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**€12.6 Million Awarded to 3 Projects in Global Effort to
End Progressive Multiple Sclerosis
*International Progressive MS Alliance leading global collaboration
to find solutions and treatments for progressive MS***

September 15, 2016, LONDON, UK – In an unprecedented global effort to end progressive MS, the International Progressive MS Alliance (Alliance) has awarded three €4.2 million Collaborative Network Award grants for a total investment of €12.6 million* toward accelerating the pace of progressive MS research. More than 2.3 million people worldwide live with MS and more than one million of those living with the disease have progressive MS.

The Alliance is a worldwide collaborative of MS organisations that fund developments in progressive MS research, including disease-modifying therapies and symptom treatments. The Collaborative Network Awards are multi-year grants that invest significant funding to fuel international networks of researchers and institutions that have worked together and demonstrated the potential to make crucial breakthroughs in understanding and treating progressive MS.

Collaboration and Investments to Advance Progressive MS Research

The journey began in 2014, when the Alliance initially funded 21 Challenge Award innovation grants. In 2015, the Alliance funded an additional 11 grants that brought multi-disciplinary researchers around the world together specifically to address barriers in progressive MS research (Collaborative Network Planning Grants). The 11 projects selected for Collaborative Network Planning Grants in 2015 were invited to apply for the 2016 Collaborative Network Awards. Each 4-year Collaborative Network Award grant is valued at €4.2 million. To date, the Alliance has committed almost €23 million in cumulative global research investments. The Collaborative Network Awards aim to accelerate progress in:

- Drug discovery programs that identify and validate molecular and cellular targets and screen and characterize drug candidates, which may be either repurposed or first-in-human drugs;
- The discovery, advancement and validation of new or existing biological or imaging biomarkers; and,

- Proof-of-concept trials and trial designs, including, but not limited to trials in remyelination, neuroprotection, enhanced plasticity.

“Finding answers for people with progressive MS is the top priority of the Alliance,” said Cyndi Zagieboylo, Chair of the Alliance Executive Committee and President and CEO of the National MS Society (U.S.), “and those answers will be found when we ensure that the best and brightest minds in the scientific community are working together.”

Global Collaboration to Tackle a Major MS Question

Up to 65% of those living with relapsing-remitting MS are at risk of developing secondary progressive MS, and 15% are diagnosed with primary progressive MS from the outset - making the need for both collaboration and acceleration of the pace of research a global priority to end MS. The 3 projects to receive Collaborative Network Award grants will focus on key priorities in quickly finding answers in relation to treating progressive MS:

Awardee/Project 1:

Principal Investigator: Douglas Arnold, M.D., McGill University (Canada) in collaboration with 16 investigators from The Netherlands, U.K., U.S., and Switzerland.

Project Title: Identifying a biomarker of disability progression for use in clinical trials

Douglas Arnold, M.D. of McGill University is making remarkable headway in developing the next generation of tools for measuring disease progression in progressive MS. Dr. Arnold’s team is pioneering the development of magnetic resonance imaging (MRI) markers that signal disease progression, and adapting these for use in early (phase 2) clinical trials of progressive MS treatments. Dr. Arnold’s research examines the underlying idea that brain injury-associated disease progression in MS is detectable by MRI prior to its identification by physicians in a clinic visit, likely due to the ability of the brain to compensate for injury, up to a point. The innovative tools being developed by Dr. Arnold and his team are essential for planning the larger scale phase 3 clinical trials required for approval of new treatments. The study also has extraordinary potential to inform proactive treatment for people with not-yet-evident progressive MS.

Awardee/Project 2:

Principal Investigator: Gianvito Martino, M.D., Division of Neuroscience, San Raffaele Hospital Milan (Italy) in collaboration with 13 Investigators from Italy, France, Germany, Europe, Canada and the U.S.

Project Title: Bioinformatics and cell reprogramming to develop an in vitro platform to discover new drugs for progressive multiple sclerosis (BRAVEinMS)

The BRAVEinMS team is working to identify molecules that may have a protective role in nerve cells or neurons and/or the capacity to promote myelin repair. They will focus their efforts in three phases – i) identifying potential drugs or compounds using sophisticated bioinformatics tools specifically developed to virtually reproduce pathogenic mechanisms of MS; ii) screening these compounds for their ability to protect nerve cells or promote myelin repair in laboratory tests using both rodent and human neurons and myelin forming cells; and,

iii) evaluating in animal models of progressive MS the therapeutic potential of the 'candidate' compounds identified through the in vitro screening.

