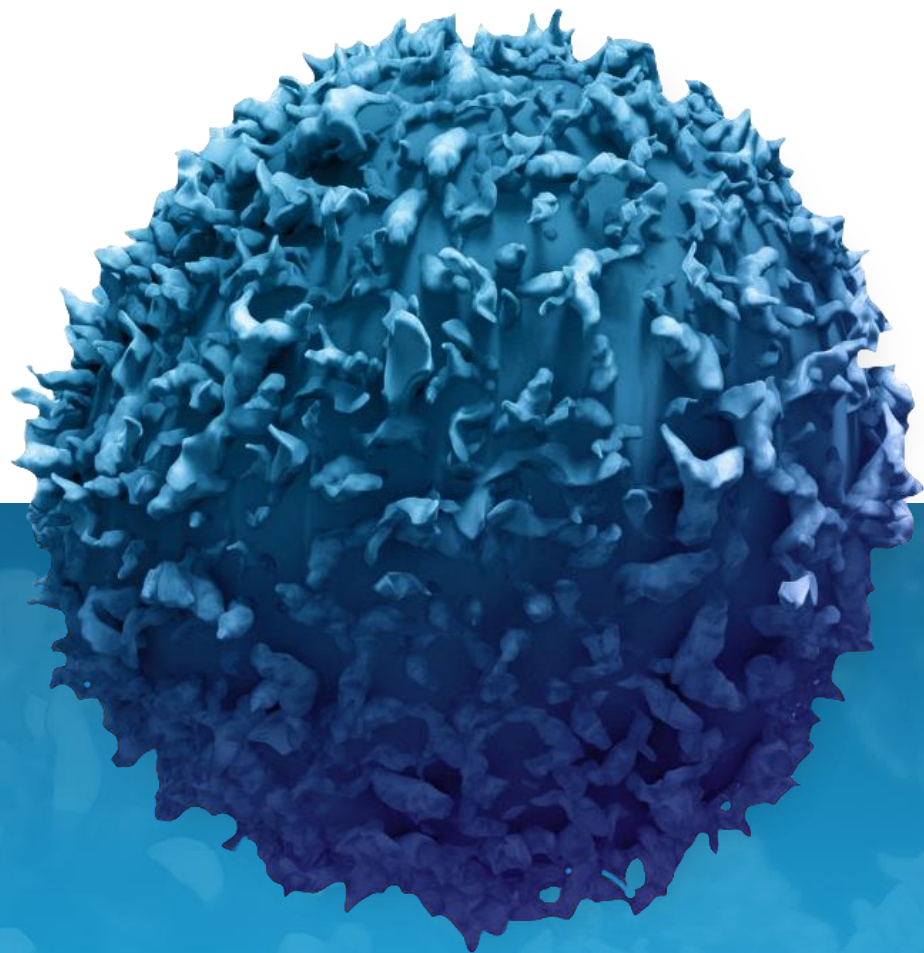




EQ504: Targeting AhR to Promote Mucosal Healing In Gastro-intestinal Disease

August 2025

Forward-Looking Statements and Other Disclaimers

This presentation contains forward-looking statements about Equillium, Inc. (the "Company"). In some cases, you can identify forward-looking statements by the words "will," "expect," "intend," "plan," "objective," "believe," "estimate," "potential," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements are based on Company management's current beliefs and expectations. These statements include but are not limited to statements regarding the Company's business strategy, the Company's plans to develop and commercialize its product candidates, the safety and efficacy of the Company's product candidates, the Company's plans and expected timing with respect to regulatory filings and approvals, size and growth potential of the markets for the Company's product candidates and cash runway. These statements involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. The Company may not actually achieve the plans, intentions or expectations disclosed in its forward-looking statements, and you should not place undue reliance on the Company's forward-looking statements.

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Advancing Novel High-Impact A&I Therapeutics

Leveraging **deep understanding of immunobiology** and its role in disease to **pioneer new products** for severe autoimmune and inflammatory disorders with high unmet medical need

Development Pipeline

	Indication	Pre-Clinical	IND Enabling	Phase 1	Phase 2	Phase 3	Rights	Status
EQ504 AhR Modulator	ulcerative colitis (oral, colon targeted)						Worldwide	Phase 1 proof-of-mechanism study initiation expected mid-2026
	lung inflammation (inhaled, lung targeted)							Potential future indications
EQ302 IL-15/21 inhibitor	celiac disease (orally delivered peptide)						Worldwide	Available for partnering

Equillium Overview

EQ504 – Oral Aryl Hydrocarbon Modulator

- The aryl hydrocarbon receptor (AhR) is **critical to barrier organ physiology and immunology**
- Modulating **AhR is validated in the treatment of both inflammatory skin & GI disease** through VTAMA® & *indigo naturalis*
- **EQ504 is a potent, selective AhR modulator** with good drug-like properties, to be **formulated to target GI and lung tissues**
- **Near-term value creation** by demonstrating safe oral dosing with **proof of mechanism in GI tissues**
- Targeting AhR affords a **differentiated, multi-modal, non-immunosuppressive MoA** complementary to other A&I agents
- Targeting the AhR for the treatment of both GI and lung disease is of **high strategic interest**

EQ302 – Dual IL-15/21 inhibitor (available for partnering)

- **IL-15 & IL-21 important to T and B cell biology** and implicated in multiple diseases
- EQ302 is a novel, **orally delivered, dual inhibitor of IL-15 and IL-21**
- Selectively **targets underlying immune pathophysiology inflammation** of celiac disease
- Increasing regulatory clarity and **strategic interest in celiac disease, for which no treatments exist**

Targeting The Aryl Hydrocarbon Receptor in Barrier Tissue Inflammation

The Aryl Hydrocarbon Receptor (AhR)

Activating the AhR Pathway

1

Signaling begins when a ligand binds to AhR in the cell cytoplasm, forming an AhR ligand complex

2

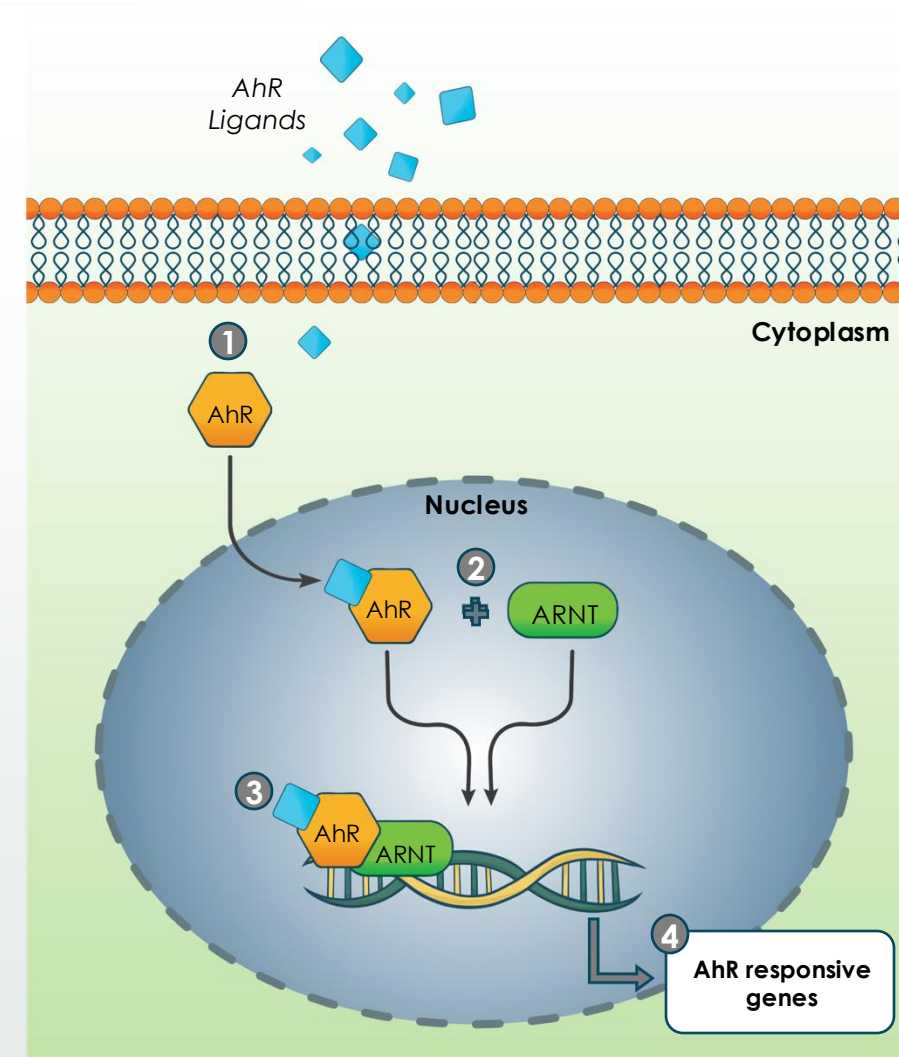
The AhR ligand complex translocates to the nucleus and heterodimerizes with the AhR nuclear translocator (ARNT)

3

The AhR ligand/ARNT complex binds to specific elements on DNA and promotes modulation of AhR responsive genes

4

AhR responsive genes include:
CYP1A1 (key biomarker)
IL-10, IL-22, IL-1 β
NF- κ B, NLRP3



AhR in Barrier Tissue Physiology and Immunology

Maintaining barrier function

Maintains the integrity of epithelial tight junctions, preventing excessive permeability and protecting against pathogens

Immune cell regulation

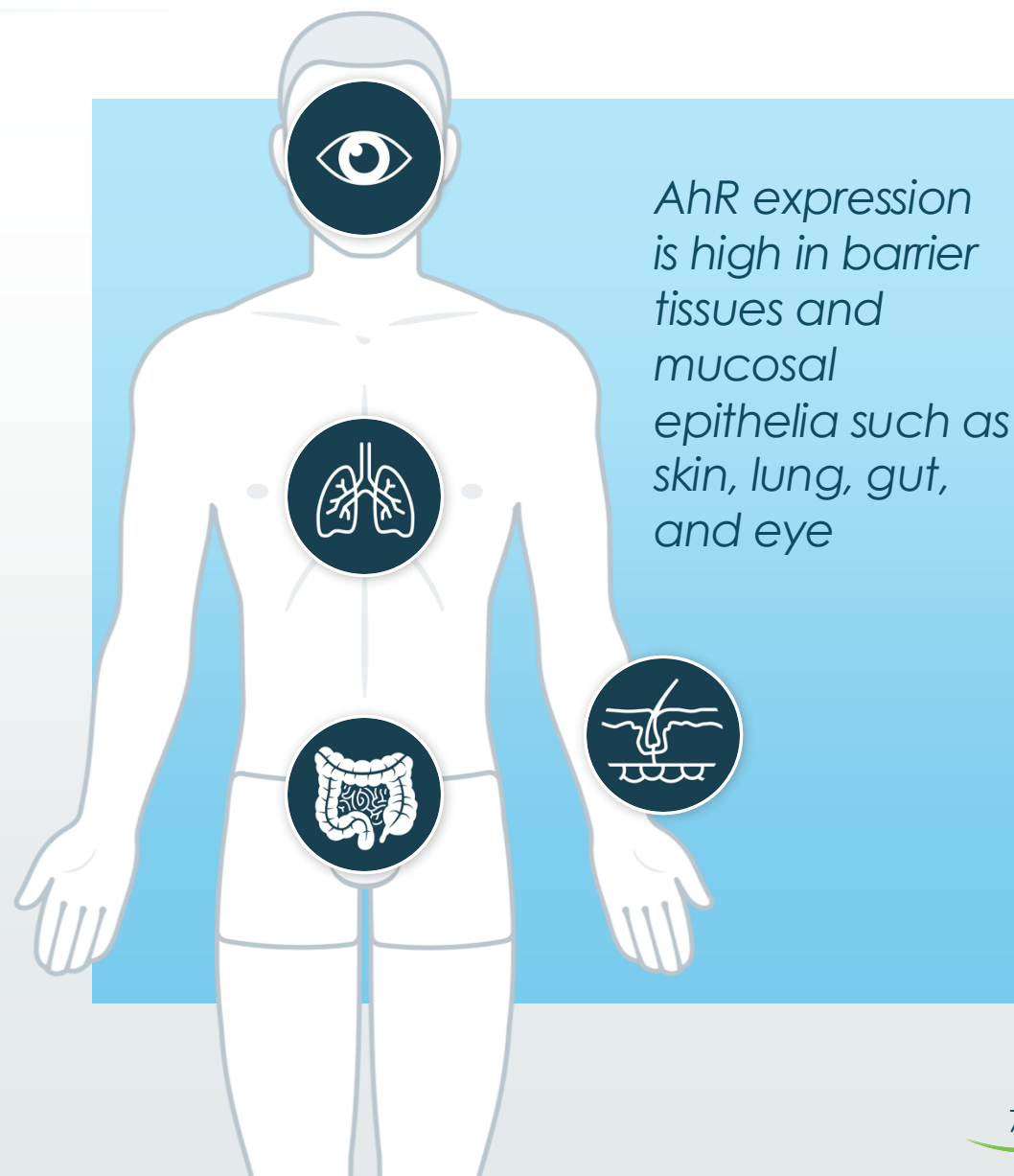
Modulates the activity of regulatory T cells (T_{reg}) involved in suppression of effector T cells (T_{eff}) and maintaining tolerance

