



**Karolinska  
Institutet**

**200**  
1810 – 2010 *År*

## **Bilaga till pressinbjudan om barncancerkonferensen**

**“Advances in Neuroblastoma Research” (ANR)**

**21-24 juni 2010, Stockholm City Conference Centre**

### **Några framstående forskare som föreläser på konferensen:**

**John Maris, Philadelphia**, är en framstående läkare och forskare som kartlagt de genetiska förändringar som ligger bakom uppkomsten av nervcellscancern neuroblastom vilken särskilt drabbar små barn. Fynden gör att man nu kan skilja på olika varianter av sjukdomen, och har möjlighet att bota fler barn. Dessutom har professor Maris forskning gjort att man kan se vilka tumörer som är ärftliga, och vilka tumörer som är så gynnsamma att de inte behöver behandlas alls.

**Bill Weiss, San Francisco**, har gjort banbrytande studier där han visat att en enstaka gen kan orsaka cancer om den slås på i särskilda celler under utvecklingen. Detta har möjliggjort en särskild djurmodell som professor Weiss utvecklat. Dessa möss, som får neuroblastomtumörer, är en utmärkt möjlighet att pröva nya behandlingsalternativ i djur innan man börjar med försök på sjuka barn. Vid konferensen presenterar Bill Weiss nya terapimöjligheter mot barncancer.

**Marie Arsenian Henriksson, Stockholm**, studerar den gen som särskilt orsakar elakartade neuroblastom, den barncancerform som trots intensiv behandling har sämst prognos. Hon har kartlagt biologiska mekanismer som kännetecknar cancercellerna, och utvecklar nya skraddarsydda behandlingsmöjligheter för barncancer.

**Per Kogner, Stockholm**, är den barnläkare och barncancerprofessor som ansvarar för konferensen ANR 2010. Hans forskning har visat att inflammation som gör barncancer mer aggressiv kan behandlas med nya droger som även inbegriper välkända värktabletter och omega-3 fettsyror. Svenska behandlingsresultat gällande barncancer, och framförallt neuroblastom, kommer att presenteras.

### **Svenska barncancerforskare som har blivit utvalda att hålla särskilt uppmärksammade föredrag. Samtliga har fått forskningsstöd från Barncancerfonden:**

**Michael Andäng**, forskare vid Karolinska Institutet, som har studerat en ny mekanism för cancercellers överlevnad vilka därigenom kan komma att behandlas på ett helt nytt sätt. Cellens särskilda pumpmekanism som kontrollerar små joners passage, styr även celledelning och cancertillväxt. Ny behandling har redan prövats framgångsrikt i olika cancermodeller.

**Alexander Pietras**, forskare vid Lunds universitet, som har studerat cancerceller som har särskilda överlevnadsmekanismer, cancerstamceller. Dessa celler är särskilt motståndskraftiga mot dagens cancerbehandling och orsakar de återfall som gör att många patienter inte överlever. Forskningsresultaten kan nu leda till nya och bättre behandlingsmöjligheter.

**Jakob Lovén**, doktorand vid Karolinska Institutet, som har studerat en särskild onkgen vilken fungerar som cancercellens speciella gaspedal. Samspelet med en nyligen upptäckt sorts genprodukt, mikro-RNA, och hormoner anses ansvara för hur tumörer kan uppstå i omogna nervceller redan under fostertiden.

**Catarina Träger**, barnläkare i Uppsala och forskare vid Karolinska Institutet, som har studerat alla svenska barn som fått neuroblastom sedan 1982. Unika resultat visar att canceren är vanligare, och allvarigare, hos pojkar än flickor. Prognosen har kraftigt förbättrats för alla tack vare intensivare behandling, särskilt för barn

med mest aggressiv sjukdom. Svenska behandlingsresultat är nu bättre än några andra hittills presenterade. Dock kan genetiska analyser visa vilka barn som behöver ny, skraddarsydd behandling.

