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Oral RBP4 Antagonist as a Treatment for Atrophic Age-related Macular Degeneration (AMD)

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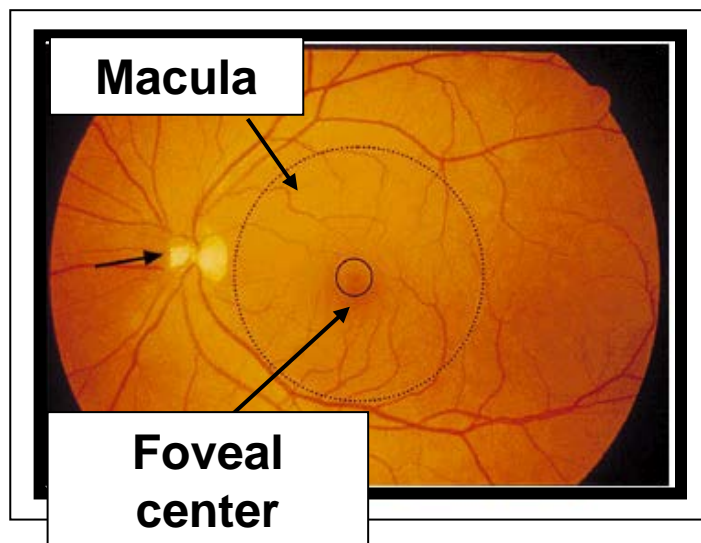
AMD: An Unmet Medical Need

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- Dry (atrophic) and wet (exudative) AMD are the leading cause of blindness
- Worldwide prevalence of Dry and Wet AMD will increase to 83MM in 2020
- 80%-90% of all AMD cases are of the atrophic form.
- Atrophic AMD is more prevalent than Alzheimer's Disease
 - 9.1 MM patients affected in US
 - ~1.0 MM patients are late-stage atrophic AMD (Geographic Atrophy)
 - 3.5% over age 75 and 22% over age 90 have the Geographic Atrophy
- Market size: \$ 20B Addressable Market
- No FDA-approved treatment for atrophic AMD

Atrophic (Dry) AMD: Loss of Central Vision

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- Dry AMD: degeneration of specialized neurons, rods and cones, in the central part of the retina called macula
- Loss of high resolution central and color vision
- Accumulation of cytotoxic lipofuscin: pathogenic factor contributing to photoreceptor death