Anti-inflammatory effects

Promotes production of anti-inflammatory cytokines IL-10 and IL-22, which mitigate excessive inflammation in barrier tissues

Tissue repair and regeneration

Promotes epithelial cell proliferation and migration, aiding in the repair and regeneration of barrier tissues

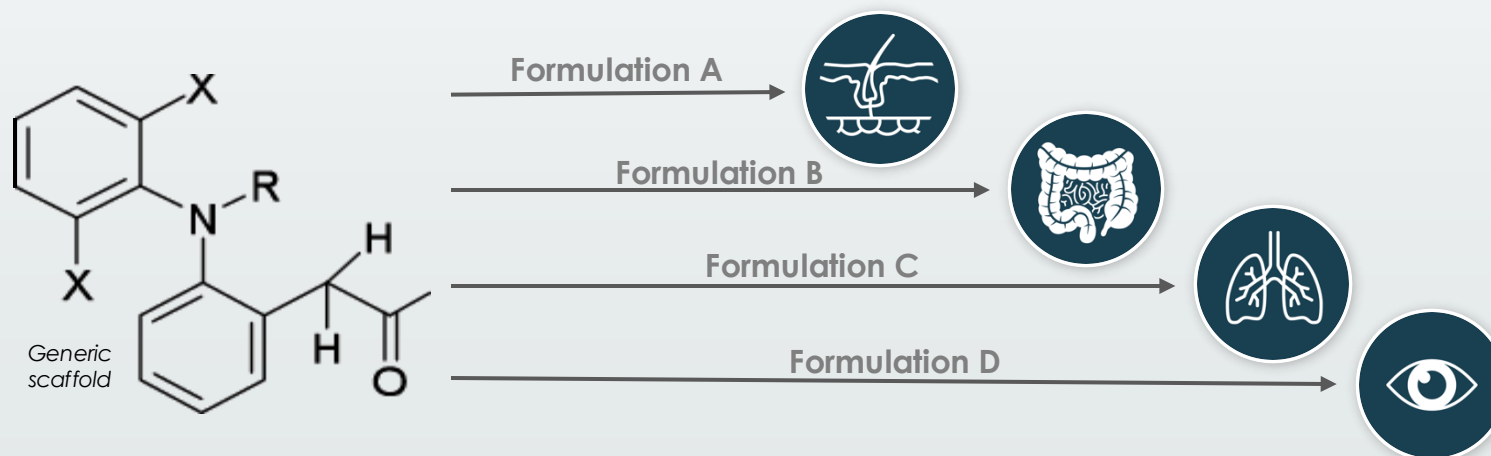


Challenges in the Development of AhR targeted Therapeutics

Despite a **paradigm shift in our understanding of AhR in disease physiology**, there are still development **challenges to generate AhR modulators for therapeutic use**

While AhR binds a diverse array of ligands there have been two key challenges in the development of AhR modulators for therapeutic use:

1. The generation of **potent and selective AhR modulators with good drug-like properties**
2. Molecules amenable to formulations that **target disease tissues and minimize systemic exposure**



Tapinarof Validates AhR as a Therapeutic Target

Review articles

Tapinarof validates the aryl hydrocarbon receptor as a therapeutic target: A clinical review



**Jonathan I. Silverberg, MD, PhD, MPH,^a Mark Boguniewicz, MD,^b Francisco J. Quintana, PhD,^c
Rachael A. Clark, MD, PhD,^d Lara Gross, MD,^e Ikuo Hirano, MD,^f Anna M. Tallman, PharmD,^g Philip M. Brown, MD, JD,^g
Doral Fredericks, PharmD, MBA,^g David S. Rubenstein, MD, PhD,^g and Kimberly A. McHale, PhD^g** *Washington, DC;
Denver, Colo; Boston, Mass; Dallas, Tex; Chicago, Ill; and Morrisville, NC*

Biologic-like Efficacy from a Small Molecule

Tapinarof activates AhR pathways and exhibits biologic-like efficacy – the first novel, non-steroidal, topical agent launched for psoriasis in the U.S. in more than 25 years

VTAMA
(tapinarof) cream 1%



Baseline

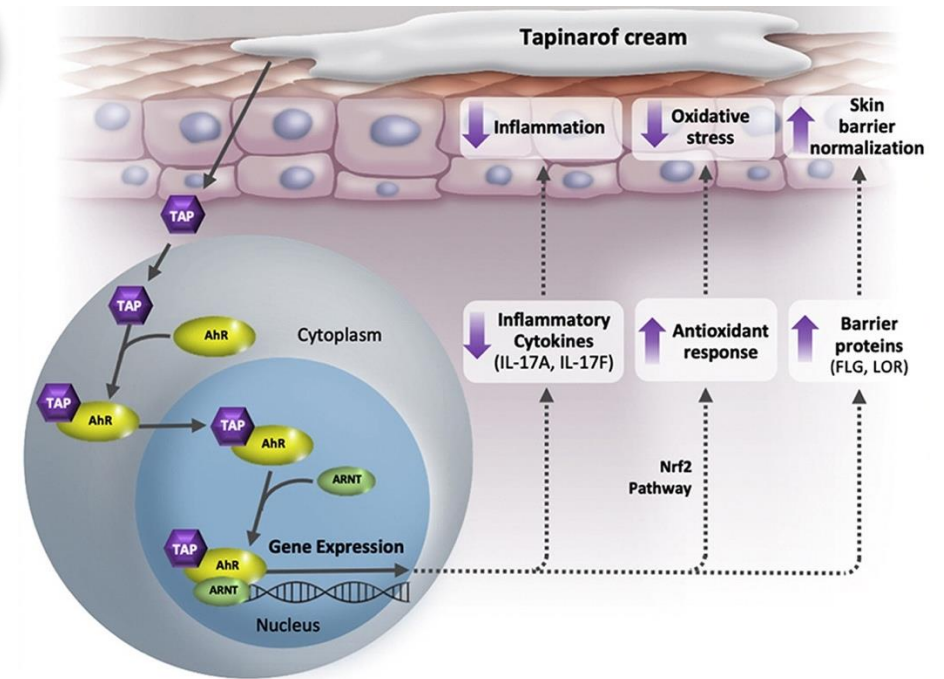


4 weeks



12 weeks

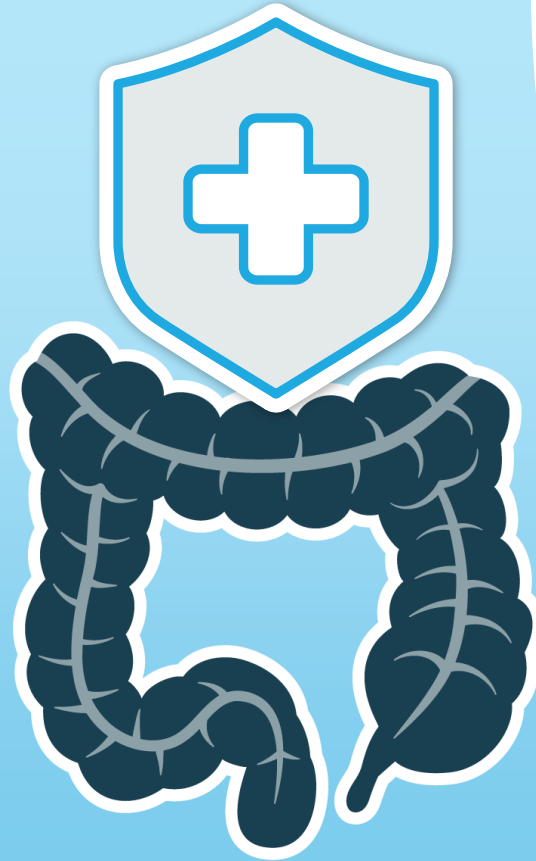
Up to 48% of adult patients achieved PASI75 vs ~10% of those using vehicle



Modulation of AhR for the Treatment of Ulcerative Colitis & EQ504

Mucosal Healing in Ulcerative Colitis: An Unfulfilled Promise

**Inflammatory
condition
affecting
~5 million
people
worldwide**

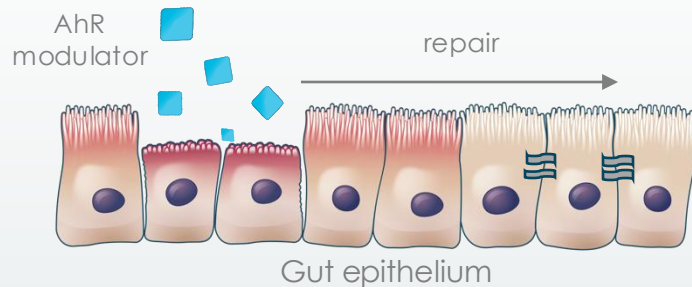


- >15 approved immunomodulatory drugs, yet **therapeutic efficacy remains low**
- Clinical remission rates **up to ~30%**
- Systemic suppression of immune system = **significant potential side effects**
- Poor long-term clinical outcomes driven by **lack of mucosal healing**
- Need to develop better strategies to **promote mucosal healing**
- **Alternative approaches** or combination therapy may enable improved care

AhR Pathway is Key to Maintaining Gut Health

AhR activated pathways are critical for maintaining intestinal homeostasis and can protect against inflammatory bowel disease by **regulating barrier function & immune responses**

Barrier function & Tissue Repair



Activated AhR pathways...

- Maintain the integrity of tight junctions of mucosal epithelial cells
- Promote tissue regeneration and wound healing

Immune Cell Regulation



Activated AhR pathways...

