



HR1147

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HOUSE RESOLUTION

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WHEREAS, The members of the Illinois House of Representatives are pleased to congratulate Dr. Graeme Bell on the occasion of his 60th birthday; and

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WHEREAS, Dr. Graeme Bell was born in Canada; he earned his bachelor's degree in zoology from the University of Calgary in Canada in 1968 and his master's degree in biology from the University of Calgary in 1971; he earned his Ph.D. in Biochemistry at the University of California in San Francisco (UCSF) in 1977, working with Professor William J. Rutter; and

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WHEREAS, After an extremely successful career in industry as a scientific founder of Chiron, Dr. Graeme Bell moved to an academic position at the University of Chicago, successfully demonstrating that investigators can make the transition from industry to academia; currently serving as the Louis Block Distinguished Service Professor of the Departments of Medicine and Human Genetics and as Director of the National Institutes of Health-funded Diabetes Research and Training Center at the University of Chicago, he has a strong record in training fellows from around the world, many of whom now occupy important leadership positions in the diabetes community in North America, Europe, and Asia; and

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1 WHEREAS, Dr. Graeme Bell's scientific career has coincided
2 with a pioneering period in the development and application of
3 the techniques of molecular biology to complex human genetic
4 disease; in the midst of this period, he has established
5 himself as one of the key outstanding international leaders of
6 the field, utilizing powerful new technologies in the
7 elucidation of a number of landmark discoveries; his career has
8 been particularly notable for the fields he has created along
9 the way in his search for genes underlying diabetes mellitus,
10 establishing himself as a world leader in the study of the
11 genetics of the most common forms of diabetes; and

12 WHEREAS, Early in his illustrious career, Dr. Graeme Bell
13 documented the phosphorylation of RNA polymerases and was the
14 first to clone the full-length cDNA and the chromosomal gene
15 encoding human insulin, discoveries which opened the way for
16 the production of human insulin and its large-scale use in
17 patients with diabetes mellitus; and

18 WHEREAS, Dr. Graeme Bell was the first person to isolate
19 and characterize the gene encoding the human insulin receptor
20 precursor and to identify functionally important alternative
21 splicing of this gene in certain tissues; he also played a key
22 role in initially characterizing the many important genes,
23 including the family of mammalian glucose transporters,
24 several somatostatin receptors in the pancreatic islet, gut,

1 and central nervous system, an inositol trisphosphate receptor
2 (IP3R3) that plays an important role in regulation of
3 intracellular calcium in many cell types, and several opioid
4 receptors in the central nervous system; and

5 WHEREAS, Dr. Graeme Bell has continued to make landmark
6 contributions to the understanding of the genetic basis of
7 diabetes; his most significant discoveries in this area have
8 put him at the forefront in elucidating genes causing
9 monogenetic forms of diabetes, especially maturity onset
10 diabetes of the young (MODY); his observations regarding MODY's
11 links to the glucokinase gene have stimulated a large number of
12 clinical and physiological studies from investigators
13 throughout the world, confirming the long postulated role of
14 glucokinase as the "glucose sensor" of the beta cell that
15 governs insulin secretion in response to glucose; these
16 discoveries have also expanded the knowledge of the structure
17 and function of hexokinases in a general context; and

18 WHEREAS, Dr. Graeme Bell has recently been at the center of
19 a collaboration involving neonatal diabetes genes; working
20 with Pal Njolstad in 2001, he described the first genetic
21 etiology of neonatal diabetes in isolation when they showed
22 homozygous mutations in the glucokinase gene, resulting in
23 severe neonatal diabetes from birth; working with Philipson and
24 Cox, he established a referral center for children diagnosed in

1 infancy to allow diagnostic testing for known causes and also
2 to define new genes for monogenic diabetes, which has led to
3 the identification of over a dozen patients with KCNJ11
4 mutations in the United States and their treatment, changing
5 from moderate control on insulin injections to excellent
6 control on sulfonylurea tablets; and

7 WHEREAS, Dr. Graeme Bell has also been at the forefront in
8 advancing our understanding of the genetic basis of the common
9 polygenic forms of type 1 and type 2 diabetes, having found
10 numerous connections between genetic patterns and
11 susceptibility to these forms of the disease; and

12 WHEREAS, Dr. Graeme Bell has developed a fine reputation
13 among his colleagues for his exemplary conduct as a scientist;
14 he is particularly well known for his generosity in sharing
15 reagents and scientific expertise with investigators all over
16 the world; his willingness to share reagents and information
17 prior to publication with other investigators, even from
18 competing laboratories, has been extremely important in
19 allowing the research of diabetes to continue moving forward;
20 he is often sought by the NIH, Wellcome Trust, Medical Research
21 Council, and premier scientific journals as a reviewer for
22 applications and papers submitted to those agencies; and

23 WHEREAS, Dr. Graeme Bell has demonstrated an exceptional

1 level of productivity, having produced over 380 peer-reviewed
2 publications; as a testament to the enormous impact of his
3 work, his papers have been cited over 42,000 times, with 114
4 papers having been cited over 100 times; and

5 WHEREAS, In recognition of his seminal contributions to the
6 understanding of the molecular and genetic basis of glucose
7 transport, Dr. Graeme Bell was the recipient of the Outstanding
8 Scientific Achievement Award of the American Diabetes
9 Association (Lilly Award) in 1990; and

10 WHEREAS, Dr. Graeme Bell's stellar scientific career has
11 led to seminal contributions to multiple aspects of diabetes
12 research over the past 25 years; his scientific
13 accomplishments, coupled with his collegiality and his
14 exemplary role in the training of colleagues and students, make
15 him an exceptional scientific resource for the State of
16 Illinois; and

17 WHEREAS, Dr. Graeme Bell will celebrate his 60th birthday
18 on April 15, 2008; therefore, be it

19 RESOLVED, BY THE HOUSE OF REPRESENTATIVES OF THE
20 NINETY-FIFTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS, that we
21 congratulate one of the foremost diabetes scientists, Dr.
22 Graeme Bell, on the occasion of his 60th birthday and wish him

1 further success and happiness in the future; and be it further

2 RESOLVED, That a suitable copy of this resolution be
3 presented to Dr. Graeme Bell as a symbol of our esteem and
4 respect.