Cerebrum 2016: Emerging Ideas in Brain Science
Bill Glovin, Editor
Foreword by Guy McKhann, M.D.

Cerebrum 2016 offers new and provocative ideas in neuroscience and book reviews from a cross-section of prominent neuroscientists and policy makers, including David C. Van Essen, Shekhar Saxema, Ellen Silbergeld, Karel Svoboda, and Michael Baumann. Drawn from the highly regarded Web edition, article topics include the global mental health crisis, neurotoxins in drinking water, the state of neurofunding, terrorist thinking, and a new approach to epilepsy.

Guy McKhann, M.D., the scientific advisor to the Dana Foundation, provides additional insight in his Foreword, particularly regarding gene editing and its potential to impact various brain disorders such as schizophrenia and Alzheimer’s disease.
Cerebrum 2015: Emerging Ideas in Brain Science
Bill Glovin, Editor
Foreword by Alan I. Leshner, Ph.D.

Does marijuana change a teenager’s brain? Is it better to treat depression through drugs or therapy? Can captivating storytelling change behavior? The answers to these questions and more may be found in a new book consisting of 12 articles and four book reviews written by a cross-section of prominent neuroscientists. Drawn from Cerebrum, the Dana Foundation’s highly regarded online journal, this seventh annual volume features John P.A. Ioannidis, George F. Koob, Patrick Sullivan, Charles B. Nemeroff, and Paul Zak.

Readers of Cerebrum 2015 will gain a greater understanding of the human condition and how advances in neuroscience can help all of us to lead longer, healthier lives.
Cerebrum 2014: Emerging Ideas in Brain Science
Bill Glovin, Editor
Foreword by Barbara J. Culliton

The inspiring ideas and extraordinary challenges facing some of the great minds in brain science makeup this sixth annual volume. Expert perspectives into the causes and effects of spatial awareness, empathy, and circadian rhythm appear alongside timely articles and book reviews about cognitive training and brain games; socioeconomic adversity and brain development; and the living with autism.

A stellar group of scientists and science writers, including Wise Young, Temple Grandin, Miguel A.L. Nicolelis, and Edvard and May-Britt Moser introduce us to these and other exciting topics.

Readers of Cerebrum 2014 will gain a greater understanding of the human condition and how advances in medicine and science help us to lead longer, healthier lives.
The inspiring ideas and extraordinary challenges facing some of the great minds in brain science make up this fifth annual volume. Expert perspectives into the causes and effects of risk taking, the sports concussion crisis, and Lewy body dementia appear alongside timely articles and book reviews about literacy transforms the brain; psychiatric drug development; and fraud in neuroscience.

A stellar group of scientists and science writers, including Steven E. Hyman, Chris Nowinski, Stanilas Dehaene, and Susannah Cahalan introduce us to these and other exciting topics.

Readers of Cerebrum 2013 will gain a greater understanding of the human condition and how advances in medicine and science help us to lead longer, healthier lives.
"You’ve Got Some Explaining to Do: Advice for Neuroscientists Writing for Lay Readers"
By Jane Nevins

What are people who read opinion-page articles looking for? How can you reach people who read general-interest magazines? Hint: It's not the same as your colleagues or science journals.

This compact book offers the reasons and information that can help scientific writers adopt new habits to be successful and happy writing for a non-science audience. Go ahead and write journal-style for science journals and colleagues, says longtime science editor Jane Nevins, but you'll need to try different styles to reach a different audience.

The book is divided into three parts: The Meet-up, Simple Fixes, and Science and Style. In The Meet-up, Nevins describes the different venues for lay writing, from opinion pages to popular magazines, and what readers of each expect and respond to best. In Simple Fixes, she shows how jargon, "cross-over words," and hackneyed expressions can be remedied, clearing away confusion for your readers. In Science and Style, she discusses what to put first, how to quote and paraphrase in lay copy, and what to leave out.

Throughout You've Got Some Explaining to Do, Nevins gives concrete, specific examples tied to neuroscience. The author, who served as the first editor in chief of the Dana Press, brings more than 20 years of experience in translating neuroscience to lay readers.
Temperament is the single most pervasive aspect of us and our fellow human beings. We notice it; we gossip about it; we make judgments based on it; we unconsciously shape our lives around it.

In *The Temperamental Thread*, developmental psychologist Jerome Kagan draws on decades of research to describe the nature of temperament—the in-born traits that underlie our responses to experience. Along the way he answers such questions as, How does the temperament we are born with affect the rest of our lives? Are we set at birth on an irrevocable path of optimism or pessimism? Must a fussy baby always become an anxious adult?

Kagan paints a picture of temperament as a thread that, when woven with those of life experiences, forms the whole cloth of an individual’s personality. He presents solid evidence to show how genes, gender, culture, and chance interact with temperament and influence a mature personality. He explains how temperament sets the stage for the many personality variations that we see all around us.

Research into temperament, powered by the new tools of neuroscience and psychological science, is enriching our understanding of others in every context, from our closest relationships to those in workplaces, schools, and even casual encounters. Jerome Kagan shows us how.
Cerebrum 2010: Emerging Ideas in Brain Science
Dan Gordon, Editor
Foreword by Benjamin S. Carson Sr., M.D.