- Promote T_{reg} cell function necessary for regulation of T_{eff} cells
- Modulate innate lymphoid cells (ILC) and macrophages (Mac) protective against mucosal damage

Anti-inflammatory Cytokines

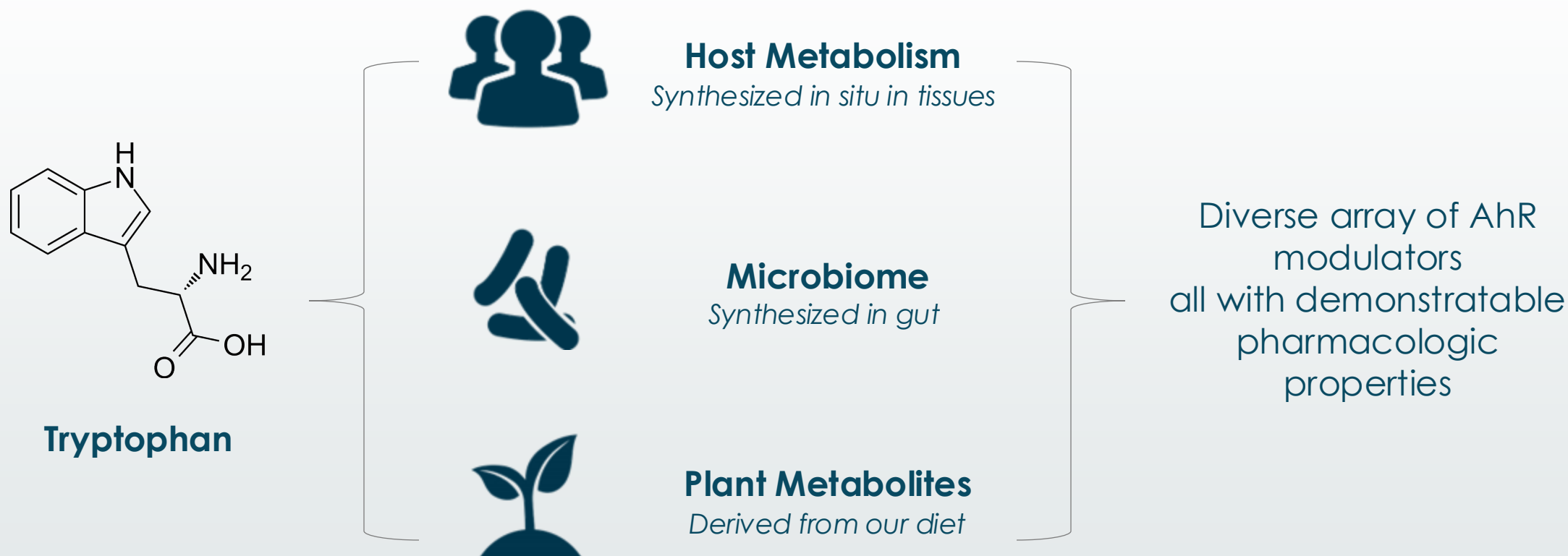


Activated AhR pathways...

- IL-10 suppresses pro-inflammatory cells, cytokines and their signals
- IL-22 maintains barrier function and stimulates epithelial cell repair

Tryptophan Metabolites Modulate Gut Homeostasis via AhR

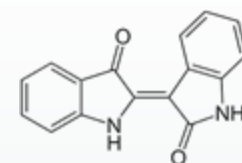
Tryptophan metabolites are **well characterized in their maintenance of gut homeostasis** and are **protective against colitis in animal models** but have limitations as therapeutics



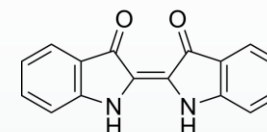
Indirubin/Indigo: Exogenous AhR Modulators

Indirubin and Indigo are **naturally-occurring, exogenous, AhR modulators** found in plants (*indigo naturalis*) that **modulate barrier physiology and immunology**

- Derived from plant biosynthesis of tryptophan and validated as the active agents in *indigo naturalis* in treatment of ulcerative colitis
- Induces T_{reg} cells and IL-10, while reducing T_h17 cells and inflammatory cytokines
- Induces IL-22 expression leading to improved barrier function and repair
- Planar indoles with poor selectivity and insolubility in water make formulation difficult



Indirubin
EC₅₀
~ 1-10nM



Indigo
EC₅₀
~ 200nM

Research Article

Combination Therapy with Indigo and Indirubin for Ulcerative Colitis via Reinforcing Intestinal Barrier Function

Original Article

Indirubin, a Constituent of the Chinese Herbal Medicine Qing-Dai, Attenuates Dextran Sulfate Sodium-induced Murine Colitis

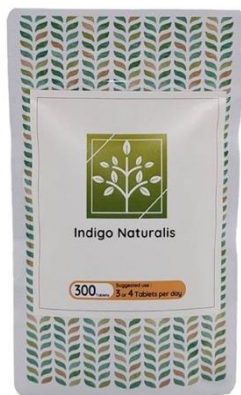
EXPERIMENTAL AND THERAPEUTIC MEDICINE 14: 1327-1336, 2017

Effects of indigo naturalis on colonic mucosal injuries and inflammation in rats with dextran sodium sulphate-induced ulcerative colitis

Modulation of AhR Leads to High Rates of Clinical Remission

Studies of **ulcerative colitis patients treated with indigo naturalis** demonstrate on-target engagement of AhR through **increased intestinal CYP1A1** and **high levels of clinical remission**

Indigo Naturalis (Qing-Dai)

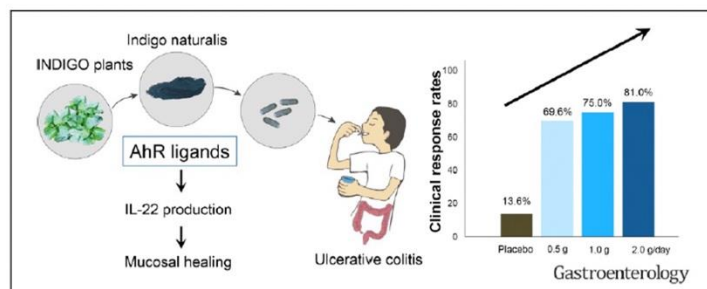


A traditional botanical medicine produced through fermentation of plants for which **indirubin** / **indigo** are the main (4%) bioactive ingredients

Gastroenterology

Efficacy of Indigo Naturalis in a Multicenter Randomized Controlled Trial of Patients With Ulcerative Colitis

Makoto Naganuma,¹ Shinya Sugimoto,¹ Keiichi Mitsuyama,² Taku Kobayashi,³ Naoki Yoshimura,⁴ Hidehisa Ohi,⁵ Shinji Tanaka,⁶ Akira Andoh,⁷ Naoki Ohmiya,⁸ Keiichiro Saigusa,⁹ Takayuki Yamamoto,¹⁰ Yuichi Morohoshi,¹¹ Hitoshi Ichikawa,¹² Katsuyoshi Matsuoka,¹³ Tadakazu Hisamatsu,¹⁴ Kenji Watanabe,^{15,16} Shinta Mizuno,¹ Wataru Suda,^{17,18} Masahira Hattori,^{18,19} Shinji Fukuda,²⁰ Akiyoshi Hirayama,²⁰ Takayuki Abe,²¹ Mamoru Watanabe,¹³ Toshifumi Hibi,³ Yasuo Suzuki,²² and Takanori Kanai,¹ for the INDIGO Study Group

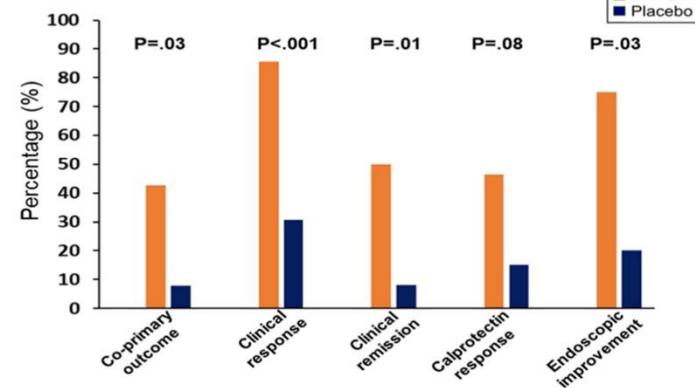


50% placebo adjusted at Week 8

Clinical Gastroenterology and Hepatology

Curcumin-QingDai Combination for Patients With Active Ulcerative Colitis: A Randomized, Double-Blinded, Placebo-Controlled Trial

Shomron Ben-Horin,^{1,2} Nir Salomon,¹ Georgios Karampekos,³ Nikos Viazis,³ Adi Lahat,^{1,2} Bella Ungar,^{1,2} Rami Eliakim,^{1,2} Rafael Kuperstein,^{2,4} Ofra Kriger-Sharabi,⁵ Hilla Reiss-Mintz,⁶ Henit Yanai,^{2,7} Iris Dotan,^{2,7} Eran Zittan,^{8,9} Nitsan Maharshak,^{2,10} Ayal Hirsch,^{2,10} Michal Weitman,¹¹ Gerassimos J. Mantzaris,³ and Uri Kopylov^{1,2}

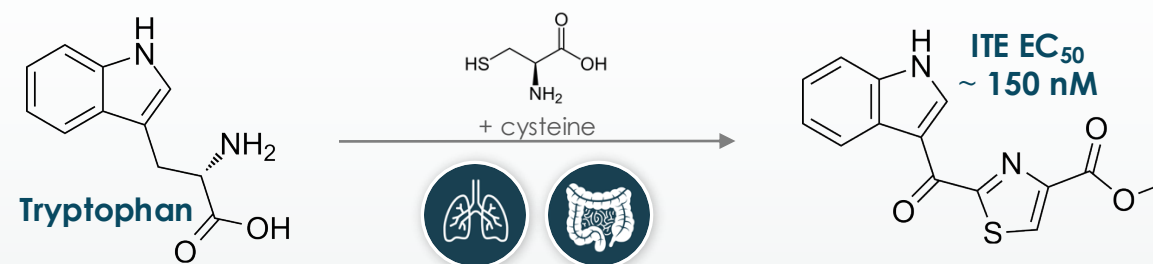


42% placebo adjusted at Week 8

ITE: An Endogenous, Non-toxic AhR Modulator

ITE is a naturally-occurring, endogenous, non-toxic AhR modulator found in the gut and lungs where it is synthesized *in situ* to modulate **barrier physiology and immunology**

- Discovered in 2002, synthesized *in situ* in gut and lung tissues from tryptophan and cysteine
- Induces T_{reg} cells and IL-10, while reducing T_h17 cells and inflammatory cytokines
- Induces IL-22 expression leading to improved barrier function and repair
- Ester group is metabolically unstable leading to loss of activity



Am J Physiol Gastrointest Liver Physiol 315: G220–G230, 2018.
First published April 19, 2018; doi:10.1152/ajpgi.00413.2017.

RESEARCH ARTICLE | *Inflammation, Immunity, Fibrosis, and Infection*

An endogenous aryl hydrocarbon receptor ligand, ITE, induces regulatory T cells and ameliorates experimental colitis

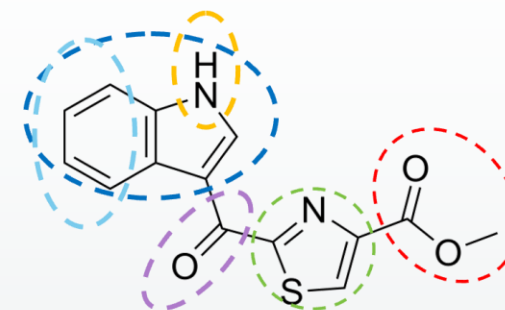
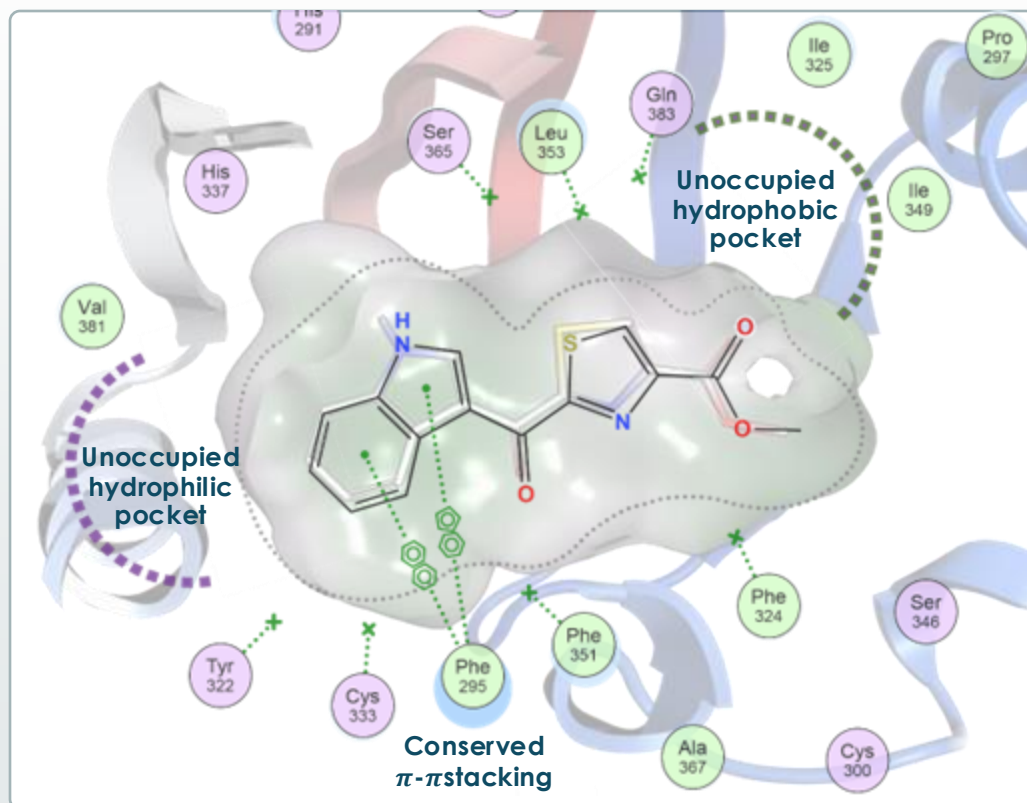
GASTROENTEROLOGY 2011;141:237–248

