



Press Release for the Global debut
“Our Cells, our Selves”
the world’s first regenerative medicine digital-dome planetarium show

PITTSBURGH, 8 September, 2007 – The interdisciplinary project REGENERATIVE MEDICINE PARTNERSHIP IN EDUCATION proudly presents the planetarium show **“Our Cells, Our Selves”** a story about juvenile diabetes (Type 1), with an accompanying immunology-based videogame **“Immun-ologee”**.

Led by John Pollock (Director/Executive Producer) REGENERATIVE MEDICINE PARTNERSHIP IN EDUCATION is supported in large part by a Science Education Partnership Award from the National Center for Research Resources, a component of the National Institutes of Health. The centerpiece of the project is a series of innovative planetarium shows that use immersive scientific visualization to bring the audience into the human body. The goal is to develop scientifically accurate, biologically rich content for young learners. All films will highlight the stories of current biomedical research, specifically associated with regenerative medicine. Each show brings together technology and the arts to communicate four specific elements of information: (1) the basic biology of interest, (2) what goes wrong with disease or trauma, (3) what is the basis of current medical therapy and (4) how the body heals itself through regenerative medicine.

The first in a planned series of digital dome planetarium shows, **“Our Cells, our Selves”** explores the immune system, giving children and their families a basic understanding of how the body protects itself from its environment. **“Our Cells, Our Selves”** provides accessible information that explains the evolutionary basis of the immune system, and then explores the auto-immune disease, type-1 juvenile diabetes. Our story starts with a bedtime story between a 7 year old Sylvie, who was recently diagnosed as diabetic and her mother. Through a dream-like story, we travel back hundreds of millions of years into the primitive ocean. There we discover the beginning of metazoan life and its basic needs for food (energy metabolism) and protection from other organisms (immune system). The movie explores a few familiar and some very unfamiliar organisms to show how the immune system evolved side-by-side with more complex organisms, and ultimately humans. Diabetes is shown as a rare error wherein the body’s own immune system attacks its insulin-producing cells in the pancreas. The show then explores the future of regenerative medicine therapies that rely on harnessing the body’s own restorative potential through the use of stem cells.

“Immunologee” is a PC-based game where players get to see the body from the point of view of the immune system. Players learn that the human immune system is not an organ with a simple function, but a complex constellation of cells and tissues. These parts must continuously work together on the challenging task of patrolling the entire body, distinguishing cells and particles that may be harmful from those that belong to the body. Players travel through tissue in the body encountering unknown particles and cells, and learn how the immune system identifies and deals appropriately with what it encounters. **“Immun-ologee”** was designed for short sessions, ideally for science centers and on-line play. The game was developed in collaboration with the Entertainment Technology Center at Carnegie Mellon University.



In addition to the planetarium shows, health-literacy film projects are in development on a variety of topics for several distinct target audiences. To accompany the movies, we have also developed interactive web activities, teacher/student workbooks, and classroom activities for school or home school (www.sepa.duq.edu/education). Through these tools, children and young adults are able to explore the ebb and flow of cellular and chemical interactions, forming a strong intuitive understanding of biological workings in the human body. This provides a foundation for understanding the emerging technologies of tissue engineering and regenerative medicine.

“Our Cells, our Selves” will premier to guests and media at the Carnegie Science Center on **Friday, October 25, 2007**. “Immunologiee” will be demonstrated and available for play.

John Pollock, Ph.D. is an Associate Professor of Biology in the Bayer School of Natural and Environmental Sciences, Duquesne University (www.science.duq.edu/faculty/pollock.html). Before starting the Regenerative Medicine Partnership in Education, Dr. Pollock worked on three previous science education planetarium projects; Director/Principal Investigator for the five film series Tissue Engineering for Life 2000-2005 (www.ptei.org/teshow). Other projects included participation as co-director and science advisor for Gray Matters: The Brain Movie 1997-2000 and science advisor for Journey into the Living Cell 1996.

The Regenerative Medicine Partnership in Education works in collaboration with:

- Department of Journalism and Interactive Media of McAnulty College, Duquesne University
 - School of Education at Duquesne University
 - Entertainment Technology Center at Carnegie Mellon University
 - Carnegie Science Center Buhl Planetarium/Digital Dome
 - Additional scientists, artists and physicians from other key institutions in Pittsburgh also participate
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Contact Information

For further information on the Regenerative Medicine Partnership in Education project or the planetarium shows, please do not hesitate to contact:

John A. Pollock, Ph.D.
Associate Professor of Biology
222 Mellon Hall
Duquesne University
Pittsburgh PA, 15282

412 855 4043
FAX 412 396 5907
pollock@duq.edu
<http://www.science.duq.edu/faculty/pollock.html>
<http://www.sepa.duq.edu>