## Дорогие участники!

Мы рады приветствовать Вас на Российских курсах последипломного образования по клиническому диабету Европейской ассоциации по изучению диабета (EASD), которые проходят на территории России уже в третий раз. Екатеринбург был выбран местом проведения очередных курсов, учитывая, что этот город является крупным промышленным центром России, главным культурным и научно-образовательным центром Уральского региона и важным транспортным узлом на стыке Европы и Азии.

Форма проведения курсов позволит Вам пообщаться в неформальной обстановке с ведущими специалистами Европы в области клинического диабета. Возможность прямого межнационального общения способствует укреплению наших связей и позиции в мире, что особенно важно в наше непростое время.

Мы очень хотим, чтобы Ваша активность, пытливость ума и жажда знаний позволили бы расширить наше мирное медицинское и научное сотрудничество, а ценные рекомендации ведущих международных специалистов в области клинического диабета помогли бы Вам в ежедневной практической деятельности.

С уважением,
Оргкомитет

## Dear participants!

We are glad to welcome you on the EASD Postgraduate Course on Clinical Diabetes arranged by EASD in Russia for the third time. Yekaterinburg was chosen as venue of the Course because it is a large industrial centre of Russia, main cultural and scientific educational centre of Ural area and important hub between Europe and Asia.

The way of Course conduction will allow you to communicate informally with leading European experts on clinical diabetes. The great opportunity of the direct international communication contributes to the strengthening of our relations and position in the world, especially in our difficult time.

We hope that your activity, keenness of mind and thirst for knowledge would extend our peaceful medical and scientific cooperation, and precious recommendations from leading international experts on clinical diabetes would be usefull in your daily practice.

Yours faithfully,

Organizing Committee

# ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, 3–5 ОКТЯБРЯ 2014 г.

## Пятница, 3 октября 2014

**10:00 – 14:30** Регистрация участников на стойке регистрации

**14:30** **ЦЕРЕМОНИЯ ОТКРЫТИЯ:**
***Аркадий Белявский,*** *Министр здравоохранения Свердловской области*
***Сергей Кутепов,*** *ректор ГОУ ВПО УГМА Минздравсоцразвития, представитель Минздравсоцразвития РФ в УФО*
***Татьяна Киселёва,*** *д.м.н., профессор кафедры внутренних болезней, эндокринологии и клинической фармакологии УГМА. Член правления Российской ассоциации эндокринологов, г. Екатеринбург*
***Анна Малышевская,*** *главный внештатный эндокринолог МЗ Свердловской области*
***Ирина Гурьева,*** *д.м.н., профессор, от имени локального организационного комитета EASD по проведению курсов, Россия*

### СЕССИЯ 1 – Диабет 2014
*Председатели: Т. Баттелино (Словения), И. Гурьева (Россия)*

**15:00** **Диабет второго типа и ожирение**
*Д. О'Горман (Ирландия)*

**15:30** **Диабет у детей, подростков и молодых взрослых**
*Т. Баттелино (Словения)*

**16:00** **Диабет в России – осложнения и организация реабилитации в России**
*И. Гурьева (Россия)*

**16:30 – 17:00** **КОФЕ- БРЕЙК**

### СЕССИЯ 2 – Современное управление диабетом
*Председатели: П. Чаудхари, Э. Джуд (Великобритания)*

**17:00** **Гипогликемия и нарушение ее распознавания**
*П. Чаудхари (Великобритания)*

**17:30** **Диабет и беременность**
*Н. Арбатская (Россия)*

**18:00** **Новости о диабетической невропатии**
*Э. Джуд (Великобритания)*

**18:30** **Закрытие первого дня работы**

# PROGRAM
# III EASD POSTGRADUATE COURSE ON CLINICAL DIABETES
# YEKATERINBURG, RUSSIA
# 3–5 OCTOBER 2014

## Friday, 3rd of October 2014

**10:00 – 14:30** **Registration at Welcome Desk**

**14:30** **OPENING CEREMONY**
***Arkady Belyavskiy,*** *Minister of Health of the Sverdlovsk region*
***Sergey Kutepov,*** *Rector of the GOU VPO UGMA the Health Ministry, representative of the Health Ministry of the Russian Federation in Ural area*
***Tatiana Kiseleva,*** *MD, Professor of internal medicine, endocrinology and clinical pharmacology UGMA. Member of the Russian Association of Endocrinologists, Yekaterinburg*
***Anna Malyshevskaya,*** *chief out-of-staff endocrinologist of Sverdlovsk area*
***Irina Gurieva,*** *MD, Professor, on behalf of Local EASD Organizing Committee, Russia*

### SESSION 1 – Diabetes in 2014
*Chairs: T. Battelino (Slovenia), I. Gurieva (Russia)*

**15:00** **Diabetes type 2 and Obesity**
*D. O'Gorman, (Ireland)*

**15:30** **Diabetes in children, adolescents and young adults**
*T. Battelino (Slovenia)*

**16:00** **Diabetes in Russia – complications and organization of rehabilitation care in Russia**
*I. Gurieva (Russia)*

**16:30 – 17:00** **КОФЕ- БРЕЙК**

### SESSION 2 – Modern Management of Diabetes
*Chairs: P. Choudhary (UK), E. Jude (UK)*

**17:00** **Hypoglycemia and hypoglycemia unawareness**
*P. Choudhary (UK)*

**17:30** **Diabetes and pregnancy**
*N. Arbatskaya (Russia)*

**18:00** **Update on diabetic neuropathy**
*E. Jude (UK)*

**18:30** **Close of the 1st day**

# ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, 3–5 ОКТЯБРЯ 2014 г.

## Суббота, 4 октября 2014

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|---|---|
| | **СЕССИЯ 3 – Лечение диабета – от теории к практике**<br>*Председатели: А Аметов (Россия), Э. Джуд (Великобритания)* |
| **08:30** | **Контроль уровня глюкозы при диабете второго типа – цель, выбор препаратов**<br>*А. Аметов (Россия)* |
| **09:00** | **Диабет и сексуальное здоровье**<br>*Э. Джуд (Великобритания)* |
| **09:30** | **Резистентность к инсулину против дефицита инсулина в патогенезе и лечении сахарного диабета 2 типа**<br>*Д. О'Горман (Ирландия)* |
| **10:00 – 10:30** | **КОФЕ- БРЕЙК** |
| **10:30 – 13:00** | ***ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ***<br>**Каждый делегат может посетить 2 из 3 семинаров**<br>**Каждый семинар длится 70 минут. (10.30 – 11.40 и 11.50 – 13.00)** |
| | **1. Пациенты с повышенным уровнем креатинина**<br>*Ц. Танькова (Болгария), В. Климонтов (Россия)*<br>**2. Раннее обнаружение глазных осложнений**<br>*П. Юровски (Польша), Т. Мелешкевич (Россия)*<br>**3. Практические аспекты мониторинга глюкозы, от анализа мочи до непрерывного мониторинга глюкозы**<br>*П. Чаудхари (Великобритания), Е. Патракеева (Россия)* |
| **13:00 – 14:00** | **ОБЕД** |
| | **СЕССИЯ 4 – Хронические осложнения сахарного диабета**<br>*Председатели: Э. Джуд (Великобритания), П. Юровски (Польша)* |
| **14:00** | **Диабетическая ретинопатия и ее профилактика**<br>*П. Юровски (Польша)* |
| **14:45** | **Диабетическая стопа в качестве конечного осложнения диабетической полинейропатии**<br>*Э. Джуд (Великобритания)* |
| **15:30** | **Диабетическая стопа. Стопа Шарко**<br>*И. Гурьева (Россия)* |
| **16:00 – 16:30** | **КОФЕ-БРЕЙК** |
| **16:30 – 20:00** | ***ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ***<br>**Каждый делегат может посетить 2 из 3 семинаров**<br>**Каждый семинар длится 70 минут. (16.30 – 17.40 и 17.50 – 20.00)** |
| | **1. Практические аспекты лечения диабетической стопы (с пациентами)**<br>*Э. Джуд (Великобритания), И. Гурьева (Россия)*<br>**2. Практическое управление образом жизни: как похудеть пациенту**<br>*Д. О'Горман (Ирландия), А. Аметов (Россия)*<br>**3. Практические аспекты инсулинотерапии и непрерывного мониторинга глюкозы (с пациентами)**<br>*Т. Баттелино (Словения), Н. Черникова (Россия)* |

# ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, 3–5 ОКТЯБРЯ 2014 г.

## Saturday, 4th of October 2014

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|---|---|
| | **SESSION 3 – Treatment of Diabetes – from theory to practice**<br>*Chairs: A. Ametov (Russia), E. Jude (UK)* |
| **08:30** | **Glucose control in type 2 diabetes – targets and which drug to use**<br>*A. Ametov (Russia)* |
| **09:00** | **Diabetes and sexual health**<br>*E. Jude (UK)* |
| **09:30** | **Insulin resistance vs insulin deficiency in the pathogenesis and treatment of type 2 diabetes**<br>*D. O'Gorman (Ireland)* |
| **10:00 – 10:30** | **COFFEE- BREAK** |
| **10:30 – 13:00** | ***PARALLEL WORKSHOPS***<br>**Each delegate can attend 2 of the 3 workshops**<br>**Each workshop lasts 70 minutes (10.30 – 11.40 and 11.50 – 13.00)** |
| | **1. Patient with elevated serum creatinine.**<br>*T. Tankova (Bulgaria), V. Klimontov (Russia)*<br>**2. Early detection of eye complications**<br>*P. Jurowski (Poland), T. Meleshkevich (Russia)*<br>**3. Practical aspects of glucose monitoring, from urinalysis to continuous glucose monitoring**<br>*P. Choudhary (UK), E. Patrakeeva (Russia)* |
| **13:00 – 14:00** | **LUNCH** |
| | **SESSION 4 – Chronic complications of diabetes**<br>*Chairs: E. Jude (UK), P. Jurowski (Poland)* |
| **14:00** | **Diabetic retinopathy and its prevention**<br>*P. Jurowski (Poland)* |
| **14:45** | **Diabetic foot as an ultimate complication of diabetic polyneuropathy**<br>*E. Jude (UK)* |
| **15:30** | **Diabetic foot – Charcot foot**<br>*I. Gurieva (Russia)* |
| **16:00 – 16:30** | **COFFEE-BREAK** |
| **16:30 – 20:00** | ***PARALLEL WORKSHOPS***<br>**Each delegate can attend 2 of the 3 workshops**<br>**Each workshop lasts 70 minutes (16.30 – 17.40 & 17.50 – 20.00)** |
| | **1. Practical aspects of Diabetes Foot care (With patients)**<br>*E. Jude (UK), I. Gurieva (Russia)*<br>**2. Practical lifestyle management – how to make your patient lose weight**<br>*D.O'Gorman (Ireland), A. Ametov (Russia)*<br>**3. Practical aspects of insulin therapy and CGM (With patients)**<br>*T. Battelino (Slovenia), N. Chernikova (Russia)* |

# ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, 3–5 ОКТЯБРЯ 2014 г.

## Воскресенье, 5 октября 2014

**СЕССИЯ 5 – Особые ситуации**
*Председатели: А. Ноуэн (Нидерланды), Н. Лалич (Сербия)*

**08:30** **Управление сердечно-сосудистыми рисками при сахарном диабете**
*Н. Лалич (Сербия)*

**09:00** **Психологический подход к пациентам с сахарным диабетом**
*А. Ноуэн (Нидерланды)*

**09:30** **Организация лечения сахарного диабета, сейчас и в будущем**
*Ц. Танькова (Болгария)*

**10:00** **КОФЕ- БРЕЙК**

***ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ***
**10:00 – 13:00** **Каждый делегат может посетить 2 из 3 семинаров**
**Каждый семинар длится 70 минут (10.30-11.40 and 11.50-13.00)**

**1. Психология и обучение**
*А. Ноуэн (Великобритания), Н. Черникова (Россия)*
**2. Пациенты с сахарным диабетом и болезнями сердца: когда применять консервативное лечение и когда применять хирургическое вмешательство**
*Н. Лалич (Сербия), М. Архипов (Россия), О. Смоленская (Россия)*
**3. Диабет и Беременность**
*Е. Дерябина (Россия), Н. Арбатская (Россия)*

**СЕССИЯ 6 – Взгляд в будущее**
*Председатели: И. Гурьева (Россия), П. Чаудари (Великобритания)*

**13:00** **Интернет, СМИ, социальные сети ... Лечение сахарного диабета в цифровую эпоху**
*П. Чаудари (Великобритания)*

**13:30** **Клинические исследования у больных сахарным диабетом в Центральной и Восточной Европе – шансы и вызовы**
*Н. Лалич (Сербия)*

**14:00** **ЗАКРЫТИЕ**

# ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, 3–5 ОКТЯБРЯ 2014 г.

## Sunday, 5th of October 2014

**SESSION 5 – Special situations**
*Chairs: A. Nouwen (Netherlands), N. Lalic (Serbia)*

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|---|---|
| **08:30** | **Cardiovascular risk management in diabetes**<br>*N. Lalic (Serbia)* |
| **09:00** | **Psychological approach to patients with diabetes**<br>*A.Nouwen (Netherlands)* |
| **09:30** | **Organization of diabetes care – now and in future**<br>*T. Tankova (Bulgaria)* |
| **10:00** | **COFFEE-BREAK** |

***PARALLEL WORKSHOPS***

**10:00 – 13:00** **Each delegate can attend 2 of the 3 workshops**
**Each workshop lasts 70 minutes (10.30-11.40 and 11.50-13.00)**

**1. Psychology and education**
*A. Nouwen (Netherlands), N. Chernikova (Russia)*
**2. Patients with diabetes and heart disease: when is it time for conservative and intervention treatments?**
*N. Lalic (Serbia), M. Arkhipov (Russia), O. Smolenskaya (Russia)*
**3. Diabetes and pregancy**
*E. Deriabina (Rissia), N.Arbatskaya (Russia)*

**SESSION 6 – A look into the future**
*Chairs: I. Gurieva (Russia), P. Choudhary (UK)*

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|---|---|
| **13:00** | **Internet, media, social networks… Diabetes care in digital era**<br>*P. Choudhary (UK)* |
| **13:30** | **Clinical research in diabetes in Central and Eastern Europe – chances and challenges**<br>*N. Lalic (Serbia)* |
| **14:00** | **CLOSING CEREMONY** |

## К.м.н Белявский Аркадий Романович
## Министр здравоохранения Свердловской области

В 1980 г. окончил Ивановский государственный медицинский институт по специальности «акушерство и гинекология». Кандидат медицинских наук. В 1987 г. работал в Ханты-Мансийском автономном округе (ХМАО-Югра). В марте 1987 г. – главный врач ЦГБ Нефтеюганска, в марте 1999 г. – главный врач окружной клинической больницы ХМАО – Югры. В 2004 г. – организатор здравоохранения высшей категории, советник РАЕН по секции «Российские энциклопедии». Член Правительства Свердловской области.
Имеет высшую квалификационную категорию по специальности «Общественное здоровье и организация здравоохранения». Заслуженный врач РФ, Заслуженный работник здравоохранения Ханты-Мансийского автономного округа. Награжден орденом РАЕН «За пользу Отечеству» им. В. Н. Татищева, серебряной медалью РАЕН «За развитие медицины и здравоохранения», почетным знаком и медалью «За заслуги перед малочисленными народами».

MD A. Belyavskiy graduated from the Ivanovo state medical Institute on specialty «obstetrics and gynecology» in 1980. In 1987, worked in the Khanty-Mansi Autonomous Okrug (KHMAO-Yugra). In March 1987, chief physician of the city hospital of Nefteyugansk, in March 1999, chief physician of the district hospital of KHMAO – Yugra. In 2004, the organizer of the health of the highest category, Advisor to the Russian Academy of Natural Sciences in the section «Russian encyclopedia». A member of the Government of Sverdlovsk region.
Has the highest qualification category in «Public health and health care». Honoured doctor of the Russian Federation, Honored worker of healthcare of Khanty-Mansi Autonomous Okrug. Awarded the order of the Russian Academy of Natural Sciences «For the benefit of the Motherland» named V. N. Tatishchev, the silver medal of the Russian Academy of Natural Sciences «For the development of medicine and health».

## Dr. Pratik Chaudhary
## Clinical Senior Lecturer at King's College London, UK

Dr. Pratik Chaudhary works within Prof Stephanie Amiel's research group with an interest in hypoglycaemia at the King's College London, UK. He is comparing regional brain responses to hypoglycaemia in hypoglycaemia aware and unaware individuals using PET and also looking at brain responses to nutrient ingestion using fMRI. He has an interest in the modulation of counter-regulatory responses to hypoglycaemia. He is investigating mechanisms by which he can improve awareness and protective hormonal responses to hypoglycaemia in those with impiared responses. The group also has an interest in new technology such as on line glucose sensing and closed loop systems and is currently investigating the role of real time continuous glucose monitoring in prevention of hypoglycaemia.

Старший Преподаватель Королевского колледжа, Лондон, Великобритания. Доктор П. Чаудхари работает в исследовательской группе профессора Стефани Амиэля при Королевском колледже, Лондон, Великобритания, изучает гипогликемию. Проводит сравнительный анализ воздействия гликемии на клетки головного мозга человека с использованием метода ПЭТ. Группа проф. Стефани Амиэля изучает новые технологии в определении уровня глюкозы для профилактики гипогликемии.

## Dr. Arie Nouwen
## School of Psychology, Middlesex University London, United Kingdom

Dr. Nouwen's main research interests focus on two areas: the motivational processes underlying dietary self-care in people with diabetes. Dr Nouwen uses both applied clinical and social as well as experimental laboratory paradigms. He uses a range of methods including neuro-imaging techniques to study the relationship between patterns of eating behaviour and cortical processing of food stimuli. He has written a number of key publications. He is Associate Editor of Diabetic Medicine and was until recently a senior lecturer at the University of Birmingham, UK. He is now based at the School of Health & Social Sciences at Middlesex University, UK.

Исследовательский интерес сфокусирован на изучении механизмов мотивации поддержания диетического самообслуживания людей с диагнозом диабет. Занимается как клиническими, так и социальными вопросами. В своей работе использует различные методы, в том числе создание психологических установок пищевого поведения. Написал ряд ключевых публикаций. Является заместителем главного редактора журнала «Diabetic Medicine» (Великобритания) и до недавнего времени занимал должность старшего преподавателя университета Бирмингема, Великобритания. В настоящее время работает в Школе здравоохранения и социальных наук университета в Миддлсексе, Великобритания.

## Prof. Tadej Battelino
## Chief Executive of the Dept. of Pediatric Endocrinology/Diabetology Metabolism

University Children's Hospital, Ljubljana, Slovenia.
Tadej Battelino obtained his MD at the Ljubljana Medical Faculty in, where he also passed his board exam in pediatrics. In 1993 and 1994 he completed clinical fellowship in pediatric endocrinology at Loyola University of Chicago, Illinois, USA. After obtaining his PhD, he completed a postdoctoral fellowship in 1996 and 1997 at Hôpital Robert Debré and INSERM U-457, Paris, France. He is currently a tenured professor of pediatrics at the Ljubljana Medical Faculty, and the head of Department of pediatric endocrinology, diabetes and metabolism at the University Children's Hospital Ljubljana, Slovenia. His laboratory for molecular genetics and metabolism is equipped for complete DNA, RNA and protein diagnostics with gas-chromatography-mass-spectrometry, rapid mutation screening equipment, real-time PCR (Taqman), automatic sequencer (ABI Prism) and full access to gene-chip facility (Affimetrix).