Aryl Hydrocarbon Receptor-Induced Signals Up-regulate IL-22 Production and Inhibit Inflammation in the Gastrointestinal Tract

ITE: Tailor-made Scaffold for Therapeutic Development

A **deep understanding of AhR, ITE biology and structure activity relationships (SAR)** led to a successful medicinal chemistry campaign **to identify an optimized therapeutic**

ITE bound to PAS-B domain pocket in AhR



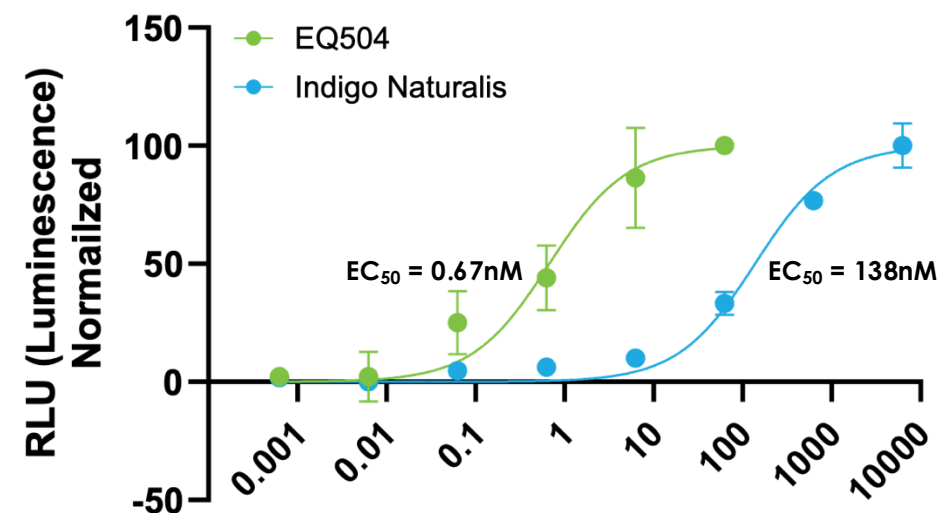
- Extensive SAR screening of 240+ compounds to:
 1. Identify key structural drivers of potency and efficacy
 2. Overcome intrinsic metabolic instability (ester, 'naked' indole)
 3. Improve pharmaceutical properties
- EQ504 potent activity as AhR modulator
- EQ504 has potential for CoM protection through 2046

EQ504 is a Potent Analog of ITE with Drug-like Properties

Derived from ITE, **EQ504 is a potent modulator of AhR and downstream pathways** that demonstrates **strong *in vitro* / *vivo* activity** in models of inflammation and barrier repair

- EQ504 highly potent and selective modulator of AhR and downstream pathways
 - ✓ Protects intestinal barrier function
 - ✓ Promotes intestinal epithelial wound healing
 - ✓ Increases T_{reg} , decreases T_{eff} cell
 - ✓ Effective in treating DSS-induced colitis in mice
- **Preclinical data in the back up section**
- Water soluble, GI stable with well-defined ADME, PK and PD properties
- Key IND enabling studies complete and 2kg GMP material manufactured in hand

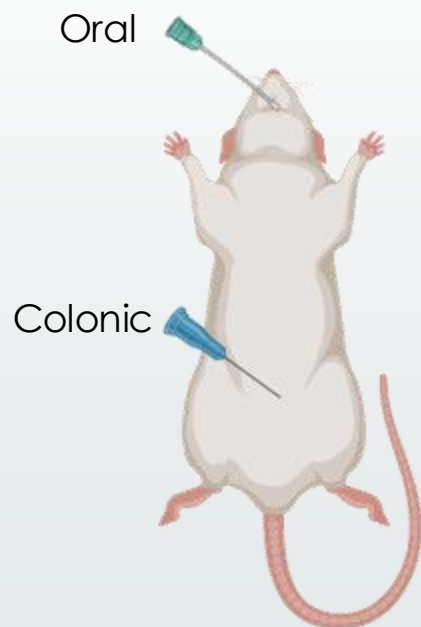
Induction of CYP1A1 in HepG2 (AhR-Lucia) Reporter Cells



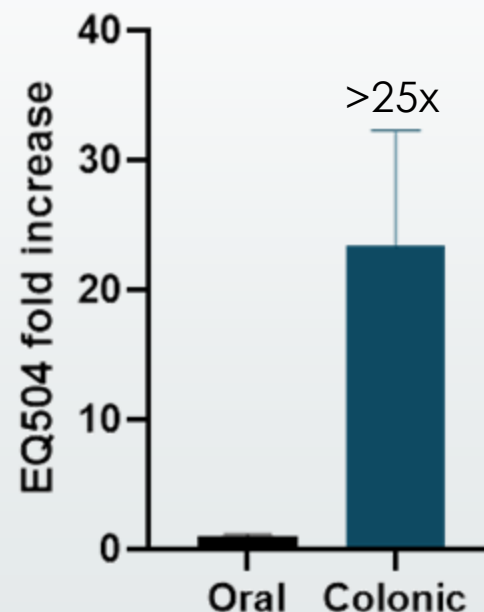
Colonic Delivery of EQ504 Reduces Systemic Exposure

In vivo experiments demonstrate **localized delivery** of EQ504 directly to the colon of rats, **results in 25x greater exposures in colon** tissues versus blood

Routes of Administration



Fold Increase of Peak (6hr) Colonic/Systemic Exposure



Targeting the Colon to Treat Ulcerative Colitis

Targeting the colon in UC patients is a clinically validated approach affording EQ504 a differentiated product profile and **several potential therapeutic benefits**

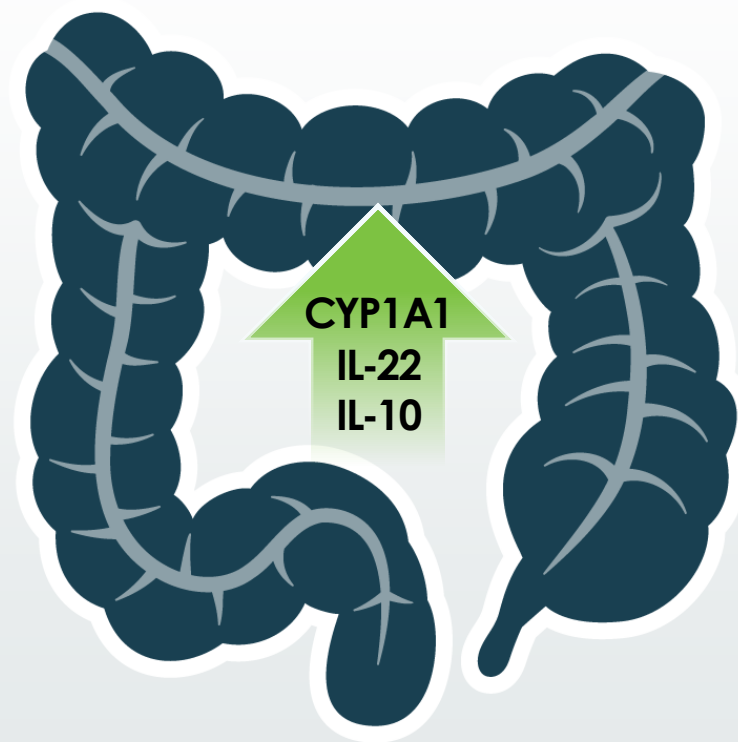
- Clinically and commercially validated enteric coating system available to target the colon
- Targeted, localized treatment of the colon may:
 - Allow for optimization of dosing to target tissues
 - Reduce systemic exposure mitigating off target activity with the potential to improve the safety and tolerability profile



Potential to Create Value in Phase 1 Proof of Mechanism Study

Efficacy of indigo naturalis in UC patients established; clinical data demonstrating a **favorable safety profile & proof of mechanism for EQ504 has potential to create value**

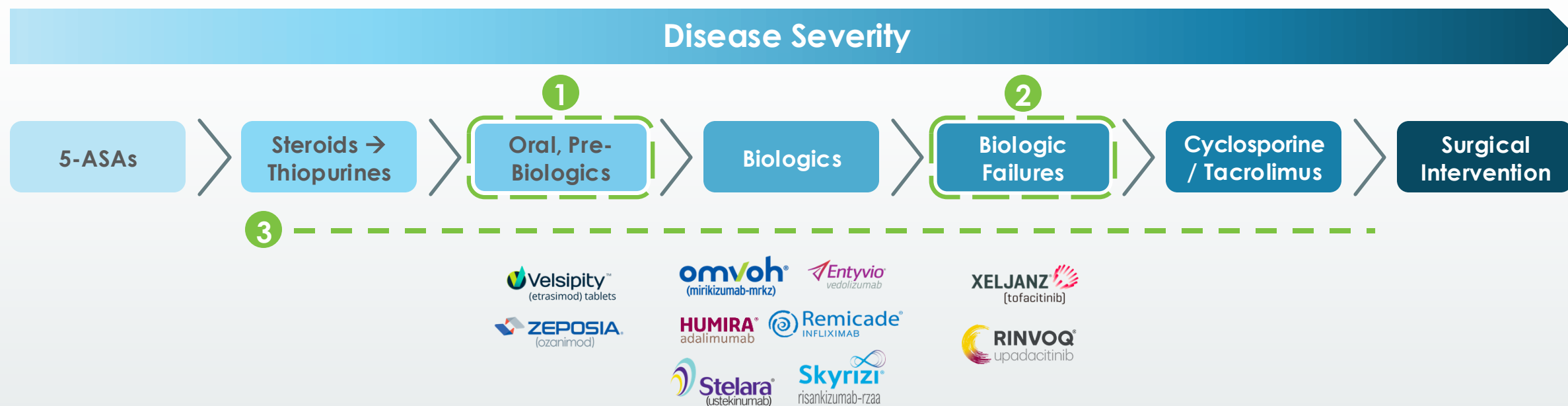
- Multiple clinical studies of indigo naturalis establish strong proof of efficacy of AhR modulation (CYP1A1)
- Planning to conduct SAD/MAD proof of mechanism study
 - Safety, tolerability
 - Pharmacokinetics and pharmacodynamics
 - Target engagement & activity in colon biopsies by CYP1A1, IL-10, IL-22
- **Phase 1 study initiation expected mid-2026**