Healthy
Vision

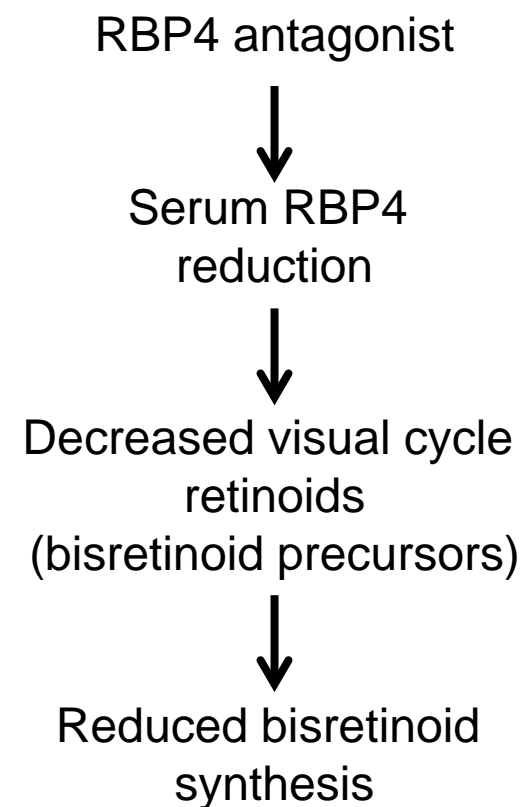
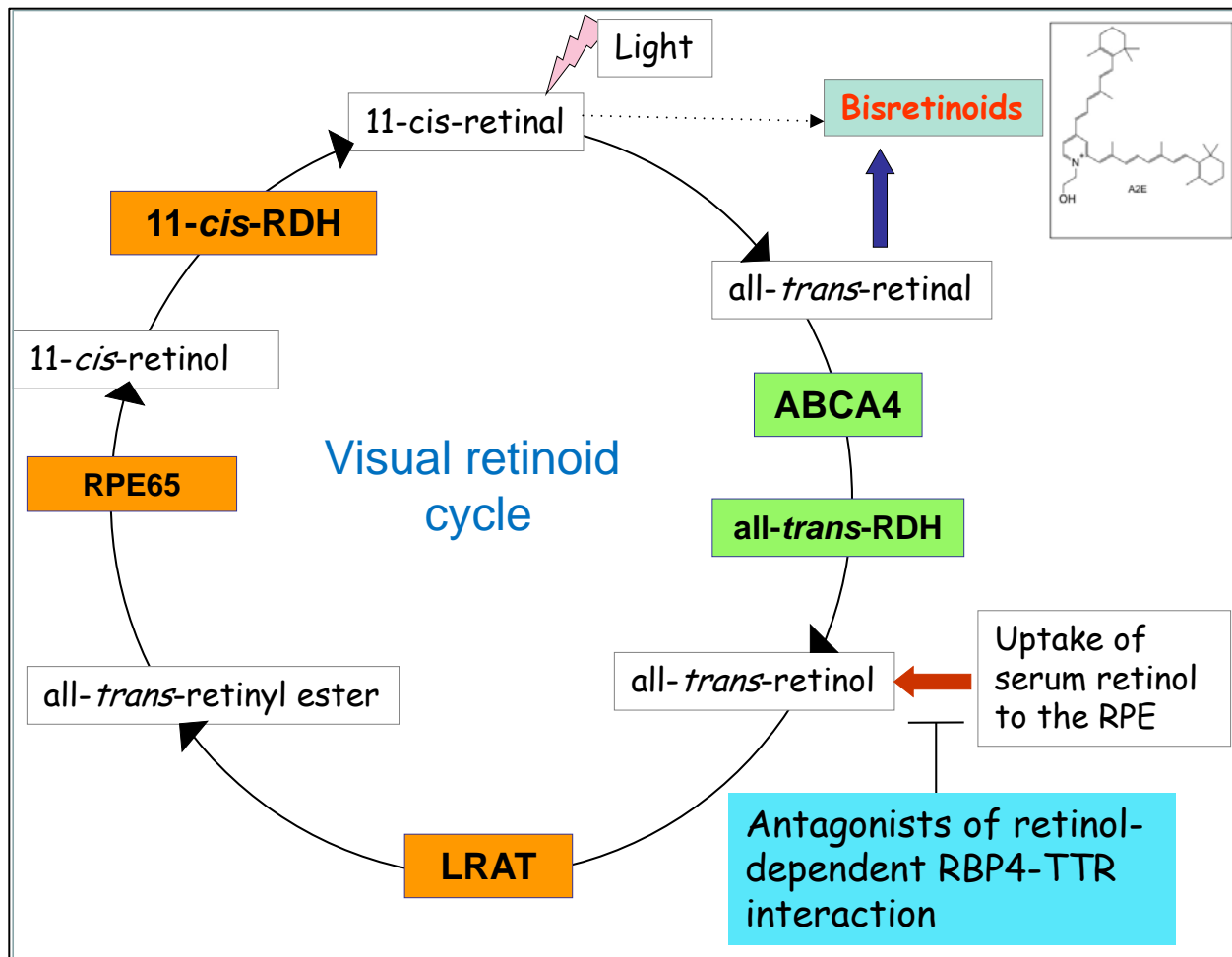


