Letter
From the Chair

Dear Members and Allies,

These past few months have been an exceptionally busy, but happily productive, period for EURADIA.

EURADIA held a well-attended workshop in the European Parliament on 17 April. The workshop focused on the issue of diabetes research in women and explored the need for increased epidemiological data across Europe to provide information lacking firstly for both sexes but then specifically for women. EURADIA brings continued attention to this issue, originally addressed as a health priority by the Austrian Presidency. We would like to thank speakers Beverley Balkau, Sarah Wild and Nathalie Vercruysse for their excellent presentations. You will soon be able to download the presentations from the EURADIA website.

John Bowis, MEP, is to be warmly thanked for hosting the workshop and for providing a spirited Chairmanship to the ensuing discussions; John has also contributed to this issue of the EURADIA Newsletter with an article on page 5 describing the European Parliament Diabetes Working Group. John Bowis is a tremendous promoter of diabetes issues in the European Parliament and we enthusiastically support his campaign for the European Commission to prepare a 'Recommendation on best practice diabetes prevention, management and care'.

We also report on the Innovative Medicines Initiative (IMI), an issue of interest to EURADIA since we were involved in drawing up the diabetes track of the Strategic Research Agenda. The IMI process has now progressed and the European Commission proposal has been presented to the Competitiveness Council. It is hoped that regulations can be adopted during the Portuguese Presidency (before the end of 2007), in order to enable the Commission to publish the first calls in 2008.

Philippe Halban
Chair EURADIA
Diabetes Research in Women

The workshop on 17 April was hosted by John Bowis, MEP who mentioned his own battle with diabetes. He noted that the theme of the workshop followed on from one of the health priorities of the Austrian Presidency: women’s health, and also fits with a series of workshops hosted by the parliamentary diabetes group during 2007. Philippe Halban, Chair of EURADIA then spoke about EURADIA being supportive of all kinds of research, not just the immediately recognisable research in a laboratory or clinic, but also epidemiological research into health service provision as well as health economics.

Drs Beverley Balkau and Sarah Wild, gave an overview of the way in which women are affected by diabetes and what data were needed to remedy this problem across Europe. Reported here is an overview of the main messages to emerge from the workshop.

What is diabetes? Diabetes results in high blood sugar levels due to an absolute (type 1 diabetes) or relative insufficiency of insulin along with resistance to the action of insulin (type 2 diabetes). Type 1 diabetes tends to occur in childhood (about 10% of cases) whereas type 2 diabetes (about 90%) is most commonly associated with obesity; importantly it is now occurring increasingly at younger ages.

Who is at risk for type 2 diabetes? Until age 60 years men are more frequently at risk, after 60 women are more frequent (Fig. 1). Diabetes appears more frequently with advancing age, with overweight and obese people more at risk as are specific ethnic groups and lower socio-economic groups.

Why is it important to delay or prevent diabetes? People with diabetes have more cardiovascular disease (heart attacks, strokes, peripheral artery disease). Small blood vessel disease (eye disease/ blindness, kidney disease, nerve damage) that also leads to foot ulcers (then gangrene and amputations). Some cancers are more prevalent with diabetes; breast, endometrium, pancreas, colon. Ultimately people with diabetes die at a younger age than those without diabetes.

What data are available on diabetes in Europe and on women in particular? Data are limited and not routinely available according to sex. There is no countrywide population-based study in any European country. Comparative data in Europe are based on estimates from small-scale regional surveys or surveys in a neighbouring country. National databases are sometimes available on medication reimbursement for diabetes drugs, but about 20% of patients are treated by diet (therefore no data). There are existing registries but these are limited and cover only diagnosed diabetes (50-75% of people with diabetes).

Changing shape of women. As an indication of the increase in the overweight and obesity, two interesting slides showed how UK women had changed shape between 1951, when the average waist size was 70 cm (27.5 in) and 2001 with waist circumference now at 87 cm (34 in).