The research team believes that BRAVEinMS will pinpoint a limited number of previously unidentified molecules with a high chance of therapeutic power in progressive MS patients. They expect that within four years from the start of the project they will identify one or two human grade compounds that can be used in Phase I/II clinical trials in patients with progressive MS. As a result, the team aims to implement a clinical trial in the near future, by the end of 2020.

Awardee/Project 3:

Principal Investigator: Francisco Quintana, Ph.D., Brigham and Women's Hospital (U.S) in collaboration with 8 Investigators from the U.S., Canada, Israel and Sanofi Genzyme

Project Title: Development of a drug discovery pipeline for progressive MS

The goal of Francisco Quintana, Ph.D.'s project is to identify drug candidates that may be effective therapies for progressive MS, and that will be ready for evaluation in patients within four years of the initiation of this research. The project's central idea is that targeting the innate immune system in the central nervous system will uncover effective therapeutic approaches for progressive MS. The innate immune system normally functions to protect the body from infections. Dr. Quintana and others have found that innate immune cells in the central nervous system promote disease activity in MS and other diseases. Dr. Quintana's team recently identified the biological pathways that control the innate immune response. They also found that genetic manipulation of the pathways can arrest nerve damage and alter disease progression in pre-clinical MS animal models; however no candidate drugs are available to modulate the activity of innate immune cells.

Dr. Quintana's study will: i. Identify the biological processes that control the innate immune response in the central nervous system; ii. Evaluate the activity of candidate drugs on the innate immune system in experimental models of progressive MS; iii. Analyze how the candidate drugs exert their beneficial effect; and, iv. Identify additional candidate targets and therapeutic drugs that impact the innate immune system in progressive MS.

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Despite advances in treatments for other forms of MS, there have been significant barriers to understanding progressive MS given the lack of an identifiable disease pattern. "The quality, breadth, innovation and focus of these awards has the potential to bring forth some of the most important and potentially transformative work in the area of progressive MS", says Prof. Alan Thompson, Chair of the Alliance's Scientific Steering Committee and Dean of University College London Faculty of Brain Sciences.

"As someone who lives with progressive MS, it brings me great hope to see such international efforts to work together to answer questions about one of the least understood forms of MS," says Caroline Sincock of the U.K., who lives with progressive MS and serves on the Alliance's Scientific Steering Committee.

About Progressive MS: Progressive multiple sclerosis, a chronic condition that disrupts the flow of information within the brain and body, is a form of MS that gets worse over time. Each day, progressive MS takes things away from people: vision, mobility, cognition, ability to work, and their very independence. MS is found in every country where studies have been conducted, and more than 2.3 million people worldwide currently live with the disease; over 1 million people live with a progressive form of MS.

About the Alliance: Ending progressive MS is an urgent and unmet need that must be overcome so that people affected by MS can live their lives without the uncertainty of what tomorrow will bring. The International Progressive MS Alliance is an unprecedented international initiative that is connecting resources and experts around the world to find answers and develop solutions to end progressive MS. The goal of the Alliance is to speed the development of new treatments for progressive MS by funding the best research, wherever it exists. The Alliance is led with management from MS organisations in Australia, Canada, Italy, the U.K, the U.S., and the MS International Federation, and expanding financial and resource support from these and other organisations, including the MS organisations in Belgium, Denmark, France, Germany, Norway, the Netherlands, Ireland, Spain and Sweden.

In addition, the Alliance engages with the pharmaceutical and biotech industry, as they have the ability to contribute extensive knowledge, resources and financial investment. Industry's collaborative partnership with the Alliance is managed through the Industry Forum – the framework where Alliance and industry stakeholders discuss and actively support and influence the critical work of the Alliance.

Learn more at www.ProgressiveMSAlliance.org.

*Euro: A total of €12.6 million awarded in Collaborative Network Awards, €4.2 million per award

U.S. \$: A total of appx. \$14.1 million awarded in Collaborative Network Awards, \$4.7 million per award

Canadian \$: A total of appx. \$18.4 million awarded in Collaborative Network Awards, \$ 6.1 million per award

U.K. £: A total of appx. £10.6 million awarded in Collaborative Network Awards, £3.6 million per award