

**Дорогие участники!**

Приветствуем Вас на IV Российских курсах последипломного образования по клиническому диабету, организованных Европейской ассоциацией по изучению диабета (EASD). Владивосток был выбран местом проведения очередных курсов EASD в России в 2016 году, принимая во внимание его уникальное местоположение на территории Российской Федерации, значение как крупного экономического, культурного и научно-образовательного центра Дальнего Востока, а также важного транспортного узла Восточной Азии.

Мы рады сообщить, что на курсах присутствуют молодые врачи из разных областей России от Тюмени до берегов Тихого океана, а также из Китая и Южной Кореи. Вы сможете не только обсудить в неформальной обстановке основные «горячие точки» клинического диабета и обменяться мнениями с ведущими европейскими и российскими учеными и практикующими докторами в области диабета, но и познакомиться с уникальной природой русского Приморья и богатой историей Владивостока. Неформальная обстановка всегда отличает данные курсы. Мы очень хотим, чтобы Вы проявили активность и пытливость ума, использовали полученный опыт в Вашей ежедневной работе с пациентами и подняли на новый уровень российскую медицинскую науку.

Наше мирное научное и медицинское сотрудничество вносит очень важный вклад в укрепление мира между странами Евразийского континента.

С уважением,

Председатель комитета  
по последипломному  
образованию EASD  
Профессор,  
Лешек Чуприняк



Со-председатель российского  
оргкомитета курсов:  
Д.м.н. профессор,  
Гурьева  
Ирина Владимировна



Со-председатель российского  
оргкомитета курсов:  
Д.м.н. профессор  
Аметов  
Александр Сергеевич

**Dear participants!**

We are glad to welcome you on the IV Russian EASD Postgraduate Course on Clinical Diabetes arranged by the European Association for the Study of Diabetes (EASD). Vladivostok was chosen as venue of the Course in Russia in 2016 due to its unique location on the territory of Russia and taking into account that the city is a large industrial, cultural and scientific educational centre of Far East of Russia and important transportation hub of Eastern Asia as well.

We are happy to advise that we see on the EASD Course young doctors from different regions of Russia - from Tyumen to the coast of the Pacific Ocean, and from China and South Korea. You will have chance not only to discuss the key points of clinical diabetes in informal way with leading European and Russian experts and physicians in diabetes and to exchange opinions, but also to get acquainted with the unique nature of the Russian Primorye and rich history of Vladivostok city. The informal way of mutual communications always distinguishes EASD Postgraduate Courses. We believe that you will show your activity, keenness of mind and thirst for knowledge and use the experience which you will get during these three days in your daily practice with patients and improve medicine level in Russia.

Our peaceful scientific and medical cooperation makes important contribution to strengthening of peace between different countries of the Euroasian continent.

Yours faithfully,

Prof. Leszek Czupryniak  
Chairman  
EASD Postgraduate Education



Prof. Irina Gurieva  
Co-chairman  
Local Organising Committee



Prof. Alexander Ametov  
Co-chairman  
Local Organising Committee



**ПРОГРАММА КУРСОВ ПОСЛЕДИПЛОМНОГО ОБРАЗОВАНИЯ  
ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ  
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)  
ВЛАДИВОСТОК, 21– 23 АПРЕЛЯ 2016 г.**

**Четверг, 21 апреля 2016 г.**

**10:00 – 13:00** Регистрация участников на стойке регистрации

**13:00**

**ЦЕРЕМОНИЯ ОТКРЫТИЯ:**

*Серебряков П.Ю., вице-губернатор Приморского края по вопросам здравоохранения, социальной сферы, физической культуры и спорта*  
*Кузьмин А.В., директор Департамента здравоохранения Приморского края*  
*Елисеева Е.В., профессор, заведующая кафедрой общей и клинической фармакологии ГБОУ ВПО «Тихоокеанский государственный медицинский университет» (Владивосток)*  
*Цыганкова О.В., главный эндокринолог Департамента здравоохранения Приморского края*  
*Бениова С.Н., главный врач Краевой клинической больницы №2, Владивосток*  
*Морозова А. М., заведующая Приморским краевым центром диабета и эндокринных заболеваний*  
*Чуприняк Л., председатель комитета по последипломному образованию по клиническому диабету EASD, от имени EASD, Польша*  
*Аметов А.С., д.м.н профессор, от имени Российской академии последипломного образования Минздрава РФ*  
*Гурьева И.В., д.м.н. профессор, от имени российского организационного комитета по проведению курсов EASD, Россия*

**СЕССИЯ 1 – Сахарный диабет в 2016 году**

*Председатели: Александр Аметов (Россия), Ирина Гурьева (Россия)*

**13:30**

**Сахарный диабет второго типа и ожирение**  
*Александр Аметов (Россия)*

**14:00**

**Диабет и старение человека**  
*Ирина Гурьева (Россия)*

**14:30**

**Сахарный диабет у детей, подростков и молодых взрослых**  
*Евгения Патракеева (Россия)*

**15:00**

**Современные технологии ведения сахарного диабета**  
*Наталья Черникова (Россия)*

**15:30 – 16:00**

**КОФЕ-БРЕЙК**

**СЕССИЯ 2 – Современное управление сахарным диабетом**

*Председатели: Ари Ноуэн (Великобритания), Наталья Арбатская (Россия)*

**16:00**

**Психологический подход к пациентам с сахарным диабетом**  
*Ари Ноуэн (Великобритания)*

**16:30**

**Сахарный диабет и беременность**  
*Наталья Арбатская (Россия)*

**17:00**

**Сахарный диабет и женское здоровье**  
*Зое Стьюарт (Великобритания)*

**17:30**

**Последние научные и клинические достижения в области сахарного диабета**  
*Лешек Чуприняк (Польша)*

**18:00**

**Заккрытие первого дня работы**

**PROGRAM**  
**IV EASD POSTGRADUATE COURSE ON CLINICAL DIABETES**  
**VLADIVOSTOK, RUSSIA**  
**21–23 APRIL 2016**

**Thursday, 21 April 2016**

**10:00 – 13:00**     **Registration at Welcome Desk**

**13:00**             **OPENING CEREMONY**

*Pavel Serebryakov, Vice-governor of Primorsky Krai For Health, Social Services, Physical Culture and Sports*

*Andrey Kuzmin, Director of Health Department of Primorsky Krai*

*Ekaterina Eliseeva, professor, Head of the Department of General and Clinical Pharmacology, Pacific State Medical University (Vladivostok)*

*Olga Tsygankova, Chief Endocrinologist of Health Department of Primorsky Krai*

*Svetlana Beniova, Chief doctor of The Regional Clinical Hospital № 2, Vladivostok*

*Alla Morozova, Chief of Primorsky Territory Centre of Diabetes and Endocrinology*

*Leszek Czupryniak, Chair of the EASD Postgraduate Education Committee, on behalf of EASD, Poland*

*Alexander Ametov, MD, professor, on behalf of Russian Medical Academy of Postgraduate Education of Ministry of Health of Russian Federation*

*Irina Gurieva, MD, professor, on behalf of Local EASD Organising Committee, Russia*

**SESSION 1 – Diabetes in 2016**

*Chairs: Alexander Ametov (Russia), Irina Gurieva (Russia)*

**13:30**             **Diabetes type 2 and obesity**

*Alexander Ametov (Russia)*

**14:00**             **Diabetes and aging**

*Irina Gurieva (Russia)*

**14:30**             **Diabetes in children, adolescents and young adults**

*Evgenia Patrakeeva (Russia)*

**15:00**             **Modern technologies in diabetes treatment**

*Natalia Chernikova (Russia)*

**15:30 – 16:00**     **COFFEE-BREAK**

**SESSION 2 – Modern management of diabetes**

*Chairs: Arie Nouwen (UK), Natalia Arbatskaya (Russia)*

**16:00**             **Psychological approach to patients with diabetes**

*Arie Nouwen (UK)*

**16:30**             **Diabetes and pregnancy**

*Natalia Arbatskaya (Russia)*

**17:00**             **Diabetes and women health**

*Zoe Stewart (UK)*

**17:30**             **Recent milestones in diabetes research and care**

*Leszek Czupryniak (Poland)*

**18:00**             **Close of the 1<sup>st</sup> day**

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**Пятница, 22 апреля 2016 г.**

**СЕССИЯ 3 – Лечение сахарного диабета – от теории к практике**  
*Председатели: Дидак Маурицио (Испания), Сигни Рейнисдоттир (Швеция)*