Глава кафедры Детской Эндокринологии/Диабетологии и Метаболизма Детской клинической университетской Больницы, Любляна, Словения.
Получил диплом MD лечебного факультета университета в Любляне, где также сдал экзамены по специальности «педиатрия». В 1993 и 1994 году завершил клиническое образование по детской эндокринологии при университете Лойолы в Чикаго, штат Иллинойс, США. В настоящее время является профессором педиатрии Медицинского факультета университета в Любляне, заведующим кафедрой детской эндокринологии, диабета и метаболизма в детской клинической университетской больнице (Любляна, Словения). Его лаборатория молекулярной генетики и метаболизма оборудована для полной диагностики на уровне ДНК, РНК и белка с использованием газовой хроматографической масс-спектрометрии и оборудованием для быстрого сканирования мутации генов.

## Dr. Edward Jude
## Consultant Physician, Dept. of Medicine, Tameside Hospital NHS Foundation Trust, Ashton under Lyne, UK

Dr. Jude's main research interest is in diabetic complications including peripheral neurophaty, Charcot neuroarthropathy, endothelial dysfunctionand the diabetic foot. He is a consultant Diabetologist at the Tameside Hospital and Reader in Medicine at the University of Manchester as an expert in diabetic foot. Dr. Jude also holds the position as a honorary research fellow at the University of Salford and is Chairman of the European Diabetic Foot Study Group, a subgroup of EASD. He also chairs the North West Diabetes Group in the UK.

Врач-Консультант, кафедра Медицины, госпиталь Tameside Hospital NHS Foundation Trust, Ashton under Lyne, Великобритания.
Основной научный интерес заключается в изучении осложнений при диабете, в частности периферической нейропатии, нейропатии Шарко, эндотелиальной дисфункции диабетической стопы. Является консультантом по диабетологии при больнице Tameside и читает лекции по медицине в университете Манчестера в качестве эксперта по диабетической стопе. Является почетным научным сотрудником университета Салфорд и председателем Европейской рабочей группы по диабетической стопе, подгруппа EASD. Является председателем Группы по диабету в Великобритании.

## Prof. Piotr Jurowski
## Professor Department of Ophthalmology and Visual Rehabilitation, University of Lodz. Poland

Dr. Piotr Jurowski is a ophthalmologist, researcher involved in clinical studies and pharmacological and surgical treatment of eye diseases with particular interest in corneal transplantation, cataract surgery as well as vitrectomy for diabetic retinopathy and retinal detachment. He graduated from Faculty of Medicine, Military Medical Academy of Lodz, Poland in 1990, achieved I and II degree of specialization in Ophthalmology in 1995 and 1998 respectively. Completed his doctorate thesis assessed influence of phacoemulsification with artificial lens implantation on nitric oxide level in aqueous humor of the rabbit eye in 2000, and habilitation thesis on methods counteracting thermal injury during phacoemulsification in experimental, animal model in 2007. His medical and research training included scholarship and courses at the United Kingdom (Windsor), Germany (Bremen). Dr. Jurowski is currently the co-chair of Section of Cataract an Refractive Surgery, Polish Society of Ophthalmology and Head of Department of Ophthalmology and Visual Rehabilitation Medical University of Lodz 2014.

Профессор Кафедры офтальмологии и визуальной реабилитации, Университет г. Лодзь, Польша.
Офтальмолог, исследователь, участвовал в клинических исследованиях фармакологического и хирургического лечения глазных заболеваний с особым интересом в трансплантации роговицы, хирургии катаракты, а также витрэктомии для диабетической ретинопатии и отслойки сетчатки. Окончил медицинский факультет Военно-медицинской академии Лодзь, Польша, в 1990 году, получил I и II степени специализации в офтальмологии в 1995 и 1998 соответственно. Докторская диссертация посвящена изучению влияния на факоэмульсификацию с имплантацией ИОЛ уровня оксида азота во внутриглазной жидкости на модели глаза кролика и защищена в 2000 году. Другая докторская диссертация посвящена методам нейтрализации термического повреждения при проведении факоэмульсификации на экпериментальных моделях животных и защищена в 2007 году. Проводит медицинские и исследовательские курсы в Великобритании, Германии. В настоящее время является со-председателем Секции хирургического лечения катаркты Польского общества Офтальмологов, главой департамента по офтальмологии и реабилитации зрения Медицинского университета г. Лодзь

## Д.м.н., проф. Аметов Александр Сергеевич
## Заведующий кафедрой эндокринологии и диабетологии Российской медицинской академии последипломного образования Минздрава России

Главные научные исследования последних лет направлены на изучение вопросов патогенеза, диагностики, лечения сахарного диабета, а также разработку мер профилактики этого заболевания.
Автор более 750 печатных работ. Автор 14 изобретений и патентов, в том числе 5 международных. Лауреат Государственной Премии БССР за разработку и создание радиоиммунологических наборов для определения ряда гормонов и онкомаркеров. Член Президиума Всероссийского общества эндокринологов, Президент МОО «Международная программа Диабет», Член Европейской ассоциации по изучению диабета (EASD), Председатель Комитета по образованию Российской Ассоциации Эндокринологов. Член Всемирной Федерации Диабета. Главный редактор международных журналов «Диабет. Образ жизни» и «Диабетография», журнала «Эндокринология: новости, мнения, обучение». Член редколлегий и редсоветов журналов «Остеопороз и остеопатия», «Consilium Medicum», «Сахарный диабет», «Русский медицинский журнал», «Ожирение и метаболический синдром».

Head of the department of endocrinology and diabetology, Russian Medical Academy of Postgraduate Education of Ministry of Health of Russia.
The main scientific researches of the last years are focesed on study of patogenesis, diagnostics, diabetes treatments, and development of measures of prevention of the disease.
Author of more than 750 publications and books. Author of 14 inventions and patents, including 5 international. The winner of the State Award BSSR for development and creation of radio immunological sets for definition of a number of hormones and onkomarkers.

Member of Presidium of the All-Russian Society of Endocrinology,
President of MOO «International Diabetes Program». The member of the European Association for the Study of Diabetes (EASD), Chairman of Committee on Education of the Russian Association of Endocrinology. Member of the World Federation of Diabetes. Editor-in-chief of the international magazines «Diabetes. Way of life» and «Diabetografiya», magazine «Endocrinology: news, opinions, training».
Member of editorial boards of magazines «Osteoporosis and Osteopathy», «Consilium Medicum», «Diabetes», «The Russian Medical magazine», «Obesity and metabolic syndrome».

## Д.м.н., проф. Гурьева Ирина Владимировна
## Заведующая сектором медико-социальной экспертизы и реабилитации при эндокринных заболеваниях ФГБУ Федеральное бюро медико-социальной экспертизы Минтруда России (Руководитель д.м.н. М.А.Дымочка), профессор кафедры эндокринологии и диабетологии Российской медицинской академии последипломного образования (зав. кафедрой – профессор А.С. Аметов)

С 1991 года деятельность посвящена организации и развитию междисциплинарной помощи больным сахарным диабетом и диабетической стопой в России. С 1991 г. – директор некоммерческой организации «Центр диабетическая стопа Международной программы «Диабет». Основное направление деятельности Центра – профилактическая, лечебная и реабилитационная помощь больным сахарным диабетом и диабетической стопой, профилактика ампутаций, научные исследования и последипломная подготовка врачей. Область научных интересов и публикаций – диабетическая автономная и сенсомоторная нейропатия, диабетическая стопа, осложнения сахарного диабета, медико-социальная экспертиза и реабилитация больных с эндокринными заболеваниями. Избиралась членом Комитета Европейской ассоциации по изучению диабета (EASD) 2003–2007, комитета Группы по изучению дибетической стопы (2001–2008), являлась представителем России в Международной рабочей группе по диабетической стопе – консультантом секции (IWG DF). Является членом Международной федерации по диабету, представителем различных международных организаций по изучению пробем сахарного диабета, рецензентом международных журналов: Diabetes Medicine (UK), Diabetes Science and Technology (US), членом редакционной коллегии журнала Diabetic Foot Journal (UK). Автор более 180 статей. Участница и руководитель научной программы медико-биологических исследований женской высокоширотной полярной лыжной антарктической экспедиции 1988–1989 гг.

Head of department of Endocrinology, Federal Bureau of Medical and Social Expertise for people with disabilities, professor of department of Endocrinology and Diabetology, Russian Medical Academy of Postgraduate Education. She was trained in diabetic foot in University Clinic of Geneva, Manchester Royal Infirmary and University of Virginia (rehabilitation and technology). She is a Director of «Diabetes Foot Centre» of «International Diabetes Programm» scince 1991, she is a national representative in International Working Group of Diabetic Foot. She was elected as Council Member of European Association for the study of Diabetes (EASD) (2003–2007) and as Committee Member of Diabetic Foot Study Group of EASD (DFSG) (2001–2008). Fields of research interests: diabetic foot, diabetic sensory-motor and autonomic neuropathy, diabetic complications. She is reviewer of Diabetes Medicine (UK), Diabetes Science and Technology (US), member of editorial board of Diabetic Foot Journal (UK). She organized several International Diabetic Foot meetings (2005, 2008, 2011) and 1st Postgraduate Course in Diabetes for EASD (2007) in Russia.
She participated in several polar expedition, head of biomedical research program of women expedition in Antarctica in 1988–89.

