



Gene therapy: Is robust scientific inquiry the missing factor?

11 December 2020



WORLD FEDERATION OF HEMOPHILIA
FÉDÉRATION MONDIALE DE L'HÉMOFILIE
FEDERACIÓN MUNDIAL DE HEMOFILIA

ASKING A QUESTION

Computer

WEBINAR

GENE THERAPY: IS ROBUST SCIENTIFIC INQUIRY THE MISSING FACTOR?

Don't miss this Patient Panel with Glenn F. Pierce, Mark W. Skinner, Declan Noone, Brian O'Mahony, Radoslaw Kaczmarek and David Page

DATE: December 11, 2020
TIME: 10am EST
DURATION: 60 minutes

This webinar is presented as part of the WFH Gene Therapy Initiative

WFH
WORLD FEDERATION OF HEMOPHILIA
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WFH GENE THERAPY ROUND TABLE
WORLD FEDERATION OF HEMOPHILIA
GENE THERAPY REGISTRY

Audio Settings ^

Chat Raise Hand **Q&A** Leave Meeting

Phone

9:02

Zoom Leave

WEBINAR

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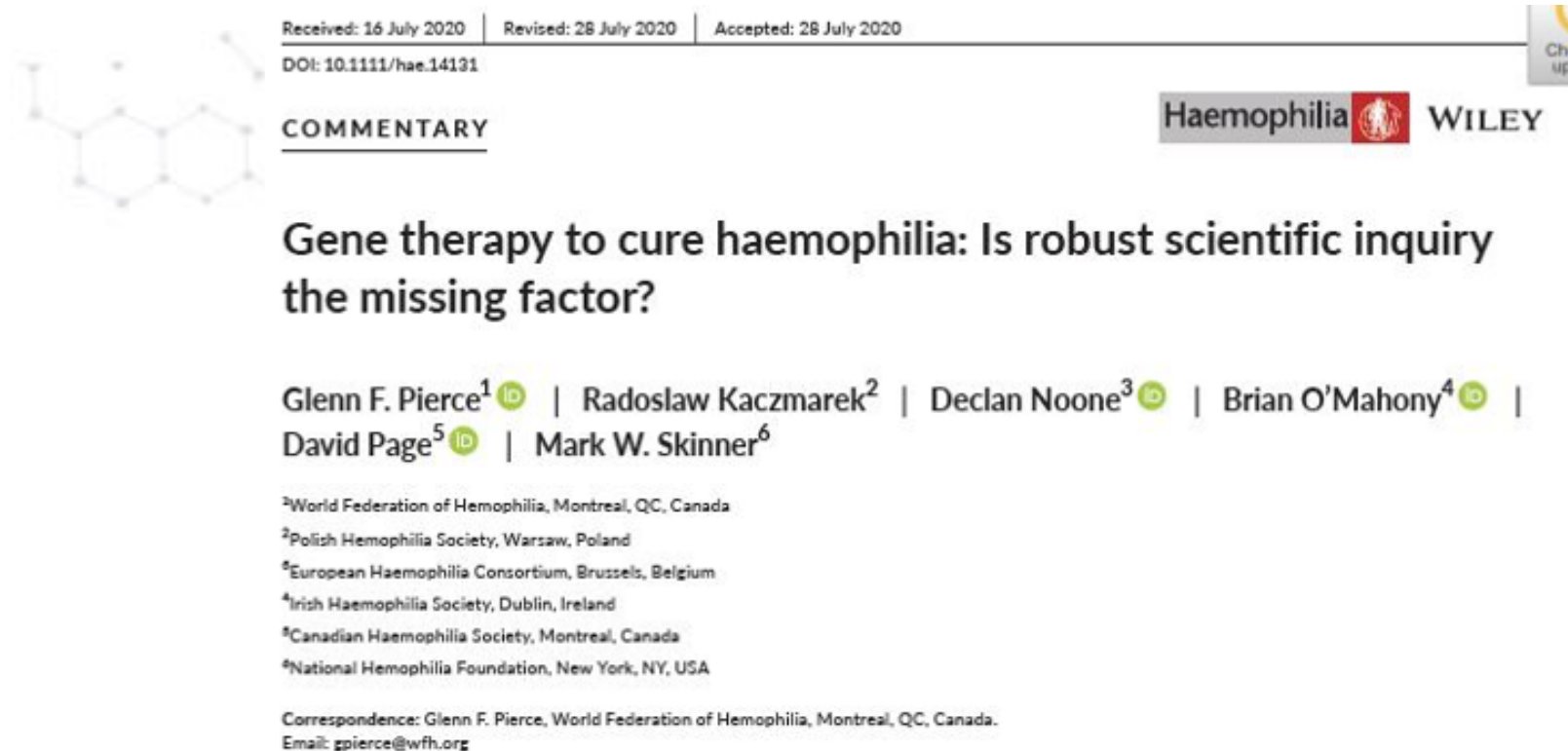
WFH GENE THERAPY ROUND TABLE
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Raise Hand Chat **Q&A** More

You can ask a question in the Question & Answers section.