AMD
Vision



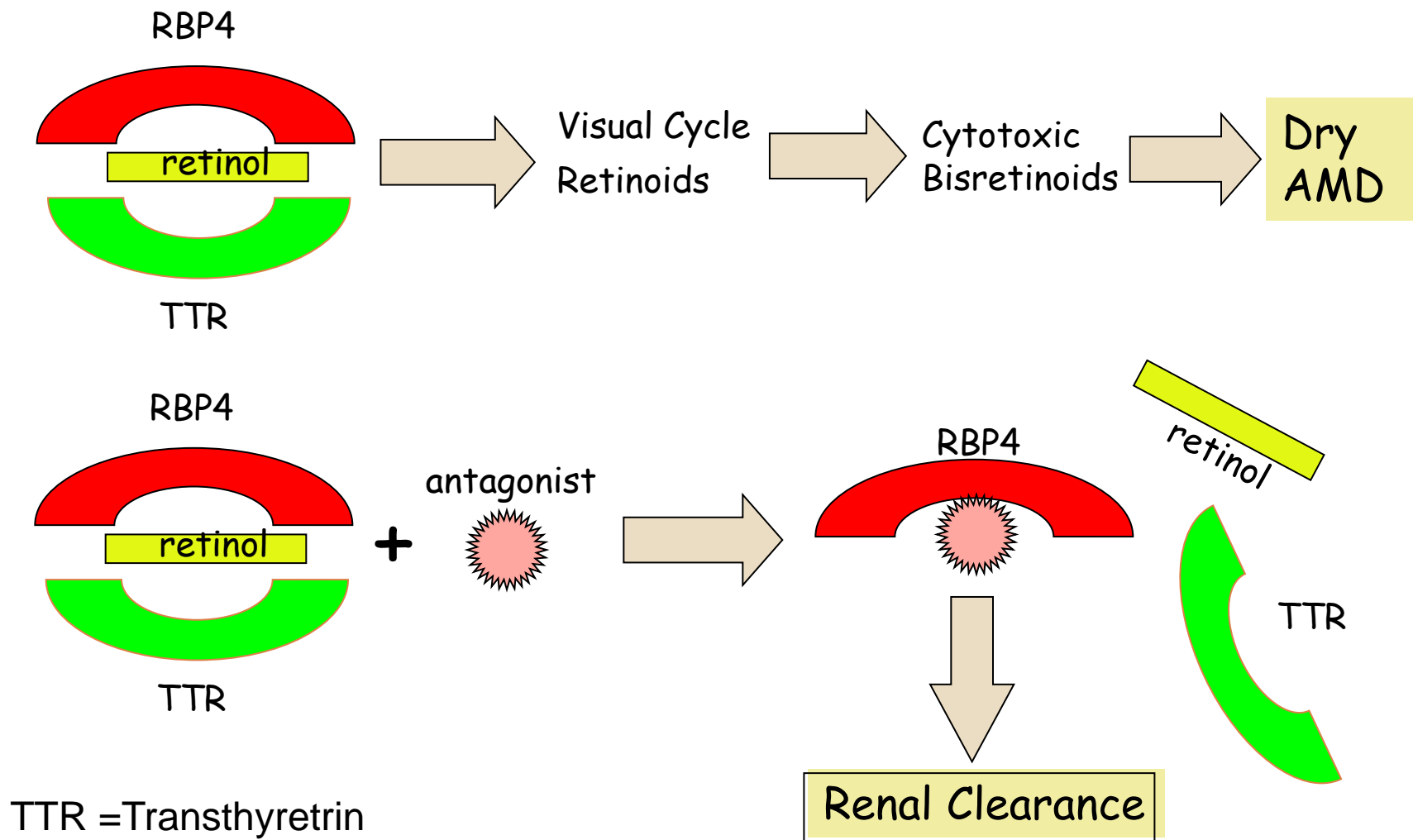
Visual Cycle - Rationale for Therapeutic Target

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Serum RBP4 Lowering by RBP4 Antagonists: Stimulation of Renal Excretion

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NIH-Funded Preclinical Lead Development Team

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Team Co-Chairs:

Konstantin Petrukhin (Principal Investigator), Columbia University
Marc Bailie, Lead Blueprint Consultant (INDS Inc, Toxicology)

Columbia Team:

Prof. Rando Allikmets, Ph.D.
Ophthalmic Science
Boglarka Racz, Ph.D.
Donna See, Ron Katz - Tech
Ventures

iCura Vision:

Graham Johnson (CSO)
Paul Pearson (CEO)

Blueprint Consultants:

John M. Jay Sisco (CMC DP)
Gian Luca Araldi (CMC DS)
Bill Martin (Screening and
Efficacy modeling)

NIH Team:

Rebecca Farkas-NINDS
Jamie Driscoll-NIMH
Tom Greenwell (NEI)
Enrique Michelotti-NIMH
Amir Tamiz -NINDS
Adrienne Ivory-NINDS
Chuck Cywin-NINDS