## К.м.н Арбатская Наталья Юрьевна
## Врач-эндокринолог. Кандидат медицинских наук

Окончила в 1997 г. Владивостокский Государственный Медицинский Университет. Клиническая ординатура по специальности «эндокринология» на базе кафедры эндокринологии ММА им. И.М. Сеченова в 1997–1999 гг.
Защита диссертации по теме: «Сахарный диабет и беременность».

Работала в ГКБ № 1 им. Н.И. Пирогова с 2000 по 2012 гг. Занимается научно-исследовательской работой в области «Сахарный диабет и беременность» на базе кафедры эндокринологии и диабетологии факультета усовершенствования врачей Российского научно-исследовательского медицинского университета с 2003 г по н.в. Сертифицированный специалист по диабетологии, тиреоидологии, помповой инсулинотерапии и круглосуточному мониторированию глюкозы в терапии различных типов сахарного диабета.

Doctor-endocrinologist. Candidate of medical sciences.
Graduated from Vladivostok State Medical University in 1997. Clinical internship in «Endocrinology» at MMA named I.M.Setchenov in 1997–1999. Defended thesis on a subject: «Diabetes and pregnancy».Joined Hospital named Pirogov from 2000 till 2012. Engaged in research for diabetes and pregnancy on the basis of endocrinology dept. of postgraduate education in medicine at the Russian Research Medical University since 2003. The certified expert in a diabetology, tireoidologiya, pump insulinotherapy and glucose everyminute monitoring.

## К.м.н. Патракеева Евгения Михайловна
## Ассистент кафедры факультетской терапии с курсом эндокринологии Санкт-Петербургского медицинского университета им. акад. И.П.Павлова

Консультирующий эндокринолог городской многопрофильной больницы № 2 г. Санкт-Петербурга.
С отличием закончила СПбГМУ им. акад. И.П.Павлова в 2005 году, проходила клиническую ординатуру на кафедре факультетской терапии, тема кандидатской диссертации посвящена вопросам вариабельности уровня глюкозы при различных режимах инсулинотерапии. Научные исследования касаются вопросов инсулинотерапии, терапевтического обучения пациентов, психологических аспектов в лечении сахарного диабета, вопросам использования новых технологий у молодых пациентов с сахарным диабетом (проводится работа по выявлению факторов, определяющих успешный перевод пациентов на постоянную подкожную инфузию инсулина (ППИИ), по использованию непрерывного мониторирования уровня глюкозы в различных клинических ситуациях). Сфера научных интересов также включает в себя вопросы, касающиеся использования интернет-ресурсов и социальных сетей в лечении сахарного диабета. С 2012 года является членом совета экспертов обучающего сайта для российских врачей-диабетологов (www.diaeuni.ru).

Teaching Assistant in Endocrinology, Saint-Petersburg Medical University and Consultant Endocrinologist at City Hospital #2, Saint-Petersburg.
She received her medical degree from the Saint-Petersburg Medical University in 2005, where she graduated cum laude and completed her residency in endocrinology and internal medicine, research fellowshipon glucose variability theme at faculty therapy department of this University. Her research interests include insulin therapy, patient education, psychological issues in diabetes care, the use of new technologies in diabetes, especially for young adults (she is investigating factors by which it will be possible to improve results in switching patients on CSII therapy, the role of continuous glucose monitoring in different clinical situations). She also has an interest in development of web-based resources and social media useas a components of diabetes therapy and patients' psychological support.Since 2012 has been a member of advisory board of the educational site for Russian diabetologists (www.diaeuni.ru). She has organized on a regular basis the course of continuous postgraduate education for young diabetologists in Saint-Petersburg with the aim of recent international research findings translation into everyday clinical practice. Member of Russian Endocrinology Society, European Association for Study in Diabetes (EASD) and American Diabetes Association

## Tsvetalina Tankova
## Associate Professor of Endocrinology, Head of the Department of Diabetology at the Clinical Center of Endocrinology, Medical University

Dr. Tsvetalina Tankova is Associate Professor of Endocrinology, Head of the Department of Diabetology at the Clinical Center of Endocrinology, Medical University, Sofia, Bulgaria. Dr.Tankova has graduated the Medical Academy in

Sofia. She obtained PhD in Endocrinology at the National Institute of Endocrinology and Gerontology, Medical University, Sofia, in 1990. She has specialty in Internal Medicine (1992) and Endocrinology (1993). In 2011 she got a Master's degree of Public Health and Healthcare Management. Dr. Tankova has specialized at WHO Collaborating Center, Diabetes Treatment and Teaching Unit, University Hospital, Geneva; Hospital Cochin, Paris, France; King's College Hospital, London, UK; Steno Diabetes Center, Copenhagen, Denmark.
Dr. Tankova is the author of over 110 peer-reviewed publications and book chapters; she has over 215 participations in national and international congresses and symposia. She serves as Editor of the Central European Journal of Medicine and as reviewer of the journals Patient Education and Counseling and Diabetes Research and Clinical Practice. Dr. Tankova is member of European Association for the Study of Diabetes, General Committee of Diabetes Education Study Group of EASD, European Group on Insulin Resistance. She is Secretary of the Bulgarian Society of Endocrinology since 2003. Dr. Tankova runs several research projects on prediabetes, diabetes, obesity, metabolic syndrome, complications of diabetes.

Доцент эндокринологии, заведующий кафедрой диабетологии в Клиническом Центре эндокринологии, Медицинский университет, София, Болгария.
Окончила медицинскую академию в Софии. Получила докторскую степень в Национальном институте эндокринологии и геронтологии медицинского университета, София, в 1990 году, имеет специальность в Internal Medicine (1992) и эндокринологии (1993). В 2011 получила степень магистра общественного здравоохранения и управления здравоохранением, является автором более 110 рецензируемых публикаций и глав книг; Участвовала более чем в 215 национальных и международных конгрессах и симпозиумах. Служит в качестве редактора Центрального Европейского Журнале медицины и как рецензент журналах пациентов просвещение и консультирование и диабета исследований и клинической практики. Является членом Европейской ассоциации по изучению диабета, EASD, Европейской группы по резистентности к инсулину. Секретарь Болгарского общества эндокринологии с 2003 года.

## Dr. Donal O'Gorman
## lecturer in exercise physiology and director of the Centre for Preventive Medicine at Dublin City University

He completed a MSc. at the Pennsylvannia State University where he investigated the impact of acute and chronic exercise on insulin sensitivity and the insulin signalling cascade. His PhD research, at Trinity College Dublin, focused on insulin resistance in patients with type 2 diabetes and in particular the cellular adaptation in skeletal muscle following exercise. Donal is a former chairperson of the Exercise and Sport Science Association of Ireland and was a member of the National Task Force on Obesity.

Защитил диссертацию в Пенсильванском Университете (США), где изучал влияние острой и хронической физической нагрузки на чувствительность к инсулину и инсулин-сигнальный каскад.,Докторская диссертация, которую защитил в Trinity College (Ирландия) посвящена инсулинорезистентности пациентов с диабетов 2 типа и особенности вопросам клеточной адаптации в скелетной мускулатуре после физической нагрузки. Является председателем Ирландской Ассоциации Физкультуры и спорта и членом Национальной целевой группы по проблемам ожирения.

## Nebojša M. Lalić
## Professor of Internal Medicine at the Faculty of Medicine, University of Belgrade

Nebojša M. Lalić MD, PhD, is Professor of Internal Medicine at the Faculty of Medicine, University of Belgrade and Head of the Department for Metabolic Disorders, Intensive Treatment and Cell Therapy in Diabetes, Clinic for Endocrinology, Diabetes and Metabolic Diseases, Clinical Center of Serbia, Belgrade. He is also Vice Dean of the Faculty of Medicine and Chairman of the National Expert Committee for Diabetes, Republic of Serbia.

The principal interest of Professor Lalic scientific work in diabetology/endocrinology has been concentrated on the relations between insulin secretion and insulin sensitivity impairments in Type 2 diabetes, their relevance for the pathogenesis of diabetes and its late complications and the possibilities of their therapeutic modulation. In this context, he is also intensively involved in the metabolic studies of the possibilities of early detection and prevention of Type 2 diabetes, as well as of the late diabetic complications and comorbidities. He has been active in the organization of several international and national scientific and educational meetings in the field of diabetology.

Профессор по внутренним болезням медицинского факультета Университета Белграда и глава Департамента по метаболическим расстройствам, интенсивной терапии и клеточной терапии при диабете при Клиническом центре эндокринологии, диабета и метаболических заболеваний, Белград, Сербия. Является заместителем декана медицинского факультета и председателем Национального экспертного комитета по диабету Республики Сербия. Принципиальный интерес в его работах сконцентрирован на связи между секрецией инсулина и нарушением чувствительности к инсулину при диабете 2 типа и важности этих параметров для патогенеза диабета и его осложнений, и возможностям терапевтической модуляции. В этом контексте занимается изучением возможности предотвращения диабета 2 типа и последующих осложнений диабета. Является инициатором и активным участником научных и образовательных встреч по вопросам диабета.

## Дерябина Елена Геннадьевна
## ФГБУ «Уральский научно-исследовательский институт охраны материнства и младенчества» Минздрава России

Консультирование по вопросам диагностики и лечения сахарного диабета 1 и 2 типа, гестационного сахарного диабета, помповой инсулинотерапии, суточного мониторирования гликемии, планирования и ведения беременности при эндокринных заболеваниях, репродуктивной эндокринологии, менопаузального периода.
Член Межведомственного научного совета по комплексной проблеме «Эндокринология» Российской Федерации, Российской ассоциации эндокринологов, Российской ассоциации гинекологов-эндокринологов.
Автор 79 научных публикаций, из них 22 – в рецензируемых медицинских журналах, 8 – в зарубежных изданиях,1 монографии и 2 пособий для врачей, 6 патентов, 3 новых медицинских технологий.