We will address as many questions as time allows.

GENE THERAPY TO CURE HAEMOPHILIA: IS ROBUST SCIENTIFIC INQUIRY THE MISSING FACTOR?



Pierce GF, Kaczmarek R, Noone D, O'Mahony B, Page D, Skinner MW. Gene therapy to cure haemophilia: Is robust scientific inquiry the missing factor? *Haemophilia*. 2020;00:1–3.

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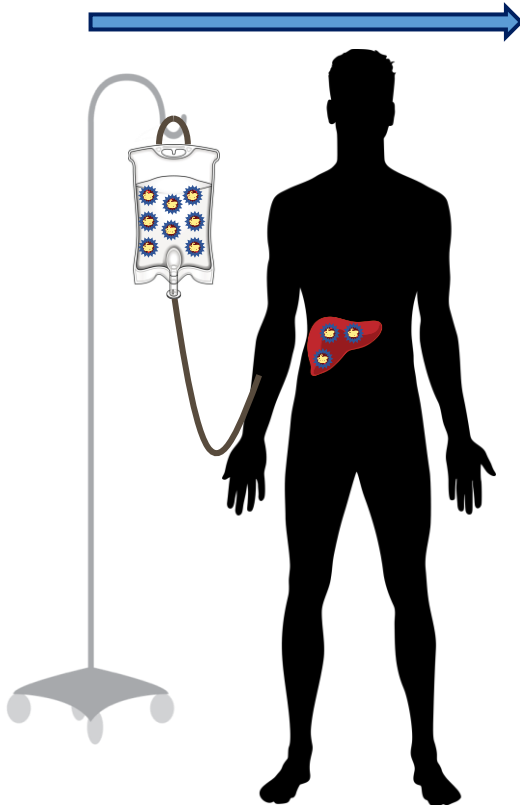
Brian O'Mahony
Irish
Haemophilia
Society