Cerebrum 2010 offers a feast for readers keen to know what the world’s leading thinkers see as the newest ideas and implications arising from discoveries about the brain. Drawn from Cerebrum’s highly regarded Web edition, this fourth annual collection brings together the foremost experts in brain science. Jay Giedd, Michael Posner, Mariale Hardiman, David Kupfer and Paul McHugh present their research—and their take—on such cutting-edge topics as the development of the teen brain, how arts education affects intelligence, the limitations of brain imaging, and how to bring more certainty and flexibility to diagnosis in the next edition of the psychiatric bible, the Diagnostic and Statistical Manual of Mental Disorders (DSM-V).

Benjamin S. Carson Sr., director of pediatric neurosurgery at Johns Hopkins Children’s Center and a professor of neurological surgery, oncology, plastic surgery and pediatrics at the Johns Hopkins Medical Institutions, provides an insightful perspective on the impact of neuroscience on his career, the well-being of patients, and the understanding of how the mind works.

Cerebrum 2010 presents candid, intriguing debates that capture the harmony as well as the discord in the complex and evolving relationship between neuroscience and society.
A man helping to park a truck doesn’t realize his skull has been fractured when his head is trapped between the truck and a wall. An airline pilot is diagnosed with Parkinson’s disease but is able to keep flying after being put on medication. A teenage girl has almost daily migraine headaches and muscle pain so severe that she cannot go to school—and most of her family suffers from the same problems.

For anyone who has ever had a neurological symptom, from a headache to tingling hands, and for anyone with a personal interest in how the brain works, Treating the Brain is the definitive guide and is a valuable, easy-to-read source of a wide range of information.

Through patient case histories, Treating the Brain explains the neurological examinations and tests, clinical features, causes, and treatments available for a wide-range of disorders including Alzheimer’s disease, migraines, stroke, epilepsy, Parkinson’s disease, and other frequently diagnosed neurological disorders.

Dr. Walter G. Bradley is the “doctor’s doctor”—the preeminent neurologist who has educated the best brain doctors in the world for over 30 years and written 19 medical books. Now, Dr. Bradley has written for lay readers, providing accurate, reliable information to patients, caregivers, health practitioners, and the general reader about the most common neurological conditions.
Cerebrum 2009: Emerging Ideas in Brain Science
Dan Gordon, Editor
Foreword by Thomas R. Insel

The inspiring ideas and extraordinary challenges facing some of the great minds in brain science make up this third annual volume. Expert perspectives into the causes and effects of identity disorder, why the mind is sometimes foggy after heart surgery, and the dangers of unidentified traumatic brain injury appear alongside timely articles about the brain and politics, using technology to map brain connections, and the pros and cons of screening for childhood disorders.

A stellar group of scientists and science writers, including neuroscientist Guy McKhann, computational neuroscientist Sebastian Seung, developmental psychologist Jerome Kagan, and neurologist Stephen Hauser introduce us to these and other exciting topics.

Readers of Cerebrum 2009 will gain a greater understanding of the human condition and how advances in medicine and science help us lead longer, healthier lives.
Deep Brain Stimulation: A New Treatment Shows Promise in the Most Difficult Cases
By Jamie Talan

A man’s hands shook so hard that he could no longer write or hold a cup. A woman developed depression so severe that a smile was a major breakthrough. Neither found relief from medicines, but both are better today thanks to a relatively straightforward technique: implanting electrodes in the brain and hooking them to a device similar to a pacemaker.

In this first comprehensive look at the subject, award-winning author Jamie Talan introduces us to patients who have reclaimed their lives thanks to deep brain stimulation: a dystonia patient sitting up straight and reading to his child, a ballerina dancing again, a young man housebound by compulsive actions who is now married and working, a trauma patient in a minimally conscious state who now can talk, sit, and feed himself.

Each chapter sheds light on the use of deep brain stimulation for a single disease or injury—Parkinson’s disease, depression, obsessive-compulsive disorder, Tourette’s syndrome, and many more—and introduces us also to the doctors who lay the foundation and continue to pave the way. Further research will shed light on other enticing possibilities, including potential use in Alzheimer’s and after stroke. The book also addresses ethical concerns raised by the treatment.

For the approximately 30,000 people worldwide who have these implants and for unknown others who will be helped in the future, Deep Brain Stimulation captures a new treatment’s great potential when all else fails.
Try to Remember: Psychiatry’s Clash Over Meaning, Memory, and Mind
By Paul R. McHugh, M.D.

In the 1990s, a disturbing trend emerged in psychotherapy: in alarming numbers, patients began accusing their parents and other close relatives of sexual abuse. These accusations were the result of false “recovered memories” urged on them by therapists practicing a new idea in treatment. The subsequent loss of public confidence in psychotherapy was devastating to psychiatrist Paul R. McHugh. With Try to Remember he looks at what went wrong and describes what the field must do to restore psychotherapy to a more honored and useful place in therapeutic treatment.