## **Nobelpristagare som deltar:**

### **PL1 The role of eicosanoids in health and disease**

*Bengt Samuelsson, Sweden*



Dr. Bengt Samuelsson is Professor of Physiological Chemistry at the Karolinska Institute. Dr. Samuelsson's research led to the discovery of various prostaglandins and related substances. Of particular interest are the thromboxanes which are involved in such common, severe thrombotic diseases as strokes and coronary infarcts. He also discovered the leukotrienes, substances that play a role in inflammation and asthma and other allergic diseases. For his discovery of prostanoids and leukotrienes he was awarded the Nobel Prize in Physiology or Medicine in 1982.

Dr. Samuelsson obtained his Doctor of Medical Science degree in biochemistry and later, his M.D. degree, from the Karolinska Institute. He spent a year as a research fellow in the Department of Chemistry at Harvard University, Cambridge, Mass., USA. In 1972, Dr. Samuelsson was appointed professor at the Karolinska Institute. In 1973–1983, he was Chairman of the Department of Chemistry; in 1978–1983, Dean of

the Medical Faculty and in 1983–1995, President of the Karolinska Institute.

Dr. Samuelsson has been a member of the Nobel Assembly and the Nobel Committee for Physiology or Medicine at the Karolinska Institute and in 1993–2005, he was Chairman of the Nobel Foundation in Stockholm.

In addition to the Nobel Prize, Dr. Samuelsson has received a number of worldwide awards and honorary academic degrees. These include the Louisa Gross Horwitz Award, the Gairdner Foundation Award and the Albert Lasker Basic Medical Research Award. He is a Foreign Associate of the US National Academy of Sciences and a Foreign Member of the Royal Society, London. He is a member of the Royal Swedish Academy of Sciences, the Royal National Academy of Medicine, Spain, the French Academy of Sciences and the Institute of Medicine, USA.

### **PL3 Telomeres and telomerase: Their implications for human health and disease**

*Elizabeth Blackburn, United States*



Elizabeth Blackburn, Ph.D. is the recipient of the 2009 Nobel Prize in Physiology or Medicine for her discoveries in telomere biology that have uncovered a new understanding of normal cell functioning and given rise to a growing field of inquiry.

Throughout her distinguished career, whether as the editor of high-profile scientific journals, such as *Molecular Cancer Research* and *Molecular Biology of the Cell*, or as a current member of over 30 distinct institutional advisory boards or review committees, Dr. Elizabeth Blackburn has spent countless hours in service to her constituency. Further, she has held leadership positions in several scientific societies, including her current appointment as President of the American Association for Cancer Research.

Dr. Blackburn has been recognized for her seminal contribution to the field of telomere biology with numerous prizes, awards, and honorary degrees, including the 2006 Albert Lasker Award for Basic Medical Research and elections to the American Association for the Advancement of Science and the Institute of Medicine. In 2007, *Time* magazine named her one of the '100 Most Influential People in the World,' and in 2008 she was the North American Laureate for the L'Oréal-UNESCO For Women In Science. The scientific community bestowed upon her the ultimate recognition of her legacy by honoring Dr. Elizabeth Blackburn with the 2009 Nobel Prize in Physiology or Medicine.

Dr. Blackburn is currently the Morris Herzstein Endowed Chair in Biology and Physiology in the Department of Biochemistry and Biophysics at the University of California, San Francisco. She is also a Non-Resident Fellow of the Salk Institute.

### PL13 Infections linked to human cancers

*Harald zur Hausen, Germany*



Harald zur Hausen was born on March 11, 1936 in Gelsenkirchen-Buer, Germany. He studied Medicine at the Universities of Bonn, Hamburg and Düsseldorf and received his M.D. in 1960. After his internship he worked as postdoc at the Institute of Microbiology in Düsseldorf, subsequently in the Virus Laboratories of the Children's Hospital in Philadelphia where he was later appointed as Assistant Professor. After a period of 3 years as a senior scientist at the Institute of Virology of the University of Würzburg, he was appointed in 1972 as Chairman and Professor of Virology at the University of Erlangen-Nürnberg. In 1977 he moved to a similar position to the University of Freiburg. From 1983 until 2003 he was appointed as Scientific Director of the Deutsches Krebsforschungszentrum (German Cancer Research Center) in Heidelberg. He retired from this position in 2003.