Focusing on the diagnosis and treatment of diabetes Type 1 and 2 Diabetes, insulin pump therapy, daily monitoring of blood glucose, planning and management of pregnancy with endocrine diseases, reproductive endocrinology, the menopausal period. A member of the Interdepartmental Scientific Council on the Complex Problem «Endocrinology» of the Russian Federation, the Russian Association of Endocrinologists, the Russian Association of gynecologist-endocrinologist. Author of 79 scientific publications, 22 of them in medical journals, 8 – in foreign publications.

## К.м.н. Черникова Наталья Альбертовна
## Доцент кафедры эндокринологии и диабетологии ГБОУ ДПО «Российская медицинская академия последипломного образования Минздрава России»

На кафедре с 1995 года, с 1997 г. – директор Центра «Образ жизни», организованного в эндокринологическом отделении ЦКБ Гражданской авиации под эгидой МОО «Международная программа Диабет». С 2003 г. ведет направление на кафедре по обучению врачей и пациентов новым технологиям в диагностике и лечении сахарного диабета (методы непрерывного мониторирования гликемии (CGMS), помповой инсулинотерапии, глюкокардиомониторированию). С 2010 года разработала и ежемесячно проводит курс обучения для «продвинутых пациентов» с сахарным диабетом. Автор около 100 печатных работ. Член Всероссийского общества эндокринологов, Член Европейской ассоциации по изучению диабета (EASD), Член Американской диабетической ассоциации.

Associate professor of endocrinology and diabetology department of Russian Medical Academy of Postgraduate Education of Ministry of Health of Russia». Since 1997 – the director of the Center «Way of life» organized on the basis of Endocrinology Department of Civil aviation Hospital, the part of «International Diabetes Program». Since 2003 conducts training of doctors and patients of new technologies in diagnostics and diabetes treatment (methods of continuous monitoring of a glycemia (CGMS), a pump insulinotherapy. Since 2010 monthly conducts a course for «the advanced patients» with diabetes. Author about 100 publications. The member of the All-Russian Society of Endocrinology, the Member of the European Association for the Study of Diabetes (EASD), American Diabetic Association.

## Д.м.н. Архипов Михаил Викторович
## Заведующий кафедрой терапии ФПК и ПП УГМА

Главный внештатный кардиолог г. Екатеринбурга. Закончил лечебно-профилактический факультет Свердловского Государственного Медицинского Института в 1978 году. Доктор медицинских наук, профессор, заведующий кафедрой ФПК и ПП УГМА. Область научных интересов: проблемы нарушения сердечного ритма, сердечная недостаточность, ОКС. Под руководством М.В. Архипова выполняются 10 кандидатских и 1 докторская диссертация. В отечественной и иностранной печати опубликованы более 80 его работ.
Член Всероссийского общества кардиологов, руководитель Екатеринбургского городского центра диагностики и лечения сердечного ритма, действующего на базе кардиологического отделенеия ГКБ N 33, член приемной комиссии по кардиологии УГМА.

Chief freelance cardiologist, Yekaterinburg. Graduated from Sverdlovsk State Medical Institute in 1978. MD, Professor, head of Department, FPC and PP USMA. Scientific interests are focusing on problems of irregular heart rhythm, heart failure, ACS. He has 80 publications in domestic and internatiobal journals. Member of Russian Society of Cardiology, the head of the Yekaterinburg city centre for diagnosis and treatment of heart rhythm, on the basis of Cardiology Department of City Hospital.

## К.м.н. Мелешкевич Татьяна Антоновна
## Зав. Отделением эндокринологии ЦКБ № 2 им. Н.А. Семашко ОАО «РЖД» старший научный сотрудник сектора МСЭ И Реабилитации при эндокринных заболеваниях ФБМСЭ

Предмет научного интереса – проблемы сахарного диабета и его осложнений, в частности – диабетическая ретинопатия – одно из наиболее тяжелых и часто встречающихся осложнений сахарного диабета, проблемы ранней диагностики, современные подходы к лечению; хирургические, лазернохирургические и консервативные способы лечения.

Scientific interest is focusing on problems of diabetes and its complications, particularly diabetic retinopathy as one of the most serious compications in diabetes. Problems of early diagnosis, current approaches to treatment – surgery and conservative methods of treatment.

## Д.м.н. Киселева Татьяна Петровна
## Главный эндокринолог Уральского Федерального округа
## Врач- эндокринолог, доктор медицинских наук, профессор

Окончила в 1976 году Благовещенский Государственный Медицинский Институт по специальности «Лечебное дело», в 1982 году окончила клиническую ординатуру по хирургии.
С 1986 г. специализируется на эндокринологии. В 2006 году защитила докторскую диссертацию по теме «Клинико-функциональные и иммуноморфологические особенности аутоиммунного тиреоидита при патологии внутренних органов». Занимается вопросами общей диабетологии и изучением эффективных и безопасных способов профилактики сахарного диабета и его осложнений.

Является профессором кафедры внутренних болезней, эндокринологии и клинической фармакологии УГМА Минздравсоцразвития г. Екатеринбург. Член правления Российской ассоциации эндокринологов.

Graduated from Blagoveshchensk State Medical Institute, speciality «Medicine» in 1976, completed medical education as surgery in 1982. Since 1986, specializes in endocrinology. In 2006 doctoral thesis on «Clinical-functional and immunomorphological features of autoimmune thyroiditis in the pathology of internal organs». Specialized on General diabetology and study effective and safe ways to prevent diabetes and its complications. Professor of internal medicine, endocrinology and clinical pharmacology of the USMA in Ekaterinburg. Member of the Board of the Russian Association of Endocrinologists.

## д.м.н. Кутепов Сергей Михайлович
## Ректор Уральской государственной медицинской академии (УГМА)

Автор 194 научных работ, в том числе десяти монографий. Имеет 14 патентов на изобретения. Под его руководством защищено семь кандидатских и докторских диссертаций.
Отмечен международной наградой Ertsmaker в номинации «За мудрость и гибкость политики управления» по результатам проведенной программы «Человек, определяющий лицо планеты».
Имеет почетные грамоты Министерства здравоохранения Российской Федерации, губернатора и правительства Свердловской области.
Награжден медалью «За освоение целинных и залежных земель», знаками «Отличник здравоохранения Российской Федерации», «За заслуги перед Свердловской областью» III степени.

Author of 194 scientific papers, including ten monographs. Has 14 patents for inventions. Under his supervision, seven master's and doctoral theses.
He marked with the international award Ertsmaker in the nomination «For the wisdom and flexibility of management policy» on the results of the program «Man defining face of the planet.» Has diplomas of the Ministry of Health of the Russian Federation, and the Governor of the Sverdlovsk region.
He was awarded the medal «For the development of virgin and fallow lands,» signs «Excellent Health of the Russian Federation», «For Service to the Sverdlovsk Region» III degree.

## Д.м.н. Климонтов Вадим Валерьевич
## Зав. лабораторией эндокринологии, зам. директора по научной работе Института клинической и экспериментальной лимфологии, г. Новосибирск

В 1996 году закончил лечебный факультет Новосибирского медицинского института, клиническую ординатуру и аспирантуру, прошел постдипломную подготовку по эндокринологии и диабетологии в Эндокринологическом научном центре (Москва), в Центре эндокринологии и метаболизма в Оксфорде (Великобритания), в медицинском Центре Университета им. Эразма Роттердамского (Нидерланды). Прошел клинические стажировки в госпитале земли Зальцбург (Австрия). В 2008 году защитил докторскую диссертацию на тему «Особенности формирования и ранняя диагностика поражения почек у больных сахарным диабетом 1 типа». Научные интересы связаны с вопросами патогенеза, ранней диагностики и лечения сосудистых осложнений сахарного диабета: нефропатии, ретинопатии, диабетической стопы. Автор 80 статей в рецензируемых журналах и двух монографий по диабетологии. Руководитель научных проектов, поддержанных Советом по грантам при Президенте Российской Федерации, Российским научным фондом. Член Европейской Ассоциации по изучению сахарного диабета (EASD) с 2000 г., являлся презентирующим автором одного устного и десяти постерных докладов на ежегодных конгрессах EASD.
Graduated from the medical faculty of the Novosibirsk Medical Institute in 1996, the medical education extended in Endocrinology Research Center on endocrinology and diabetology (Moscow), in the Center of Endocrinoloingy and

Metabolism, Oxford (UK), in the Medical Centre of the University named Erasmus Of Rotterdam (The Netherlands). Completed clinical training at the hospital of Salzburg (Austria). His doctoral thesis is «The Peculiarities of the formation and early diagnosis of kidney damage in patients with Type 1 Diabetes». Scientific interests focuses on pathogenesis, early diagnosis and treatment of vascular complications of diabetes: nephropathy, retinopathy, diabetic foot. The author of 80 articles in journals and two books on diabetology. Head of research projects supported by the Council on grants at the President of the Russian Federation, the Russian Science Foundation. Member of the European Association for the study of diabetes (EASD) from 2000.

## Д.м.н. Смоленская Ольга Георгиевна

Профессор, заведующая кафедрой факультетской терапии и эндокринологии ГБОУ ВПО Уральский государственный университет,кафедра факультетской терапии и эндокринологии.

Professor, Head of the Department of Therapy and Endocrinology SEI HPE Ural State University, Department of Therapy and Endocrinology.

## Brian Carey
## Executive Administrator of EASD

Organiser of EASD Postgraduate Education, EASD Virtual Meeting (www.easdvirtualmeeting.org), Online Media and EASD Press Liaison Officer

Брайан Кэрри
Исполнительный администратор Европейской Ассоциации по изучению диабета (EASD), организатор курсов последипломного образоваия по клиническому диабету, видеоконференций.