In this thought-provoking account, McHugh explains why fad diagnostic trends and misguided treatments have repeatedly swept through psychotherapy. He recounts his part in the court battles that erupted over recovered memories and the frequent companion diagnosis of multiple-personality disorder. He warns that today the diagnosis of post-traumatic stress disorder seems to be following the same path of misdirection at the expense of the real suffering of patients. He argues that both psychiatric professionals and the public must raise their standards and expectations for psychotherapy.

Psychotherapy, McHugh ultimately shows, is an important healing method and not just a valuable adjunct, but often far superior, to the psychopharmaceuticals that flood the drug market today.
In this second annual anthology, top scientists and scholars interpret the latest discoveries about the human brain and confront their implications for fields from architecture to ethics, music to health-care policy. Among the provocative topics are whether free will is an illusion, the risks and rewards of new drugs based on living cells, why remembering our past is essential to envisioning the future, how brain science can inform the design of better facilities for people with Alzheimer’s disease, and when using drugs to smooth the daily bumps of our emotional lives might be an ethical choice.

In his foreword, science writer Carl Zimmer says that news about the human brain tends to trigger cyclones of chatter, but we often don’t know what to make of the sheer mass of data. The provocative articles in Cerebrum 2008, however, offer a guide to ordering one’s understanding of the brain.
Your Brain on Cubs
Dan Gordon, Editor

Every sports fan is familiar with the rush that accompanies a come-from-behind win—and the equally powerful crush of a disappointing loss. The contributors to *Your Brain on Cubs* introduce us to the role of the brain, not just in these emotions but in many aspects of watching and playing sports.

Chicago Cubs fans offer a unique conduit for understanding how our brain lets us believe in a “curse” involving a billy goat and what makes a day at the ballpark so enjoyable. The underpinnings of loyalty reveal why we are willing to “wait ‘til next year.” For the players on the field, brain research offers new insight into how we become experts and what makes it possible to hit a fastball traveling at ninety-five miles per hour.

*Your Brain on Cubs* centers on the national pastime but draws in other sports as well for an intriguing look at talent - and triumph - on the field and at our devotion in the stands.
The Neuroscience of Fair Play: Why We (Usually) Follow the Golden Rule
By Donald W. Pfaff, Ph.D.

Several recent books have used anthropology, psychology and evolution to argue that our ethical or moral life evolved from nature. Now a distinguished neuroscientist takes that proposition a critical step farther, right to the basics: brain signals.

Donald Pfaff, Ph.D., head of the Laboratory of Neurobiology and Behavior at Rockefeller University, gives us the first book to describe how ethics may be a hardwired function of the human brain.

Pfaff explains how specific brain circuits cause us to consider an action toward another as if it were going to happen to us, prompting us to treat others as we wish to be treated ourselves. Into this picture, he brings various brain hormones that produce or induce forms of moral behavior such as individual heroism, parental love, close friendship, and violence and aggression.

Pfaff solves the mystery of our universal ethical precepts, presenting a rock-solid hypothesis of why humans across time and geography have such similar notions of good and bad, right and wrong.
Best of the Brain from Scientific American: Mind, Matter, and Tomorrow’s Brain
Floyd E. Bloom, M.D., Editor

In *Best of the Brain*, top neuroscientist Floyd E. Bloom has selected the most fascinating brain-related articles from *Scientific American* and *Scientific American Mind* since 1999. These include works by Steven E. Hyman, Harvard Provost and former director of the National Institute for Mental Health, writing on ways to improve diagnosis of psychiatric disorders, and science writer Carl Zimmer on how the brain conjures a sense of self. Bloom garnishes the impressive lineup with his own introduction.

The articles are grouped into three sections. “Mind” includes stories on consciousness and creativity, among brain researchers’ most difficult topics. “Matter” features new perspectives on the senses, psychological disorders, addiction, and more. The book concludes with “Tomorrow’s Brain,” providing a peek into the future of brain-machine interactions and groundbreaking treatment approaches.

In the understandable, exciting language that has made *Scientific American* magazine popular among general readers and experts alike, *Best of the Brain* provides gripping stories from the front lines of brain research.
Defining Right and Wrong in Brain Science: Essential Readings in Neuroethics
Walter Glannon, Ph.D., Editor

Defining Right and Wrong in Brain Science is an authoritative record of the emerging ideas that are defining neuroethics.

Edited by University of Calgary philosophy professor Walter Glannon, it is an essential reference for anyone who wants to understand how these issues have taken shape.

Contributors include Adina Roskies, writing on “Neuroethics for the New Millennium;” Martha J. Farah and Paul Root Wolpe on “Monitoring and Manipulating Brain Function;” Antonio Damasio on “The Neural Basis of Social Behavior: Ethical Implications;” and Alan Leshner on “Ethical Issues in Taking Neuroscience Research from Bench to Bedside.” Other thinkers represented in this collection are British Medical Research Council Chairman Colin Blakemore, Patricia Smith Churchland, Arthur Caplan, Paul McHugh, and Anjan Chatterjee.

This book will be indispensable to readers curious about how issues in neuroethics emerge and develop.
Cerebrum 2007: Emerging Ideas in Brain Science
Cynthia A. Read, Editor
Special foreword by Bruce S. McEwen, Ph.D.

