# Apellis

## **Apellis Company Presentation**



## Forward looking statements

Statements in this presentation about future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute "forward-looking statements" within the meaning of The Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements relating to the implications of preliminary clinical data. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: whether the Company's clinical trials will be fully enrolled and completed when anticipated; whether preliminary or interim results from a clinical trial will be predictive of the final results of the trial; whether results obtained in preclinical studies and clinical trials will be indicative of results that will be generated in future clinical trials; whether APL-2 or APL-9 will successfully advance through the clinical trial process on a timely basis, or at all; whether the results of such clinical trials will warrant regulatory submissions and whether APL-2 or APL-9 will receive approval from the FDA or equivalent foreign regulatory agencies for GA, PNH, CAD, wAIHA or any other indication; whether, if Apellis' products receive approval, they will be successfully distributed and marketed; and other factors discussed in the "Risk Factors" section of Apellis' Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 31, 2019 and the risks described in other filings that Apellis may make with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Apellis specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.



## What we do







**Pioneers in innate** immunity & complement immunology

By regulating its core component C3

Value & patient outcomes at the center of our programs





Initial focus on ophthalmology and hematology



**R&D** in other areas of complement control e.g. AAVs

## Pipeline

Product	Category	Disease	Pre-clinical	Phase 1	Phase 1b/2	Phase 3	FDA
<b>APL-2</b> (intravitreal)	Ophthalmology	ප Geographic Atrophy					
<b>APL-2</b> (systemic)	Hematology	Paroxysmal Nocturnal Hemoglobinuria					
		Cold Agglutinin Disease					
	Nephrology	Complement Dependent Nephropathies, Including C3 Glomerulopathy					
<b>APL-9</b> (IV)	Other	Control of Host Attack of AAVs for Gene Therapies					



## Apellis lead molecule: APL-2



## Peptides of the APL-2 family bind to a pocket of C3 and inhibit activation\*

\* Janssen, J. Biol. Chem., 282(40), 29241-29247, 2007





## Central inhibition of complement





# HEMATOLOGY

PNH



## Paroxysmal Nocturnal Hemoglobinuria (PNH) is characterized by intravascular & extravascular hemolysis



**Extravascular hemolysis** 

Red blood cell destruction by macrophages in spleen and liver

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## C5 Intravascular hemolysis Red blood cell rupture in the circulation

## Hemoglobin levels in patients with PNH receiving eculizumab (n=141; all hemolytic)



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McKinley CE, Richards SJ, Munir T, Griffin M, Mitchell LD, Arnold L, Riley K, Copeland N, Newton DJ, Hill A, Hillmen P. Extravascular hemolysis due to C3-loading in patients with PNH treated with eculizumab: defining the clinical syndrome. Blood. 2017:130:3471.

What is the unmet need on Soliris<sup>®</sup>?

RESULTS



of patients remain anemic on Soliris



of patients had  $\geq 1$ transfusion in the prior year



Average Reticulocytes



McKinley CE, Richards SJ, Munir T, Griffin M, Mitchell LD, Arnold L, Riley K, Copeland N, Newton DJ, Hill A, Hillmen P. Extravascular hemolysis due to C3-loading in patients with PNH treated with eculizumab: defining the clinical syndrome. Blood. 2017:130:3471.

Study of 141 patients by Hillmen et. al

- Excluded patients with aplastic anemia & bone marrow failure
- Included 21% on higher than label eculizumab dose



## APL-2 safety



No evidence to date of any increased rate of infections

Infections follow normal resolution course

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Excludes one patient with bone marrow failure



No transfusions in PNH patients without significant comorbidities on full pharmacology



Interim data as reported Sept 4, 2018

ΗN 

## PHAROAH: APL-2 shows potential to improve eculizumab outcomes as add-on therapy in PNH – 270 mg/day, N=6

Patient 5



Interim data as reported Sept 4, 2018

PNH

า				
	4	5	6	7

## PHAROAH: APL-2 add-on to Soliris<sup>®</sup> - all four patients successfully transitioned to APL-2 monotherapy



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Interim data as reported Sept 4, 2018