**08:30**            **Предотвращение набора лишнего веса у людей с сахарным диабетом**  
*Сигни Рейнисдоттир (Швеция)*

**09:00**            **Управление сердечно-сосудистыми рисками при сахарном диабете**  
*Дидак Маурицио (Испания)*

**09:30**            **Диабет и костная система**  
*Татьяна Каронова (Россия)*

**10:00 – 10:30**    **КОФЕ-БРЕЙК**

**10:30 – 13:00**    **ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ**  
Каждый делегат может посетить 2 из 3 семинаров  
Каждый семинар длится 70 минут (10.30–11.40 и 11.50–13.00)

**1. Психология и обучение**

*Ари Ноуэн (Великобритания), Евгения Патракеева (Россия), Жанна Балхиярова (Россия)*

**2. Лечение сахарного диабета 2 типа: руководства и персонализированная медицина**

*Дидак Маурицио (Испания), Александр Аметов (Россия)*

**3. Практические аспекты лечения диабетической стопы (с пациентами)**

*Эдвард Джуд (Великобритания), Ирина Гурьева (Россия), Андрей Павлов (Россия), Елена Алейникова (Россия)*

**13:00 – 14:00**    **ОБЕД**

**СЕССИЯ 4 – Хронические осложнения сахарного диабета**  
*Председатели: Лешек Чуприяк (Польша), Мартин Халузик (Чехия)*

**14:00**            **Диабетическая ретинопатия с точки зрения диабетолога**  
*Лешек Чуприяк (Польша)*

**14:30**            **Современные данные о диабетической нейропатии и ее последствиях, включая диабетическую стопу**  
*Эдвард Джуд (Великобритания)*

**15:00**            **Новости о диабетической нефропатии**  
*Мартин Халузик (Чехия)*

**15:30 – 16:00**    **КОФЕ-БРЕЙК**

**16:00 – 18:30**    **ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ**  
Каждый делегат может посетить 2 из 3 семинаров  
Каждый семинар длится 70 минут (16.00–17.10 и 17.20–18.30)

**1. Практическое управление образом жизни:**

**как вести пациента с сердечно-сосудистыми заболеваниями**

*Дидак Маурицио (Испания), Эн Юн Ри (Республика Корея)*

**2. Как управлять ожирением пациента с сахарным диабетом**

*Сигни Рейнисдоттир (Швеция), Александр Аметов (Россия), Татьяна Демидова (Россия)*

**3. Практические аспекты инсулинотерапии и непрерывного мониторинга глюкозы (с пациентами)**

*Наталья Черникова (Россия), Лаланта Лиларатна (Великобритания)*

**PROGRAM**  
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**21–23 APRIL 2016**

**Friday, 22 April 2016**

**SESSION 3 – Treatment of diabetes – from theory to practice**  
*Chairs: Didac Mauricio (Spain), Signy Reynisdottir (Sweden)*

**08:30 Preventing weight gain in people with diabetes**  
*Signy Reynisdottir (Sweden)*

**09:00 Cardiovascular risk management in diabetes**  
*Didac Mauricio (Spain)*

**09:30 Diabetes and Bone**  
*Tatiana Karonova (Russia)*

**10:00 – 10:30 COFFEE-BREAK**

**10:30 – 13:00 PARALLEL WORKSHOPS**  
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**  
*Arie Nouwen (UK), Evgenia Patrakeeva (Russia), Zhanna Balkhiyarova (Russia)*
- 2. Type 2 management. Guidelines and personalized medicine**  
*Didac Mauricio (Spain), Alexander Ametov (Russia)*
- 3. Practical aspects of diabetes foot care (with patients)**  
*Edward Jude (UK), Irina Gurieva (Russia) Andrey Pavlov (Russia), Elena Aleinikova (Russia)*

**13:00 – 14:00 LUNCH**

**SESSION 4 – Chronic complications of diabetes**  
*Chairs: Leszek Czupryniak (Poland), Martin Haluzik (Czech Republic)*

**14:00 Diabetic retinopathy from the diabetologists perspective**  
*Leszek Czupryniak (Poland)*

**14:30 Update on diabetic neuropathy and its consequences including diabetic foot**  
*Edward Jude (UK)*

**15:00 Update on diabetic nephropathy**  
*Martin Haluzik (Czech Republic)*

**15:30 – 16:00 COFFEE-BREAK**

**16:00 – 18:30 PARALLEL WORKSHOPS**  
Each delegate can attend 2 of the 3 workshops  
Each workshop lasts 70 minutes (16.00–17.10 and 17.20–18.30)

- 1. Practical lifestyle management – how to treat patient with ischemic heart disease**  
*Didac Mauricio (Spain), Eun-Jung Rhee (Korea)*
- 2. How to manage an obese patient with diabetes**  
*Signy Reynisdottir (Sweden), Alexander Ametov (Russia), Tatiana Demidova (Russia)*
- 3. Practical aspects of insulin therapy and evolution of CGM (with patients)**  
*Natalia Chernikova (Russia), Lalantha Leelarathna (UK)*

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**Суббота, 23 апреля 2016 г.**

**СЕССИЯ 5 – Особые ситуации**

*Председатели: Ари Ноуэн (Великобритания), Лешек Чуприяк (Польша)*

- 08:30**            **Контроль уровня глюкозы при сахарном диабете второго типа – цель, выбор препаратов**  
*Мартин Халузик (Чехия)*
- 09:00**            **Гипогликемия и нарушение ее распознавания**  
*Лаланта Лиларатна (Великобритания)*
- 09:30**            **Организация лечения сахарного диабета, сейчас и в будущем**  
*Лешек Чуприяк (Польша)*
- 10.00 -10.30**    **КОФЕ-БРЕЙК**

**10:10 – 11:30**    **ПОСТЕРНАЯ СЕССИЯ**

*Лешек Чуприяк (Польша), Ирина Гурьева (Россия)*

**11:30 – 14:00**    **ПАРАЛЛЕЛЬНЫЕ СЕМИНАРЫ**

Каждый делегат может посетить 2 из 3 семинаров  
Каждый семинар длится 70 минут (11.30–12.40 и 12.50–14.00)

- 1. Непрерывный мониторинг глюкозы**  
*Лаланта Лиларатна (Великобритания), Евгения Патракеева (Россия)*
- 2. Сахарный диабет и беременность**  
*Зое Стьюарт (Великобритания), Наталья Арбатская (Россия)*
- 3. Пациенты с повышенным уровнем креатинина**  
*Мартин Халузик (Чехия) и Татьяна Каронова (Россия)*

**СЕССИЯ 6 – Взгляд в будущее**

*Председатели: Ирина Гурьева (Россия), Лаланта Лиларатна (Великобритания)*

- 14:00**            **Интернет, СМИ, социальные сети – лечение сахарного диабета в эпоху цифровых технологий**  
*Лаланта Лиларатна (Великобритания)*
- 14:30**            **Клинические исследования у больных сахарным диабетом**  
*Дидак Маурицио (Испания)*
- 15:00**            **ЗАКРЫТИЕ КУРСОВ**



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**Saturday, 23 April 2016**

**SESSION 5 – Special situations**

*Chairs: Arie Nouwen (UK), Leszek Czupryniak (Poland)*

**08:30**            **Glucose control in type 2 diabetes – targets and which drug to use?**  
*Martin Haluzik (Czech Republic)*

**09:00**            **Hypoglycaemia and hypoglycaemia unawareness**  
*Lalantha Leelarathna (UK)*

**09:30**            **Organization of diabetes care – now and in future**  
*Leszek Czupryniak (Poland)*

**10.00 – 10.30**    **COFFEE-BREAK**

**10:10 – 11:30**    **POSTER SESSION**

*Leszek Czupryniak (Poland), Irina Gurieva (Russia)*

**11:30 – 14:00**    **PARALLEL WORKSHOPS**

Each delegate can attend 2 of the 3 workshops  
Each workshop lasts 70 minutes (11.30–12.40 and 12.50–14.00)

**1. Continuous glucose monitoring**

*Lalantha Leelarathna (UK), Evgenia Patrakeeva (Russia)*

**2. Diabetes, women and pregnancy**

*Zoe Stewart (UK), Natalia Arbatskaya (Russia)*

**3. Patients with elevated serum creatinine**

*Martin Haluzik (Czech Republic), Tatiana Karonova (Russia)*

**SESSION 6 – A look into the future**

*Chairs: Irina Gurieva (Russia), Lalantha Leelarathna (UK)*

**14:00**            **Internet, media, social networks – diabetes care in digital era**  
*Lalantha Leelarathna (UK)*

**14:30**            **Clinical research in diabetes – what is and what should it be about?**  
*Didac Mauricio (Spain)*

**15:00**            **CLOSING CEREMONY**

**К.м.н. Кузьмин Андрей Валерьевич**  
**Директор департамента здравоохранения**  
**Приморского края**



Окончил в 1993 году Владивостокский Государственный Медицинский Институт по специальности «Медико-профилактическое дело», в 1996 г. – очную аспирантуру на кафедре эпидемиологии. В 1997 году защитил кандидатскую диссертацию. С 2004 г. специализируется в области организации здравоохранения и общественного здоровья. В 2006 году прошел профессиональную подготовку по специальности «Организация здравоохранения и общественное здоровье». 2011 год – обучение по Президентской программе «Подготовка управленческих кадров в сфере здравоохранения и образования в 2011–2014 гг.».