Watching the dramatic progress in brain science, captivated readers worldwide are asking: What do these advances mean for health, child development, and longevity and why on earth are they reaching into law, education, technology, the arts, religion, and other fields?

Cerebrum, a one-of-a-kind journal of opinion, has been serving these inquisitive lay readers since 1998. In the journal, prominent neuroscientists and thinkers in diverse fields, present, prop up, and protest new ideas arising from discoveries about the brain. Cerebrum articles are frequently quoted by the news media, including The Wall Street Journal, The Boston Globe, and The Washington Post.

Cerebrum 2007 brings together more than a dozen articles and book reviews from the journal’s Web edition. Readers of the book are among the first to hear top experts in their fields deliver what will be tomorrow’s conventional wisdom on topics such as the biological nature of ethical behavior, the brain basis for belief in the supernatural, the science of music, and using drugs to alter traumatic memories. The cases are made in clear, concise lay language by authors such as neurologist Kathleen Foley, M.D., of Memorial Sloan-Kettering Cancer Center, Stanford University bio ethicist and professor of law Henry T. Greely, J.D., and Judith L. Rapoport, M.D., chief of the child psychiatry branch of the National Institute of Mental Health.

Cerebrum 2007: Emerging Ideas in Brain Science, inaugurates a yearly anthology for readers who like provocative ideas that are transforming every area of our lives.
Resistance: The Human Struggle against Infection
By Norbert Gualde, M.D., Ph.D.

The 20th century utopian notion of eradicating common infectious disease, once highly esteemed, has gradually taken a back seat to the reality of bacterial resistance, new diseases, and newly discovered infectious agents. In his book Resistance, Norbert Gualde illustrates the importance of taking a more practical approach to predicting and controlling future outbreaks.

With astute pragmatism, Gualde takes his readers on an exciting journey, exploring the histories of epidemics, the emergence of new diseases, and the return of old ones. Based on two theories describing the emergence of infectious agents, Gualde suggests that the constant interaction between man and micro-organisms will create a catalyst to epidemics similar to those of the medieval 14th century.

Gualde offers an interesting perspective to this study, as he not only speaks to the scientific aspects of disease and immunology, but to their societal implications, specifically in the poorer southern hemisphere.

In this thought-provoking and highly readable translation, Gualde, a professor of immunology, describes how strategies of increased global surveillance and monitoring combined with advancing knowledge of the body’s own weapons of immunity can work together to fight tomorrow’s inevitable infectious outbreaks.
Mind Wars: Brain Research and National Defense
By Jonathan Moreno, Ph.D.

A provocative book that reads like an edge-of-your-seat investigation into the intertwining worlds of science, technology, and government, *Mind Wars* is the first ever systematic overview of brain research and national security. In it, Jonathan Moreno unearths a multitude of questions about federal defense agencies’ interest in the burgeoning field of neuroscience and describes the many fascinating ethical and policy issues that may emerge from this relationship.

Moreno’s discussion focuses on the security establishment’s extensive and growing role and investment in high-tech neuroscience, neuropharmacology (the study of the influence of drugs and hormones on the nervous system), and related areas. The book covers the various uses of neural imaging technology, as well as brain-machine interface devices to relay messages between human brains and machines. The many research efforts Moreno describes being undertaken by the military and other national security entities are all aimed at affecting the brain and nervous system to provide advantage in a conflict.

The author, one of the country’s best-known bioethicists, calls for the scientific community to be more engaged in dealing with the unintended consequences of their work. Moreno emphasizes that, as new kinds of weapons are added to the arsenal already at the disposal of fallible human leaders, we need to find practical ways to address the problem.
The Dana Guide to Brain Health: A Practical Family Reference from Medical Experts
By Floyd E. Bloom, M.D., M. Flint Beal, M.D., and David J. Kupfer, M.D., Editors
Foreword by William Safire

A milestone in health publishing and the first major home medical reference on the brain, the Dana Guide is based on the contributions of more than 100 of America’s most distinguished scientists and clinicians. This extensively illustrated 700-page “bible” for the brain contains eight comprehensive chapters on the brain throughout life, 16 sections on how the brain works, and 72 sections on specific neurological and psychiatric disorders.

The Dana Guide to Brain Health sets a new standard for definitive information and advice. In its pages readers will discover:

- The crucial steps for taking care of our brains;
- The intimate connection between brain health and body health;
- How the brain develops from the prenatal period and childhood through adolescence and adulthood;
- How the brain regulates breathing and blood flow; and
- How we learn, remember, and imagine.