## PHAROAH: APL-2 add-on to Soliris<sup>®</sup> - all four patients successfully transitioned to APL-2 monotherapy



\*Average last available reading for all four patients on each dosing regimen

(i) last reading during eculizumab monotherapy prior to co-treatment with APL-2

(ii) last reading during co-treatment and prior to APL-2 monotherapy

(iii) last reading while on APL-2 monotherapy



Interim data as reported Sept 4, 2018

APL-2 + Eculizumab <sup>ii</sup>	APL-2 Monotherapy <sup>iii</sup>
11.9	11.4
0	0
0.8x	0.9x
1.2x	0.8x
5.9 Years	1.9 Years
1.0x	_

## PADDOCK (interim): APL-2 shows potential to reach normal LDH levels as monotherapy in treatment in naïve PNH patients – 270 mg/day



- Reductions in LDH were rapid following initiation of APL-2 therapy, with 95% of subjects achieving an LDH in the normal range by day 29
- Reductions in LDH have been sustained and durable, with mean LDH maintained within the normal range at all timepoints beyond day 29



ΙZ

Interim data as reported Dec 2, 2018

**Increase in Hemoglobin** 

• All 19 subjects responded rapidly after initiating APL-2 therapy, and by day 29 mean baseline Hb increased from 8.0 g/dL to 10.8 g/dL

• Increases in Hb were sustained and durable as represented by a mean Hb of 12.2 g/dL at day 85

## PADDOCK (interim): other measures of anemia meaningfully improved with APL-2 including reticulocytes and bilirubin

**Decrease in Absolute Reticulocyte Count (ARC)** 



ΗN

Interim data as reported Dec 2, 2018

## **Decrease in Serum Total Bilirubin**

## PEGASUS – Phase 3 head to head vs. Soliris®



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### **Primary endpoint:**

• 4 mo.  $\Delta$  in HgB

### Secondary endpoints:

- Transfusion
   avoidance
- Reticulocytes
- LDH
- FACIT

Autoimmune hemolytic anemia (AIHA) is a group of rare autoimmune disorders characterized by the premature hemolysis of red blood cells (RBCs) by autoantibodies

AIHA presents in two common forms

![](_page_18_Picture_2.jpeg)

## **Cold Agglutinin Disease**

Typically associated with IgM autoantibodies - 13-15% of cases

Typically associated with IgG autoantibodies - 60-70% of cases

## Est. 40,000 AIHA patients worldwide

CAD

https://www.orpha.net/consor/cgi-bin/OC Exp.php?Expert=98375&Ing=EN

![](_page_18_Picture_11.jpeg)

## Warm Antibody AIHA

## APL-2 in Cold Agglutinin Disease – preliminary data

Hemoglobin (g/dL)

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![](_page_19_Figure_2.jpeg)

![](_page_19_Figure_3.jpeg)

![](_page_19_Figure_4.jpeg)

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Interim data as reported June 15, 2019

AD U

## LDH (U/L)

### Indirect Bilirubin (mg/dL)

# NEPHROLOGY

C3G

![](_page_20_Picture_2.jpeg)

## **DISCOVERY study Preliminary Results in C3G**

A. Mean and Individual uPCR

- Urine protein-to-creatinine ratio (uPCR) is a means to quantitate protein in the urine
- A downward trend in uPCR observed in patients with C3G treated with APL-2
- Mean serum albumin increased as proteinuria (mean uPCR) decreased
- Mean serum albumin was below the lower limit of normal at baseline, and increased into the normal range by day 84

![](_page_21_Figure_6.jpeg)

C. Mean and Individual Serum Albumin

![](_page_21_Figure_8.jpeg)

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- Mean  $\pm$  SE
- Patient 2
- Patient 3 **↔**
- Patient 5 · -----
- Patient 6
- Patient 7
- Patient 8 ----

- Mean  $\pm$  SE
- Patient 2
- Patient 3 **-**∕--
- Patient 5
- Patient 6
- Patient 7
- Patient 8

## **OPHTHALMOLOGY**

**GEOGRAPHIC ATROPHY** 

![](_page_22_Picture_2.jpeg)

# Geographic Atrophy Impacts One Million People in the U.S. Alone

![](_page_23_Picture_1.jpeg)

## Geographic Atrophy - the leading cause of blindness

![](_page_24_Picture_1.jpeg)

Up to 98% of chronic anti-VEGF patients progress to GA.