Имеет высшую квалификационную категорию по специальности «Организация здравоохранения и общественное здоровье». Занимается вопросами реализации государственной политики в области охраны здоровья населения на территории Приморского края. В 2014 году награжден нагрудным знаком «Отличник здравоохранения».

Dr. Andrey Kuzmin – Director of Health Department of Primorsky Krai. Graduated from the Vladivostok State Medical Institute, department of «Medicine and prevention of diseases», got postgraduate education at department of epidemiology in 1996. In 1997 defended the master's thesis. Since 2004 focuses his interests on organization of health care and public health. In 2006 visited training «The organization of health care and public health». In 2011 – training at the Presidential program «Training of Managers for Health Care». Has the highest qualification category «The Organization of Health Care and Public Health». Deals with realization of the state policy in the field of public health care on the territory of Primorsky Krai. Awarded as The Excellent Manager in Health Care in 2014.

**Prof. Leszek Czupryniak**  
**Department of Internal Medicine and Diabetology,**  
**Medical University of Lodz, Poland**



Dr. Leszek Czupryniak is a physician researcher, involved mostly in clinical studies on pathogenesis and treatment of type 2 diabetes mellitus, hypertension and obesity, with particular interest in mechanisms responsible for their co-existence. He has been also investigating cardiovascular risk factors in diabetes and obese subjects, including endothelial dysfunction studies in vivo and obstructive sleep apnoea syndrome. He graduated from Medical University of Lodz, Poland, in 1994, is a specialist in internal medicine and diabetology, completed his doctorate thesis on homocysteine metabolism in type 2 diabetes in 2001, and habilitation thesis on blood pressure regulation in type 2 diabetes and obesity in 2008. His medical and research training included scholarship or courses at the United Kingdom Prospective Diabetes Study centre (Oxford Centre for Diabetes, Endocrinology and Metabolism) in Oxford (UK), Maastricht (the Netherlands), King's College, London (UK), Miami (USA). Dr. Czupryniak is currently the president of Diabetes Poland and a member of the Executive Committee of the European Association for the Study of Diabetes (EASD), Chair of the EASD Postgraduate Education Committee.

In 2000-08 he was an active member of the EASD Hypertension in Diabetes Study Group, in 2007 was elected to the Executive Committee of the Group. Since 2004 he has organized biannually Minkowski Postgraduate Course in Clinical Diabetes in Wroclaw (Breslau) in Poland.

Author or co-author of 96 original papers published in international journals including *Diabetes Care*, *Diabetic Medicine*, *Journal of Clinical Endocrinology and Diabetes*, *American Journal of Hypertension*. Also authored or co-authored 73 reviews and 21 bookchapters. Member of the Editorial Consultant Board at The Lancet, the Editorial Board of the *Diabetes, Obesity and Metabolism* and the Editorial Board of *Cardiovascular Endocrinology*. For 14 years he was a managing editor of the *Polish Journal of Diabetology*, the first diabetes scientific journal in Poland. He is a member of several national and international professional medical associations, including ADA. More privately, he is an avid collector of diabetes memorabilia, and inspired by Michael Bliss' book "Discovery of Insulin" in 2003 and 2004 he conducted research and published the account of the history of the beginnings of insulin production in Poland in 1924.

Профессор Лешек Чуприяк, врач-исследователь, профессор кафедры внутренних болезней и диabetологии Медицинского Университета г. Лодзь, Польша. Приглашается для проведения клинических ис-



следований патогенеза и лечения больных диабетом 2 типа, артериальной гипертензии и ожирения. Занимался исследованием сердечно-сосудистых факторов риска при диабете и ожирении. Закончил Медицинский Университет в г. Лодзь, Польша, в 1994 году, по специальности «Внутренние болезни и диабетология», защитил докторскую диссертацию на тему нарушения метаболизма при СД 2 типа в 2001 году и докторскую диссертацию по регулированию артериального давления при СД 2 типа и ожирении в 2008 году. Проходил обучение по клиническим научным исследованиям в Оксфордском центре эндокринологии и обмена веществ (Великобритания), учебных центрах в Маастрихте (Нидерланды), Королевском колледже Лондона (Великобритания), учебном центре в Майами (США). В настоящее время является президентом Диабетического общества Польши, членом исполнительного Комитета Европейской ассоциации по изучению диабета (EASD), занимает пост председателя Комитета последипломного образования EASD.

В период с 2000 по 2008 годы – активный член группы по изучению хронического повышенного давления у больных диабетом, в 2007 году был избран в исполнительный комитет группы. С 2004 года является организатором курсов имени Оскара Миньковского по последипломному образованию по клиническому диабету во Вроцлаве, Польша, которые проводятся раз в 2 года.

Автор 96 собственных работ и соавтор более 140 статей, опубликованных в международных журналах, таких как *Diabetes Care*, *Diabetic Medicine*, *Journal of Clinical Endocrinology and Diabetes*, *American Journal of Hypertension*.

Автор 73 обзоров и 21 частей в изданиях. Член правлений различных обществ и редакций в области диабета, кардиоваскулярной эндокринологии, гипертонии, осложнений при диабете. Последние 14 лет является редактором Польского журнала по диабету, ведущего специализированного журнала Польши. Является членом медицинских ассоциаций. Собирает материалы, связанные с историей лечения диабета, в частности, вдохновленный книгой Michael Bliss «Открытие инсулина», изучил и опубликовал книгу об истории и начале производства инсулина в Польше в 1924.

**Д.м.н., профессор Аметов Александр Сергеевич  
Заведующий кафедрой эндокринологии  
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 «Диабетогрфия», журнала «Эндокринология: новости, мнения, обучение». Член редколлегий и редсоветов журналов «Остеопороз и остеопатия», «Consilium Medicum», «Сахарный диабет», «Русский медицинский журнал», «Ожирение и метаболический синдром».

Professor, Dr. Alexander Ametov – Head of the department of endocrinology, Russian Medical Academy of Postgraduate Education of Ministry of Health of Russia. The main scientific researches of the last years are focused on study of pathogenesis, 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 oncomarkers.

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 journals «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 эн-**  
**докринных заболеваниях ФГБУ Федеральное бюро медико-социальной экспер-**  
**тизы Минтруда России, профессор кафедры эндокринологии и диабетологии**  
**Российской медицинской академии последипломного образования**

Является профессором кафедры эндокринологии РМАПО и заведует сектором медико-социальной экспертизы и реабилитации ФБ МСЭ. Практикующий врач-эндокринолог, врач кабинета диабетической стопы. Окончила 1 Московский медицинский институт имени И.М. Сеченова, обучалась в клинической ординатуре по эндокринологии ЦОЛИУв, защитила кандидатскую диссертацию по проблемам гипотиреоза и докторскую по синдрому диабетической стопы, включая аспекты экспертизы и реабилитации. Прошла обучение по диабетической стопе в Университетской клинике Женевы и Королевском Госпитале Манчестера, прослушала курс Роберта Тернера для молодых ученых в Оксфорде, Курс по реабилитационным технологиям в Университете Вирджинии. 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, членом Комитета Группы по изучению диабетической стопы (2001–2008), является представителем России в Международной рабочей группе по диабетической стопе (IWGDF) – секции Международной Федерации по Диабету. Является рецензентом международных журналов: *Diabetes Medicine (UK)*, *Diabetes Science and Technology (US)*, членом редакционной коллегии журналов *Diabetic Foot Journal (UK)*, «Эндокринология: новости, мнения, обучение». Автор более 180 статей. С 2007 года организовала четыре курса последипломного образования по клиническому диабету EASD в России (2007, 2013, 2014, 2016 годы), а также несколько крупных международных симпозиумов по диабетической стопе в России. Участница и руководитель научной программы медико-биологических исследований женской высокоширотной полярной лыжной антарктической экспедиции 1988–1989 г.