Mark W.
Skinner
National
Hemophilia
Foundation

AAV GENE TRANSFER FOR HEMOPHILIA

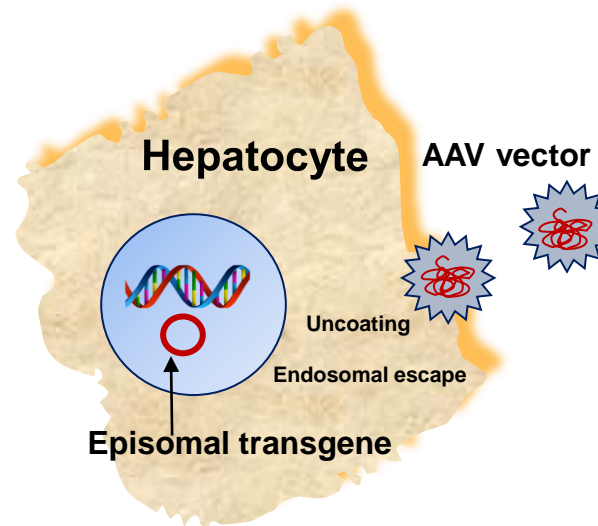
Delivery to target tissue



Capsid tropism

Transduction

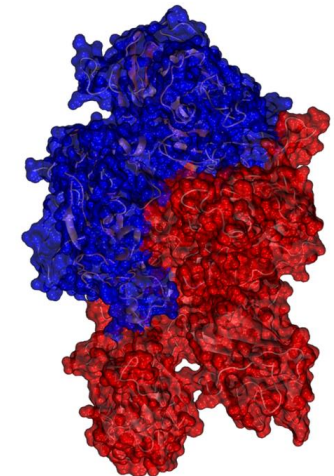
Episomal Transgene



Capsid tropism

Protein

Synthesis

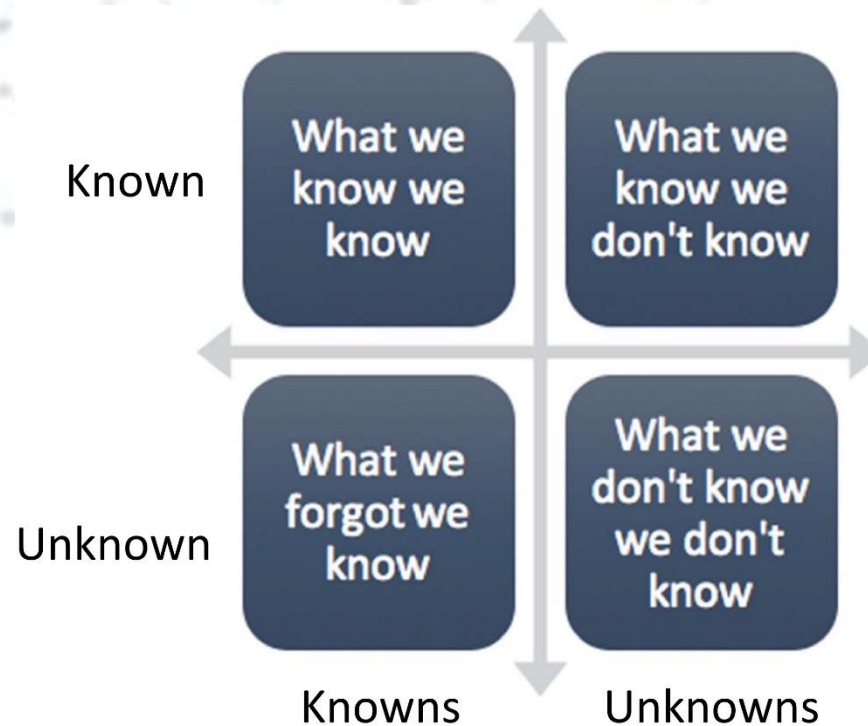


Factor VIII

Promotor, regulatory elements,
transgene, codon optimization

KNOWN & UNKNOWN

- Robust scientific inquiring and lifelong follow-up are crucial to understanding both known and yet unknown safety issues



KNOWLEDGE GAPS - UNCERTAINTIES

- Eligibility – Who can receive gene therapy?
- Predictability – Can we predict who will have a response?
 - Variability and reliability - How does factor expression vary from person to person?
Why?
- Tolerability – How safe is gene therapy?
- Durability – How long will factor expression last?
- Ability to re-dose – Can people receive a second dose of AAV gene therapy in the future?
- Visibility/transparency – What information should be available to people thinking about receiving gene therapy?
- Affordability – What do we know about the cost of gene therapy?

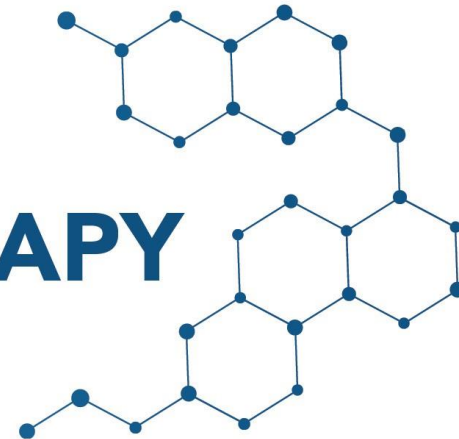
FINAL THOUGHTS

- Recognition of uncertainty
- Need for scientific answers
- Informed consent
- Need for long-term follow-up

WFH GENE THERAPY REGISTRY

- Prospective, observational, and longitudinal registry
- **Goal:** Data collection on all patients who receive gene therapy for hemophilia, via clinical trials and post-marketing
- Worldwide

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**GENE THERAPY
REGISTRY**



A complex, semi-transparent molecular structure, possibly representing a protein or a large organic molecule, is overlaid on the slide. It features a network of interconnected hexagonal and pentagonal rings, with various atoms and bonds visible. The structure is rendered in shades of blue and grey, with some red dots highlighting specific atoms.

Questions & Answers

KEY MESSAGE

“This is an urgent reminder while gene therapy is under clinical investigation. We need more transparency from all those pursuing clinical trials, including meaningful research on the unanswered questions around safety, variability and durability of response. Only in this environment, we can have confidence in this technology.”

A complex, light blue molecular structure, resembling a protein or a large organic molecule, is positioned in the background. It features a series of interconnected hexagonal and pentagonal rings, with various atoms and bonds visible. The structure is semi-transparent, allowing the text to be clearly seen over it.

THANK YOU

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