

## **Templeton Foundation awards grant for meditation research**

November 19, 2012

The John Templeton Foundation has awarded a grant of \$2.3 million over three years to continue and extend the Shamatha Project, the most comprehensive investigation yet conducted into the effects of intensive meditation training on mind and body.

The Shamatha Project is led by Clifford Saron, associate research scientist at the Center for Mind and Brain and MIND Institute at the University of California, Davis.

This inaugural Templeton Prize Research Grant, "Quantifiable Constituents of Spiritual Growth," was announced Nov. 18 during a special session at the annual meeting of the American Academy of Religion in Chicago in honor of His Holiness the 14th Dalai Lama, winner of the 2012 Templeton Prize, who gave a videotaped presentation.

"This project represents a true long-term perspective on the developmental consequences of intensive meditation training. Nothing quite like this has been done before," Saron said.

At several meetings sponsored by the Massachusetts-based Mind and Life Institute, Saron has presented results from the Shamatha Project to the Dalai Lama, who has endorsed the project. Saron and his colleagues have also shared results from this research with scientific and lay audiences around the world.

"The Shamatha project is a remarkable scientific odyssey that is changing our understanding not only of how contemplative practices may affect human cognition, emotion and brain function, but also how we view the relationship between mental function and health. This major award from the John Templeton Foundation will help Dr. Saron and our team expand the boundaries of this innovative research," said Ron Mangun, dean of the Division of Social Sciences at UC Davis and a co-investigator on the grant.

With the new funding, Saron, project co-director Bajinder Sahdra, a former postdoctoral researcher at UC Davis and now a lecturer at the University of Western Sydney, Australia, Mangun and their colleagues will continue and expand the analysis of data from the Shamatha Project. The latest phase of the project will address two big questions: After going through intensive meditation training, what differentiates people who develop their lives in ways that relieve suffering for themselves and others close to them from those who do not; and how are measured changes in cognitive, psychological and physiological processes related to peoples' life experience years later?

Michael Murray, executive vice president of programs at the John Templeton Foundation, said that the foundation was impressed with the size and scope of the project.

"There are more data points per subject in this study than I have ever encountered in a meditation research project," Murray said. "The dataset is unique and unusually multidimensional in the sense

of taking multiple measurements of cognition, behavior, emotion, experience, biomarkers, neural indicators, self-report, and other-person judgment, and then repeating many of these at multiple time-points."

The project is investigating the effects of two three-month retreats held in 2007. A total of 60 volunteers received intensive daily instruction from Buddhist scholar Alan Wallace in developing calm, focused attention and cultivating compassionate concern. Throughout the retreats, they were tested for a variety of psychological, physiological and cognitive measures. Participants in the second retreat were also interviewed about their experiences during training and all participants provided spoken accounts of their experiences five and 15 months later.

In a series of papers and conference presentations, the team has described how retreat participants reported improved psychological functioning, were better able to sustain visual attention and inhibit habitual responses, and were more engaged with and sympathetic to suffering. Participants also showed greater activation of attention-related brain regions during meditation after training and had improved measures of cellular health that have been linked to aging. In addition, those participants who reported greater mindfulness had diminished stress hormone levels.

The new funds will aid completion of analysis of the original data set as well as support follow-up data collection. In new work, the researchers will carry out structured telephone interviews with the participants, assessing their experiences of the retreat six years later and investigating what changes it made in their lives and how those changes continue to affect them.

Saron, Sahdra and colleagues will use a sophisticated network analysis to see which physiological and psychological measures made during the retreats are associated with long-term personal growth years later -- and which are not.

Additionally, they will interview other people, including family members, colleagues and friends of the retreat participants, to garner their observations about the long-term changes in the participants.

"We're relating how things that we can measure in the laboratory reflect meaningful changes in peoples' lives," Saron said.

"A common way people think about meditation is as though it is a formulaic process. Take a person, follow the instructions, obtain a result – but meditation is not so mechanical," Saron said. "We view it as a commitment to investigate the nature of one's mind in a developmental process of becoming familiar with 'the world within.' This promotes a more knowing and friendly attitude towards oneself. We think this greater comfort 'within our own skin' will be reflected in mental and physical health, our actions in the world, and felt by those with whom we interact."

"We fundamentally care about individual differences," Saron said. "Why do people change? How can we develop a sense of purpose?"