The Dana Guide to Brain Health is simply the most authoritative, comprehensive, and clearly written guide to the bodily organ that is the key to our everyday health. No home should be without it.
Sandra Ackerman, Editor

Brought together by the Office of Scholarly Programs of the Library of Congress, the Dana Foundation, the Columbia University Center for Bioethics, and the National Institutes of Health, top scholars and scientists in neuroscience and ethics convened at the Library of Congress in Washington, D.C. in May 2005. The fourth volume in the Dana Foundation Series on Neuroethics, Hard Science, Hard Choices presents a focused discussion of the leading questions these prominent thinkers dealt with in considering the facts, ethics and policies guiding brain science today. Science writer Sandra Ackerman weaves their arguments and discussions into a concise, dynamic narrative concentrating on the most significant and immediate ethical issues that have emerged from recent brain research in the areas of brain imaging, drugs and the brain, and new technology aimed at the brain. Translating sophisticated facts and opinions into an engrossing account of neuroethics, she offers a rare view of science in the making.

Sandra J. Ackerman is the author of Discovering the Brain and a contributing author of The Dana Guide to Brain Health. She has published numerous articles and columns on a wide range of topics in brain research, medicine, health, and human evolution, and in 2001 received a Rosalynn Carter Fellowship in Mental Health Journalism.
A Well-Tempered Mind: Using Music to Help Children Listen and Learn
By Peter Perret and Janet Fox
Foreword by Maya Angelou

Peter Perret, conductor of the Winston-Salem Symphony for more than 25 years, wondered if placing a woodwind quintet in a poorly performing elementary school might help students academically. He decided to try, and the result was an eye-brow raising jump in the children’s test scores—and this book.

Perret describes an innovative program for first-through third-graders at two elementary schools in Winston-Salem and a journey of discovery into the brain for him. The quintet taught the children to listen to music, detect the roles of the instruments, discern how music is constructed, and even compose their own music, all the while integrating the lessons into the children’s regular courses. Providing a mix of classroom vignettes, music theory, and findings in one of the newest areas of brain research, Perret shows how the program gave life to a host of tantalizing questions: Does music physically change the brain? Is music a primary language of the brain? Does music affect any cognitive abilities needed for reading and math? Can music help kids with short attention spans, dyslexia, and other learning difficulties? How did the musicians in the classroom contribute to the children’s academic improvement?

A charming, inspiring reading experience, A Well-Tempered Mind describes the program in detail and offers valuable advice to parents, educators, and would-be teaching artists for designing music program approaches to suit their means and situations.
**Fatal Sequence: The Killer Within**

By Kevin J. Tracey

Severe sepsis, a critical illness that most often afflicts victims of initially non-fatal illnesses or injuries, is the third most common killer in the United States today. Kevin Tracey, a neurosurgeon, immunologist, and highly regarded investigator, offers a riveting account of a medical and scientific “perfect storm,” the deadly downward spiral of infection and organ failure in septic shock and severe sepsis, focusing on his battle to save a baby girl’s life.

A one-year-old arrives in the emergency room, the victim of scalding burns from boiling water after she crawled between her unsuspecting grandmother’s legs in the family kitchen. She survives the night, but the following morning is only the beginning of her long and intense battle against both foreign microbes and her own immune system. Tracey, who cared for the girl during her four-week stay in intensive care, draws on her case to vividly illustrate how a clinical nightmare of organ failure develops.

Tracey uses this tragic example to examine how the brain plays an integral role in the onset of septic shock and severe sepsis, explaining in accessible language how the brain normally restrains the immune system and protects the patient from its lethal effects. He recounts the challenges that arose in the young girl’s case to demonstrate how brain failure allowed the immune system to run out of control and indiscriminately kill normal cells along with - or even instead of - foreign microbes.

A new and important dispatch from the medical frontlines, *Fatal Sequence* is a narrative readers will remember, long after closing the book, about a shocking, all too common event: death from complications of illness or injuries that never should have killed.
The Creating Brain: The Neuroscience of Genius
By Nancy C. Andreasen, M.D., Ph.D.

Where does the unique originality we call “creativity” come from? Michelangelo was a stonecutter’s son, and Shakespeare was the son of a middle-class businessman. What causes some people to soar free of their limited lives and make astonishingly creative contributions?

In her elegant, fascinating tour of creativity and the brain, Nancy Andreasen, professor of psychiatry at the University of Iowa and the winner of the National Medal of Science, shows us that creativity is not the same as intelligence nor the same as skill. Rather, we discover, the essence of creativity is to shape the materials of life in new and unexpected ways.

Andreasen explores how the human brain achieves creative breakthroughs in art, literature, music, and science. She investigates the role of patrons or mentors, the possession of an omnivorous vision, the value of not having a “standard education,” and the question of “genius and insanity.”

The author shows us what extraordinary creators such as Mozart, Henri Poincaré, and Coleridge, said about creating and how they reflect special qualities of creative people and the creative process. She describes her fascinating interview with the playwright Neil Simon in which he discussed how his mind works. Andreasen’s studies of participants in the Iowa Writer’s Workshop suggest that creativity may be inherited and sometimes associated with mental disorders, through neither is necessary for creativity to flourish.

The author proposes that creativity can and should be encouraged and offers advice to nurture it in both children and adults.
Which would be acceptable: the athlete who may one day get “neuro-enhancement” to boost performance, or the student who does the same before a test? How will increasingly powerful brain imaging technologies affect the ideas of privacy and self-incrimination?