Also in France, between 1997 and 2006 men’s waist had increased by 2.4 cm and women’s by 4.5 cm (Fig. 2). This greater prevalence of overweight is leading to increasing incidence of diabetes.
Why is it important to collect data for women with diabetes? Diagnosis of type 2 diabetes is often made too late, when complications have already developed. The ‘gold standard’ oral glucose tolerance test diagnoses diabetes based on high fasting blood glucose and/or a high 2-hour blood glucose after a glucose drink. Unfortunately diabetes in women is often missed on this test as they are more likely than men to have an abnormal 2 hour glucose result and this sample is not used routinely: diagnosis is more often made with a fasting glucose sample, as this is less costly to perform.

Women may not be sufficiently treated for diabetes. Diagnosis of kidney disease is made by an assessment of renal function widely based on the ‘Modified Diet in Renal Disease equation’, which appears to underestimate renal function in women. More women may be wrongly identified with impaired renal function, and this could have a negative impact on treatment as some treatments are only recommended in people with normal kidney function.

Diabetes in pregnancy. Diabetes in pregnancy (gestational diabetes) has adverse outcomes for mother and baby similar to those for pre-existing diabetes (below). However different tests and criteria for diagnosis are needed for this condition. The HAPO study (Hyperglycemia and Adverse Pregnancy Outcomes) reports in June ‘to clarify unanswered questions on associations of maternal glycemia, less severe than overt diabetes mellitus, with risks of adverse pregnancy outcome.’ This will allow internationally acceptable criteria to be derived for the diagnosis and classification of gestational diabetes mellitus.

Mothers and babies at risk. There are striking data for babies of mothers with diabetes (compared to babies of mothers without diabetes) from the England, Wales and N. Ireland based ‘Confidential Enquiry into Maternal and Child Health’ (CEMACH) – there are no comparable data for other countries. Babies are five times more likely to be stillborn, more likely to be big and suffer problems at birth, and twice as likely to have birth defects. In the first month of life such babies are three times more likely to die. There are long-term health consequences for child.

What does the future hold? There will be increasing frequency of obesity at younger age with an increase in diabetes; the result will be an increasing number of mothers with diabetes, diabetes in pregnancy and the negative effects for mother at childbirth. The children born will have a greater risk of obesity and diabetes and diabetic complications at increasingly younger age. This will be an ongoing and increasingly problematic cycle if nothing is done to reverse the trend.

What research is needed now?

- Data for development and implementation of effective approaches to prevention of type 2 diabetes, adapted to sex, age, ethnicity, socio-economic status of communities.
- More and larger studies on prevention of diabetes complications.
- Establishing and implementing appropriate methods to manage weight, blood sugar, cholesterol and blood pressure.
- More research into health service provision across Europe.
- Better information flow and management of data collection.
- Sex-specific component is critical in genomic studies (e.g. EU FP6 INTERACT study).
- Sufficiently large studies are needed to investigate sex differences.
Diabetes Research in Women

Women with diabetes: key messages

• Data specific to diabetes in women are limited and not routinely available
• With diabetes the female protective advantage for cardiovascular disease is lost
• With diabetes there are serious consequences for mother and baby during and after pregnancy
• There is an increased risk of obesity and diabetes in children born to mothers with diabetes
• Sex differences are often ignored in diabetes research with consequences for policy and treatment

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The workshop on diabetes research in women had a good participation with around ten MEPs and also many EURADIA members, who are comprised of representatives from non-governmental organisations including patient organisations, health professionals, primary care clinicians, biomedical scientific researchers and pharmaceutical industry. The presentations were followed by a lively discussion on what can be done to prevent or delay such diabetes-related problems in women. EURADIA would like to thank all those who participated for their support.

Speakers

John Bowis OBE MEP since 1999 the Conservative MEP for London; has been Rapporteur for the Parliament on Food Safety, Health and Enlargement. Professional Qualifications; Health and Poverty Reduction in Developing Countries; European Centre for Disease Prevention and Control; Patient Mobility; Major and Neglected Diseases in Developing Countries and Mental Health. John is the EPP-ED Coordinator and UK Conservative Party's Spokesman in Parliament on the Environment, Public Health and Food Safety.

Prof Philippe Halban is Professor of Genetic Medicine and Development at the University of Geneva, Switzerland. Prof Halban has devoted his research career to the study of pancreatic beta cell function for which he has received international recognition. Prof Halban is Chairman of EURADIA.