NIH Blueprint Neurotherapeutics grant mechanism: virtual pharma model

LDT membership: expertise in drug development; Access to all required services through Phase 1;
Milestone driven process with regular Steering Committee reviews

iCura Vision Management

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Management

Paul G. Pearson, PhD, Founder and CEO

Previous VP PK & Drug Metabolism, Amgen; Exec Dir, Drug Metabolism, Merck' 20+ years of preclinical experience at leading pharmaceutical companies

Graham Johnson, PhD, Founder and CSO

Previous VP BMS, CRO Rib-X, SVP AVI BioPharma (Sarepta) and Dir, Parke-Davis; 35+ years of chemistry and scientific experience at leading pharmaceutical and biotech companies

Sara Barrington, Founder and CFO/COO

Previous SVP Finance Exosome Diagnostics; CFO Ausam Biotechnologies; 20 + finance experience with new ventures

Scientific Collaborators & SAB Members

Konstantin Petrukhin , PhD, Founder and Chair of SAB

Department of Ophthalmology, Columbia University; previous Merck

Additional SAB Members:

KOLs, Scientists and Physicians from industry/pharma and leading academic institutions. SAB will be established

Board of Directors

James Bristol

Senior Advisor Frazier Healthcare, former SVP Worldwide Drug Discovery Research Pfizer. Chair Deciphera Pharmaceuticals

James McCullough

Director & CEO Exosome Diagnostics, Previously CEO Ausam Biotechnologies

Paul G. Pearson, PhD, Founder and CEO

iCura Vision Discovery and Development Partners

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❑ **NIH Blueprint Neuroscience Program**

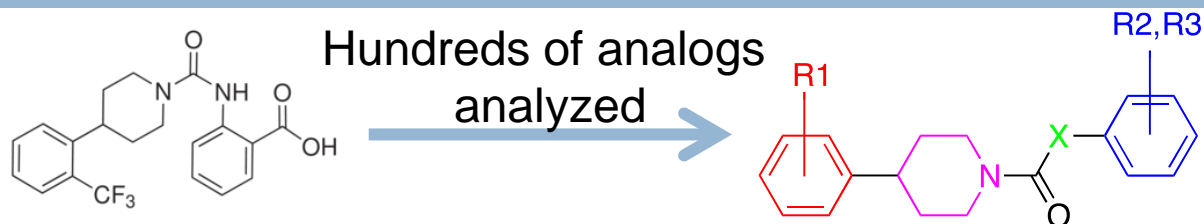
- ❑ NIH Blueprint funded medicinal chemistry and discovery program
- ❑ NIH Blueprint funded IND-enabling preclinical development program: formulation support, GLP toxicology, API production etc
- ❑ NIH Blueprint funded Phase 1 proof of concept clinical development program
- ❑ Advanced Blueprint Neuroscience program with ongoing funding

❑ **Columbia University**

- ❑ Worldwide exclusive license to iCura Vision for ocular indications of RBP4 antagonists
- ❑ Worldwide exclusive option agreement to iCura Vision for non-ocular indications

Program Overview

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- **Preclinical Candidate nominated for IND-enabling studies**
 - **Exceptional in vitro efficacy, optimal PK characteristics in rodent and non-rodent species, robust bisretinoid reduction in preclinical efficacy model, synthetic route amenable to process chemistry**
- Clinical target validation from Fenretinide clinical trials
 - Serum RBP4 lowering below 1 μ M reduced the growth of geographic atrophy
- POC and PK/PD obtained from **single** dose clinical PK-PD studies.
 - Serum RBP4: Assess quantitative **target engagement** in clinical studies
- Chemistry Program – exceptional chemical matter from three structural series

IP Portfolio

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- Broad IP foundation created
 - ▣ Published Method of Use application for A1120 in dry AMD
 - ▣ 5 Composition of Matter patent applications filed 2013
 - ▣ 1 Additional Composition of Matter application filed 2014
- Exclusive Worldwide License from Columbia University to iCura Vision
- Ongoing NIH funding to enhance IP position

Key Program Characteristics

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- Oral therapy for age-related macular degeneration
- Improved patient acceptance compared to intravitreal injection into eye
- Macular degeneration one of major public health issues with aging population - \$20B addressable market in US alone
- NIH validated with continuing NIH funding
- Strong pre-clinical data with peer reviewed publications
- Worldwide exclusive license from Columbia University
- **Conducting \$10M financing round for generating Phase I/II data**