Such thought-provoking questions are rapidly emerging, as new discoveries in neuroscience raise difficult dilemmas. Michael Gazzaniga, widely considered the father of cognitive neuroscience, investigates some of these controversial and complex issues in *The Ethical Brain*.

He first examines “lifespan neuroethics” and considers how embryonic brain development defines human life. He then moves on to the issues raised as the brain ages, such as whether we should have freedom to extend our lives and enhance our brains using genetics, pharmaceuticals, and training.

Gazzaniga also considers the challenges faced by the justice system from new discoveries in neuroscience. Recent findings suggest that our brain has already made a decision before we become fully aware of doing so, raising whether the concept of personal responsibility can remain a tenet of the law. Gazzaniga argues that as neuroscience learns more about the unreliability of human memory, the very foundation of trial law will be challenged.

Gazzaniga then discusses a radical re-evaluation of the nature of moral belief, as he not only looks at possibly manipulating the strength of a belief but also explores how scientific research is building a brain-based account of moral reasoning.

*The Ethical Brain* is a groundbreaking volume that presents neuroscience’s loaded findings—and their ethical implications—in an engaging and readable manner. It is an incisive and thoughtful analysis of the ethics questions posed by neuroscience that confront modern society at the dawn of the twenty-first century.
A Good Start in Life: Understanding Your Child’s Brain and Behavior from Birth to Age 6
By Norbert Herschkowitz, M.D., and Elinore Chapman Herschkowitz, M.A.
Foreword by Jerome Kagan

A Good Start in Life covers how children learn to live together in family and society from birth to age six. Dr. Herschkowitz and his wife, Elinore Chapman Herschkowitz, distill a lifetime of studying infants and children to explain how brain development shapes a child’s personality and behavior. The authors discuss a host of social development issues, including appropriate rule-setting, development of a moral sense, temperament, language development, playing, aggression, impulse control, and empathy.

New topics in this edition are concerns when a baby is premature, coping with traumatic events, and children and TV. Topics updated with the latest research are child care, language, and the effect of a mother’s stress on the fetus. Popular features of the books are a Q & A at the end of each chapter with new ideas from parents and an appendix with charts and brain maps showing milestones in a child’s development.

Dr. Herschkowitz has become a popular interviewee in many print and online parenting magazines and broadcast programs. The hardcover edition of A Good Start in Life was selected for the California State Library’s “Studies in the News,” a compilation of items significant to the legislature and governor’s office created by the State Library’s Research Bureau to supplement public policy debate in California’s capitol. This book for parents and others who care for young children weaves up-to-the-minute psychology and biological knowledge into a seamless tapestry.

Original cloth edition co-published with Joseph Henry Press.
Neuroscience and the Law: Brain, Mind, and the Scales of Justice
Brent Garland, Editor
Foreword by Mark S. Frankel

With commissioned papers by Michael S Gazzaniga, Ph.D. and Megan S. Steven; Laurence Tancredi, M.D., J.D.; Henry T. Greely, J.D.; and Stephen J. Morse, J.D., Ph.D.

Neuroscience and the Law is a concise, jargon-free work examining how discoveries in neuroscience are influencing criminal and civil legal proceedings and which imminent and longer-term advances may affect the U.S. justice system. Part One of the book summarizes the deliberations at a meeting of 26 top neuroscientists, legal scholars, attorneys, and state and federal judges. Part Two comprises the four formal commissioned papers that anchored these discussions:

- “Free Will in the 21st Century,” by Michael S. Gazzaniga and Megan S. Steven
- “Neuroscience Developments and the Law,” by Laurence Tancredi
- “Prediction, Litigation, Privacy and Property,” by Henry T. Greely
- “New Neuroscience, Old Problems,” by Stephen J. Morse
Back from the Brink: How Crises Spur Doctors to New Discoveries about the Brain
By Edward J. Sylvester

Back from the Brink goes behind the scenes at Johns Hopkins Medical Institutions in Baltimore and Columbia’s New York-Presbyterian Hospital, the two medical centers that pioneered the new specialty of neurological intensive care. Sylvester puts us in the room as doctors and nurses labor to save brain-injured victims and takes us into the conferences and labs where these leaders in academic medicine create new science to heal the injured brain.

A vivid, powerful writer, Sylvester makes us party to unforgettable and fascinating events. His descriptions of the maelstrom in the traumatized brain are some of the most eloquent ever put to paper, and the human faces in his cast of characters are almost clear enough to touch.

Back from the Brink covers some of the most innovative developments and exotic territory in modern medicine and makes it clear why most people hope that if they ever get very sick they will end up in academic medical centers like Hopkins and Columbia.
Beyond Therapy: Biotechnology and the Pursuit of Happiness
A Report of the President’s Council on Bioethics
Special foreword by Leon R. Kass, M.D., Chairman of the President’s Council, dissenting commentary by scientist members of the Council, and an introduction by William Safire.