Dr Sarah Wild has been Senior Lecturer in Epidemiology and Public Health at the University of Edinburgh since 2002 and her main research interests are the epidemiology of diabetes and cardiovascular disease, particularly the effects of sex, deprivation and ethnicity.

Dr Beverley Balkau is Director of Research at INSERM, Villejuif, France (Institute for Health and Medical Research). Her main research interests are in diabetes screening, the importance of post-prandial glucose in diabetes complications, insulin resistance and the insulin resistance syndrome. Dr Balkau participates in several large EU-funded studies.

Ms Nathalie Vercruysse Since 2003, has been in charge of the administration of the diabetes theme in DG Research and recently the obesity theme has been added to her responsibilities.
Diabetes on the European Health Agenda

By John Bowis MEP

The European Parliament Diabetes Working Group exists to raise the profile of diabetes amongst European Union policymakers and to press for EU policy responses to the growing prevalence of diabetes. Chaired by MEPs Dorette Corbey (Socialist Group, Netherlands), Georges Andrejevs (Liberal Group, Latvia) and myself (European People’s Party/Democrats, UK), the group gathers together interested MEPs to discuss developments in the field of diabetes. We fight for screening, education, disease prevention, health promotion, disease management, a partnership between individuals and diabetes health and care professionals; and the empowering of people to manage their own condition better, as well as, of course, more European research efforts.

The Working Group has organised awareness-raising blood sugar tests, blood pressure tests (illustrated above), cholesterol tests and eye tests in the European Parliament. Last year we launched and lobbied for a European Parliament Written Declaration on diabetes, calling upon the Commission to prepare a Recommendation on best practice diabetes prevention, management and care - rather like Europe has a Recommendation on cancer screening. The Declaration was a great success, adopted with 422 signatures and providing a clear signal that the Parliament wants to see action.

Europe’s Health Action Programme opens the door to the mapping of Europe’s health needs and the sharing of best practice in how needs are being met. It opens the door to measures to promote good health and to prevent disease and disability. The budget for the Programme is small but the budget for research is larger and growing. So we are proud to have secured special mention of diabetes as a disease for priority research in the 7th Research Framework Programme (2007-13). The door has been well and truly opened and was pushed again by the Austrian Presidency last year, which made diabetes one of their main health themes and oversaw the adoption of a Council resolution on diabetes. This good work now needs to continue and be translated into concrete policies and research tenders from the Commission.

Diabetes presents an enormous challenge to Europe - to some 20 million people in the enlarged European Union, estimated to rise to over 26 million over the next 25 years. It is a global predicament too, acknowledged by the United Nations’ adoption of a resolution on diabetes in December 2006 - the first of its kind for a non-communicable disease. In the European Parliament and across the European Institutions, we will continue to do our bit to bring together the experts, the patients, the professionals, the decision-makers and the budget-holders to tackle the diabetes challenge.

Health in the 7th Framework Programme

Summary overview of the presentation by Nathalie Vercruysse (EURADIA workshop 17 April)

**Budget:** €6.1 billion over 7 years (2007-2013) (out of a total €32.4 billion for all collaborative research)

**Main policy drivers:**
- Improving health of European citizens
- Increasing competitiveness of European health-related industries and businesses
- Addressing global health issues, including emerging epidemics

**First calls for the health theme for 2007-2008 (year 1 & 2 of FP7) work programme published 22 December 2006**
  - First deadline: 19 April 2007 €637 million
  - Second deadline: 18 September 2007 €553 million, pending approval of 2008 budget (+ JTI: €125 million) pending approval by Council

**Funding schemes for research in FP7**
- Collaborative projects to develop new knowledge, new technology, products, demonstration activities
  - Small- or medium-scale focused research actions (FRP)
  - Large-scale integrating projects (IP)
  - Projects targeted at special groups (SMEs & SICA)
- Networks of Excellence (NoE)
- Coordination actions (CA) and support actions (SA)
- Support for individual teams (ERC) [www.erc.europa.eu](http://www.erc.europa.eu)
- Support for training and career development of researchers
- Research for the benefit of specific groups (in particular SMEs)

**Scope of research in the health theme:** FP7 supports basic and applied collaborative research. Includes discovery activities, translational research and early clinical trials (normally only phase I and II).

