Quell Therapeutics

Non-confidential overview – May 2020

Quell Therapeutics : A "*Disruptive and Ambitious*" Vision

Be the leading Cell Therapy player in the Immune Dysregulation field

Disruptive, transformative and valued therapies addressing unmet medical needs

Keeping the patient central in all our efforts

Founded on the most engaging culture

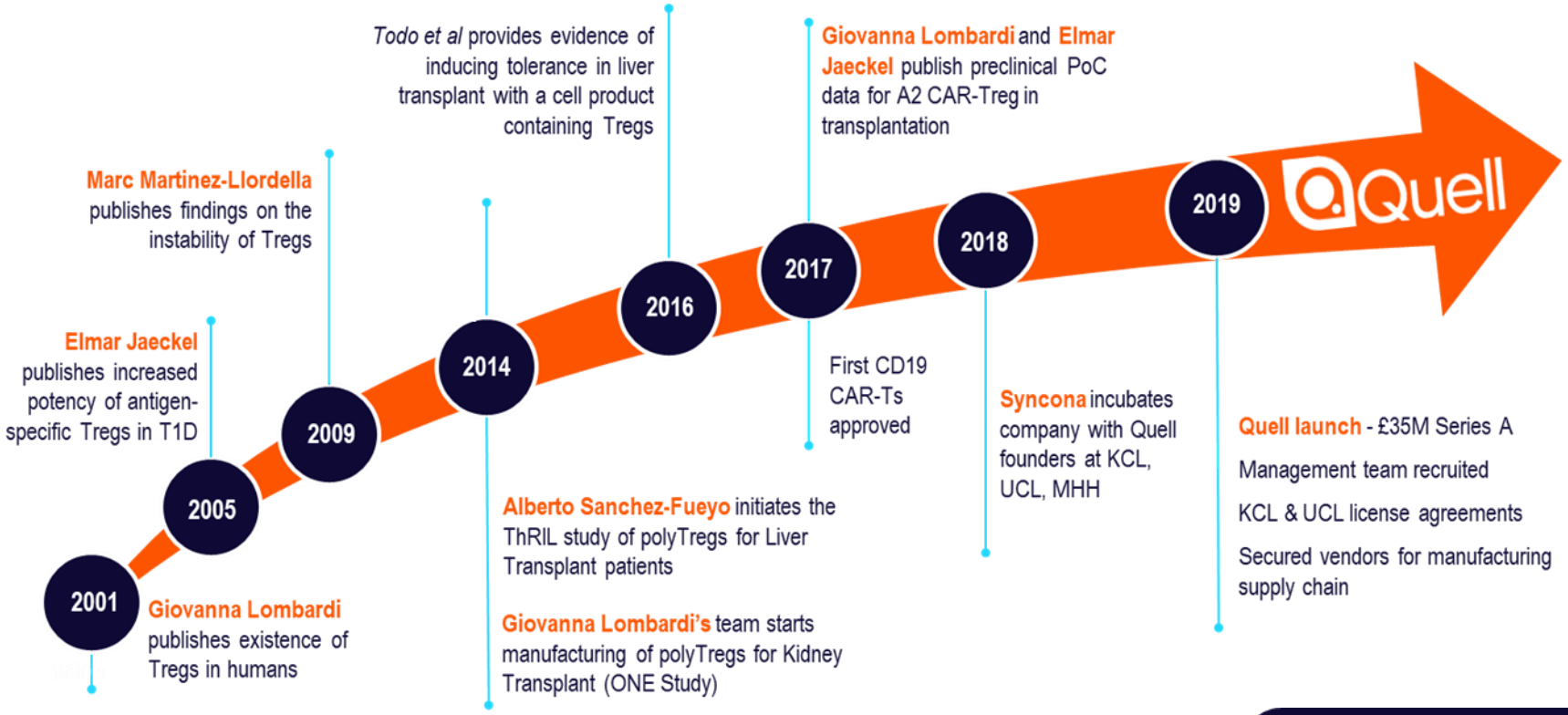
Quell Therapeutics: Leadership in Engineered Treg Cell Therapies

- Six complementary Scientific Founders
  Technology from leading academic institutions : KCL, UCL, Hannover
- £35m Series A; Leading long-term healthcare investor, and company builder
- Highly experienced Management Team
- QEL-001
  Lead asset CAR-Treg for Liver Transplantation
  Pipeline expansion into Autoimmune & Inflammatory diseases
- 
  Quell HQ office & labs (11k sq ft) at the iHub in White City, London

