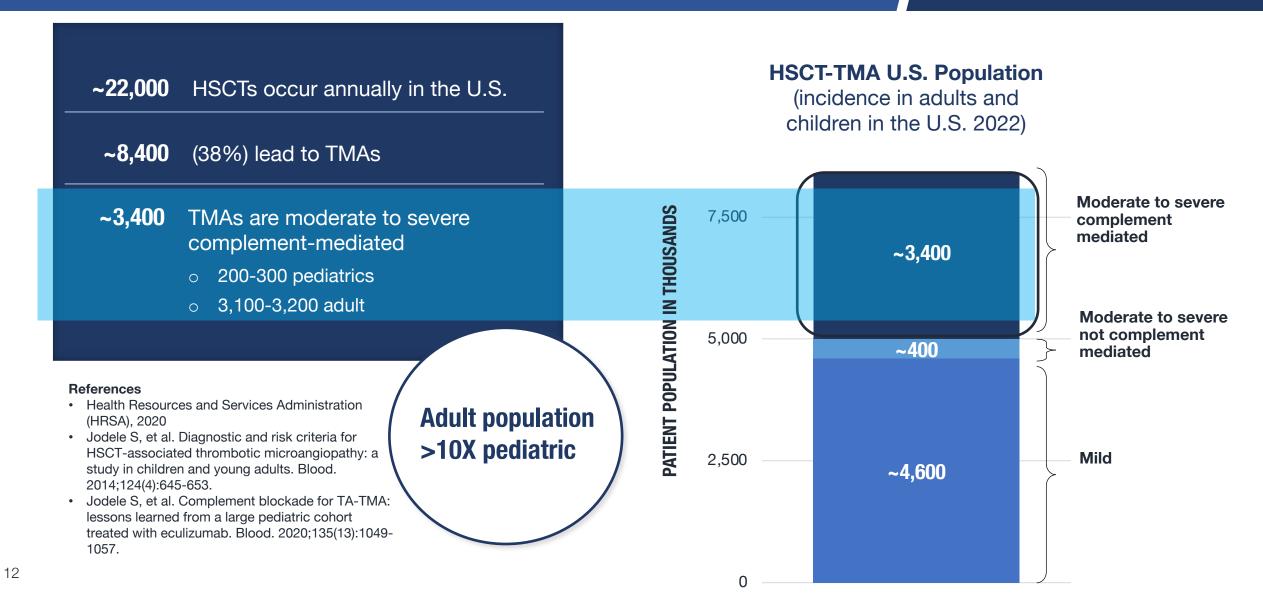
Nomacopan clinical trials are establishing a simple, fixed dose for each age category; rapid offset of action allows complement re-activation if/when needed

3. GVHD

Graft versus host disease (GVHD) is commonly present in patients with severe HSCT-TMA^{6;} LTB4 is often elevated in patients with GVHD and inhibition of LTB4 may slow GVHD progression⁷

Pediatric & Adult HSCT-TMA U.S. Market Opportunity





Nomacopan in HSCT-TMA Recent Progress



Acceleration into pivotal, registrational Phase 3 Part B

> Based on FDA guidance, moving forward to design and planning for pivotal Part B of Phase 3 clinical trial in pediatric HSCT-TMA patients 2 years to <18 years of age

2 Addition of new pipeline program in adult HSCT-TMA

Initiating new program for indication in adults with HSCT-TMA, which will include a study supportive of both adult and pediatric regulatory pathways; adult HSCT-TMA population is >10 times pediatric **3** Phase 3 Part A to remain open for youngest pediatric patients

Enrollment for youngest group (0.5 to <2 years) in Part A is not complete and study will stay open for these patients while pivotal Part B study in the older pediatric patients advances; Part A data readout upon completion

Program Acceleration in Pediatric HSCT-TMA



MIDD Participation

Akari was selected to participate in the FDA Model-Informed Drug Development program that is helping accelerate development of treatments, including those for rare pediatric diseases

Predictive PK/PD Model

Akari's robust, predictive PK/PD model simulated 10,000 virtual patients informing FDA MIDD interactions that helped confirm PK/PD model suitability and doses selected for Phase 3 Part A nomacopan study in severe pediatric HSCT-TMA Akari clinical data from 38 subjects (in previous clinical studies and healthy volunteers) support PK/PD model simulations used to select doses for the nomacopan Phase 3 Part A clinical trial in HSCT-TMA

Rich

Data Set

An expanded PK/PD model using data from 55 patients treated with nomacopan was reviewed in the recent Type C interaction with the FDA along with PK/PD data from Part A and found to be predictive supporting simple, fixed dosing in the upcoming Phase 3 pivotal Part B clinical trial