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## МЕСТО ПРОВЕДЕНИЯ КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD) ЕКАТЕРИНБУРГ, РОССИЯ, 3–5 ОКТЯБРЯ 2014 г.

### МЕСТО ПРОВЕДЕНИЯ:

**Адрес:** Отель «Онегин»
г. Екатеринбург,
ул. Розы Люксембург, д. 49

**ПЛЕНАРНЫЕ ЗАСЕДАНИЯ\СЕССИИ:** Конгресс-зал «ФОРУМ» (9 этаж)

### ПАРАЛЕЛЬНЫЕ СЕМИНАРЫ 13 СЕНТЯБРЯ:

– Конгресс-зал «ФОРУМ» (9 этаж)
– Зал заседаний «ЛИЦЕЙ» (9 этаж)
– Зал заседаний «АССАМБЛЕЯ» (8 этаж)

## VENUE OF THE III EASD POSTGRADUATE COURSE ON CLINICAL DIABETES YEKATERINBURG, RUSSIA 3–5 OCTOBER 2014

### VENUE OF THE EVENT:

**Adress:** Onegin hotel
Rozi Luxemburg str. 49,
Yekaterinburg

**CEREMONIES AND SESSIONS:** Congress-hall «FORUM» (9th floor)

### WORKSHOPS IN THE 13TH OF SEPTEMBER 2013:

– Congress-hall «FORUM» (9th floor)
– Meeting Hall «LICEY» (9th floor)
– Meeting Hall «ASSAMBLEIA» (8th floor)

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# P1 TYPE 1 DIABETES MELLITUS SELF-CONTROL BY PREGNANT WOMEN

***M.M. Atadjanova***
*Center for the Scientific and Clinical Study of Endocrinology, Uzbekistan Public Health Ministry.*

**Aim:** to assess effect of intensive type 1 diabetes mellitus self-control on outcomes of pregnancy.

**Methods:** We examined 2 groups of pregnant patients with type 1 diabetes mellitus (DM). 25 pregnant women performing self-control of fasting and postprandial glycemia and correcting insulin doses were included into the 1st group, 25 females controlling and correcting glycemia irregularly and missing regular visits for examination and blood sampling comprising the 2nd one.

**Results:** Compensation in 1st group patients was achieved by 4–5 weeks of gestation to be maintained by the patients. 22 (88%) deliveries of viable fetuses were registered in the group, 6 (27.3%) stimulated and 12 (54.5%) spontaneous deliveries, respectively, as well as 4 (18.2%) cesarean sections among them. There were 2 (8%) miscarriages and 1(4%) abortion. The newborns' weight ranged from 2750 to 4000 g, assessment by Apgar scale scored 5-8. In the 2nd group diabetes compensation was achieved by 12–14 weeks of gestation being unstable. In this group the pregnancy outcomes included 18 (72%) deliveries of viable fetuses, 5 (27.7%) stimulated and 4 (22.3%) spontaneous deliveries, respectively as well as 9 (50%) cesarean sections among them. There were 6 (24%) miscarriages and one (4%) intrauterine death of a fetus. In this group signs of diabetic fetopathy were observed in 2 (10%) newborns, 4 (20%) newborns weighing 4 kg and more; 3 (15%) cases of fetal hypotrophy were registered. The Apgar score reached 5–7.

**Conclusion:** Regular self-control of carbohydrate metabolism facilitates increase in the percentage of favorable pregnancy outcomes in patients with type 1 DM.

# P2 THE BENEFITS AND RISKS OF CONTINUOUS SUBCUTANEOUS INSULIN INFUSION USING A SENSOR AUGMENTED PUMP IN PREGNANT WOMAN WITH POORLY CONTROLLED TYPE 1 DIABETES

***E. Deryabina***
*Ural Research Institute of Maternity and Infancy Welfare. Yekaterinburg, Russia*

**Objective:** To determine the benefits and risks of continuous subcutaneous insulin infusion using a sensor augmented pump (SAP/CSII) began in the third trimester in pregnant woman with poorly controlled type 1 diabetes compared with multiple daily insulin injections (MDI).

**Methods:** 30-year-old a woman suffering type 1 diabetes for 17 years, was admitted to hospital at 29 weeks gestation due to the poor control of carbohydrate metabolism and the risk of preterm birth. Obstetrical history: two miscarriages in 7–8 weeks, no delivery. Glycemia during the day from 2.0 to 19.0 mmol/L, daily hypoglycemia. The total daily dose of insulin (isophane&lispro) was 62U/day (1,1U/kg/day). The SAP/CSII was started at 29 weeks with the continuous monitoring of blood glucose levels in real time.

**Results:** The individual target of blood glucose was achieved within a week of insulin pump therapy. Hypoglycemia on SAP/CSII was not observed. The daily dose of insulin lispro in pump therapy was 43.2±3.3U/day (30.3% less than MDI). The basal rate of insulin throughout the day varied from 0.8 to 1.9 U/hour. During pregnancy daily insulin dose was gradually increased and at 36 weeks was 53.1±3.7U/day. Delivery occurred at 36 weeks of gestation by cesarean section for obstetric indications. Diabetic fetopathy absent.

**Conclusions:** SAP/CSII during pregnancy helps more flexibility to select a dose of insulin and more rapidly, than MDI, to achieve glycemic targets without increasing the frequency of hypoglycemia, especially in cases of labile diabetes. Good glycemic control during pregnancy reduces the risk of adverse perinatal outcomes.

# P3 MODERN FEATURES OF NEWBORNS FROM MOTHERS WITH TYPE 1 DIABETES

***E. Deryabina, T. Kutyavina, S. Zaharova***
*Ural Research Institute of Maternity and Infancy Welfare. Yekaterinburg, Russia*

**Background:** Now in the Sverdlovsk region delivery at women with type 1 diabetes is 0.1% of all deliveries in a year.

**Objective:** to evaluate the modern features of newborns from mothers with type 1 diabetes.

**Methods:** Analyzed all the history of delivery 57 infants born 2013 from mothers with type 1 diabetes in the Sverdlovsk region.

**Results:** Age of women at delivery – 27,8 ± 4,55 years (range 19 to 41 years), diabetes duration prior to pregnancy – 8 [4; 13] years (from 0 to 28 years).Planned the pregnancy (HbA1c≤6,0%) only 21.1% of patients.During their pregnancy HbA1c≤6,0% was at 45.6% of pregnant women. Different diabetic complications were detected in 94.7%, complications of pregnancy – in 71.9% of patients. Prematuredelivery was in 63.1% of cases. Perinatal death was not.Diabetic fetopathy was determined at 63.1%, intrauterine growth restriction – at 15.8%, hypoglycemia – at 71.9% of newborns.Congenital malformations were detected in 6 (10.5%) infants (before conception HbA1c> 6,5% in 5 of 6 cases). Respiratory distress syndrome was detected in 63.1%, respiratory support was necessary in 36.9% of newborns. Adverse pregnancy outcomes have been observed in 2.7 times more frequently when HbA1c> 6,0% in pregnancy ($p < 0.05$).

**Conclusions:** Today perinatal complications in diabetic patients are still higher than population level. Important cause of this is the absence of pregnancy planning in most patients with type 1 diabetes, poor glycemic control during pregnancy.
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# P4 PSYCHOLOGICAL DIFFERENCES BETWEEN TYPE 1 DIABETES PATIENTS ON CSII AND MDI THERAPIES

***N. Novoselova, E. Patrakeeva, A. Zalevskaya***
*Endocrinology, Saint-Petersburg Medical University, Saint-Petersburg, Russia*

**Background:** Insulin pumps are known as more physiologic way of insulin delivery and can help to improve control of diabetes. But psychological and emotional issues of using insulin pumps are still not clear.

**Methods:** We used 50 cards with statements about diabetes and gave them to patients with possibility to choose 5 cards most appropriate for them.
Patients on CSII select 2 from 10 additional cards about efficacy of insulin pump and evaluation of patients attitude to CSII.

**Results:** 33 participants took part in our study (19 patients on CSII (HbA1c 7.6±2.7%), 14 patients on MDI (HbA1c 8,9 ±3.1%)).
Patients on CSII were more motivated to achieve target value of HbA1c and more tight glycaemic control. It was proved by often choosing cards «I want to be expert in my diabetes», although they chose cards that showed depression and anxiety – «I want to forget about my diabetes», «I'm afraid that my diabetes will progress». Patients on MDI were more interested in practical questions like «How stress influences on glycaemic control» or «What can I do to prevent complications of diabetes».
Among cards about using insulin pump patients choose more often positive cards «My life after switch on pump become easier».

**Conclusions:** Our study showed that patients on CSII and MDI have different psychological and emotional issues and need different way of psychological help.

# P5 DIFFERENT TYPES OF BOLUSES IN CSII THERAPY FROM PATIENTS' AND PHYSICIANS' POINTS OF VIEW.

***L. Goncharova, E. Patrakeeva, A. Zalevskaya***
*First State Pavlov Medical University of Saint-Petersburg.*

**Background:** using of variable boluses can be a great opportunity for better postprandial replacement and can make control of diabetes tighter. However precise recommendations about situations when patient should use variable boluses still don't exist.

**Methods:** We gave 30 endocrinologists (mean age 37±9 years) and 30 CSII patients with type 1 diabetes (T1DM) (mean age 27±11 years, mean diabetes duration 12±6 years, CSII duration 3±1.5 years) a questionnaire about situations when variable boluses should be used. There were several questions with multiple answer options of using variable boluses and also responders could propose their answers.