Professor, Dr. Irina Gurieva – 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 is a practising doctor endocrinologist and diabetic foot specialist. 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” since 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 author of 180 publications. 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 four Postgraduate Courses in Diabetes for EASD (2007, 2013, 2014 and 2016) in Russia. She participated in several polar expedition, head of biomedical research program of women expedition in Antarctica in 1988–89.

**Д.м.н профессор Елисеева Екатерина Валерьевна**  
**Заместитель директора**  
**Департамента здравоохранения Приморского края**

В 1995 году окончила с отличием лечебный факультет Владивостокского государственного медицинского университета. Автор более 300 научных и учебно-методических работ, в том числе 6 монографий. Научный руководитель 15 работ на соискание ученой степени кандидата медицинских наук и 1 – доктора медицинских наук. Заведующая кафедрой общей и клинической фармакологии ГБОУ ВПО «Тихоокеанский государственный медицинский универси-



тет». Главный внештатный клинический фармаколог Дальневосточного Федерального округа. Президент общественной организации «Общество специалистов по клинической фармакологии Приморского края», председатель Приморского отделения Межрегиональной ассоциации клинических фармакологов РФ. Победитель X Всероссийского конкурса «Лучший врач года» в номинации «Лучший врач клинический фармаколог». Сфера научных и практических интересов: фармакоэкономические исследования в медицине, вопросы организации лекарственного обеспечения, фармаконадзор.

Professor Ekaterina Eliseeva – Deputy director of Department of Health of Primorsky region. Head of the Department of General and Clinical Pharmacology in the Pacific State Medical University. Chief supernumerary clinical pharmacologist of the Far Eastern Federal District. Graduated from the Medical Faculty of the Vladivostok State Medical University in 1995, with honors. Author of over 300 scientific and educational works, including 6 monographs, and currently supervisor of 15 competitors for the medical Ph.D. degree and 1 competitor for the D.M. degree. President of the non-governmental organization «Society for Clinical Pharmacology of the Primorsky Territory», Chairman of the Primorsky branch of the Interregional Association of Clinical Pharmacology of the Russian Federation. The winner of the 10th all-Russian contest «The Best Doctor of the Year» in nomination «The Best Doctor of Clinical Pharmacology». Scientific and practical interests: pharmaco-economic studies in medicine, drug supply arrangement and pharmacy supervision.

**Dr. Diego Mauricio Puente**  
**Chief Physician, Department of Endocrinology & Nutrition**  
**at Hospital Universitari Germans Trias i Pujol, Spain**



Didac Mauricio, MD PhD, is currently Chief Physician and acting Head of the Department of Endocrinology & Nutrition, University Hospital Germans Trias i Pujol, affiliated with the Autonomous University of Barcelona. He is leading the Diabetes Research Group at the Health Sciences Research Institute Germans Trias i Pujol, that is also member of the excellence diabetes research network CIBER *Diabetes and Associated Metabolic diseases* (CIBERDEM), Instituto de Salud Carlos III in Spain. He is currently on leave from his position as Associate Professor at the School of Medicine, University of Lleida. He completed his fellowship in Endocrinology & Nutrition at Hospital de Sant Pau, Autonomous University of Barcelona, Spain (1986–1990). In 1993, he presented his PhD thesis, School of Medicine, Autonomous University of Barcelona. He was a post-doc research fellow at the Steno Diabetes Center & Hagedorn Research Institute in Gentofte, Denmark (1994–1995). He has published over 130 peer-reviewed articles and has contributed to multiple books. He has also served as a member in several local and international committees. D. Mauricio has been principal investigator of several research projects funded by national and international agencies. He is the Editor-in *Chief of Endocrinología y Nutrición*, the official journal of the Spanish Society of Endocrinology & Nutrition. He keeps a strong interest on current clinical issues in diabetes management, including randomised clinical trials and clinical research of diabetic complications (atherosclerotic disease and retinopathy).

Доктор Дидак Маурицио, главный врач и заведующий кафедрой по эндокринологии и диетического питания Университетского госпиталя Бадалоны, Каталония, Испания. Получил степень доктора медицинских наук в Университете Барселоны в 1985 году. Завершил свое образование по специальности «Эндокринология и диетическое питание» в госпитале при автономном университете Барселоны, Испания (1986–1990). В 1993 году защитил докторскую диссертацию в Школе медицины автономного университета Барселоны. Работал научным сотрудником в Диабет-Центре Стено при Научно-исследовательском институте в Гентофте, Дания, в группе профессора Дж. Нерупа (1994–1995). Опубликовал 79 статей в специализированных журналах, является соавтором нескольких книг. Был членом нескольких местных и международных комитетов. Д-р Маурицио был научным руководителем ряда научно-исследовательских проектов, финансируемых национальными и международными агентствами. Интересуется текущими вопросами лечения сахарного диабета, участвует в проектах, связанных с иммунными и генетическими маркерами аутоиммунного диабета, диабетическими микроангиопатическими осложнениями диабетической стопы.

**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.

Доктор Ари Ноуэн работает в школе психологии при Лондонском университете. 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. Martin Haluzik**  
**Head of Department of Internal Medicine, Charles University,**  
**Prague, Czech Republic**

Prof. Martin Haluzik graduated from the Department of Internal Medicine, Charles University in 1994. From 2000-2002 he worked at the National Institute for Diabetes, kidney and digestive tract in Bethesda, U.S.A. He is currently head of the Outpatient Clinic III at the Charles University in Prague. He is the author of four books, 12 chapters in Czech and English monographs, more than 170 professional and a number of popular scientific articles. Martin Haluzik is a member of the editorial boards of six journals in the field of diabetology, endocrinology and internal medicine. He received many awards such as the Czech Learned Society Award for 2004 and Lantus Young Investigator Prize for significant discoveries in diabetology (2010).



Профессор Мартин Халузик окончил отделение внутренних болезней Карлова университета Праги в 1994 году. В период с 2002 по 2004 годы работал в Национальном институте диабета, почек и желудочно-кишечных заболеваний в США. В настоящее время возглавляет поликлинику при Карловом университете Праги. Автор четырех книг, 12 глав различных монографий на чешском и английском языках, более 170 профессиональных статей в специализированных научных журналах. Является членом редакций шести медицинских журналов по диабетологии, эндокринологии и внутренним болезням. Лауреат премии Чешского Научного Общества 2004 года и лауреат премии молодых ученых за значительные открытия в диабетологии 2010 года.

**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 neuropathy, Charcot neuroarthropathy, endothelial dysfunction and 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.



Доктор Эдвард Джуд – врач-консультант кафедры Медицины госпиталя 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.



**Цыганкова Ольга Григорьевна**  
**Главный эндокринолог Департамента здравоохранения**  
**Приморского края**



Окончила Владивостокский государственный медицинский институт по специальности «Лечебное дело» в 1995 году, клиническую интернатуру по терапии в 1996 году. В 2001 г. прошла профессиональную переподготовку во Владивостокском Государственном Медицинском Университете по программе «Профессиональная переподготовка по эндокринологии». С 2003 г. работала главным эндокринологом Управления здравоохранения г. Владивостока. Работает в Приморском краевом центре диабета и эндокринных заболеваний заведующей отделением эндокринологии №1. Сертифицированный специалист по эндокринологии, диабетологии. Занимается вопросами общей эндокринологии, помповой инсулинотерапии и круглосуточного мониторинга глюкозы в терапии различных типов диабета, изучением эффективных и безопасных методов лечения сахарного диабета и профилактики его осложнений. Является главным эндокринологом Департамента здравоохранения Приморского Края.

Dr. Olga Tsygankova graduated from Vladivostok State Medical Institute on specialty «General Medicine» in 1995, clinical internship on therapy in 1996. In 2001 passed retraining in the Vladivostok State Medical University on the program «Professional retraining in endocrinology.» Since 2003 worked as the chief endocrinologist of the Department of Health of Vladivostok. Works in the Primorsky Regional Center for Diabetes and Endocrine Diseases as head of the Department of Endocrinology №1. Certified specialist in Endocrinology, Diabetology. Deals with total endocrinology, insulin pump therapy and continuous glucose monitoring in the treatment of various types of diabetes, the study of effective and safe treatments for diabetes and prevention of its complications. Dr. Tsygankova is the chief endocrinologist of Health Department of Primorsky Krai.