Positioning & Market Opportunity

Opportunity for Broad Therapeutic Positioning

EQ504 positioned to have significant **utility across multiple lines of therapy**



- 1 Pre-biologic:** Substantial unmet need for new oral agents in the pre-biologic setting
- 2 Biologic failures:** Robust efficacy may support incremental opportunity in biologic failure patients
- 3 Combination therapy:** MoA affords rationale for combination with **ALL** lines of immuno-modulatory therapies

Large Market Opportunity and Active M&A

Ulcerative colitis market expected to exceed \$12B in annual worldwide sales by 2030,
availability of safe and effective **oral agents** expected to expand the pool of treated patients

Approximately ~900,000
patients in US
& ~600,000
receiving treatment

Multi Billion \$
opportunity in US alone



Acquired by



for **\$3.2 Billion**
at Phase 2a



Acquired by



for **\$10.8 Billion**
at Phase 2a



Licensed by



for **\$900 million**
at preclinical

Corporate

Accomplished Executive Leadership



Bruce Steel, CFA
CHIEF EXECUTIVE OFFICER

BioMed Ventures • Rincon
Anaphore • Ambit



Steve Connelly, PhD
CHIEF SCIENTIFIC OFFICER

BioMed Ventures • aTyr Pharma
The Scripps Research Institute



Christine Zedelmayer
CHIEF OPERATING OFFICER

Amylin • Amgen • Ligand



Penny Tom
SVP FINANCE

Illumina • Ernst & Young



Joel Rothman
CHIEF DEVELOPMENT
OFFICER

Cytokinetics • Genentech
Raptor • Jazz Pharmaceuticals



Matt Ritter, PhD
SVP CORPORATE
DEVELOPMENT

La Jolla Pharmaceutical
EyeCyte • The Scripps
Research Institute

Extensive Industry Experience



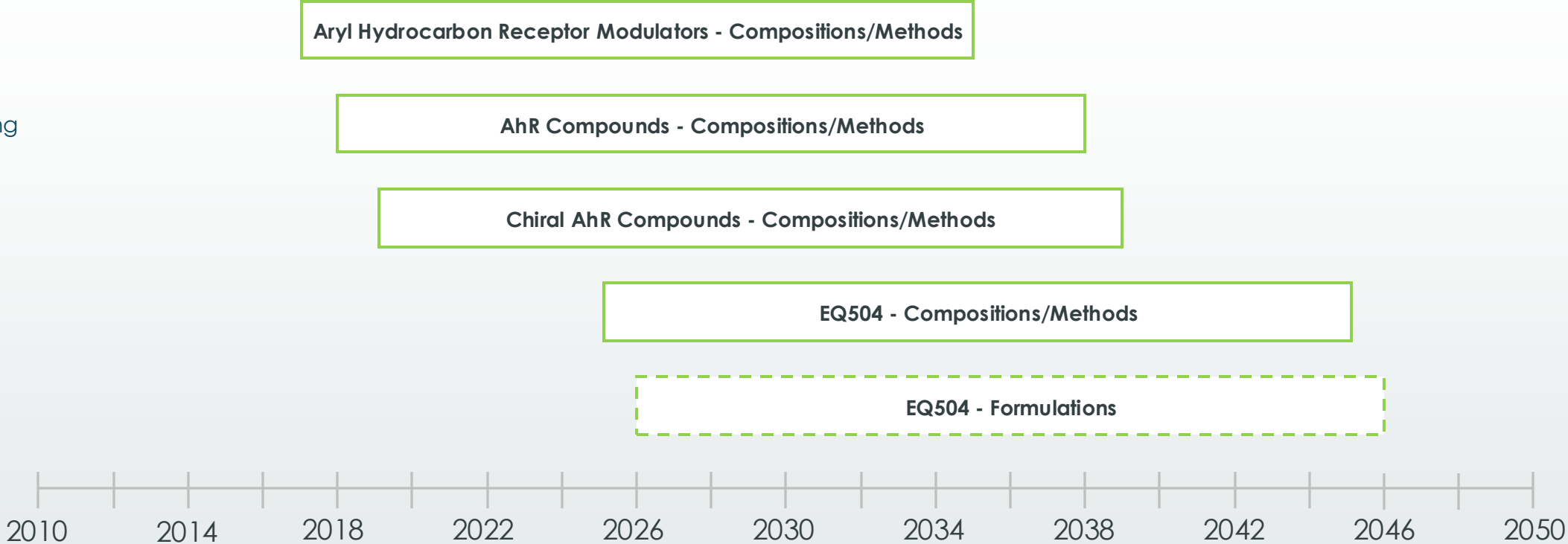
Equillum Intellectual Property

AhR Portfolio

3 patent families
8 issued patents
5 applications pending

Current EQ Filings

Future EQ Filings



Assumptions:

- Current EQ filings includes, filed, provisional, and prepared applications
- listed applications will issue
- Potential patent term extensions not shown

Scientific Advisors

Professor Francisco J. Quintana, PhD

Harvard University & Associate Member, Broad Institute.



Dr. Quintana is immunologist focused on investigating signaling pathways that control inflammation, with the ultimate goal of identifying novel therapeutic targets and biomarkers for immune-mediated disorders. He has published over 230 peer reviewed articles and book chapters and is a world-renowned expert on the transcription factor AhR, which he identified as having an important role in the control of inflammation driven by adaptive and innate immune cells. Dr. Quintana's work guided the development of Tapinarof, the first FDA-approved AHR-targeting drug for the treatment of psoriasis and atopic dermatitis.

Dr. Thomas Daniel, MD

Venture Partner, Entrepreneur & Industry Veteran

Over 20 years of experience leading and building research and development organizations and leading investments in new companies. Tom recently served as a Venture Partner at ARCH Venture Partners for five years following a decade as President of Global Research and Early Development at Celgene Corporation. He previously served in senior leadership roles at Ambrx, Amgen and Immunex and was formerly a director at Juno, Epizyme, Sana, Larimar and Vir. Gate Therapeutics and Trotana, and is director at Vividion, Gossamer Bio, Aspen and Mozart.

Professor Vijay K. Kuchroo, DVM, PhD

Harvard Medical School & Member of the Broad Institute



Dr. Kuchroo is a world-renowned immunologist where his major research interests include autoimmunity – particularly the role of co-stimulation and other regulatory factors that impact the induction of T cell tolerance and dysfunction in the tissues such as the gut and lung. Dr. Kuchroo has published over 400 research articles and is the lead author of a paper describing the development of Th17 cells, which is one of the most cited papers in the field of immunology. Dr. Kuchroo was named a Distinguished Fellow by the American Association of Immunologists in 2021, among the highest honors bestowed by AAI.

Dr. Fred Ramsdell, PhD

Former CSO & Founder at Sonoma Biotherapeutics



An esteemed immunologist Fred has held senior positions at Sonoma Biotherapeutics, Immunex and Novo Nordisk. Notably at Darwin Molecular he established the immunology program, where amongst other programs, he led the team that discovered and characterized FoxP3, a gene critical to the function of regulatory T cells. For his efforts Fred and colleagues were awarded the Crafoord Prize in 2017 for their discoveries relating to regulatory T cells, which counteract harmful immune reactions in arthritis and other autoimmune diseases.

Clinical Advisors

Professor Bruce Sands

Feinstein IBD Clinical Center, Mt Sinai Hospital



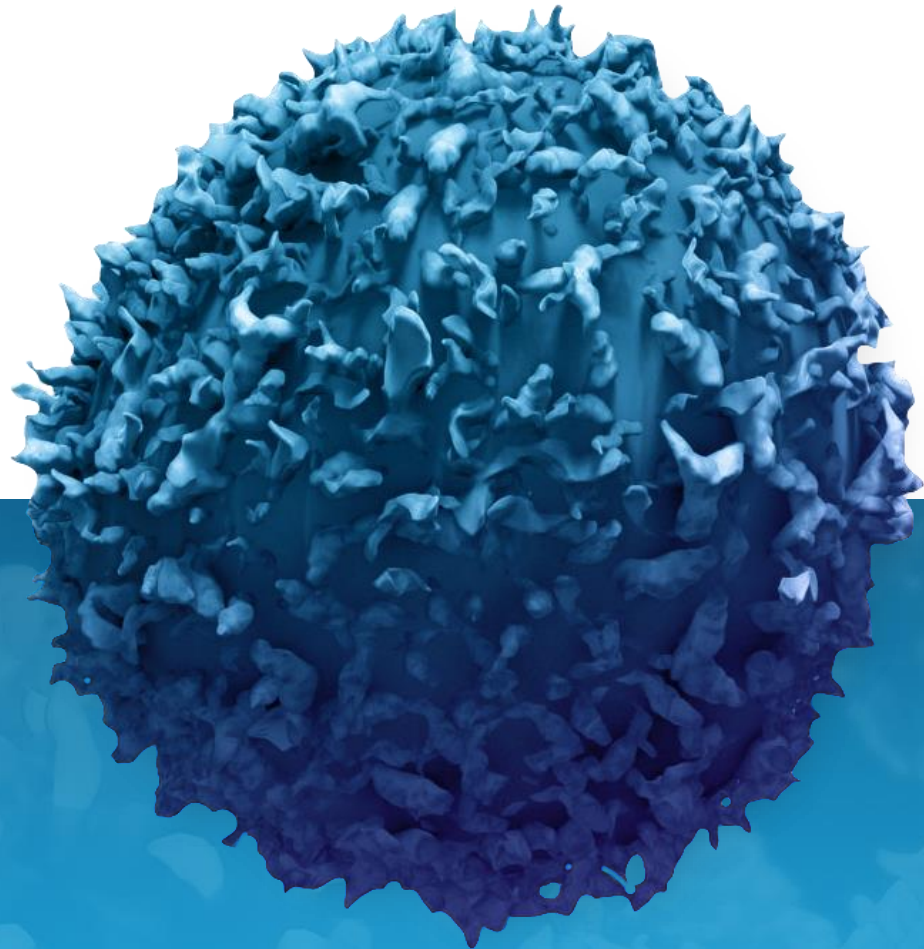
Dr. Sands is an expert in the management of inflammatory bowel diseases and has earned an international reputation for his care of patients with complex and refractory disease. He joined Mount Sinai in 2010 as Chief of the Dr. Henry D. Janowitz Division of Gastroenterology. Prior to joining Mount Sinai, Dr. Sands was Medical Co-Director of the Crohn's & Colitis Center at Massachusetts General Hospital in Boston, where he also served as the hospital's Acting Chief of the Gastrointestinal Unit as well as Associate Professor of Medicine at Harvard Medical School.

Brian Feagan

Venture Partner, Entrepreneur & Industry Veteran



Dr. Brian Feagan is a gastroenterologist, his research focus is the design, conduct and execution of large-scale randomized controlled trials (RCTs) in Crohn's disease and ulcerative colitis, and over the past 30 years, has been Principal Investigator in over 140 multi-center RCTs. His research has been devoted to the development, validation and optimization of outcome measures to assess the efficacy of novel therapeutics in CD and UC. Dr. Feagan is Professor of Medicine at the Schulich School of Medicine & Dentistry, a gastroenterologist at London Health Sciences Centre and Senior Scientific Director of Alimentiv Inc.