Our Scientific Founders

 **Prof. Giovanna Lombardi** Kings College, London	Treg Biologist, Treg Manufacturing Process Expertise, ThRIL Study (Liver Tx), ONE/TWO Study (Kidney Tx)
 **Prof. Alberto Sanchez-Fueyo** Kings College, London	Academic/Clinical Liver Tx Hepatologist, Treg Translational Scientist, Tolerance Induction, ThRIL / LITE / LIFT Studies (Liver Tx)
 **Prof. Elmar Jaeckel** Hannover Medical School	Academic/Clinical Hepatologist, Metabolic & Autoimmune Diseases, Treg Translational Scientist
 **Prof. Hans Stauss** Royal Free, UCL, London	Immunologist, T Cell Engineering Expertise, T Cell Receptors (TCRs)
 **Prof. Emma Morris** Royal Free Hospital, UCL, London	Principal Investigator on Multiple Cell Therapy trials, Regulatory & Clinical Development Expertise
 **Dr. Marc Martinez-Llordella** Kings College, London	Treg Biology and Immunology Expert Quell Management Team member – VP Biology

Evolution of Treg Science and the Landscape



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Quell Leadership Team

Iain McGill, CEO

Commercial leadership, Transplantatinon, Immunology, Oncology

NOVARTIS · Roche · Jazz Pharmaceuticals · Wyeth

Luke Henry, VP Operations & Corporate Devt

PhD Oncology, Cell Therapy, Strategic Consulting

NEON THERAPEUTICS · BCG BOSTON CONSULTING GROUP

Natalie Belmonte, SVP Research & Translation

Cell therapy R&D Biotech Development Lead

Tx Cell · PROMETHERA BIOSCIENCES

Marc Martinez-Lordella, VP Biology

KCL Senior Lecturer; Treg Biologist; Founder at Quell

KING'S College LONDON · UCSF · UNIVERSITAT DE BARCELONA

Bernd Schmidt, VP Product Delivery (CMC)

Broad experience in Product Development, Manufacture & Supply

gsk · AstraZeneca

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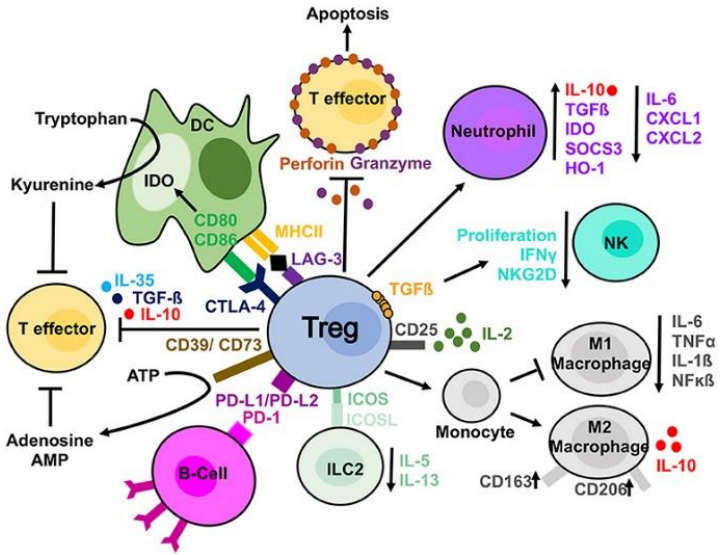
Tregs: Master controllers of Immune & Tissue homeostasis

Classical Tregs

- CD4+ CD25+ Foxp3+
- 5-10% of CD4+ T cells (thymus & peripheral-derived)
- Recognize self antigens through their TCR(αβ)
- TCR activation promotes immunosuppressive activity

Multiple mechanisms of localized immunosuppressive activity



Both contact-dependent & paracrine factors

Bystander suppression
IMMUNE TOLERANCE

Reduce inflammation
PROMOTE TISSUE REPAIR

Treg Cell Therapy: Restoring immune balance in disease

1st Gen

Polyclonal Tregs

- Selected & expanded Tregs
- Clinical safety & feasibility demonstrated in >100 patients
- Evidence of efficacy in GvHD *(Di Ianni et al, 2011; Martelli et al, 2014)*
- Biological effect demonstrated in liver transplant (*Sanchez-Fueyo et al 2019)*

2nd Gen

Donor-reactive Tregs

- Superior potency vs polyTregs
- Limited to organ transplant
- Significant challenges in manufacturing
- Initial evidence of efficacy in Liver Transplant *(Todo et al, 2016))*

Now/Future

Engineered Tregs

Tissue-targeting of Tregs with CAR/TCR technology

Modular technology to optimize Treg phenotype and function

Scalable manufacturing

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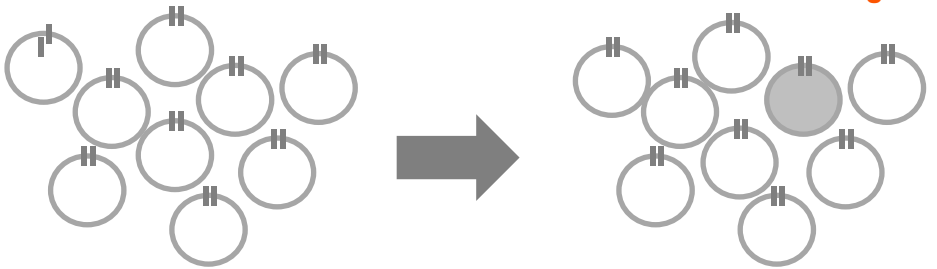
Increase antigen-specificity