A sense of "purpose in life" is gaining increased recognition within the field of psychology as a key to sustained health, Saron explained, whether or it not involves meditation as such.

Saron sees a wide potential impact for the project to health and medicine, law, business and society at large. He has spoken about the Shamatha Project to audiences as diverse as former California state prison administrators, agricultural leaders, and major corporations such as Google. Saron is currently working with researchers at UC San Francisco and other colleagues to develop a short

intervention to help reduce stress for parents of children with autism.

Other co-investigators and trainees on the Templeton Foundation grant team at UC Davis are: Professors Emilio Ferrer, Phillip Shaver and Karen Bales, Department of Psychology; graduate students Stephen Aichele, Anahita Hamidi, Brandon King, and Anthony Zanesco; Erika Rosenberg, consulting scientist with the Center for Mind and Brain and research associate Rachel Whitworth. Other team members are: Susan Bauer-Wu, University of Virginia; Katherine MacLean, Johns Hopkins University; Jonathan Smallwood, Max Planck Institute, Leipzig, Germany; Paul Grossman, University of Basel Hospital, Switzerland; Firdaus Dhabhar, Stanford University; and Ezequiel Di Paolo, University of the Basque Country, Spain. The Shamatha Project additionally involves a number of other collaborating researchers.

Funds to support the work since 2006 have come from the Fetzer Institute, Hershey Family Foundation, fellowships from the National Science Foundation and Social Science and Humanities Research Council of Canada, the Santa Barbara Institute for Consciousness Studies, Tan Teo Charitable Foundation, Baumann Foundation, Yoga Research and Education Foundation, Mental Insight Foundation, and individual and anonymous donors as well as sponsorship by the Shambhala Mountain Center and Mind and Life Institute.

The foundation launched the Templeton Prize Research Grant initiative this year to honor each year's Templeton Prize Laureate specifically by funding scientific research in disciplines related to the laureate's life's work.

This grant from John Templeton Foundation is counted as part of The Campaign for UC Davis, a university-wide fundraising initiative publically launched in 2010 to inspire 100,000 donors to contribute \$1 billion in support of the university's mission and vision.

### **About the John Templeton Foundation**

The John Templeton Foundation ([www.templeton.org](http://www.templeton.org)) serves as a philanthropic catalyst for discoveries relating to the Big Questions of human purpose and ultimate reality. The Foundation supports research on subjects ranging from complexity, evolution, and infinity to creativity, forgiveness, love, and free will. It encourages civil, informed dialogue among scientists, philosophers, and theologians and between such experts and the public at large, for the purposes of definitional clarity and new insights. The Foundation's vision is derived from the late Sir John Templeton's optimism about the possibility of acquiring "new spiritual information" and from his commitment to rigorous scientific research and related scholarship. The Foundation's motto, "How little we know, how eager to learn," exemplifies its support for open-minded inquiry and its hope for advancing human progress through breakthrough discoveries.

### **About UC Davis**

For more than 100 years, UC Davis has engaged in teaching, research and public service that matter to California and transform the world. Located close to the state capital, UC Davis has more than 32,000 students, more than 2,500 faculty and more than 21,000 staff, an annual research budget of nearly \$750 million, a comprehensive health system and 13 specialized research centers. The university offers interdisciplinary graduate study and more than 100 undergraduate majors in four colleges — Agricultural and Environmental Sciences, Biological Sciences, Engineering, and Letters and Science. It also houses six professional schools — Education, Law, Management, Medicine,

Veterinary Medicine and the Betty Irene Moore School of Nursing.

**Additional information:**

[The Shamatha Project](http://mindbrain.ucdavis.edu/labs/Saron/shamatha-project/): <http://mindbrain.ucdavis.edu/labs/Saron/shamatha-project/>

**Media contact(s):**

- Clifford Saron, Center for Mind and Brain, (415) 307-9757, [cdsaron@ucdavis.edu](mailto:cdsaron@ucdavis.edu)
- Bajinder Sahdra, University of Western Sydney, [B.Sahdra@uws.edu.au](mailto:B.Sahdra@uws.edu.au)
- Don Lehr, The Templeton Prize, (212) 967-8200, [dlehr@templetonprize.org](mailto:dlehr@templetonprize.org)
- Andy Fell, UC Davis News Service, (530) 752-4533, [ahfell@ucdavis.edu](mailto:ahfell@ucdavis.edu)