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STEM CELL  
RESEARCH  
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**November 2, 2004  
Election**

# Our Discussion Today

- The Potential of Stem Cell Research
- The Problem
- The Solution
- A Call to Action

# The Potential

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# Opportunity To Turn Hope For Cures Into Reality

- Stem cells are “unspecialized” cells that can generate healthy new cells and tissues
- They have the potential to provide cures for many currently incurable diseases and injuries, including:
  - Cancer
  - Alzheimer’s
  - Diabetes
  - HIV/AIDS
  - Heart disease
  - Multiple sclerosis
  - Parkinson’s disease
  - Spinal cord injuries
- Some stem cell therapies are already being used, such as in bone marrow transplants to treat leukemia

# Lives of Millions of Children and Adults are at Stake

- **128 million** Americans – including millions of Californians – suffer from diseases and injuries that could be treated or cured with stem cell therapies
- These devastating medical problems affect a child or adult in nearly **half of all families**
- They also generate **hundreds of billions of dollars** in health care costs annually

# U.S. Disease & Injury Statistics

Condition	Number of persons affected
Cardiovascular diseases	58 million
Autoimmune diseases	30 million
Diabetes	16 million
Osteoporosis	10 million
Cancer	8.2 million
Alzheimer's disease	4 million
Parkinson's disease	1.5 million
Burns (severe)	0.3 million
Spinal cord injuries	0.25 million
Birth defects	150,000 (per year)
Total	128.4 million

Dan Perry, Executive Director of CAMR.  
*Science* (2000) **287**: 1423.

# The New Frontier in Medicine...

- Most medical experts view stem cell research as the new frontier in medicine, a huge breakthrough that could save millions of lives – if adequate funding is made available to conduct needed research

**...a Real Potential for Cures**

# Examples of Potential Treatments

- Type I Diabetes
  - Restore normal blood sugar by replacing pancreatic cells.
- Burn Treatment
  - Regenerate functional skin following severe burns.
- Heart Disease
  - Restore damaged regions of the heart and cardiovascular system.
- Alzheimer's & Other Neurological Diseases
  - Regenerate neural cells and restore communication between brain and body, to alleviate symptoms of Alzheimer's, ALS, multiple sclerosis & Parkinson's.
- Spinal Injuries
  - Restore function to damaged spinal cords (recently successful in tests with paralyzed rats, which regained the ability to walk).



# The Problem



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# A Critical Funding Gap Exists

- Currently, there is ***no state level*** funding for stem cell research
- ***Political roadblocks have severely limited federal funding*** for some of the most promising types of stem cell research

# The Solution



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# The California Stem Cell Research and Cures Initiative

- Scheduled for November 2, 2004 statewide ballot – after over 1 million voters signed petitions
- The Initiative closes the funding gap by authorizing tax-free state bonds to support stem cell research at California's medical research facilities
- Establishes California Institute For Regenerative Medicine to oversee and facilitate research grants

# Protects Taxpayers & State Budget

- Uses low-interest, tax-free bond funds to support stem cell research:
  - Authorizes an average of \$295 million per year over a 10-year period for research at California institutions
  - Amounts to approximately  $\frac{1}{2}$  of 1% of the state's bonds currently authorized and outstanding
  - Bonds are self-financing during the first five years, so there's no cost to the state's general fund
    - Protects our budget during economic recovery
- Won't increase or create any new taxes

## **Benefits Our Economy & State Budget**

- Will make California a world leader in stem cell research.
- Will create thousands of new, good paying jobs and boost our economy – generating millions in new state tax revenues
- Will give the State an opportunity to share in royalties resulting from the research – which could generate millions in additional state revenues for decades to come