**К.м.н., доцент Морозова Алла Моисеевна**  
**Заведующая Приморским краевым центром диабета и**  
**эндокринных заболеваний ГБУЗ «Краевая клиническая**  
**больница № 2»**



Окончила в 1973 г. Владивостокский медицинский институт. С 1974 г. работает по специальности «Эндокринология» в городском эндокринологическом отделении МСЧРХ (1974–1981 гг.), во Владивостокском медицинском государственном университете (доцентом, заведующей курсом эндокринологии и диабетологии 1981–2015 гг.), заведующая Приморским краевым центром диабета и эндокринных заболеваний ГБУЗ «ККБ № 2» с 2015 г. Область научных интересов и публикаций – диабетология и нейроэндокринология. Член Европейской ассоциации по изучению диабета. Избиралась членом Президиума всероссийского общества эндокринологов. С 1993 г. Председатель Ассоциации врачей эндокринологов Приморского края.

Dr. Alla Morozova – Chief of Primorsky Territory Center for Diabetes and Endocrinology. Graduated from Vladivostok Medical Institute in 1973. Since 1974 has been working as endocrinologist at the Endocrinology Department of the MSCHRH (1974–1981), at Vladivostok Medical State University (Associate Professor, Head of the Endocrinology and Diabetology course 1981–2015), Head of the Primorsky Territory Center for Diabetes and Endocrinology GBUZ «KKB № 2» (Territory Clinical Hospital #2) since 2015. Research interests and publications – diabetology and neuroendocrinology. Member of the European Association for the Study of Diabetes (EASD). Elected as member of the Presidium of the All-Russian Society of Endocrinologists. Since 1993 Chairman of the Association of Physicians Endocrinologists of Primorsky Krai.

**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 г. 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, тиреологии, помповой инсулинотерапии и круглосуточному мониторингу глюкозы в терапии различных типов сахарного диабета.

Dr. Natalia Arbatskaya – 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». Worked at the 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.



**Dr. Lalantha Leelarathna**  
**Consultant Diabetologist and Honorary Senior Lecturer,**  
**Manchester Royal Infirmary and University of Manchester, UK**

Dr.Lalantha Leelarathna studied Medicine at the Faculty of Medicine, University of Colombo, Sri Lanka from 1993–1998 and qualified with first class honours. After coming to UK in 2001, he completed the membership of the Royal College of Physicians in 2004 and completed higher specialist training in diabetes, endocrinology and general internal medicine in 2009 (London Deanery). During this period he also completed his masters in diabetes & endocrinology at Kings College, London. Dr.Leelarathna joined University of Cambridge &Addenbrooke's Hospital in Cambridge, in 2010 and completed his doctoral studies in 2014 with the thesis titled «Improving Glucose Control and Reducing the Burden of Hypoglycaemia: Use of Novel Diabetes Technology in Type 1 Diabetes and Critical Illness». During this period he was responsible for conducting adult closed-loop studies under the AP@home project in Cambridge under the supervision of Dr. Roman Hovorka. His areas of expertise include hypoglycaemia, continuous glucose monitoring, insulin pump therapy and closed-loop insulin delivery systems with several publications in leading diabetes journals. Dr.Leelarathna was appointed as Consultant Diabetologist and Honorary Senior Lecturer at Manchester Royal Infirmary and University of Manchester in May 2014.



Доктор Лаланта Лиларатна учился медицине на факультете Медицины университета в Коломбо, Шри Ланка с 1993 по 1998 годы и имеет высшую квалификацию. После переезда в Соединенное Королевство в 2001 году завершил свое образование в Королевском медицинском колледже в 2004 году на факультете по диабету, эндокринологии и общим внутренним болезням в 2009 году (Лондон). Имеет дипломы по диабету и эндокринологии Кингс Колледжа, Лондон. Поступил в больницу Адденбрукс при Кембриджском университете в 2010 году и окончил аспирантуру в 2014 году, защитив докторскую диссертацию «Улучшение контроля за уровнем глюкозы и снижение бремени гипогликемии: использование новых технологий в лечении диабета 1 типа». Проводил исследования в Кембриджском университете под руководством д-ра Романа Говорка. Область исследований: гипогликемия, непрерывный мониторинг глюкозы, помповая инсулинотерапия и системы доставки инсулина. Работает с ведущими журналами по диабету. В настоящее время является консультантом по диабету и старшим преподавателем Манчестерского университета с мая 2014 года.

**Dr. Zoe Stewart**  
**Clinical Research Fellow in diabetes in pregnancy,**  
**University of Cambridge, UK**

Dr Zoe Stewart is a Clinical Research Fellow in diabetes in pregnancy at the University of Cambridge, where she is completing a PhD examining new treatments for type 1 diabetes in pregnancy under a Gates Cambridge Scholarship and a Jean Hailes Fellowship for Emerging Clinical Leaders in women's health. Dr Stewart has numerous publications in the field of diabetes in pregnancy, and is a regular peer-reviewer for a range of general, diabetes, and women's health journals. Her area of





focus is research and clinical work related to gestational diabetes and type 1 and type 2 diabetes in pregnancy, as well as the use of insulin pumps, continuous glucose monitors, and closed-loop systems, and she is committed to improving health outcomes for women and their children.

Доктор Зое Стюарт – научный сотрудник в области диабета беременных Кембриджского университета, получила звание кандидата наук по исследованиям новых подходов в лечении диабета 1 типа у беременных. Имеет многочисленные публикации по диабету беременных в специализированных журналах. Область исследований – гестационный диабет и диабет 1 и 2 типа у беременных, а также использование инсулиновых помп, непрерывный мониторинг уровня глюкозы с целью улучшения состояния здоровья у беременных и детей.

**Д.м.н. Каронова Татьяна Леонидовна**  
зав. НИЛ клинической эндокринологии,  
Северо-Западный Федеральный медицинский  
исследовательский центр им. В.А. Алмазова



Окончила СПбГМУ им. акад. И.П. Павлова, где в последующем проходила интернатуру и клиническую ординатуру на кафедре факультетской терапии с курсом эндокринологии. С 1998 по 2003 г. год работала врачом-эндокринологом, а после аспирантуры с 2003 г. по настоящее время – ассистентом и доцентом кафедры. Преподает эндокринологию студентам Университета, врачам на цикле повышения квалификации. С 2008 г. является сотрудником НИЛ эндокринологии ФМИЦ им. В.А. Алмазова, а с 2014 г. возглавляет НИЛ клинической эндокринологии Института эндокринологии. Активно публикуется в отечественных, а также в зарубежных журналах. Является автором более 100 статей, тезисов, пособий. Член Российской Ассоциации эндокринологов, Российской Ассоциации остеопороза, член EASD.

MD PhD Karonova Tatiana – Doctor of Medical Sciences, Head of Clinical Endocrinology Laboratory Federal North-West Medical Research Centre, St. Petersburg, Russia. Graduated from St. Petersburg State Medical University n.a. I.P.Pavlov in 1995 and received Endocrinologist certificate in 1998. Worked as endocrinologist in the Endocrinology department at the university hospital. Since 2003 have been working as assistant professor and associated professor in the faculty department in St. Petersburg State Medical University n.a. I.P.Pavlov and have been actively involved in teaching and supervision of medical students, residents and medical doctors at the postgraduate department. Since 2008 actively involved in research works at the Clinical Endocrinology Laboratory in Federal North-West Medical Research Centre, and in 2014 appointed Head of the Clinical Endocrinology Laboratory. The author of more than 100 papers, thesis and brochure for students, actively published in local and foreign journals. Member of the Russian Association of Endocrinologists, Russian Association of Osteoporosis, and member of EASD.

**MSD. Eun-Jung Rhee**  
Associate professor in Endocrinology and Metabolism,  
Kangbuk Samsung Hospital,  
Sungkyunkwan University School of Medicine



Graduated from Ewha Women's University School of Medicine in 1997, internship at Ewha Women's University School of Medicine Hospital in 1997–1998, then at Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine as residency 1999–2003, was a fellowship of Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, got master's degree at The Catholic University School of Medicine in internal Medicine and then got Doctor of Philosophy in internal medicine at the The Catholic University School of Medicine in 2007. From 2007 – assistant professor in Endocrinology and Metabolism in Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, 2010–2011 – visiting professor in Cardiovascular Division, Brigham and Women's Hospital, Harvard University, Boston, MA, USA. Member of American Diabetes Association, Member of Korean Society of Endocrinology, Member of Korean Diabetes Association, Member of Korean Society of Bone Metabolism. Got some awards including Young investigator's Award from Korean Endocrine Society on "The effect of PPAR- $\gamma$  activation on aromatase activity in human osteoblast and many others.