**Collaborative research in the Health theme has Activities in 3 main areas:**
1) Biotechnology, generic tools and technologies for human health
2) Translating research for human health (includes diabetes and obesity)
3) Optimising the delivery of healthcare to citizens

Child health and the health of the ageing population will be addressed across all activities

The full slide set can be downloaded from www.EURADIA.org
Innovative Medicines Initiative

The aim of the Innovative Medicines Initiative (IMI) is to improve the environment for pharmaceutical research in Europe and overturn the trend of relocation in this crucial sector. The importance of the IMI is that it is novel: it will be the first time that competitors in the pharmaceutical sector work together as a public-private partnership. Involving academia and clinical centres, SMEs, patient groups and public authorities is a key element of the initiative and will lead to faster uptake of results. Research activities are to be undertaken through collaborative projects following open calls and peer review, with all non-profit research organisations and SMEs eligible for funding.

Background

The IMI is a proposed public-private partnership between the European Commission and the European Federation of Pharmaceutical Industry and Associations (EFPIA). It is a Joint Technology Initiative (JTI) under the 7th Research Framework Programme. Its aim is to stimulate additional European research investment, build critical mass by uniting currently fragmented efforts, and ensure effective and efficient programme management and therefore enhance Europe’s competitiveness. The IMI is intended to improve the environment for pharmaceutical research in Europe and overturn the trend of relocation in this crucial sector. The IMI will create a €2 billion research programme over 7 years, jointly with the pharmaceutical industry. It will support the development of new knowledge, tools and methods in order to bring better and safer medicines quicker to the market and therefore seek to overcome research bottlenecks in the drug development process. Concretely, €1 billion will come from the 7th Research Framework Programme and go directly to SMEs and universities that will undertake research that serves the generic, pre-competitive needs of the pharmaceutical sector. The pharmaceutical companies will match this €1 billion by undertaking research and development in projects with the involved SMEs and universities.

Following an EFPIA vision document, a Strategic Research Agenda was developed under the lead of industry, involving all Stakeholder groups, i.e. academia, represented by universities and other public research institutions; biopharmaceutical companies and SMEs; healthcare providers and clinical centres; regulators and patients’ organizations.

Diabetes research and IMI

EURADIA was heavily involved in the IMI decision-making process, represented through Philippe Halban (Chairman) for the University of Geneva and Carole Brendel (EURADIA Scientific Officer). The Strategic Research Agenda presents a specific focus on Metabolic Diseases - diabetes is one of the five disease areas to be addressed.

Timeline for IMI

15 May 2007: the Commission officially proposed the IMI as one of the first two JTIs, creating the legal framework to establish IMI.

21-22 May: Commission presented IMI legal proposal to the Competitiveness Council, it is hoped that the regulation can be adopted during the Portuguese Presidency (before end of 2007), in order to start working and enable to publish the first calls under IMI in 2008.

Further information:

- [http://www.efpia.org](http://www.efpia.org)
- Commentary by Philippe Halban to be published in Diabetologia in August 2007
EU diabetes research funding resources

Health research in FP7
Information and news about the entire 7th Framework Programme

Health objectives in FP7

DG Research: Public Health Research
For an overview of public health in the European context, the research work programme (- Sub-areas 3.1 ‘Translating clinical research’, 3.2 ‘Health Care Systems’ and 3.3 ‘Health Promotion and Disease Prevention’ - Specific International Cooperation Activities), and submission and evaluation procedures
http://teamwork.intbase.com/0703_02/frameset.php?page=presentations

Advisory Groups: future calls in FP7
The role of the advisory groups has been strengthened and ideas will come first from these groups.
http://ec.europa.eu/research/fp7/advisory_en.html

European Research Council
Individual teams led by independent Principal Investigators are supported. ERC Grants are awarded to a single researcher (‘Principal Investigator’) heading an individual research team to conduct a frontier research project on the condition that he/she is engaged by a legally established hosting organisation.
http://erc.europa.eu

ERA-NET
The objectives of Community action in this field is to contribute to the creation of the European Research Area by stimulating and supporting programme coordination and joint activities conducted at national or regional level, as well as among European organisations, and thus help to develop the common knowledge base necessary for the coherent development of policies.
http://cordis.europa.eu/coordination/home.html

National Contact Points
The main provider of advice and individual assistance in all Member States and Associated States. You can easily find contact details of the designated National Contact Points for your country. When seeking support you should contact the NCP relevant to your area of interest.