# Reduces CA Healthcare Costs

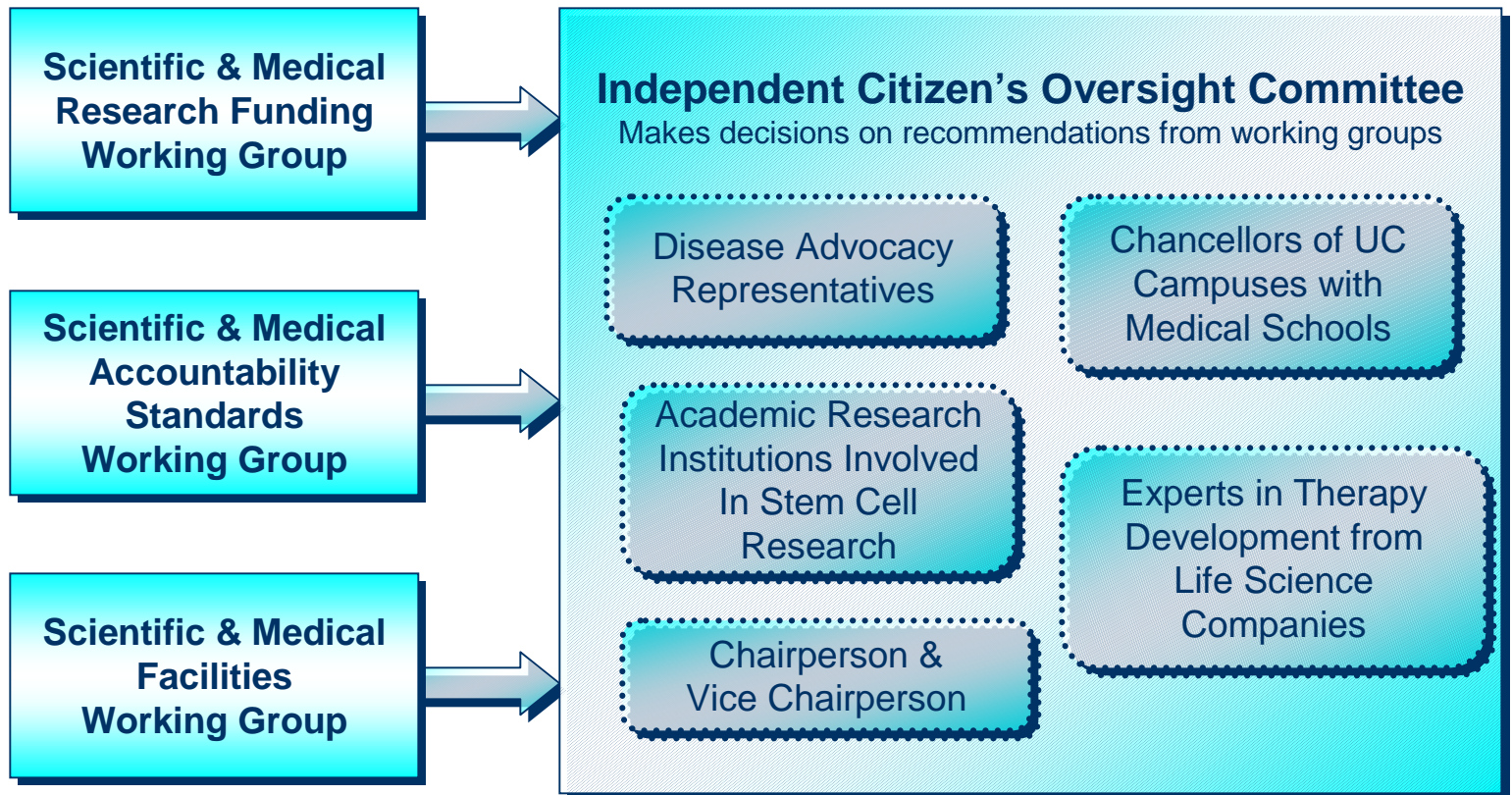
- California has the highest health care costs in the nation – over \$112 billion per year
  - A huge share of those costs is caused by diseases and injuries that could be cured with stem cell therapies.
- By leading to cures that reduce California health care costs by just 1%, the Initiative would save \$1 billion annually and pay for itself within a few years
- The potential savings could be far greater – possibly reducing our health care costs by tens of billions of dollars in the decades ahead