Source: American Academy of Ophthalmology; The Lancet; Ophthalmology; L.E.K. interviews and analysis

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## **Geographic Atrophy** Risk of blindness when central vision is affected. ~1M patients in US alone. No approved therapies.

## FILLY - Phase 2 study of APL-2 in Geographic Atrophy

![](_page_25_Figure_1.jpeg)

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## FILLY – timeline and endpoints

![](_page_26_Figure_1.jpeg)

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## Primary efficacy endpoint is the primary registration endpoint

Change in geographic atrophy (GA) lesion size from baseline to month 12.

## Primary safety endpoint

Number and severity of local and systemic treatment emergent adverse events (TEAEs).

## **FILLY baseline characteristics**

	Sham injections N=81	APL-2 every other month N=79	APL-2 monthly N=86
Bilateral GA, n (%)	72 (90.0%)	64 (82.1%)	71 (85.5%)
History of CNV in Fellow Eye, n (%)	29 (35.8%)	28 (35.4%)	36 (41.9%)
GA lesion size, mean, mm <sup>2</sup> (SD)	8.2 (4.1)	8.9 (4.5)	8.0 (3.8)
BCVA score, mean letters (SD)	59.8 (17.2)	58.4 (16.0)	59.8 (15.7)
BCVA score (Snellen equivalent)	20/63	20/80	20/63
LL-BCVA score, mean letters (SD)	33.6 (17.8)	31.4 (17.1)	36.3 (16.6)

![](_page_27_Picture_2.jpeg)

![](_page_28_Figure_0.jpeg)

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Modified Intent to Treat population (mITT), Observed, Mixed-Effect Model

## Lesion growth by six-month periods (square root) - post hoc analysis

![](_page_29_Figure_1.jpeg)

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**AD** 

Data from subjects with a measurable GA lesion size at both Months 6 & 12

## Lesion growth by six-month periods (square root) - post hoc analysis

![](_page_30_Figure_1.jpeg)

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**AD** 

Data from subjects with a measurable GA lesion size at both Months 6 & 12 & 18

# After cessation of treatment at 12 months, GA growth resumes but treatment effect is maintained through 18 months (square root)

![](_page_31_Figure_1.jpeg)

![](_page_31_Figure_2.jpeg)

APL-2 every other month

APL-2

![](_page_31_Figure_4.jpeg)

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Modified Intent to Treat population (mITT), Observed, Mixed-Effect Model

**16%** lesion growth difference p=0.097 vs Sham

**20%** lesion growth difference p=0.044 vs Sham

## GA growth comparison: fellow eye vs study eye - post hoc analysis

![](_page_32_Figure_1.jpeg)

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**VS** 

Includes patients from the Bilateral GA Population

## New onset exudations

FILLY: 38% of enrolled patients had wet AMD in the non-study eye (fellow eye), balanced between the three groups.

 
 Sham group (n=81)
 APL-2 EOM (n=79)

 Q
 Q

 Fellow eye DRY
 Fellow eye DRY

 1%
 Fellow eye WET 9%

"Expected" based on natural history ~2%/yr for Dry fellow eye patients (Sunness et al 1999) and ~10%/yr for Wet fellow eye patients (Marques et al. 2013)

![](_page_33_Figure_6.jpeg)

## DERBY & OAKS - Phase 3 Program Overview

![](_page_34_Figure_1.jpeg)

Population:	Patients with Geographic Atrophy secondary to AMD	Tr
1st Endpoint:	Change in total area of GA lesion(s) based on FAF at Month 12	Sa
Design:	Double Masked, Randomized 2:1:2:1	Du

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- ample size: 600 Subjects from approx. 100 multinational sites per study
- uration: 2 years

# Thank you

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