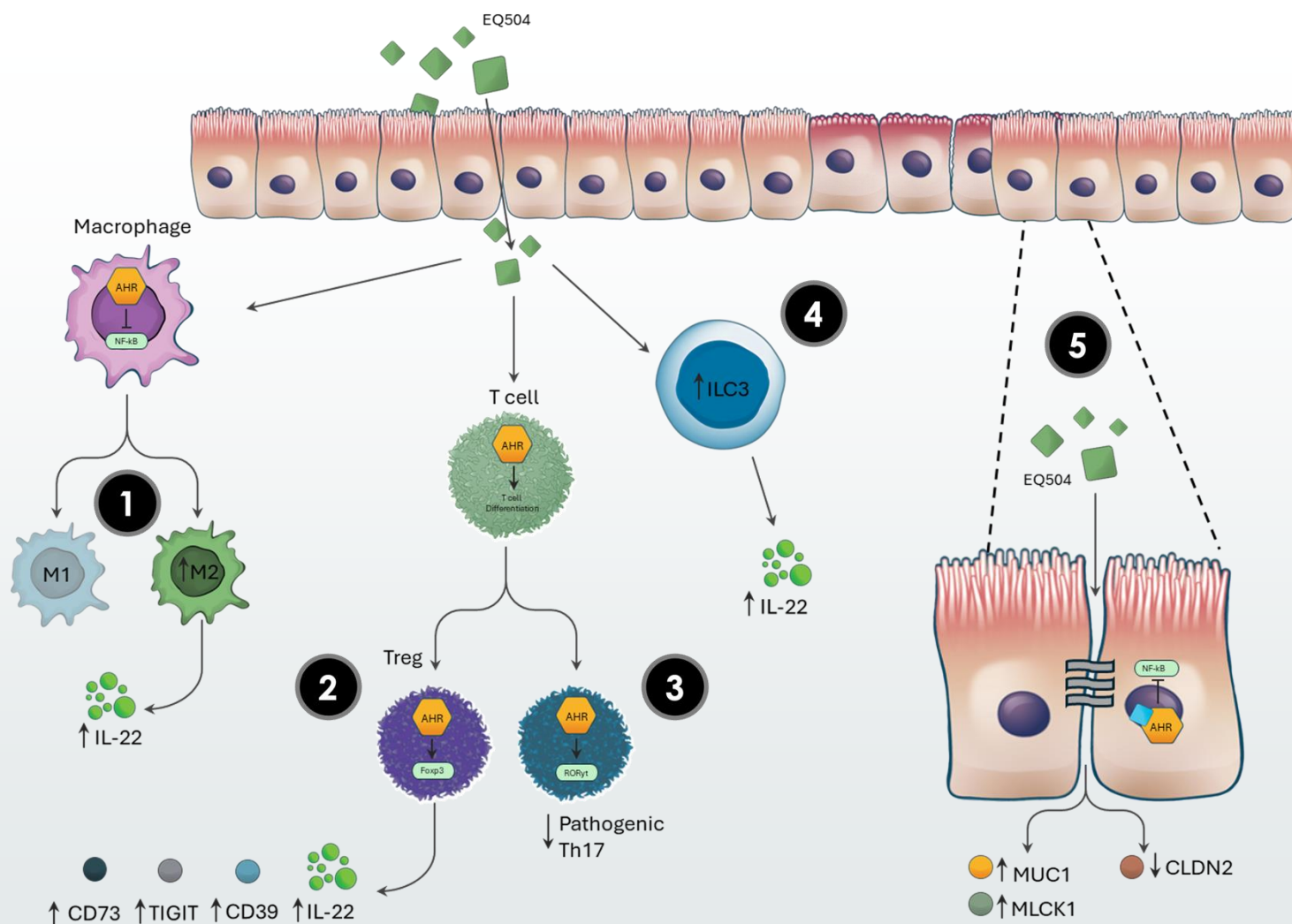


Thank you

www.equilliumbio.com

Pre-clinical Data

Modulation of AhR Modulates Tissue and Immune Cell Biology



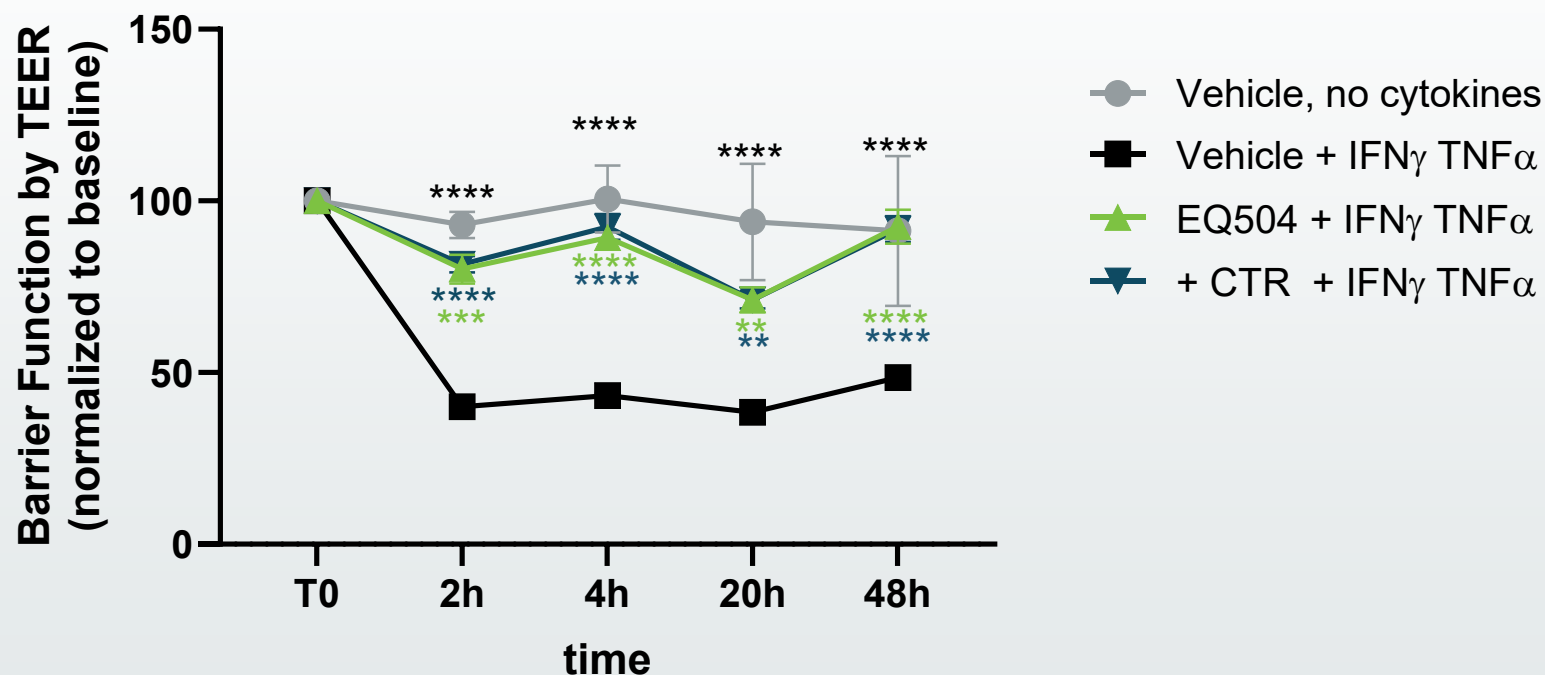
EQ504 impacts multiple cells in the gut

- 1** Drives M2 polarization which leads to an increase in IL-22 production.
- 2** Induces CD39 and TIGIT expression of Tregs which also leads to IL-10 and IL-22 cytokine release.
- 3** Decreases pathogenic Th17 activity, including secretion of IL-17
- 4** Activates ILC3s and induces the release of IL-22
- 5** In gut epithelial cells, EQ504 increases genes associated with gut healing at the tight junction and decreases genes associated with gut damage.

EQ504 Protects *Ex Vivo* Intestinal Barrier Function from Inflammation

Activation of AhR pathways by **EQ504 protects gut epithelial barrier function** which is disrupted by pro-inflammatory cytokines during stress, damage or disease

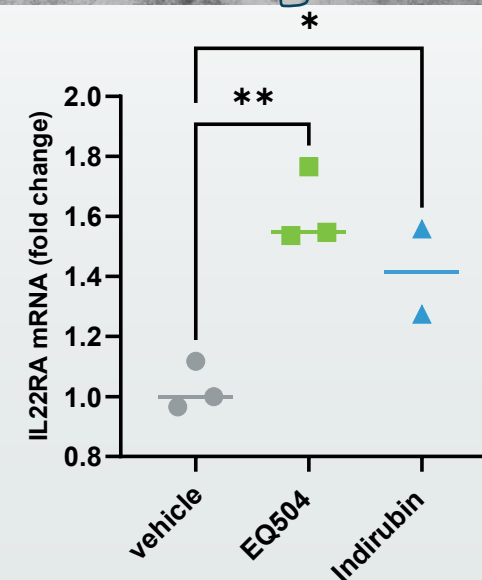
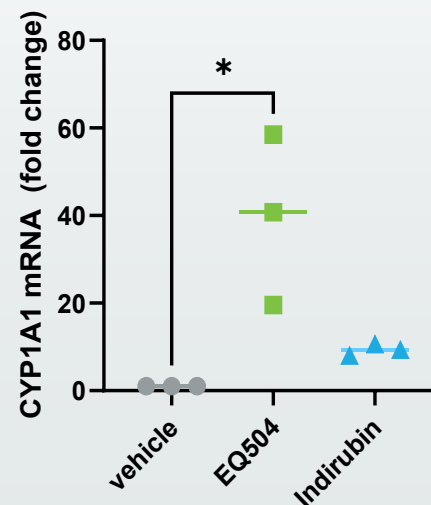
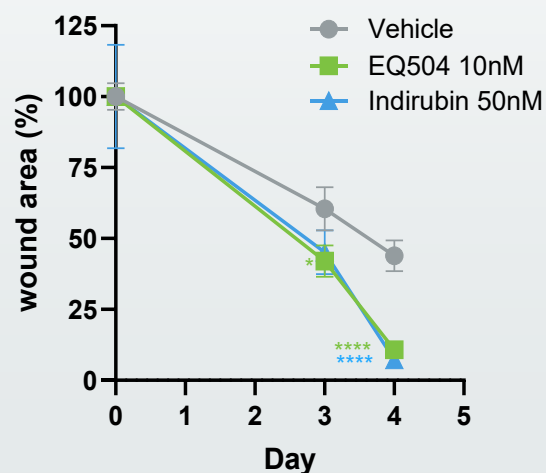
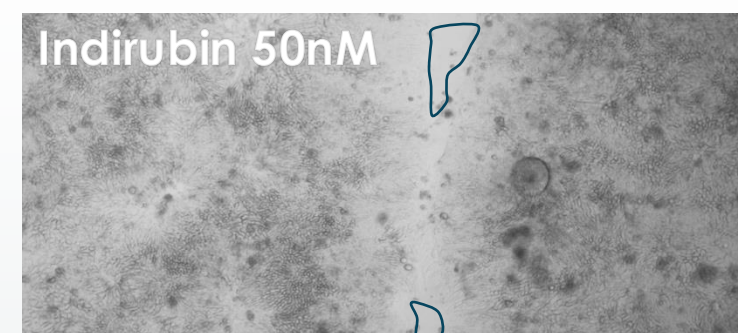
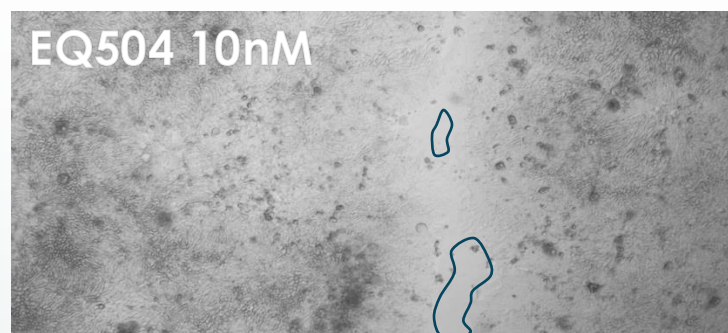
Modulation of gut epithelial barrier function *ex vivo*