He had and has a number of special appointments, among them being the Chairman of several Scientific Price-Committees, between 1989-1991 Chairman of the Association of National Research Centers (Großforschungseinrichtungen) in Germany and from 1993 to 1996 President of the Organization of European Cancer Centers (OECC).

Zur Hausen received a number of national and international awards, among them the Robert-Koch-Price, the Charles S. Mott Price of the General Motors Cancer Research Foundation, the Federation of the European Cancer Societies Clinical Research Award, the Paul-Ehrlich-Ludwig Darmstätter-Price, the Jung-Price, Hamburg, the Charles Rudolphe Brupbacher Price, Zürich, the Prince Mahidol Award, Bangkok, the Raymond Bourguine Award, Paris, the Coley-Award, New York, the Life Science Achievement Award of the American Association for Cancer Research, San Diego, and the Nobel-Prize for Medicine, 2008. He received honorary doctorates from the Universities of Chicago, USA, Umeå, Sweden, Prague, Czech Republic, Salford, UK, Helsinki, Finland, Erlangen-Nürnberg and Würzburg, both Germany, Buenos Aires, Argentina and Ferrara, Italy.

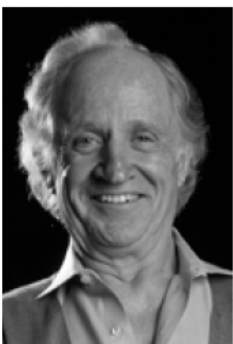
He is an elected member of various academies (LEOPOLDINA, Heidelberg Academy of Sciences, Polish Academy of Sciences, Venezuela National Academy of Medicine, American Philosophical Society, Institute of Medicine of the National Academy of Sciences (USA), Foreign member of the US National Academy of Sciences and research organizations (EMBO, HUGO), and became an Honorary Member of a number of biomedical scientific societies. A large number of Special Lectures and Visiting Professorships, Memberships in Editorial Boards and active involvements in the organization of international meetings complement his curriculum.

From 2000 until 2009 zur Hausen was Editor-in-Chief of the International Journal of Cancer and from 2003 until 2009 Vice-President of the German National Academy for Natural Sciences and Medicine LEOPOLDINA in Halle.

Since 2006 he has been a Member of the Board of Directors of the International Union against Cancer (UICC), and a Member of the National Science Transfer and Development Agency in Bangkok, Thailand.

### PL25 Modeling neuropsychiatric disorders in the mouse

*Mario Capecchi, United States*



Mario Capecchi graduated from George School and received his B.S. in chemistry and physics from Antioch College in 1961 and his Ph.D. in biophysics from Harvard University in 1967. He completed his thesis work under the guidance of Dr. James D. Watson, co-discoverer of the structure of DNA. Mario advanced quickly through the ranks at Harvard Medical School but he was looking for something different. He sought an environment that believed in long-term investment, one that would allow him to address the big questions. Dr. Capecchi began his research at the University of Utah, 1973. Thirty-four years later, on December 10, 2007, Dr. Capecchi received the highest honor in his field, the Nobel Prize, for his work in molecular biology. His pioneering work in gene targeting of mouse embryo-derived stem cells has set a new standard for research worldwide. This renowned discovery holds endless possibilities for

development of treatments and ultimately cures for every known human disease. Dr. Capecchi believes we, as citizens of the world, we have many challenges that face us. Health issues and many diseases that plague us... but also global concerns such as war, equal opportunity for all people, the world economy and most importantly global warming. Millions of lives are in peril. We must begin now to address these issues and make a difference while we still can.