Application: 6387

Brian O’Callaghan, CEO

Page: General Information

Provide information about the company to be considered for the award. If you will be nominating an individual, specify the nominee’s employer.

Name of Organization/Company

Deep Genomics

[redacted]

Additional Contacts

I do not wish to list additional contacts

Page: Entry Information

Entry Title

Brian O’Callaghan, CEO

Category

G10. Executive of the Year - Biotechnology

Executive Nominee Submission Format

Written Answers

a. Briefly describe the nominated executive's employer: the organization's history and past performance (up to 200 words). Required

Founded in 2015, AI-first TechBio company Deep Genomics is on a mission to accelerate genomic research and drug development by using AI to understand and manipulate the complex language of biology, particularly RNA.

Deep Genomics has built a platform of proprietary foundation models that work together to address multifaceted challenges in therapeutic development. These models not only analyze vast biological datasets to tackle multiple problems simultaneously but also demonstrate emergent intelligence, solving problems beyond their original training. By fine-tuning them to specific diseases, tissues, or modalities, the platform can predict both target biology and optimal therapeutic interventions.

Deep Genomics' flagship foundation model is BigRNA. With 1.8 billion tunable parameters trained on over one trillion genomic signals, BigRNA is reshaping the landscape of RNA research and development.

In 2023, Brian O'Callaghan was appointed CEO to lead the evolution from a single-model to a robust platform of foundation models, positioning Deep Genomics at the forefront of AI-driven biotechnology.

b. Outline the nominated executive's achievements since the beginning of 2023 that you wish to bring to the judges' attention (up to 250 words). Required

Since his appointment as CEO in September 2023, O'Callaghan has led Deep Genomics into a new era of innovation and growth, transitioning the company from a single-model initiative to a fully integrated platform of AI foundation models for drug discovery.

O'Callaghan has led the development and launch of additional proprietary models, DeepADAR and DeepRNAi, targeting RNA editing and siRNA therapeutic design, respectively. These models work alongside BigRNA as part of a cohesive, multi-model platform that accelerates therapeutic discovery across a broader range of modalities.

O'Callaghan's vision for Deep Genomics has always been rooted in delivering on the aspirations of the company's founder and Chief Innovation Officer, Brendan Frey. At every juncture, he brings the focus back to the patients Deep Genomics' technology seeks to help, ensuring that the company's groundbreaking AI will translate into tangible improvements in human health.
To make the mission a reality, key milestones between 2023 and 2025 include:

- a new office and lab in Cambridge, Massachusetts,

- an expanded Toronto headquarters,

- and several high-impact executive hires, including Greg Hoffman (CSO), Clive Bertram (CBO), Monika Kowalcyzk (VP of Platform Technology), Shawdee Eshghi (VP of Platform Biology), and Vic Myer joining as Chair of the Scientific Advisory Board.

These structural and strategic changes position Deep Genomics for long-term leadership in AI-powered drug discovery.

c. Explain why the achievements you have highlighted are unique or significant. If possible compare the achievements to the performance of other executives in your industry and/or to the nominee's past performance (up to 250 words). Required

With 30 years' experience across biotech and pharma, O'Callaghan has elevated Deep Genomics into an industry pioneer. His achievements stand out not only within the company's history, but also across the broader AI-driven drug discovery landscape. This is demonstrated in his approach to:

Technology & Partnerships:

- In 2024, Deep Genomics advanced BigRNA, with recent data showing the model now outperforms Google's Enformer across key genomic prediction tasks such as gene regulation, variant interpretation, and RNA-targeting oligo design.

- The expansion of the platform's capabilities into RNA editing and siRNA therapeutics prove the scalability of its foundation model strategy.

- To maximise the impact of the technology, Deep Genomics has adopted a unique partnership model with pharmaceutical companies. Rather than limiting focus to one or two therapeutic programs, the company's technology addresses a broad spectrum of applications. This approach combines the domain expertise of pharmaceutical giants with Deep Genomics' cutting-edge AI capabilities, driving significant productivity and efficiency gains.

Leadership & Culture:

- O'Callaghan has cultivated a unique multidisciplinary culture that successfully unites AI engineers and RNA biologists, a challenge that continues to hinder many peers in the industry.

- Working closely with founder Brendan Frey, he has prioritized "multilingualism," the ability to translate fluently between scientific domains, as a core value. His carefully built executive team reflects this vision, blending deep scientific expertise with a collaborative, cross-functional mindset.

- These achievements define O'Callaghan's unique approach to driving both innovation and integration in a highly complex field.

d. Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words). Optional

[REDACTED FOR PUBLICATION]

Would you like to add an additional webpage link?

Yes

[redacted]

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No

Supporting Document

No File Uploaded

Would you like to add an additional supporting document?

No

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