This thoughtful, far-reaching report examines the uses of biotechnology to satisfy our desire for better children, superior performance, longevity, and happiness and asks us to consider whether these uses confront us with profound ethical challenges.
The End of Stress as We Know It
By Bruce McEwen, Ph.D., with Elizabeth Norton Lasley
Foreword by Robert Sapolsky

The End of Stress as We Know It provides readers with the “gold standard” in understanding how their bodies work under stress and why they have the power to avoid its debilitating effects. Bruce McEwen, Ph.D., one of the world’s authorities on the subject of stress, provides unshakable evidence of how mind and body work together either for good or for ill when we are challenged by life’s events.

McEwen shows how chemicals activated during stressful situations can protect the body under acute conditions. He describes the subtle damage that comes from failing to turn off the body’s danger alert system, and how, when chronically activated, it can cause long-lasting harm. He counsels that many stress management programs can help us, if we understand the powerful mind-body forces activated by stress.

The premise of this book is that knowledge is power. By learning how the body reacts to large and small challenges in our lives, by understanding how we put ourselves in situations that cause upheaval in our minds and bodies, we can make the best choices—backed up by the latest scientific knowledge.

Co-published with Joseph Henry Press.
Striking Back at Stroke: A Doctor-Patient Journal
By Cleo Hutton and Louis R. Caplan, M.D.

At age 43, Cleo Hutton, in the prime of life, experienced a devastating stroke. Suddenly unable to speak, understand, or even walk, Hutton found herself struggling first to survive and then to regain her physical skills and her independence.

Striking Back at Stroke is Hutton’s personal journal from this trying time, detailing her success rebuilding her life and overcoming difficulties she never imagined confronting. Her account is interwoven with medical and scientific commentary by the leading expert in American stroke medicine, Louis R. Caplan, M.D., who explains Hutton’s case in terms of what scientists and doctors have come to know about strokes. Caplan also focuses his observations on how the medical system served her and on the shattering effects of a stroke on the families of patients.

Both authors give valuable advice—about home care, emotional support, and physical recovery—from the front lines of the battle against stroke. Their wise and experienced voices make Striking Back at Stroke an inspiring story as well as an indispensable guide for anyone enduring the changes that a stroke can bring to a life, a family, and a sense of self.
The Bard on the Brain: Understanding the Mind through the Art of Shakespeare and the Science of Brain Imaging
By Paul M. Matthews, M.D., and Jeffrey McQuain, Ph.D.
Foreword by Diane Ackerman

In this beautifully illustrated full-color book, the authors explore the beauty and mystique of the human mind and the workings of the brain, following the paths the Bard pointed out in 35 of the most famous speeches from his plays. Paul Matthews, director of brain imaging at Oxford University, and Jeffrey McQuain, a scholar of Shakespeare’s language, find the playwright an irresistible guide.

This joint exploration of Shakespeare and brain science leads to many places. On the magical isle of The Tempest, Miranda’s joy at seeing others like her takes us to the discovery of how our brain is shaped by development and experience. In Richard III, Richard’s chilling description of his villainous character and evil intentions—“Dive, thoughts, down to my soul”—raises the question of what in the brain enables us to make moral choices. The French princess Katherine’s struggle to communicate with her English future husband in Henry V leads to the wonder of how our brain masters language. And in Macbeth, Macbeth’s anguished appeal to his wife’s doctor, “Canst thou not minister to a mind diseased…Raze out the written troubles of the brain?,” points to urgent discoveries we are still trying to make.

It was Shakespeare who dramatized what we need to know in our modern quest to understand the engine of our humanity. Seeing how he asked the questions we are trying to answer today makes them even more compelling and absorbing.

Illustrating the book are performance photos from the plays—with acclaimed British and American actors such as Morgan Freeman as Petruchio, Sir Ian McKellan as Prospero, Alfre Woodard as Paulina, and Sir Anthony Hopkins as King Lear—and stunning images of the brain from researchers around the world.
Understanding Depression: What We Know and What You Can Do About It
By J. Raymond DePaulo, Jr., M.D., and Leslie Alan Horvitz
Foreword by Kay Redfield Jamison

One of the world’s leading experts on depression, J. Raymond DePaulo, Jr., M.D., chairman, Department of Psychiatry and Behavioral Sciences at the Johns Hopkins University School of Medicine, gives the general reader the latest and best information about an illness that one in five Americans will experience at some time in life.

What depression is, who gets it and why, what happens in the brain, the troubles that come with the illness, and the treatments that work (or do not) are the subjects in Understanding Depression. The author includes manic-depression (bipolar disorder), pointing out how often it is related to major depression. Drawing on his experience with more than 8,000 affected people during 25 years of treating and counseling patients and speaking in public, DePaulo says that anyone who confronts depression fights it as an individual. He adds that every case is different and deserves to be worked out in its own right. With this book, readers can make a powerful start.

Dr. DePaulo’s work will be treasured for its wisdom, encouraging attitude, comforting compassion, and solid advice.

Co-published with John Wiley & Sons, Inc.
**Keep Your Brain Young: The Complete Guide to Physical and Emotional Health and Longevity**

By Guy McKhann, M.D., and Marylin Albert, Ph.D.