1. FDA website. <u>https://www.fda.gov/drugs/development-resources/model-informed-drug-development-pilot-program</u>.

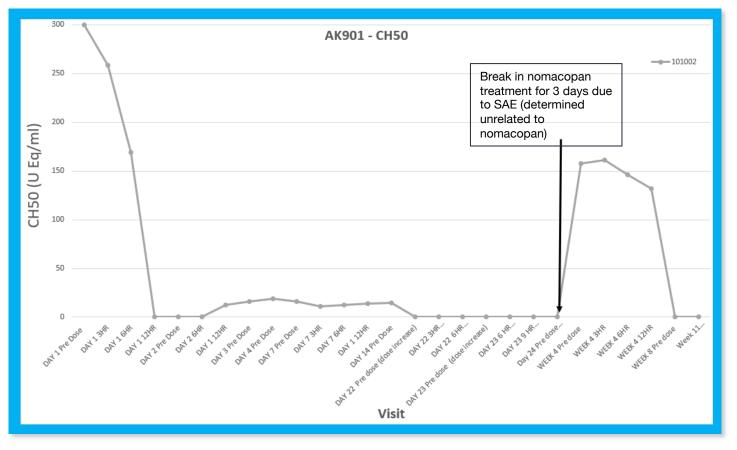
Clinical Trial Patient Case Study Presented As Late-Breaker at Transplantation and Cellular Therapy Tandem Meetings



A patient with severe pediatric HSCT-TMA, which typically involves multi-organ failure and other acute consequences, was discharged home from the hospital following treatment with nomacopan

- 6-year-old male received a cord blood HSCT for relapsed refractory acute myelogenous leukemia (AML)
- Post-transplant acute gut graft-versus-host disease (GVHD)
- TMA at day +66 post-transplant
- Treatment with a single-age, weight-based ablating dose of nomacopan day +74 followed by maintenance dosing for 21 days
- After a 3-day break in treatment for encephalopathy unrelated to nomacopan, treatment continued for a further 46 days until the end of the study with correction of the patient's urine protein creatinine ratio for ≥28 days
- Gut pathology and thrombocytopenia resolved
- No adverse events related to nomacopan

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GEOGRAPHIC ATROPHY (GA)



Geographic Atrophy (GA)

- Geographic atrophy (GA) manifests as a chronic progressive degeneration of the macula, which occurs during late-stage dry age-related macular degeneration (dAMD) and can lead to irreversible vision loss
- Approximately 5 million people worldwide are affected,^{1,2}
 with nearly 1 million in the U.S.³
- One treatment was approved by the FDA in 2023

References

- 1. Wong WL, et al. Global prevalence of age-related macular degeneration and disease burden projection for 2020 and 2040: a systematic review and meta-analysis. Lancet Glob Health. 2014;2(2):e106-e116.
- 2. Rudnicka AR, et al. Age and gender variations in age-related macular degeneration prevalence in populations of European ancestry: a meta-analysis. Ophthalmology. 2012;119(3):571-580.
- 3. Friedman DS, et al. Prevalence of age-related macular degeneration in the United States [published correction appears in Arch Ophthalmol. 2011 Sep;129(9):1188]. Arch Ophthalmol. 2004;122(4):564-572.



Complement-Only Inhibitors Have Demonstrated Promising Efficacy in GA, Yet Significant Treatment Burdens Exist



Drug	ΜΟΑ	Stage	Dose interval	Reduction GA growth (mm ²) vs sham ^{1, 2}	Incidence of CNV ^{2,3}	Injections/year with no CNV	Injections/year with CNV
pegcetacoplan (Syfovere™)	anti-C3 PEGylated peptide, IVT	FDA approved Feb 2023	25 to 60 days	EM: 17% EOM: 14% (pooled 12-month data DERBY & OAKS)	EM: 12% EOM: 7% SHAM: 3.1% (at 24 months)	6 -14 injections	12 - 22 injections (6 – 8 anti- VEGF)
avacincaptad pegol (Zimura®)	anti-C3 PEGylated aptamer, IVT	PDUFA Aug 2023	Monthly	EM: 17.3% (12-month data GATHER2)	EM: 7.2% SHAM: 3.6% (at 12 months)	12 injections	18 - 20 injections
PAS-nomacopan / Akari	anti-C5 PASylated small protein, IVT	Pre-clinical	3+ months	TBD	Address via LTB4 inhibition/ target equivalent to sham	4 injections or fewer	N/A

• In clinical trials discontinuation for an approved complement-only inhibitor for GA treatment reported up to 20%⁴

• For anti-VEGF CNV treatments, up to 1/3 of patients may discontinue/ not adhere⁵

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References: 1. Presentation DERBY and OAKS trial results Oct 11 2021, American Society of Retina Specialists 2021, San Antonio, Texas; 2. Iveric GATHER-2 press release 6 Sept 2022 - table in Supplement showing GATHER-1 and GATHER-2 results at 12-months; 3. Apellis DERBY and OAKS 24 month data press release August 24 2022; 4. Medscape article on 24-month data presentation at AAO 2022 With Approval Pending, Pegcetacoplan Shows Mixed Results for Treating Geographic Atrophy https://www.medscape.com/viewarticle/981813#vp_2 5. McClard CK, et al. Questionnaire to Assess Life Impact of Treatment by Intravitreal Injections (QUALITII). BMJ Open Ophthalmol. 2021;6(1):e000669.