**Results:** 100% of patients and 90% of doctors answered that using of variable boluses influenced glycaemic control. Using of variable boluses helps to manage diabetes better and makes feel more confident about not getting high blood glucose level (70% vs. 60%), allows to make diet more wide and not to be afraid about high blood glucose level (80% vs. 60%). 20% of patients and 10% of doctors answered that they still don't understand when variable boluses should be used.
Furthermore younger doctors (mean age 26 ± 1.5) revealed more knowledge about using insulin pump. Patients whose level of HbA1c was close to target (<7.0%) gave more complete answers and showed more optimistic attitude to variable boluses.

**Conclusions:** Our results show that there is still no clear understanding of the situations when variable boluses should be used among patients and doctors. Repeated theoretical and practical educational courses about prandial replacement in CSII therapy are essential not only for patients but also for doctors.

# P6 EATING BEHAVIOUR OF TYPE 2 DIABETES PATIENTS

***D.Sh. Avzaletdinova, T.V. Morugova***
*Bashkir State Medical University, Ufa, Russia*

**Background:** Obesity mainly caused by overeating is one of the most important risk factor of type 2 diabetes mellitus (T2DM). The aim of the present study was to investigate eatingbehaviourtypes of patients with T2DM and obesity.

**Methods:** 30 T2D Mpatients (8 men and 22 women) aged 51.5±2.2 years old (30–74 years) were questioned. Physical assessment included height, weight, body mass index and obesitydegree according World Health Organization. The Dutch Eating Behaviour Questionnaire was used. Statistical analyses was performed using STATISTICA® 6.0 program. Means, mistakeof mean, 95% confidence interval (CI) were calculated.

**Results:** Mean value of restraint scale was 2.7±0.1 (95% CI 2.5-2.9). The same one of emotional scale was 2.3±1.0 (95% CI 2.1-2.6) and of external scale was 2.6±0.1 (95% CI 2.5-3.0).
Restraint behavior was diagnosed in 23 (76.7%) patients. 23 (76.7%) patients had emotional overeating and 16 (53.3%) patients had external eatingbehaviour. Only 3 patients (10%) did not have pathology of eating behavior. 4 patients (13.3%) had violation of oneeatingbehaviour type.Impairment at once of two eatingbehaviourforms was revealed in 11 (36.7%) patients. 12 patients (40.0%) had disturbances of all three eatingbehaviourtypes.

**Conclusion:** Present study has shown that major of T2DM patients with obesity have disturbances of several types of eatingbehaviour. Type of eating behaviour of each particularly patient may be take into considerationfor more effective management of diabetes.

# P7 HYPOGLYCEMIC THERAPYTHERAPY IN PATIENTS WITH TYPE 2 DIABETES AND FATTY LIVER DISEASE

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**Background:** The aim was to study the effectiveness of combination therapy for diabetes mellitus type 2, based on the combination of exenatide and metformin, for a fatty liver and somatometric indicators.

**Methods:** The clinical group was formed of 30 patients, who were instituted combined therapy: metformin 1 500 mg/day, exenatide 20 mcg/day. Duration of treatment 3 months. The patients' age averaged 56.9 ± 4.2 years. Duration of diabetes mellitus type 2 averaged 6.1 ± 0.5 years. The inclusion criteria: diabetes mellitus type 2, fatty liver disease, HbA1C 6,5% – 9.5%. The dynamics of somatometric indices (body mass index, waist hip ratio), ehohepatodensitometric indices and their correlation interaction.

**Results:** 3 months BMI decreased by 3.5 kg/m² ($p<0.05$), waist decreased by 7.3 sm ($p<0.05$), hips by 5.2 sm ($p<0.05$), WHR decreased by 0.07($p>0.05$). Parameter of hepatic ehodencity LA decreased on 44.9% ($p<0.05$) and attenuation index - on 17.7% ($p<0.05$). When evaluating the correlation interactions BMI had a direct relationship with a close reliable LA ($r=0.75$, $p<0.001$). Glycosilated hemoglobin after 3 months of treatment was reduced by 15,1% ($p <0,05$) and was 6,2 ± 0,2%.

**Conclusion:** Combination therapy for three months in patients with type 2 diabetes and fatty liver leads to subcompensation carbohydrate metabolism, reduce the severity of abdominal obesity and fatty liver.

# P8 INSULIN INITIATION IN TYPE 2 DIABETES MELLITUS PATIENTS IN HOSPITAL AND OUTPATIENT SETTING – EFFECTIVENESS AND SAFETY

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**Background:** Different approaches can be used for patients education and insulin titration when starting insulin in T2DM patients. We evaluate outcomes after 3 months of starting insulin in hospital or on outpatient basis.

**Materials and methods:** 60 T2DM patients starting insulin for poor oral antidiabetic drugs effectiveness were included. 40 initiated treatment in hospital, while for 20 insulin was started with regular clinic visits. All patients were observed monthly to 3 months. HbA1c, body weight, hypoglycemia frequency were evaluated as primary outcomes.

**Results:** At inclusion groups did not significantly differ in age, diabetes duration, HbA1c. Hospital group more frequently was prescribed bolus insulin (25% vs. 5% p=0.06), had more insulin injections per day (2.5(1.4) vs. 1.7(0.9) p=0.03) and higher basal insulin dose (31(11.2) vs. 17(7.8)U, p=0.0001). In 3 months groups did not differ in frequency of bolus insulin use (20% vs. 21%), injection number (2.4 both), insulin dosages (36(21.6) vs. 32(21.3) p=0.54). Hospital group daily insulin dose decreased by 2(11.7)U while in outpatient increased by 13(16.8). Resulting HbA1c was similar (7.2(0.8) vs. 7.2(0.67) p=0.85), but hospital group gained more weight (2.5(2.99) vs.1.0(2.58)kg p=0.05) and had higher number of hypoglycemias (10.1(14.4) vs. 2.6(4.6) p=0.03).

**Conclusions:** Outpatient initiation of insulin provides same effectiveness with less weight gain and hypoglycemias due to lower initial insulin dosages and gradual uptitration. Hospital titration tends to overdose insulin for further daily use.

# P9 FEATURES OF AGE-RELATED ANDROGEN DEFICIENCY IN PATIENTS WITH TYPE 2 DIABETES

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**Objective:** To study the characteristics of the age-related androgen deficiency in patients with type 2 diabetes.

**Materials and methods:** We examined 30 patients with type 2 diabetes mellitus (DM ) in the average age of 55,63 ± 0,91 years , with disease duration of 6,63 ± 0,65 years, receiving hospital treatment in endocrinology department of the 3rd Clinics of Tashkent Medical Academy. The control group consisted of 20 healthy men, the average age of 58,3 ± 0,76 years. All patients were examined testing blood sugar level during fasting and after eating, glycated hemoglobin levels, free and total testosterone levels in the blood, and also ultrasound scanning of the pelvic organs. The study did not include men on whom inflammation in the pelvic organs, prostatic hyperplasia were found. Androgen deficiency evaluation in men was carried out using the scale of age-related androgen deficiency symptoms which has a summary of questions that reveals the latter.

**The results of the study:** In surveyed patients carbohydrate metabolism related to the criteria for diabetes management , ie, fasting blood sugar was 6,93 ± 0,23 mmol / l , after eating 8,97 ± 0,34 mmol / l, glycated hemoglobin was 6,7 ± 0 45 %.

Total serum testosterone levels in patients with type 2 diabetes was reduced in 23 patients (76.7% ), while in the control group, it was in 8 patients (40%). In patients with type 2 diabetes concentration of total and free testosterone levels below normal values detected in 66.5% and 82%, respectively. The dissociation rate of decline of total and free testosterone levels in patients with type 2 diabetes is caused by an age related increase of the globulin levels that bind sex steroids that stimulate the further reduction of free testosterone levels. According to the results of the questionnaire it is revealed that in patients with type 2 diabetes 12 ( 40%) patients had mild androgen deficiency, in 15 (50% ) it was of average intensity, and in 3 (10%) markedly high androgen deficiency was seen. In the control group, these results were 45%, 15%, 5% respectively, in 35% of the men androgen deficiency was not detected.

**Conclusion:** Thus, the concentration of testosterone is low in 76.7% of patients with type 2 diabetes. Androgen deficiency according to the questionnaire is more pronounced in men with type 2 diabetes.

# P10 CHOICE OF ANTIHYPERTENSIVE THEARPY IN PATIENTS WITH T2DM

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Diabetes mellitus is one of the most common disorder in today's age. It is associated with the different types of medical complications and one of the most common complication, among them is Arterial Hypertension due to angiopathy.

**Objective:** To study the effect of different types of antihypertensive drugs from various antihypertensive groups in patients with type 2 diabetes.

**Materials and methods:** We studied 60 patients with type 2 diabetes mellitus with arterial hypertension with middle age 54.4 ± 1.19 , with disease duration of 9.15± 0.89 years, receiving hospital treatment in the 3- TMA clinic in the department of endocrinology. There were 24 males and 36 females patients. All 60 patients were divided into four different groups. The first group was consist of 15 patients who were getting ARB'S as a antihypertensive therapy. The second group consisted of 15 patients who received ACE Inhibitors as a antihypertensive therapy, The third group consisted of 10 patients, who received CCB's and the last fourth group of 20 patients received a combination therapy of beta-blockers with CCB's. In all patients with different groups blood pressure was monitored regularly before and after the initiation of the treatment, the levels of glucose were measured during fasting and post prandial periods respectively, and the HBA1C levels were also measured in the beginning of the treatment

**Results:** we surveyed the patients ' blood pressure during the duration of 10 days fell down averagely in the first group upto SBP 16±4mmhg and DBP upto 8±2mmhg respectively. 10 of the 15 patients achieved normal blood pressure after the initiation of therapy which is 65% of the total group. In the second group the fall in SBP was 18±2 and DBP 8±2. All together 11 patients in this group achieved normal blood pressure which is 70% of the total group. The third group blood pressure fell down upto SBP 18±2 and DBP 6±2. out of this group of 10 people 08 people achieved normal blood pressure which is approximately 80% of the total group. The fourth and the last group which consisted of 20 people had the following results: SBP fell down to 22±4 mmhg and DBP upto 14±2. in this group 17 patients achieved normal blood pressure which is 78% of the total group.