Two of the nation’s most highly regarded experts on the aging brain bring us the first truly useful advice book for maintaining your brain in the second half of life. Professor Marilyn Albert and Dr. Guy McKhann, both of Johns Hopkins University School of Medicine, share what they know about the brain in successful aging, but also counsel us on the real changes, some good and some dismaying, that take place in the brain, along with illnesses that can occur.

McKhann and Albert discuss every aspect of aging—changes in memory, nutrition, mood, sleep, and sex, as well as the later problems that creep up in alcohol use, vision, hearing, movement, and balance. They know not all of us get off scot-free, and they provide us with what we need to know about Alzheimer’s and Parkinson’s diseases, tremors, stroke, and other common disorders.

The authors, a husband-and-wife team, are leaders in the study of aging in the separate departments they head at one of the world’s leading medical institutions. They work on a daily basis with patients and research volunteers. Despite its easy, relaxed style, *Keep Your Brain Young* reflects the rigor of science. What you read here, you can believe.

Co-published with John Wiley & Sons, Inc.
Neuroethics: Mapping the Field
Proceedings of the Conference
Steven J. Marcus, Editor

Neuroethics: Mapping the Field is the proceedings of a two-day conference organized in 2002 by Stanford University and the University of California, San Francisco. Some 100 pioneers and opinion leaders in neuroscience, journalism, law, philosophy, and other fields engaged in free-wheeling debate on where the discoveries of brain research could lead individuals and society.

Topics include themes of enhancement, free will, the promise and peril of technology, brain imaging, disease diagnosis and prediction, and how medical insurance and government leaders will face them. The formal and informal proceedings are contained in this transcript, which has been edited for an absorbing “you are there” reading experience. Representing the first formal gathering on the subject of neuroethics, these proceedings are the primary resource for anyone interested in the ethical issues emerging from neuroscience.
In Search of the Lost Cord: Solving the Mystery of Spinal Cord Regeneration
By Luba Vikhanski

Award-winning popular medical writer Luba Vikhanski follows the work of today’s most watched scientific teams as they race to defeat the ancient assumption that spinal cord injury is incurable.

In Search of the Lost Cord takes us from one short paragraph, penned in Madrid in the early 1900s, that pushed nerve regeneration into the backwaters of science for much of the last century to the discoveries that began tumbling from labs around the world in recent years. The author brings to life the courage and conviction of the top scientists and young acolytes who are fighting their way toward the vital advances. She describes their research in clear, accessible language and never loses sight of the two million victims of injuries whose hopes rest on this quest. In an era full of new hope for regeneration, the struggle to heal the spinal cord is by far the most compelling story.

Based on more than 150 interviews in eight countries and extensive background research, Vikhanski’s account is popular science at its best.

Co-published with Joseph Henry Press.
The Secret Life of the Brain
By Richard Restak, M.D.
Foreword by David Grubin

Best-selling author and neuropsychiatrist Dr. Richard Restak brings us an exciting PBS-series companion book filled with fascinating information about the brain. A visually beautiful, thoroughly satisfying exploration of recent discoveries and their human impact, The Secret Life of the Brain unfolds the story of the brain as, unseen and usually unnoticed, it develops and changes throughout our lifespan.

Restak presents key parts of the story through children and adults affected by brain disorders, thus unveiling the brain’s most surprising secret: that it is never a victim, it always fights back. Here we discover what the brain can do when confronted by misfortune, especially when the people affected, and the scientists and doctors who work with them, are determined to put up a fight.

The foreword is written by The Secret Life of the Brain series producer David Grubin, who has won numerous Emmy awards for public television documentaries.

Co-published with Joseph Henry Press.
States of Mind: New Discoveries about How Our Brains Make Us Who We Are
Roberta Conlan, Editor

At some time in life almost everyone asks, “Who am I? Where does my identity come from? Why do I feel this way or behave this way?” We wonder: how much of who we are is due to genes? How much is due to circumstances? How much is actually within our control?

Eight of the country’s top brain scientists, including 2000 Nobel laureate in medicine Eric Kandel, explore these and other thought-provoking topics in an absorbing group of essays based on a lecture series co-sponsored by The Dana Alliance for Brain Initiatives and the Smithsonian Associates. Among the trove of fascinating questions:

- What causes addiction or severe mental illness?
- Why are madness and creativity often intertwined?
- How does the brain affect the immune system?
- What are emotions?
- How does the brain remember?

Co-published with John Wiley & Sons, Inc.
The Longevity Strategy: How to Live to 100 Using the Brain-Body Connection
By David Mahoney and Richard Restak, M.D.
Foreword by William Safire

Combining unique perspectives in a delightful book that shows you how a long, healthy life is made, a successful CEO and a leading brain expert identify the key traits that link centenarians. David Mahoney and Dr. Richard Restak reveal how the discoveries of brain research—together with personal actions—will make a longer life not just worthwhile, but a genuine gift. This book sets out no-nonsense advice based on hard science for people planning the fourth quarter of their lives.

Some of the wisdom in these pages:

- Keep up with the latest brain research; it’s leading to major advances in longevity;
- Build in a back-up plan; diversify your vocation from the very start;
- Spice up your life with risk;
- Erase the word “retire” from your vocabulary.

Co-published with John Wiley & Sons, Inc.