PAS-Nomacopan May Provide 3 Key Benefits: Complement Inhibition, Fewer Doses and LTB4 Inhibition to Address CNV Risk





New PAS-nomacopan construct composition of matter patent filed Dec. 2022; if granted provides patent protection to 2042

References

- 1. Liao DS, et al., Complement C3 inhibitor pegcetacoplan for geographic atrophy secondary to agerelated macular degeneration - a randomised phase 2 trial. *Opthalmology* 2019; 127: 586-195.
- 2. Jaffe GJ, et al., C5 inhibitor avacincaptad peg for geographic atrophy due to age-related macular degeneration a randomised pivotal phase 2/3 trial. *Ophthalmology* 2021; 128: 576-586.
- McClard CK, et al. Questionnaire to Assess Life Impact of Treatment by Intravitreal Injections (QUALITII): Development of a patient-reported measure to assess treatment burden of repeat intravitreal injections. *BMJ Open Ophthalmol.* 2021;6(1):e000669.
- 4. Sasaki F, et al., Leukotriene B4 promotes neovascularisation and macrophage recruitment in murine wet-type AMD models. *JCI Insight* 2018; 3: e96902.

1. Efficacy

Efficacy of complement C3 and C5 inhibition slowing progression of GA lesions is well understood^{1,2}

2. Frequency of Intravitreal Injections

Frequent needle injections into the back of the eye, a source of fear, discomfort and disruption for patients³; **potential for 4 or fewer injections with PAS-nomacopan each year**

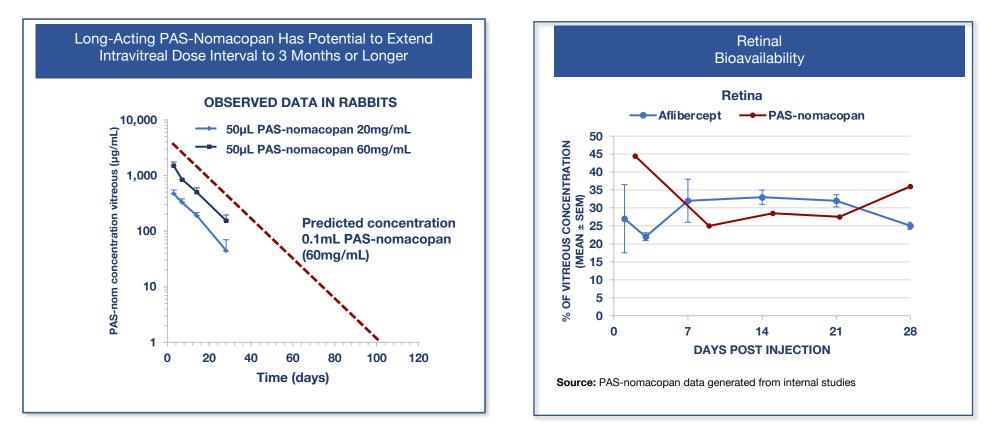
3. Safety

LTB4 inhibition may prevent VEGF-A overexpression, a key driver of sight-threatening CNV,⁴ a safety risk (treated with VEGF inhibitors) associated with approved and late-stage complement-only inhibitors

Long-Acting PAS-Nomacopan Has Potential for 4 or Fewer Injections Into the Eye Per Year



 PK/PD data show PAS-nomacopan has extended half-life in the eye after intravitreal injection (7.4 to 8.4 days), suggesting the dose interval may be 3 months or longer¹



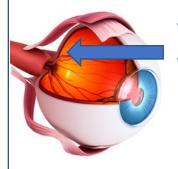
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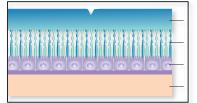
LTB4 Inhibition May Prevent Choroidal Neovascularization