Доктор Юн-Джун Ри окончила Школу медицины Женского университета Ихва (Сеул, Корея) в 1997 году, была интерном в госпитале при Школе медицины Женского университета Ихва в 1997–1998 годы, затем работала научным сотрудником в госпитале Kangbuk Samsung, получила степень магистра по внутренним болезням медицинской школы Католического Университета в 2007 году, также получила степень доктора философии по внутренним болезням. С 2007 – ассистент профессора по эндокринологии и метаболизму госпиталя Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine. В период 2010–2011 – посещала профессорские курсы на кардиоваскулярном отделении госпиталя Brigham and Women's Hospital, Гарвардского университета, Бостон, США. Член Американской ассоциации по диабету, член Корейской ассоциации по эндокринологии, член Корейского общества по метаболизму. Является лауреатом премии «Молодой исследователь» Корейского общества эндокринологов за работу «Эффект PPAR-гамма излучений на активность ароматазы в человеческих остеобластах».

**К.м.н. Патракеева Евгения Михайловна**  
**Ассистент кафедры факультетской терапии**  
**Первого Санкт-Петербургского государственного медицин-**  
**ского университета имени акад. И.П. Павлова (ПСПбГМУ),**  
**врач-эндокринолог**

Окончила с отличием ПСПбГМУ в 2005 году, интернатуру и клиническую ординатуру проходила на кафедре факультетской терапии ПСПбГМУ. Научные интересы: вопросы инсулинотерапии, терапевтического обучения пациентов, психологических аспектов в лечении сахарного диабета, применение новых технологий в диабетологии, а также использование веб-ресурсов и социальных сетей как инструмента образовательной поддержки диабетологов (является членом редакционного совета образовательного ресурса [www.diaeuni.com](http://www.diaeuni.com)) и пациентов с сахарным диабетом (член команды проекта [www.rule15s.com](http://www.rule15s.com) и аккаунтов @diabet.connect в социальных сетях). Организатор курса непрерывного постдипломного обучения молодых диабетологов Санкт-Петербурга с целью трансляции итогов современных научных исследований в клиническую практику, а также образовательного курса для пациентов, использующих ППИИ и готовящихся к переходу на ППИИ. Член Российской ассоциации эндокринологов, Европейской ассоциации по изучению сахарного диабета (EASD), Американской диабетологической ассоциации.



Dr. Evgenia Patrakeeva – teaching Assistant in Endocrinology and Consultant Endocrinologist, First Saint-Petersburg Medical University named after I.P. Pavlov. Received her medical degree from First Saint-Petersburg Medical University named after I.P. Pavlov in 2005, where she graduated cum laude and completed her residency in endocrinology and internal medicine at faculty therapy department. Research interests include insulin therapy, patient education, psychological issues in diabetes care, the use of new technologies in diabetes. She also has an interest in development of web-based resources and social media use as components of diabetes therapy and patients' psychological support. Member of advisory board of the educational site for Russian diabetologists ([www.diaeuni.ru](http://www.diaeuni.ru)), Co-founder of educational web-resource ([www.rule15s.com](http://www.rule15s.com)) and educational social networks account for Russian-speaking diabetes patients (@diabet.connect). 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. Innovative educational course for CSII and ready-for-CSII young patients was also organized with Dr. Patrakeeva's support and personal participation. Member of Russian Endocrinology Society, European Association for Study in Diabetes (EASD) and American Diabetes Association (ADA).

**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 мониторинга 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.

Dr. Natalia Chernikova – 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.

**Dr. Signy Reynisdottir**  
**Head of the Unit for Metabolism, Karolinska Institutet, Sweden**

During her specialist training, Dr. Reynisdottir worked with many patients who have complications with being overweight, obesity, and in particular type 2 diabetes.

Dr. Reynisdottir is currently the head of the Unit for Metabolism at the Karolinska Institutet in Sweden where her focus is on non-surgical treatment of severe obesity.

Доктор Сигни Рейнисдоттир возглавляет кафедру по метаболизму Королевского института, Швеция. Работает с больными, которые имеют осложнения из-за избыточного веса, ожирения на фоне диабета 2 типа.

Возглавляет Кафедру по метаболизму Королевского института Швеции, занимается проблемами нехирургического лечения избыточного ожирения.



**К.м.н. Мухотина Александра Григорьевна**  
**Президент НП «Союз медицинских организаций и врачей Приморского края»**

Окончила в 1988 году Владивостокский государственный медицинский институт по специальности «Лечебное дело», в 1989 году – клиническую интернатуру по специальности “Акушерство и гинекология”, в 1995 году – клиническую ординатуру по специальности “Акушерство и гинекология”. С 1990 г. специализируется в области эндокринной гинекологии. В 2003 году защитила кандидатскую диссертацию. С 2005 года получила сертификат по специальности “Эндокринология”. Занимается вопросами эндокринной гинекологии, общей эндокринологии, репродуктивной медицины, изучением ранней диагностики и эффективных способов лечения эндокринопатий, нарушающих фертильность, изучением способов безопасной профилактики гестационного диабета и его осложнений, сахарного диабета 2 типа, возраст-ассоциированных заболеваний, медициной климактерия. Является доцентом кафедры акушерства и гинекологии ТГМУ (г. Владивосток), председателем регионального отделения “Российской ассоциации гинекологов – эндокринологов”.

Dr. Alexandra Mukhotina – president of Union of Medicine Organizations and Physicians of Primorsky Krai. Graduated from the Vladivostok State Medical Institute on speciality «General Medicine» in 1988, clinical internship on «Obstetrics and Gynecology» in 1989, clinical residency on «Obstetrics and Gynecology» in 1995. From 1990 main interest focuses on endocrine gynecology. In 2003 defended her masters thesis. In 2005 got a certificate in the speciality «Endocrinology». Area of researches – endocrine gynecology, general endocrinology, reproductive medicine, the study of early diagnosis and effective ways to treat endocrinopathies violating fertility study ways to secure the prevention of gestational diabetes and its complications, type 2 diabetes, age-related diseases, menopause medicine. She is an assistant professor of obstetrics and gynecology TSMU (Vladivostok), chairman of the regional branch of the «Russian Association of Endocrinologists and Gynecologists».



**Д.м.н. профессор Демидова Татьяна Юльевна  
профессор кафедры эндокринологии ГБОУ ДПУ  
«Российской медицинской академии последипломного  
образования» МЗ РФ**



Основную область профессиональной деятельности профессора Демидовой Т.Ю. составляет изучение особенностей патогенеза и лечения ожирения, сахарного диабета 2 типа, а также развития сердечно-сосудистых заболеваний и микрососудистых диабетических осложнений. Ключевым направлением научно-практического интереса является изучение патогенетической роли и возможностей управления такими факторами, как ожирение, инсулинорезистентность, гипергликемия и АД, что нашло отражение в печатных работах. Под руководством Т.Ю. Демидовой защищены 4 кандидатские диссертации. Автор более 320 печатных работ, 4 монографий, 12 учебных пособий, в т.ч. МЗ РФ, глав в руководствах по эндокринологии и диабетологии, клинических рекомендаций по лечению ожирения и сахарного диабета. Член Всероссийского общества эндокринологов. Член редакционной коллегии журнала «Женское здоровье». Член редакционной коллегии журнала «Эндокринология. Новости. Мнения. Обучение». Член Европейской Ассоциации по изучению диабета.

Professor Tatiana Demidova – department of endocrinology, Russian Medical Academy of Postgraduate Education of Ministry of Health of Russia. Professional activities focus on pathogenesis and treatment of obesity, diabetes type 2, and also cardiovascular diseases and microvascular diabetic complications. The key scientific interest is study of a pathogenetic role and opportunities of management of such factors as obesity, an insulinoreistance, a hyperglycemia. The author of more than 320 printing works, 4 monographs, 12 manuals. Member of the Russian Society of Endocrinologists. Member of an editorial board of the journal Women Health. Member of an editorial board of the journal Endocrinology. News. Opinions. Education. Member of the European Association for the Study of Diabetes (EASD).



**Павлов  
Андрей Васильевич**

ГБУЗ ГКБ № 1,  
заведующий  
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**Dr. Andrey Pavlov**  
Head of Department of

Endovascular Diagnostics and treatments, the vascular surgeon, Vladivostok.



**Алейникова  
Елена Викторовна**

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ГБУЗ ККБ № 2, хирург  
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**Dr Elena Aleinikova**  
Assistant professor,  
department of general

surgery, Pacific State Medical University (Vladivostok), surgeon, Regional Clinical Hospital #2, Vladivostok.