****p<0.00001, ***p<0.0001, **p<0.001 vs Vehicle+ IFN γ TNF α by Two-way ANOVA (Analysis of Variance: a statistical test used to analyze the difference between the means of more than two groups). CACO2 monolayer challenged with IFN γ /TNF α to assess recovery of epithelial tight junctions in the presence of EQ504 using TEER: Trans-Epithelial Electrical Resistance. Abbreviations: IFN γ , interferon-gamma; TNF α = tumor necrosis factor alpha; CTR = FICZ (6-Formylindolo[3,2-b]carbazole); AhR, aryl hydrocarbon receptor. In-house data, Marrocco et al., American Association of Immunologists, 2025

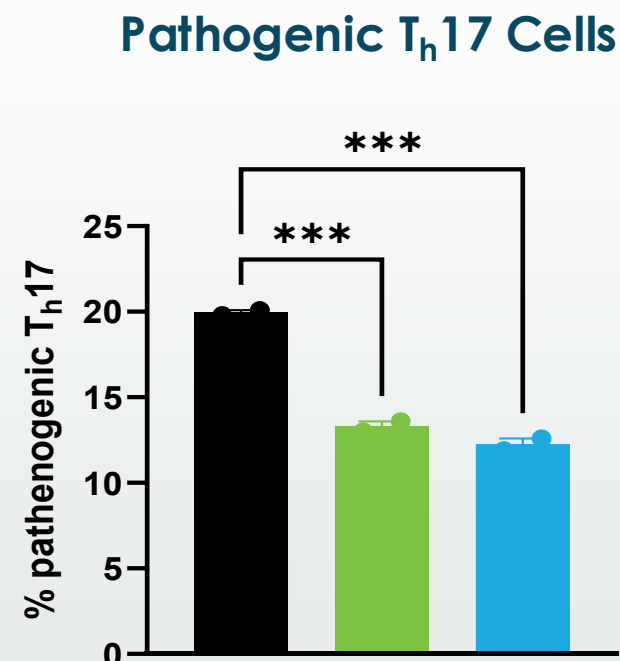
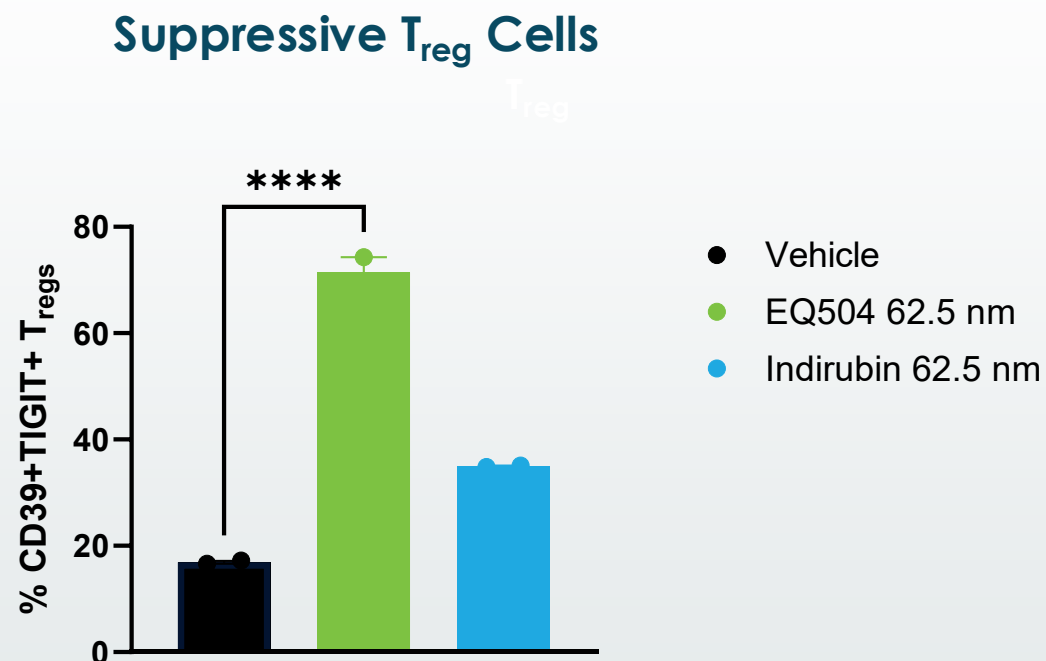
EQ504 Promotes *Ex Vivo* Intestinal Epithelial Wound Healing

EQ504 activates AhR and induces CYP1A1 and other downstream pathways such as IL-22 which leads to **increased levels of wound healing in epithelial cells**



EQ504 Modulates Key Immune Cells *In Vitro*

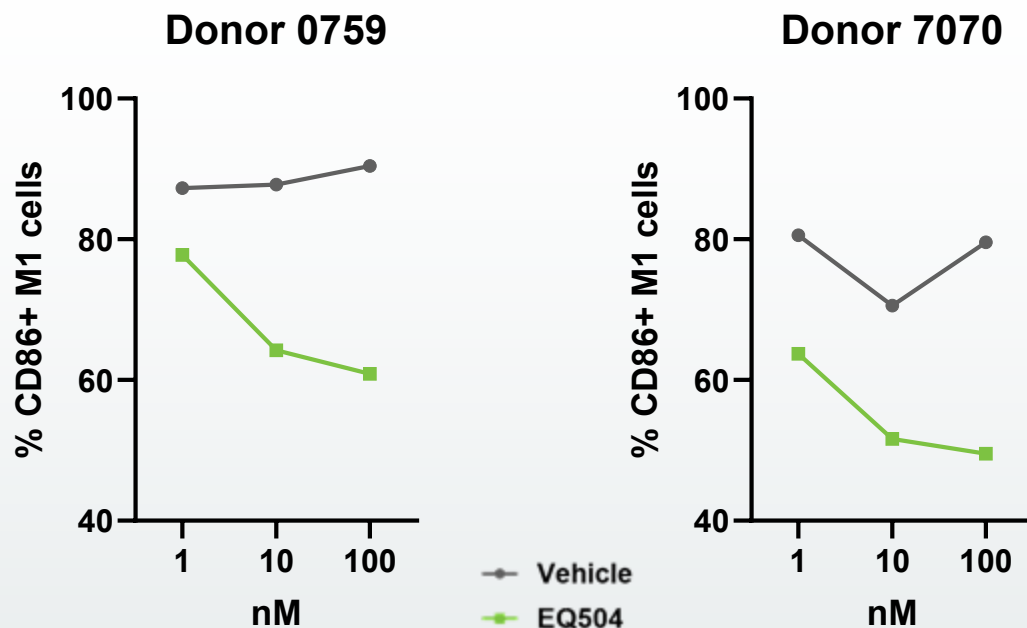
Modulation of AhR by EQ504 **increases the number and function of suppressive T_{reg} cells** that inhibit activity of T_h1 and T_h17 cells while also **reducing the number of pathogenic T_h17 cells**



**** $p < 0.0001$, *** $p < 0.001$; one-way ANOVA

T_{reg} cells are differentiated under standard differentiating conditions; retinoic acid + TGFB (cocktail) with a low CD3/CD28 stimulation for 7 days. TGIT+ T_{reg} cells selectively inhibit pro-inflammatory T_h1 and T_h17 cells (Joller et al., 2015), while CD39^{hi} T_{reg} cells have stronger stability and function under inflammatory conditions (Gu et al., 2017). Total PBMCs were incubated for 72hrs with CD3/CD28 stimulation. Th17 CXCR6+ROR γ δ + T_h17 cells migrate to inflamed tissues to mediate further inflammation (Schnell et al., 2021). Abbreviations: AhR, aryl hydrocarbon receptor, In-house data, Ampudia et al., American Association of Immunologists, 2025

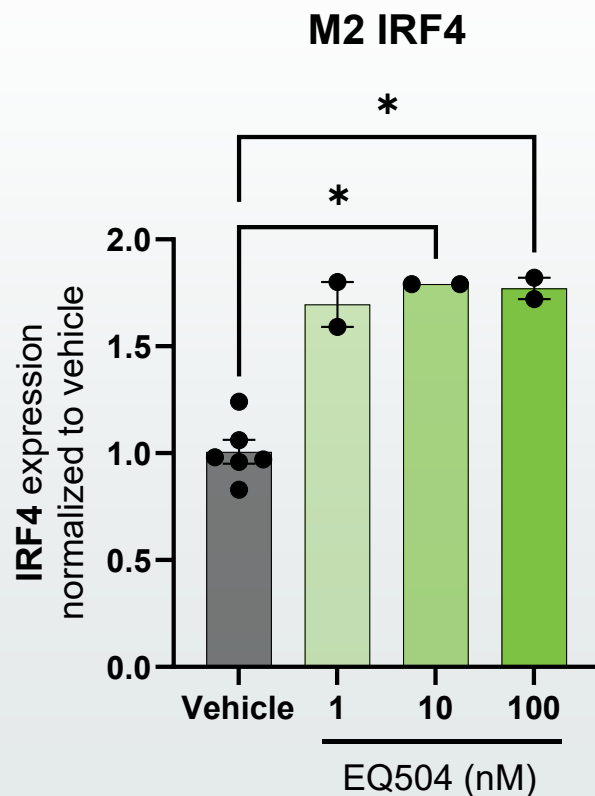
EQ504 Reduces Frequency of CD86+ M1 Macrophages



- **CD86** is a co-stimulatory molecule expressed on antigen presenting cells (APCs) and plays a crucial role in T cell activation and survival
- CD86 is also highly expressed on M1 macrophages which are involved in triggering inflammation and tissue damage
- Hence, **reducing CD86 on M1 macrophages can shift their function towards a less pro-inflammatory phenotype** such as an M2 phenotype that promotes tissue repair and resolution of inflammation

EQ504 Upregulates IRF4 Expression on M2 Macrophages

EQ504 upregulates interferon regulatory factor 4 (IRF4), a key regulator of M2 macrophage activation and polarization that contributes to tissue repair and resolution of inflammation



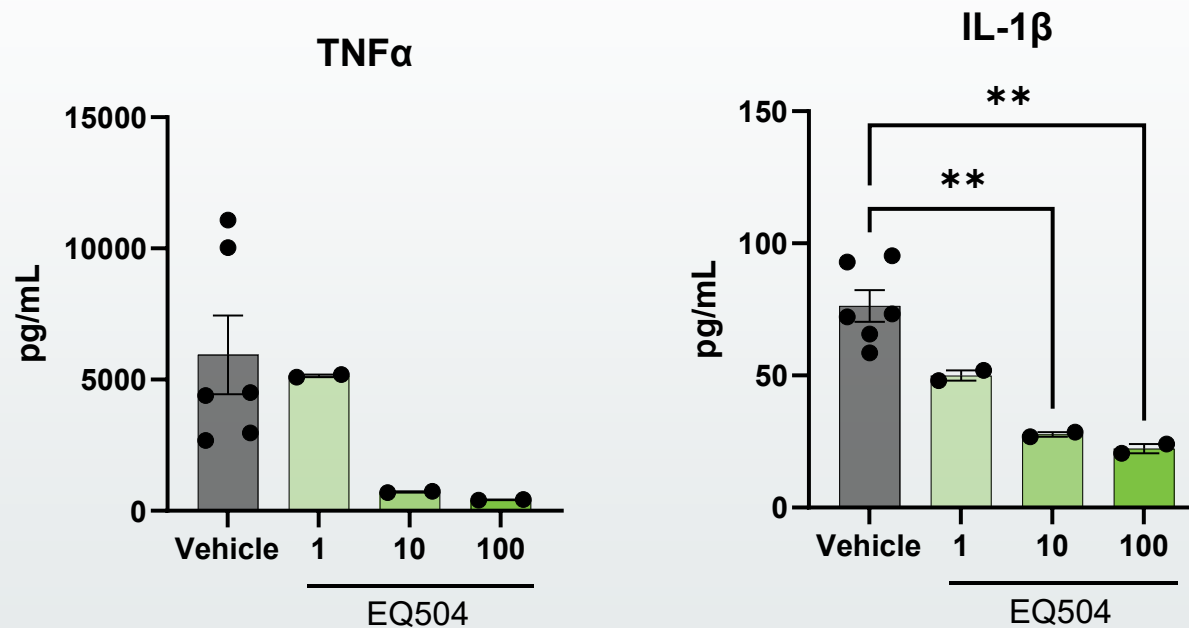
* $p < 0.005$ vs Vehicle by one-way ANOVA

Isolated monocytes were differentiated into M2 macrophages for 9 days in the presence of 1, 10, or 100nM EQ504. Polarized M2 macrophages were collected on Day 9 and gene expression of IRF4 was assessed. Abbreviations: interferon regulatory factor 4, IRF4. In-house data.