**Conclusions:** This study concludes that the treatment with the combination therapy (CCB+beta blockers) is able to achieve better blood pressure control in comparison to monotherapies with ARB, ACE and CCB groups which were suffering T2DM.

# P11 THE FREQUENCY OF COMPLICATIONS AND OUTCOMES OF PREGNANCIES WITH GESTATIONAL DIABETES MELLITUS ACCORDING TO THE ANTENATAL CLINIC URBAN HOSPITAL № 1 OF CHELYABINSK

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**Actuality:** Prevalence of GDM in pregnant women is 3–5%. Pregnancy with GDM complicated by polyhydramnios, preeclampsia, diabetic fetopathy.

**Objective:** To study incidence of complications and outcomes of pregnancies with GDM according to the antenatal hospital №1 of Chelyabinsk, using the criteria of the Russian national consensus «Gestational diabetes: diagnosis, treatment, postnatal observation» 2012

**Materials and Methods:** 26 cards of pregnant women with GDM observed in antenatal hospital № 1 in Chelyabinsk. For revealing of GDM were used: determination of venous blood glucose, glycated hemoglobin, oral glucose tolerance test with 75 g of glucose.

**Results:** Average age of women was 29,7 ± 3,7 years. Anamnesis of diabetes was found in 61%, 12.5% – anamnesis of macrosomia (> 4000 g).
GDM was diagnosed in accordance to the criteria of Russian national consensus. GDM was verified to 26,69 ± 5,56 weeks of pregnancy.
Pregnancy with GDM complicated by preeclampsia 38%, 30,7% uteroplacental blood flow disorders, 23% of chronic fetal hypoxia, 15.3% polyhydramnios and chronic placental insufficiency. Childrenweight were 3733,75 ± 157,18 There was no one case of diabetic fetopathy.

**Conclusions:** Using the criteria of Russian national consensus led to the diagnosis of GDM at time of 26,69 ± 5,56 weeks of pregnancy.
Timely assistant to women with GDM, allowed to avoid severe obstetric complications and premature birth.

# P12 CLINICAL AND DIAGNOSTIC INDICES OF QUANTITATIVE SENSORY TESTING IN PATIENTS WITH DIABETES N

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Diabetic peripheral distal sensorimotor symmetric polyneuropathy (DPN) leads to diabetic foot (DF) formation and increasing of lower limb amputations. Aim: to evaluate clinical and diagnostic indices of quantitative sensory testing in patients with diabetes.

**Methods:** The study included 31 patients, 14 – with type 1 and 17 – with type 2 diabetes mellitus (DM). The mean age of patients with type 1 DM was 32,3±4.2 and with type 2 diabetes – 61,2 ±2,7 years. Quantitative assessment of symptoms of neuropathy was conducted using NSS and NDS.

**Results:** In type 2 DM the stiffness experienced up to 70,5% of patients, thus, more than a half noted the positive symptoms of neuropathy: 58.5 % – aching pain, 64,3 % – seizure, 65,9 % – tingling. The temperature sensitivity disturbance up to the upper third of the tibia have 71.5% of patients, 21.5 % – the tactile sensitivity violation up to the knee and 28,7% – reduced the pain to needle stimuli. The half of the patients (50,7%) estimated vibration at 3-5 conventional units. In 32,2% patients with type 2 DM identified the painless form of DPN. Scoring of NDS demonstrate that all patients with type 1 DM have moderately sensorimotor DPN, while in 82,3% patients with type 2 DM severe DPN.

**Conclusion:** Quantitative sensory testing in patients with DM allows isolating the patients with high risk of developing the DF syndrome. Thus, special attention should be paid to identifying painless form DPN, especially in patients with type 2 DM.

# P13 QUALITY OF LIFE AND THE COMPLEX TREATMENT OF PATIENTS WITH CHRONIC WOUNDS: CLINICAL CASE

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**Background:** For patients with diabetes mellitus (DM) psychological factors, depression are the more strong prerequisite for adverse health outcomes than the metabolic changes. Well organized rehabilitation is required for patients with chronic wound and diabetic foot syndrome due to the high risk of lower limb amputation.

**Methods:** Clinical example demonstrates the patient with chronic wound and the changes of QL.

**Results:** Patient C., 43 y.o., an engineer, an athlete, has DM during 8 years treated by insulin. Complications of DM start since the beginning of the disease: neuropathy of the lower extremities, retinopathy, nephropathy. The seriousness of the disease was not assessed correctly. Amputation of the left foot at the level of joint Chopart in connection with Charcot foot was performed in 2010. Since 2012 there were a chronic wound on the right foot, severe psychological maladjustment, loss of a job; disability. In 2014 against the backdrop of an overload of the foot (trying to be adapted, to help the family) enlarged wound, get rid of odors and swelling of the foot. Examination: pronounced sensory disturbances of the lower extremities; NDS 18-19; pulse on the arteries is still preserved; on the plantar surface is the ulcerative defect size 4x3 cm; soft tissue in the exostoses areas are movable. Bacteriology: Staphylococcus aureus. Pseudomonas aeruginosa. Laboratory data: a slight change of hepatic indicators; GFR 44 ml/min; glycated hemoglobin 5.7%. X-ray examination of the right foot: osteoarthropathy (Charcot foot). Psychologist examination and questionnaires: reducing adaptation of the patients expressed emotional personal protective resistance, hindering recovery. In 2014 was trained at the School of diabetes, prosthetic and orthopedic devices were provided, adequate antibiotic therapy was performed; bone exostosis of the sphenoid bone of the right foot with the plastic of local fabrics wound defect was removed; psychotherapy was beginning. Despite the fact that the seam broke, the chronic wound of right foot healed by secondary intention.

**Conclusions:** Worsening of QL affects the chronization of ulcer. A multidisciplinary approach involving psychological care as well as drug therapy and podiatric care are necessary for the patients with diabetic foot syndrome and chronic wounds. Should reach the somatic and psychological compensation for the patient with DM.

# P14 REGULATING OF INSULIN ACTIVITY: ROLE OF INHIBITORS OF INSULIN-DEGRADING ENZYME

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**Background and aims:** Insulin is a peptide hormone that able to regulate the glucose homeostasis and the activity and catabolism of insulin are regulated by Insulin-Degrading Enzyme (IDE). As well as cleaving insulin, IDE degrades a number of other substrates including atrial natriuretic peptide, glucagon and amyloid-β protein, which has a considerable potential in pathogenesis of Alzheimer's disease.

**Materials and methods:** The proteolytic degradation and inactivation of insulin is believed to be mediated primarily by IDE, so we extract IDE from alloxan rat hepar and red blood cells by ion-exchange and gel-penetrating chromatography of protein fraction and applying biospecific sorbent based on methods of extracting endogen inhibitors of the enzyme(Fig.1).

**Results:** Despite an interest in IDE for over 50 years, because of its involvement in insulin catabolism, this is the novel potent and selective inhibitor the properties of which we described. Notably, the potency of these inhibitors was found and their activity, purification rate in a substrate-specific manner was described, an unexpected finding for active site-directed inhibitors. Characteristics of inhibitor Mm = 11kD, pH = 10.5 – 11.0 .

**Conclusion:** Collectively, our findings demonstrate that potent, small-molecule IDE inhibitors can be developed, and in certain instances, can be highly substrate selective. The distinctive structure of IDE's active site, and the mode of action of our inhibitors, suggests that it may be possible to develop inhibitors that support the longstanding view that IDE inhibitors could hold therapeutic value for the treatment of diabetes.

# P15 LARGE FIBERS DYSFUNCTION AND IMBALANCE IN PATIENTS WITH DIABETIC PERIPHERAL NEUROPATHYS

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**Background:** The aim of this study was to identify the association between diabetic neuropathy and deterioration of balance using computerised dynamic posturography in type 1 and type 2 diabetes mellitus patients.

**Materials and methods:** The 102 type 1 and type 2 DM patients participated. The postural stability was evaluated using sensory organisation test (SOT), motor control test (MCT) of computerised dynamic posturography (CDP). Neurological disability score and neuropathy impairment score of the lower limbs were used to determinate specific somatosensory loss. Trail making test was used to assess the role of frontal dysfunction in posture stability.

**Results:** Patients were divided into 3 groups: 1) without reduction of proprioception (kinaesthesia), vibration or tactile sensation, n=27; 2) with reduction of vibration or tactile sensation, but without reduction of proprioception, n=37; 3) with reduction of proprioception, vibration and tactile sensation (large fiber dysfunction), n=38. Equilibrium scores in SOT 1, 2, 3 conditions and the composite muscle response latencies in MCT were significantly worse ($p \leq 0.03$) in the group 3 as compared to the group 1. The patients from group 3 were characterized longer duration of diabetes, more frequent events of imbalance complaints and history of falls as compared to the group 1. There were not significant differences between three groups in age, BMI, levels of HbA1c, in presence of vestibular syndrome and trail making test parameters.

**Conclusion:** Peripheral neuropathy with large fiber dysfunction is independent risk factor of postural instability in diabetic patients. The large fiber dysfunction with the reduction of proprioception leads to instability in enviroments of low lighting, visual movement and in case of unexpected external disturbances.