DG Health and Consumer Protection (DG SANCO): Public Health
The programme, which shall complement national policies, shall aim to protect human health and improve public health. Programme runs for a 6-year period (from 1 January 2003 to 31 December 2008). Three general objectives: health information, rapid reaction to health threats and health promotion through addressing health determinants.
Innovative Medicines Initiative
Aim of the IMI is to improve the environment for pharmaceutical research in Europe. It will be the first time that competitors in the pharmaceutical sector work together as a public-private partnership. Involving academia and clinical centres, SMEs, patient groups and public authorities
http://ec.europa.eu/research/health/imi/index_en.html
http://www.imi-europe.org/
http://www.efpia.org

Other sources of funding for diabetes research

European Foundation for the Study of Diabetes (EFSD)
Since its inception, EFSD has committed over €42.5 million to diabetes research in Europe by means of partnership grant programmes, resource awards and fellowships.
http://www.EuropeanDiabetesFoundation.org

Juvenile Diabetes Research Foundation International (JDRFI)
As the leading charitable funder of diabetes research worldwide, JDRF offers a wide variety of grants and fellowships to qualified researchers. JDRF is committed to spending more than $150 million in FY08 to support research relevant to our mission of finding a cure for diabetes and its complications.
http://www.jdrf.org/index.cfm?page_id=103206

International Diabetes Federation (IDF)
Bringing Research in Diabetes to Global Environments and Systems (BRIDGES). BRIDGES will support translational research projects in diabetes prevention and treatment to provide the opportunity to "translate" lessons learned from clinical research to those who can benefit the most: people with diabetes. BRIDGES will support: Pilot projects for up to 2 years and €50,000 and Outcome projects for up to 3 years and €300,000. Deadline for 1st round of funding: 2 November 2007 (contact Ronan L’Heveder, ronan@idf.org)

European Science Foundation: EuroBioFund
EuroBioFund was set up in 2006 by the European Science Foundation, with support from the European Commission, to identify future grand challenges in the life sciences, which require a coordinated European approach for their financing and implementation
http://www.esf.org/activities/eurobiofund.html

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EURADIA acknowledges that this list is not exhaustive and we apologise for any unintentional omissions. We welcome information on other European organisations providing funds for research in diabetes and associated areas. Please send information to info@euradia.org.
EURADIA Partner Profiles

Juvenile Diabetes Research Foundation: www.jdrf.org
The Juvenile Diabetes Research Foundation International (JDRF) is the world's largest charitable funder and advocate for research on type 1 diabetes and its complications. Founded in 1970 by parents to find a cure for diabetes, JDRF has directed more than $1 billion in grants for diabetes research to the world's leading laboratories, universities and medical centers. In the 2006 financial year, JDRF directed more than $122 million in diabetes research, representing 500 grants in 20 countries.

JDRF funds research in both academia and industry to aggressively pursue all promising avenues of science and accelerate the discovery, development, and delivery of therapeutics. We make funding decisions based on vigorous scientific and lay review, and annually direct more than 80 percent of expenditures to research and research-related education.

Our research review process includes not only leading research scientists from around the world, but also lay reviewers who either have type 1 diabetes or have family members with type 1 diabetes. This ensures that JDRF funds research with the greatest impact throughout the world, leading to results as soon as possible. JDRF has taken the lead in translating basic research breakthroughs into cure therapies in such areas as restoring autoimmunity, preventing and reversing complications, islet replacement, beta cell regeneration, and achieving metabolic control.