EQ504 Reduces Production of M1-associated Cytokines

EQ504 **modulates activity of M1 macrophages** leading to reduction of key inflammatory cytokines important in the development and progression of ulcerative colitis

Cytokine data



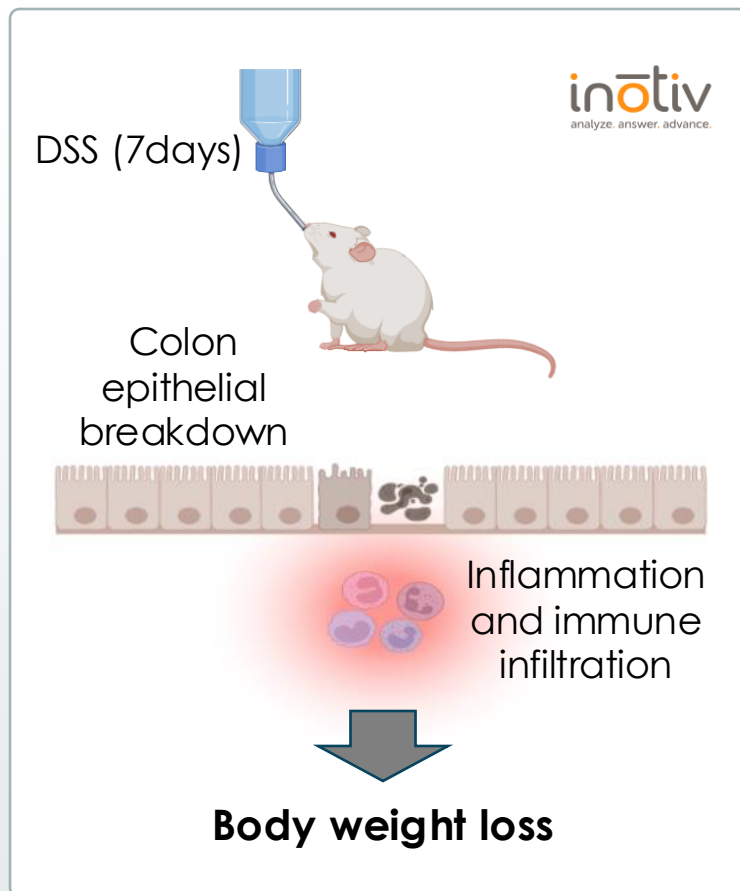
**p<0.01; one-way ANOVA

Isolated monocytes were differentiated into M1 macrophages for 9 days in the presence of 1, 10, or 100nM EQ504. Polarized M1 macrophages were collected on Day 9 and cytokines in supernatants were assessed using Legendplex. Abbreviations: Tumor necrosis factor alpha TNFα, interleukin one beta, IL-1β. In-house data.

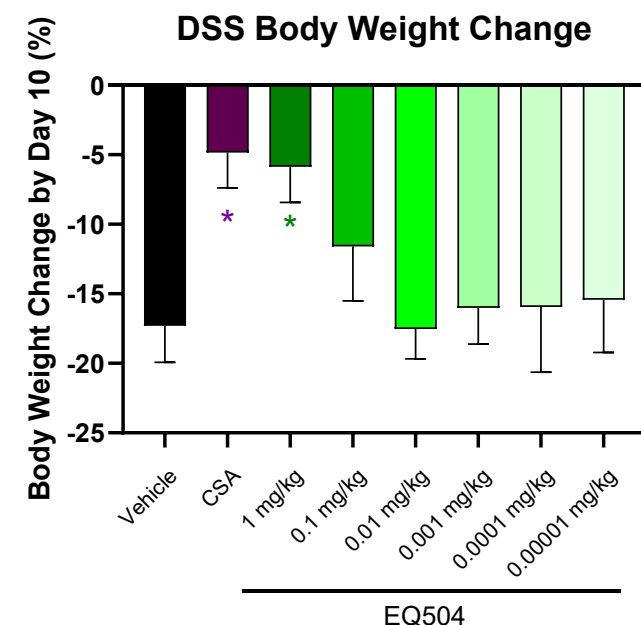
EQ504 Demonstrates Dose-Dependent Activity in DSS Colitis Model

DSS Colitis Animal Model

- Dextran Sodium Sulfate (DSS) induced colitis is the most widely used in vivo model of IBD
- Cyclosporin (CSA), a broad and strong immuno-suppressant, commonly used as a positive control
- Dose-dependent activity observed with EQ504
- EQ504 efficacious at 1mg/kg



EQ504 Demonstrates Dose Response in DSS colitis Model

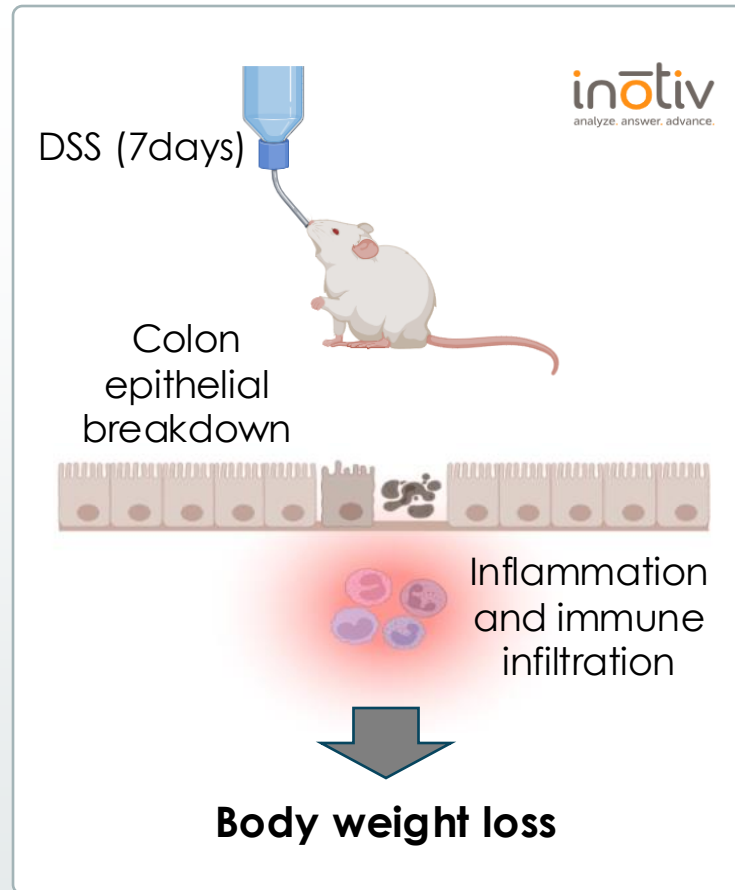


**p<0.001 vs Vehicle by One-way ANOVA, n=8-10

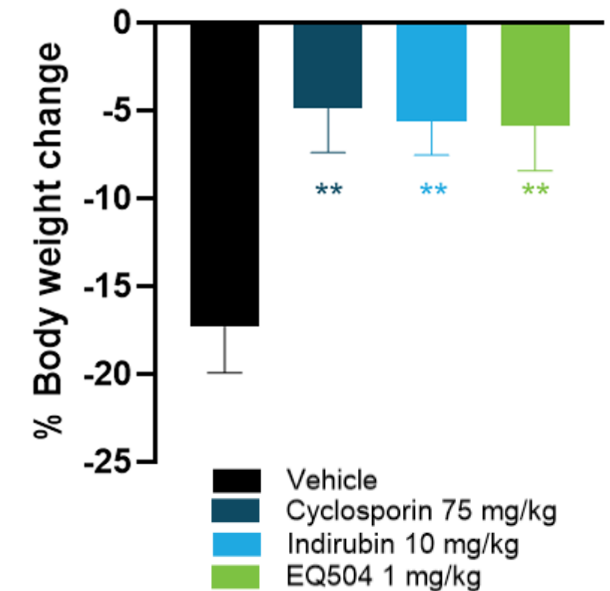
EQ504 Demonstrates Activity in Treating Experimental Colitis

DSS Colitis Animal Model

- Dextran Sodium Sulfate (DSS) induced colitis is the most widely used in vivo model of IBD
- Cyclosporin (CSA), a broad and strong immuno-suppressant, commonly used as a positive control
- Indirubin is efficacious at 10 mg/kg in DSS colitis
- EQ504 efficacious at 1mg/kg



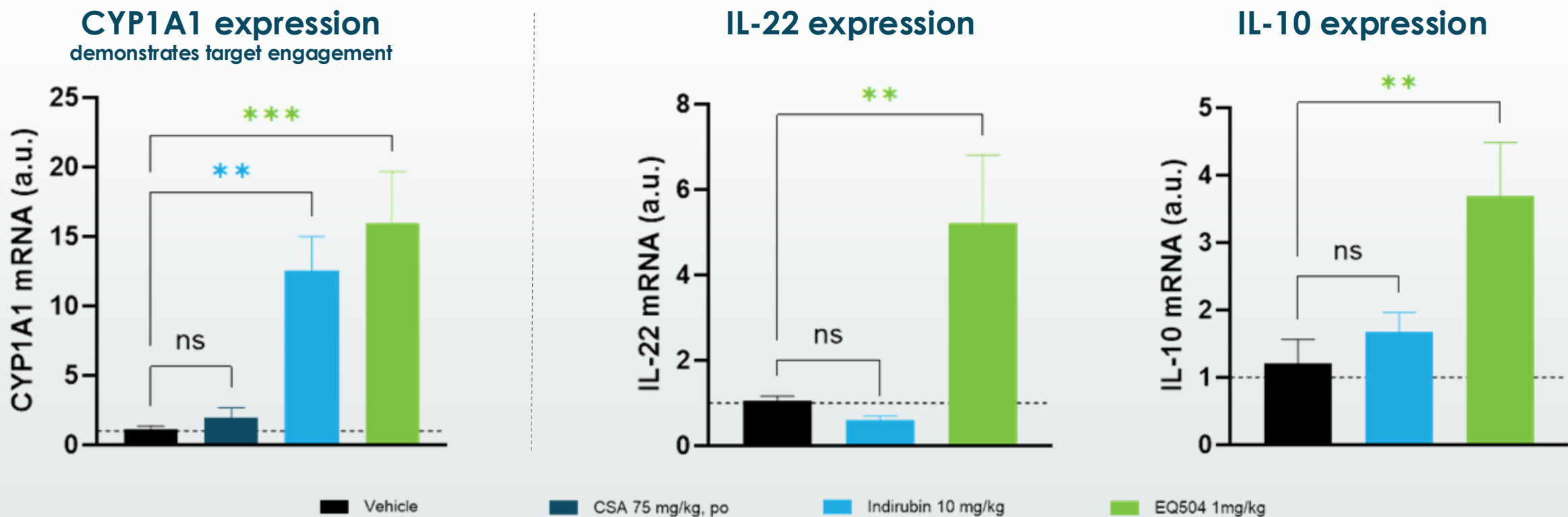
EQ504 is efficacious at 1 mg/kg in DSS colitis



**p<0.001 vs Vehicle by One-way ANOVA, n=8-10

EQ504 Induces Anti-Inflammatory Cytokines in Colon Tissues

AhR modulators **EQ504** and **indirubin** activate AhR pathways as demonstrated by **increased CYP1A1 and anti-inflammatory cytokine expression** in DSS colitis colons



EQ504 is Protective in DSS Colitis by Histology