**К.м.н. Балхиярова Жанна Радиковна  
Ассистент кафедры эндокринологии Башкирского  
государственного медицинского университета**



С отличием окончила лечебный факультет Башкирского государственного медицинского университета в 2004 году, аспирантуру в Институте биохимии и генетики Уфимского научного центра Российской академии наук. В 2009 году защитила диссертацию, посвященную изучению молекулярно-генетических основ предрасположенности к сахарному диабету 1 типа. С 2006 работает врачом-эндокринологом в отделении эндокринологии Городской клинической больницы № 21. Является сертифицированным специалистом по диетологии, имеет опыт обучения пациентов в рамках школы диабета и помповой инсулинотерапии в Уфимском городском амбулаторном центре помощи больным сахарным диабетом, а также отделении эндокринологии ГКБ №21. Проводит научные исследования в области генетики метаболических нарушений (диабета 1 и 2 типа, метаболического синдрома, ожирения), занимается изучением механизмов формирования пищевого поведе-



ния. Является членом Европейской ассоциации эндокринологов, в том числе группы по изучению психосоциальных аспектов диабета (PSAD Study Group), членом Республиканской ассоциации эндокринологов, Российской ассоциации эндокринологов, Американской диабетологической ассоциации.

MD, PhD Balkhiarova Zhanna – teaching assistant to the Chair of Endocrinology of Bashkir State Medical University. Endocrinologist at the Department of Endocrinology of City Hospital No. 21. Graduated with honors from the Bashkir State Medical University in 2004 completed her PhD at the Institute of Biochemistry and Genetics of Ufa Scientific Centre of Russian Academy of Sciences in 2009. Her PhD thesis concerned the investigation of molecular genetics of type 1 diabetes. Since 2006 is employed at the Endocrinology Department of the City Hospital No. 21 in Ufa. Dr. Balhyarova is a certified specialist in dietology, and has experience in teaching patients at the Diabetes School and Pump Therapy School in the Ufa City Out-Patient Centre for Patients with Diabetes, and in the Department of Endocrinology of the City Hospital No. 21. Her research concerns genetics of metabolic disorders (type 1 and type 2 diabetes, metabolic syndrome, obesity) and the molecular mechanisms underlying eating behavior. Dr. Balhyarova is a member of the European Association for the Study of Diabetes and its Psycho-social Aspects of Diabetes Study Group, the Association of Endocrinologists of the Republic of Bashkortostan, the Russian Endocrinology Society, and the American Diabetes Association.

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ПО КЛИНИЧЕСКОМУ ДИАБЕТУ ЕВРОПЕЙСКОЙ АССОЦИАЦИИ  
ПО ИЗУЧЕНИЮ ДИАБЕТА (EASD)  
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VLADIVOSTOK, RUSSIA  
21–23 APRIL 2016**

**VENUE OF THE EVENT:**

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- Congress-hall «Daimond» В (3<sup>rd</sup> floor)
- Meeting Hall «Emerald» (3<sup>rd</sup> floor)

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## P1 PROGRESSION NEPHROPATHY DURING REPEAT PREGNANCY IN WOMEN WITH TYPE 1 DIABETES USING INSULIN PUMP THERAPY

*Valikova O.V.<sup>1 2</sup>, Mukhotina A.G.<sup>2 3</sup>, Morozova A.M.<sup>1</sup>*

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<sup>2</sup> Center of endocrine and reproductive health «Primavera»;

<sup>3</sup> «Pacific State Medical University»; Vladivostok; Russian Federation.

**Objective:** To identify the progression of nephropathy during repeated pregnancies in patients with type 1 diabetes using insulin pump therapy.

**Materials and Methods:** case records from 20 women with type 1 diabetes were examined. Patients were aged 26–36 years, with a diabetes duration of 12–25 years. During the first pregnancy, 13 women were in the basal-bolus insulin therapy, insulin pumps have been established before the second pregnancy planning. 7 women during the first and second pregnancy using insulin pump therapy. Patients used insulin pump Roche Accu-Chek Spirit, Accu-Chek Combo, was used insulin aspart. Patients were educated in the School of Diabetes. Before pregnancy glyated hemoglobin level was (HbA1c)  $6,5 \pm 0,1\%$ . Blood pressure were before pregnancy in the normal range. In 12 women before pregnancy exhibited nephropathy, the average rate of albuminuria  $90 \pm 10,0$  mg/l. 8 women nephropathy before pregnancy is not diagnosed. HbA1c, albuminuria were evaluated monthly.

**Results:** level HbA1c were  $6,2 \pm 0,4\%$ . In the control of patients with nephropathy, 7 female figures have increased an average of  $160 \pm 5,0$  mg/l, but not more than 200 mg/l. In 5 women, the indicators increased significantly, by an average of  $400 \pm 10,0$  mg/l in these patients appeared hypertension, currently treated with medication. Of the 8 patients without nephropathy, only one increase in albuminuria, an average of  $60 \pm 2,0$  mg/l, 7 other women figures remained normal the entire pregnancy. All pregnancies resulted in births. In 19 women delivery were cesarean section at term 38–40 weeks, one patient urgent independent delivery at term 39 weeks. All the kids in the 4–5 day left home with their mothers. In the postpartum period in patients with hypertensive blood pressure figures were restored to normal. Albuminuria within 6 months recovered to pre-pregnancy figures.

**Conclusions:** the use of insulin pump therapy with repeated pregnancy in patients with diabetes mellitus leads to a more stable performance of albuminuria and reduces the risk obstetric, endocrine and fetal complications, as well as the progression of albuminuria to proteinuria in some patients did not create the conditions for an emergency delivery.

## P2 THE USE OF TECHNIQUES OF NEUROIMAGING IN PATIENTS WITH TYPE 1 DIABETES MELLITUS

*Rotkank M., Samoylova J., Matveeva M.*  
*Siberian State Medical University.*

**The aim:** assessment of the brain condition in patients with type 1 diabetes mellitus (T1DM) by magnetic resonance imaging (MRI) and magnetic resonance spectroscopy (H-MRS).

**Materials and methods:** were examined 58 patients with T1DM at the age  $22.4 \pm 0.2$  years, the control group consisted of 29 healthy young adults, matched by sex and age. All patients underwent a complete clinico-metabolic examination. MRI of the brain performed on apparatus Siemens Magnetom 1,0 T. in the standard method. 22 patients underwent H-MRS. Statistical analysis was performed using the R-system package.

**Results:** in assessing the state of carbohydrate metabolism average blood glucose levels in patients with T1DM  $11.52 \pm 4.9$  mmol/l, HbA1c  $8.84 \pm 1.8\%$ . According to the standard MRI in patients with type 1 diabetes was found expansion arachnoid spaces liquorocystic character, spaces of Virchow-Robin and convexity spaces. Also noted a correlation between the expansion of liquorocystic spaces and indexes HbA1c ( $r=0,6$ ,  $p=0,001$ ), and fasting blood glucose ( $r=0,5$ ,  $p=0,001$ ), as well as with the expansion of Virchow-Robin spaces ( $r=0,6$ ,  $p=0,001$ ,  $r=0,5$ ,  $p=0,001$ ) and convexity spaces ( $r=0,5$ ,  $p=0,004$ ,  $r=0,3$ ,  $p=0,003$ ). During the H-MRS identified changes in metabolite ratios in the thalamus, namely the reduction of NAA/Cho ratio of 1.09 to the right, left 1.11 (the rate of more than 1.6), a significant increase in Cho/Cr ratio of 2.328 right, left 2.246 (rate of less than 1.2).

**Conclusions:** chronic hyperglycemia in T1DM may be accompanied by structural changes in the brain with indirect signs of atrophy. Conducting H-MRS allows to get more information about brain metabolism in T1DM.

## P3 YOUNG ADULTS WITH DIABETES MELLITUS, A CASE REPORTS

### Serdyuk Y.I.

*City Polyclinic 3, Barnaul, Altai Territory, Russian Federation.*

This case concerns a Patient L.T. , 23-year-old female who was treated for 8 year with basal-bolus and pump insulin therapy for type 1 Diabetes Mellitus. Disease contains Diabetic preproliferativeretinopathy, State after laser coagulation OS 2013,2014, OD 2013,2014,2015. Expressed sensorimotor neuropathy of legs. Autonomous neuropathy Cardiovascular form. Abdominal obesity 1st. Adipose hepatosteatosi of minimal activity. Insulin pump start 2012. Insulin lispro 60 ME/day. Diet with the patient's words – regularly. The frequency of self-monitoring: 7–10 times at day. HbA1 c – 8.3%-8,5%. Glycemia 1.0–25.0 mmol/l. About 1 time in 2–3 months there are episodes of loss of consciousness against the background of hypo-, that stop injections glucose intravenously.