Novo Nordisk : www.novonordisk.com
Novo Nordisk is a healthcare company and a world leader in diabetes care (although it also focuses on other disease areas). It has a strong background in diabetes care, with more than 80 years’ experience in this field. It began in 1923 when August Krogh, a Danish Nobel Prize Winner in physiology, and his wife Marie, who had type 2 diabetes, visited the Canadian researchers Frederick Banting and Charles Best. Banting and Best had begun extracting insulin from the pancreas of cows in the previous year. The Kroghs returned home and the year after August Krogh set up a company in Denmark called Nordic Insulin Laboratory that began producing insulin for treatment of diabetes. One of Krogh's original employees, Harald Pedersen, in 1925 formed a competing insulin company of his own, Novo Therapeutic Laboratory. These two companies joined forces in 1989 to become Novo Nordisk A/S.

Novo Nordisk is looking into ways to defeat diabetes at all stages of its progression. Our detailed knowledge of the structure and function of the hormone insulin has provided us with a basis for the design of modern insulins or insulin analogues — with attributes that meet individual needs of people with diabetes. At the same time we are developing new delivery systems for insulin, including a pulmonary administration system that will allow precise dosing of insulin by inhalation. Novo Nordisk has a leading role in the development of new compounds that can be used to reduce glucose production. We are developing an analogue of a natural stimulator of insulin secretion and inhibitor of glucagon secretion (GLP-1) that in disease models normalises blood glucose without causing risk of hypoglycaemia.

Our long-term goal is to defeat diabetes and research includes the search for factors responsible for the formation and destruction of the insulin-producing beta cells. With headquarters in Denmark, Novo Nordisk employs more than 23 600 employees in 79 countries, and markets its products in 179 countries. More than 4000 people work in R&D in centres in Denmark, Switzerland, China and the USA.
Diabetes research highlighted in *RTD Info* December 2006

At the start of the Seventh Framework programme (FP7), projects funded during FP5 and FP6 were highlighted in *RTD Info*, December 2006. ([http://ec.europa.eu/research/rtdinfo/51/article_5131_en.html](http://ec.europa.eu/research/rtdinfo/51/article_5131_en.html))

The increase in ‘diabesity’ is profiled as a worrying cause for concern across the EU particularly as almost 10% of the population are obese. Currently at least 7% of health spending in the EU is allocated to obesity and its medical consequences – this figure does not include the loss of economic activity. ‘Investment in diabetes-obesity-diabesity has increased four-fold, rising from euro 44.5 million during the Fifth Framework Programme (1998-2002) to euro 188 million of appropriates in the Sixth (2002-2006).’

The report profiles projects on both type 1 and type 2 diabetes funded by the Commission, including Eugene 2 ([www.eugene2.com](http://www.eugene2.com)) ‘focusing on the causes and consequences of type 2 diabetes.’ ‘EUGENE2 is an inter-European collaborative network involving research laboratories from Sweden, Finland, Denmark, Italy, Germany, the United Kingdom, France and Spain.’

Type 1 diabetes is then examined: ‘what is the initial cause of juvenile diabetes? Why are Finnish children, more than any other young people in the EU, affected by type 1 diabetes? Various different European research projects are devoted to obtaining a greater understanding of this illness and its early diagnosis based on genetic factors.’

All the projects discussed in RTD Info, and many more, can be found listed on www.euradia.org.

**Diary: Diabetes Research Conferences**

**The Endocrine Society's 89th Annual Meeting**, 2-5 June 2007, Toronto, Canada  
[www.call4abstracts.com](http://www.call4abstracts.com)

**EuroScience Open Forum 2008**, 18-22 July 2007, Barcelona, Spain  

**American Diabetes Association, 67th Scientific Sessions**, 22-26 June 2007, Chicago, USA.  

**12th Federation of European Nurses in Diabetes, Annual Conference**, 14-15 September 2007, Amsterdam, Netherlands.  
[http://www.fend.org/conf_0.html](http://www.fend.org/conf_0.html)

**Primary Care Diabetes-Europe, 9th International Conference**, September 16-17 2007, Amsterdam, Netherlands.  


**European Health Forum Gastein**, 3-6 October 2007, Bad Gastein, Austria.  