Optimize Tregs with engineering technologies / synthetic biology

CAR Technology enhance the therapeutic potential of Tregs

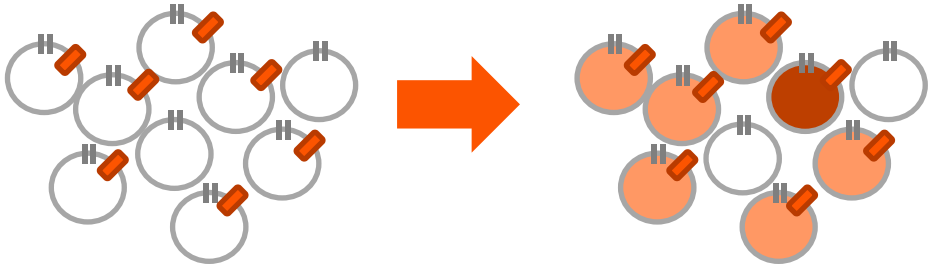
CAR-mediated Antigen-specificity drives increased suppression in Tregs through broader activation

Polyclonal Treg therapy



10-15% (SOT)
<0.1% (autoimmune)

CAR-Treg therapy

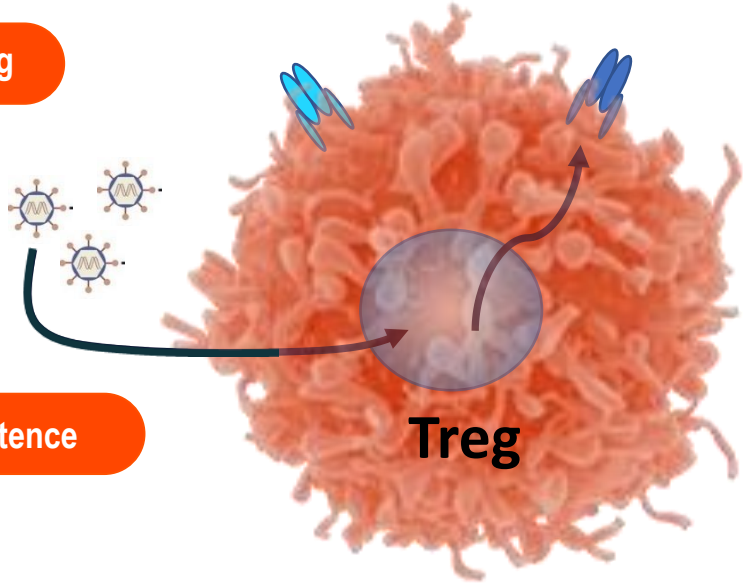


60-80% CAR-Treg

CAR Endogenous TCR

Multi-modular Engineered Treg Therapies

Optimized for Efficacy, Safety & Manufacturability



Tissue targeting

Suppressive capacity

Phenotype-lock stability

Trafficking / Homing

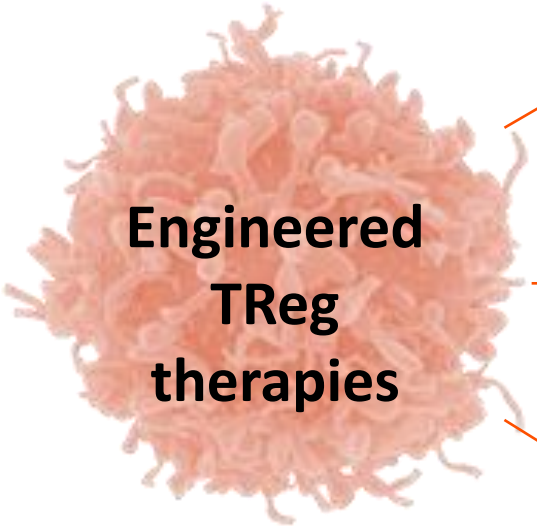
Persistence

Treg subpopulations

Safety

Treg GMP expansion

Significant Clinical Opportunity for Engineered Treg Therapies



Solid Organ Transplant

- Drive tolerance to an alloantigen response
- Opportunity to withdraw patients off chronic immuno-suppression drug regimens

Autoimmune Diseases

- Drive tolerance to an autoantigen response
- Address underlying disease pathophysiology to modify the course of disease
- Broad patient opportunity across multiple diseases

Inflammatory Disorders

- Reduce inflammation to promote tissue repair and tissue homeostasis
- Broad patient opportunity across autoinflammatory & neuroinflammatory disorders