# Requires Fiscal & Public Accountability

- Ensures bond funds are used properly and effectively
  - Requires independent audits, open meetings, public hearings and annual reports to the public
- Gets politics out of medical research
  - Research grants based on the potential for cures, with guidance from top medical experts and representatives of disease advocacy groups



# Broad Participation In Governance



# Creates Strict Ethical Guidelines

- Includes strict provisions to protect patient rights, safety and privacy
- Specifically prohibits any funding for human reproductive cloning
  - Reinforces current prohibition on reproductive cloning in current state law

# Supported by a Broad Coalition

- Patient and disease advocacy groups
- Leading medical and health care groups, like the California Medical Association (representing 30,000 California doctors)
- Leading scientists and medical researchers – including 11 Nobel Prize Winning scientists

# Organizational Endorsements

## (Partial List)

- Alliance for Aging Research
- ALS Therapy Development Foundation
- American Diabetes Association
- American Hematology Society
- American Nurses Association of California
- American Parkinson's Disease Association of Los Angeles
- California Medical Association
- Christopher Reeve Paralysis Foundation
- Coalition for the Advancement of Medical Research
- Cure Autism Now
- Cystic Fibrosis Research, Inc.
- Diabetes Research Institute
- Elizabeth Glaser Pediatric AIDS Foundation
- Gray Panthers, California
- Hereditary Disease Foundation
- Juvenile Diabetes Research Foundation
- National Coalition of Hispanic Organizations
- Parkinson's Action Network
- Sickle Cell Disease Foundation of California
- Stem Cell Research Foundation

# Nobel Laureate Scientists

## (Partial List)

- David Baltimore, PhD (1975)
  - President, California Institute of Technology
- Paul Berg, PhD (1980)
  - Professor of Cancer Research Emeritus, Director Emeritus Beckman Center, Stanford University
- J. Michael Bishop, MD (1989)
  - University Professor and Director, G.W. Hooper Foundation, Chancellor, UCSF
- Paul Boyer, PhD (1997)
  - Professor Emeritus of Biochemistry, UCLA
- Sydney Brenner, PhD (2002)
  - Distinguished Professor, Salk Institute for Biological Sciences
- Renato Dulbecco, MD (1975)
  - Distinguished Professor and President Emeritus, Salk Institute for Biological Sciences
- Donald Glaser, PhD (1960)
  - Professor of Physics and Neurobiology, University of California, Berkeley
- Roger Guillemin, MD, PhD (1977)
  - Distinguished Professor, Salk Institute for Biological Sciences
- David Hubel, MD (1981)
  - Research Professor of Neurobiology, Harvard University
- Arthur Kornberg, MD (1959)
  - Emeritus Pfeiffer Merner Professor of Biochemistry, Stanford University
- George Palade, MD (1974)
  - Professor of Cellular and Molecular Medicine, UCSD School of Medicine
- Stanley B. Prusiner, MD (1997)
  - Professor of Neurology, University of California, San Francisco

# A Call to Action



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# Time is of the Essence

- 128 million Americans suffer every day from diseases that could be cured with stem cell therapies
- The goal of aggressively pursuing all types of stem cell research is strongly supported by the overwhelming majority of scientists, medical experts and disease advocacy groups – as well as by notable supporters from across the political spectrum
- "Science has presented us with a hope called stem cell research...I just don't see how we can turn our back on this."
  - Former First Lady Nancy Reagan
  - May 8, 2004

# Help Us Turn Hope into Reality

- The medical legacy of previous generations: cures for diseases like polio and smallpox
- The Initiative can make our legacy cures for diseases that still cause millions of children and adults to suffer and die each year
- You can help make it happen:
  - Sign up as a member of our coalition
  - Talk to your friends and neighbors
  - Make a donation to support our campaign
  - Vote YES on November 2nd



# Contact Us

Californians For Stem Cell Research

(800) 931-CURE

[www.CuresForCalifornia.com](http://www.CuresForCalifornia.com)

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Vote YES...to  
Save Lives and  
Reduce Health  
Care Costs