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Altri autori (Persone)	AltevogtBruce M HouganMatthew
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Nota di contenuto	Introduction -- Grand challenge : how does the human brain work and produce mental activity? -- Grand challenge : nature versus nurture : how does the interplay of biology and experience shape our brains and make us who we are? -- Grand challenge : how do we keep our brains healthy? Do we protect, restore, or enhance the functioning of our brains as we age? -- Inspiring the next generation of scientists --

Challenges and technical limitations -- Ethical considerations --
Conclusion: On the cusp -- Appendixes.

Sommario/riassunto

Neuroscience has made phenomenal advances over the past 50 years and the pace of discovery continues to accelerate. On June 25, 2008, the Institute of Medicine (IOM) Forum on Neuroscience and Nervous System Disorders hosted more than 70 of the leading neuroscientists in the world, for a workshop titled "From Molecules to Minds: Challenges for the 21st Century." The objective of the workshop was to explore a set of common goals or "Grand Challenges" posed by participants that could inspire and rally both the scientific community and the public to consider the possibilities for neuroscience in the 21st century. The progress of the past in combination with new tools and techniques, such as neuroimaging and molecular biology, has positioned neuroscience on the cusp of even greater transformational progress in our understanding of the brain and how its inner workings result in mental activity. This workshop summary highlights the important issues and challenges facing the field of neuroscience as presented to those in attendance at the workshop, as well as the subsequent discussion that resulted. As a result, three overarching Grand Challenges emerged: How does the brain work and produce mental activity? How does physical activity in the brain give rise to thought, emotion, and behavior? How does the interplay of biology and experience shape our brains and make us who we are today? How do we keep our brains healthy? How do we protect, restore, or enhance the functioning of our brains as we age?