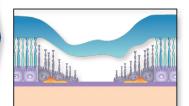


1 CNV starts with inflammation in the choroid and retinal pigment epithelium (RPE)



The **choroid** is part of the vascular layer of the eye¹ The **RPE**, adjacent to the choroid, is constantly exposed to high levels of metabolic and oxidative stress¹





retina (macular) photoreceptor cells retinal pigment epithelium choroid

- The RPEs ability to cope with stress decreases with age and the subsequent inflammation damages the RPE and photoreceptors²
- Damaged RPE releases leukotrienes, including LTB4^{2,3}

2 LTB4 activation can lead to over expression of VEGF-A

 In a pre-clinical model of laserinduced CNV LTB4 recruited inflammatory immune cells into the retina³



M2 macrophages were attracted and activated via LTB4 receptors leading to production of vascular endothelial growth factor–A (VEGF-A) ³

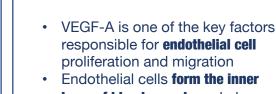
Normal expression of VEGF-A is healthy



- CNV is an overdevelopment of blood vessels in the retina²
- New blood vessels are leaky, fluid from blood/red blood cells enter the retina²
- Fluid can distort/damage the retina, including photoreceptors²



Neovascularization, fluid, retinal/macular distortion²



layer of blood vessels and play a key role in function, including exchanges between blood vessels and surrounding tissues VEGF-A protein

References:

- 1. Hejtmancik JF, Nickerson JM. Overview of the Visual System. Prog Mol Biol Transl Sci. 2015;134:1-4..
- 2. Grossniklaus HE, Green WR. Choroidal neovascularization. Am J Ophthalmol. 2004;137(3):496-503.
- 3. Sasaki F, Koga T, Ohba M, et al. Leukotriene B4 promotes neovascularization and macrophage recruitment in murine wet-type AMD models. JCI Insight 2018;3(18):e96902. Published 2018 Sep 20.
- 4. Guyer D.R., et al. Subfoveal choroidal neovascular membranes in age-related macular degeneration. Visual prognosis in eyes with relatively good initial visual acuity. Arch Ophthalmol. 1986;104:702–705
- 5. Wong T.Y., et al. The natural history and prognosis of neovascular age-related macular degeneration: A systematic review of the literature and meta-analysis. Ophthalmology 2008;115:116–126.

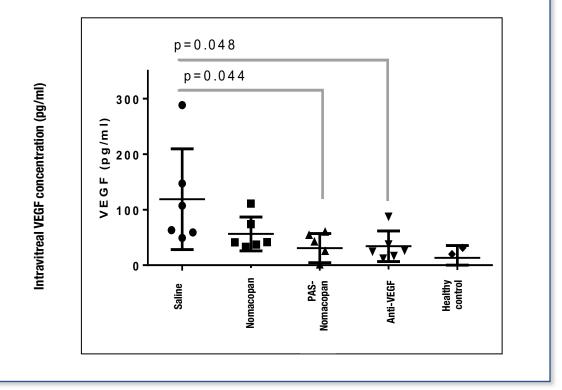
PAS-Nomacopan Decreased VEGF Levels As Effectively As An Anti-VEGF Antibody In a Pre-Clinical Model



In a pre-clinical model of severe uveitis, long-acting PAS-nomacopan (single IVI) decreased VEGF levels (VEGF-A is a key driver of CNV) as effectively as anti-VEGF antibody treatment ^{1,2}

LTB4 promotes laser induced CNV in a preclinical model of wet age related macular degeneration³

Effect of PAS-nomacopan on VEGF levels in a standard preclinical model of severe uveitis



References

1. Eskandarpour M, et al., Leukotriene B4 and its receptor in experimental autoimmune uveitis and in human retinal tissues – clinical severity and LTB4 dependence of retinal Th17 cells. Am J Pathol. 2021; 191:320-334

2. Eskandapour M, et al., Immune mediated retinal vasculitis in posterior uveitis and experimental models: the leukotriene (LT)B4-VEGF axis. Cells 2021; 10:396

3. Sasaki F, et al., Leukotriene B4 promotes neovascularization and macrophage recruitment inn murine wet-type AMD models. JCI Insight 2018; 3:e96902

NEXT STEPS



Next Steps



	to begin in Phase Part B clinical tria	 Enrollment expected Initiation Initiati		
Nomaco <mark>p</mark> an in HSCT-TMA				
2023			2024	
PAS-Nomacopan in GA				
 IND-enabling studies 	• Initia		IND filing •	First-in-human/
underway	clini sup		expected 1H 2024	initiation of clinical trials
24	Sup	Y'J		2H 2024

FINANCIAL UPDATE



Financial Update



- Ticker: AKTX (NASDAQ)
- 101.1M ADS outstanding
- Cash of \$13.2M as of December 31, 2022
- Additional gross proceeds of \$4M raised in a registered direct offering in March 2023
- Estimated cash runway into Q4 2023

THANK YOU