And Patient B.T. 26 year-old, for type 1 Diabetes Mellitus from 5 years. Disease contains Diabetic nonproliferative retinopathy. Moderate sensory neuropathy of legs. Insulin pump start 2015. Insulin lispro 35 ME/day. After 01/2016 – base-bolus mode by Insulin injection 33–35 ME/day (lispro 4-5-4 + detemir 9-10 ME). Diet – irregularly. The frequency of self-monitoring: 2–4 times at day. HbA1 c – 9.5%–7.0%. Glycemia 3.3–17.0 mmol/l. About once a week there are episodes of hypo- ( 3.5–3.2 mmol/l), that she stopped eaten carbohydrates independently.

This report demonstrates potential benefit of different attitude of the patient to his disease, depending on the age of onset of the disease. In practice, self-control, when treatment is appropriately selected, about 2–4 times a day is sufficient (without exacerbation of concomitant diseases, abnormal environmental conditions, etc.). Most often, excessive glucose measurement frequency does not lead to better control of diabetes and compensation (the patient does not know how to use this information.). Problems of organization of management of patients with diabetes are associated with the difficulty of full communication between doctor and patient as well as lack of knowledge and motivation of the patients themselves.



## P4 ABNORMALITY OF LIPID METABOLISM IN PATIENTS WITH TYPE 1 DIABETES MELLITUS DEPENDING ON GENDER

*Semshchikov V.S., Khamnueva L.Yu., Andreeva L.S., Chugunova E.V.*  
*Irkutsk state medical university, Russia.*

**Background and aim:** To investigate serum lipid profiles in patients with diabetes mellitus type 1 (T1DM) depending on gender.

**Methods:** The study included 93 patients with T1DM: 56 (60%) males and 37 (40%) females. The median (Me) duration of T1DM and glycated hemoglobin (HbA1c) was 5,5 and 10,7 % in males; 9 years and 9 % in females -, respectively,  $p > 0,05$ .

**Results:** Among males dyslipidemia was observed in 41 (73%) patients, among females in 27 (73%). Me of high density lipoproteins cholesterol (HDL CHOL) in males with duration of diabetes from 0 to 4 years was lower – 1.1 mmol/L [0.9; 1.5], than in females – 1.5 mmol/L [1.3, 1.7],  $p < 0.05$ . Me of HDL CHOL in males with duration of diabetes from 5 to 10 years was also lower – 1.3 mmol/L [1.2; 1.4], than in females – 1.7 mmol/L [1.5, 2],  $p < 0.05$ . With increasing diabetes duration more than 11 years there were no differences in HDL CHOL level depending on gender. A positive correlation between low density lipoproteins cholesterol (LDL CHOL) level and HbA1c ( $r=0,411$ ;  $p=0,012$ ) in females was determined.

**Conclusions:** With poor glycemic control dyslipidemia was observed with equal frequency in males and females. A positive correlation between LDL CHOL and HbA1c in females was determined. HDL CHOL was higher in females with diabetes duration less than 10 years, whereas with increasing disease duration there were no differences depending on the gender.

## P5 EFFECTIVENESS OF TYPE 1 DIABETES INNOVATIVE THERAPY IN REAL CLINICAL PRACTICE OF VLADIVOSTOK CITY

***Tcygankova O.G., Morozova A.M.***

*Regional Clinical Hospital № 2, Primorsky Regional Center of diabetes and endocrine diseases,  
Vladivostok, Russia.*

**Objective:** To study the results of insulin analogs long-term using and extra-long action insulin efficiency in the treatment of patients with diabetes mellitus type 1 (DM1) in real clinical practice of Vladivostok city.

**Materials and Methods:** 74 patients (36 women, 38 men) with type 1 diabetes were observed during 10 years. Mean age: 25–47 years. Patients were divided into groups: group 1–59 patients (27 women, 32 men) received prolonged treatment with insulin analog; group 2–15 patients (9 women, 6 men) were treated with genetically engineered human insulin from the debut of the disease. During the year 27 patients were observed (16 women, 11 men) and detected not to reach target blood glucose on previous basal-bolus therapy with insulin glargine (IGlar) and aspartame (IAsp). They were transferred to IGLar insulin degludek (Ideg) an equivalent dose with following subsequent titration according to the level of fasting plasma glucose (FPG).

**Results:** All patients initially did not have diabetic complications, the average level of glycated hemoglobin (HbA1c) was 9,22 [7,2–11,9]% in the group 1, group 2–9,03 [8,0–10,5]%. The daily dose of insulin in both groups amounted to: 46,72 [34,0–66,0] units in group 1, 48,08 [40,0–54,0] units – in group 2. After 10 years of follow-up (in 2015) the effectiveness of insulin analog treatment demonstrated improved of HbA1c levels. HbA1c level in the first group fell to 7,26 [6,0–8,7]%, and in the second – rose to 9,21 [8,0–10,5]%. The daily dose of insulin in the first group was 57,72 [45,0–70,0] units, in the second – 58,15 [46,0–60,0] units. Patients transferred for Ideg treatment had average baseline HbA1c 8,0 [7,2–9,2]%. Before transferring to Ideg 33,33% patients reported cases of hypoglycemia during previous month. Ideg helped to improve glycemic control in all patients: HbA1c level decreased to 6,9 [6,4–7,2]%. Episodes of day hypoglycemia for the entire observation period was not detected, the number of nocturnal hypoglycemia decreased by 70%. The daily dose of basal insulin decreased by 12,8%, mealtime – 14%.

**Conclusions:** Modern insulin therapy with insulin analog in the treatment of patients with type 1 diabetes provide to achieve target levels of glucose metabolism indexes in most patients. Using of extremely long action insulin analog improves glycemic control by using lower doses and reduce the incidence of hypoglycemic conditions.

## P6 ASSOCIATION OF TYPE 2 DIABETES AND GENETIC MARKERS OF FTO GENE IN RUSSIAN POPULATION

***Ksenia A. Vakhromeeva; Supervisor: prof. Ludmila A. Suplotova***

**Introduction:** Type 2 diabetes (T2D) is a genetically determined disease with a polygenic type of inheritance. Several genetic markers that contribute to predisposition to T2D have been identified in different populations.

The aim of this study was to evaluate associations between genetic markers and T2D in Russian population.

**Methods:** We assessed the associations of 96 single nucleotide polymorphisms (SNPs) linked with T2D different pathway components and carbohydrate metabolism abnormalities in 96 Russian patients and 96 normoglycemic controls using Illumina Golden Gate Genotyping Assay (low density DNA chip with 96 SNPs). T2D was defined according to the World Health Organization criteria, 1999. Biochemical measurements included a standard 75g Oral Glucose Tolerance Test, HbA1c, Insulin and C-peptide. Data were analyzed with the free online statistical program named "Calculator for confidence intervals of odds ratio" ([gen-exp.ru/calculator\\_or.php](http://gen-exp.ru/calculator_or.php)).

**Results:** We detected statistically significant differences between ten SNPs and T2D in the Russian cohort: rs8050136 ( $p=0,05$ ) and rs11642841 ( $p=0,04$ ) in FTO gene, rs2943641 ( $p=0,02$ ) and rs2943634 ( $p=0,03$ ) in IRS1 gene, rs571312 in MC4R gene, rs1470579 ( $p=0,04$ ) in IGF2BP2 gene, rs163184 ( $p=0,03$ ) in KCNQ1 gene, rs11924032 ( $p=0,04$ ) in SLC2A2 gene, rs11634397 ( $p=0,03$ ) in ZFAND6 gene, rs7172432 ( $p=0,04$ ) in C2CD4A gene.

**Conclusion:** Many genes were found to be associated with T2D in our Russian cohort including FTO, IRS1, MC4R, IGF2BP2, KCNQ1, SLC2A2, ZFAND6 and C2CD4A. Further studies are needed to see whether there is a direct link between the above genes and T2D development in the Russian population.

## P7 EATING BEHAVIOUR STYLES AND BMI IN PATIENTS WITH TYPE 2 DIABETES

***Balkhiyarova Zh.<sup>1</sup>, Avzaletdinova D.Sh.<sup>1</sup>, Morugova T.V.<sup>1</sup>, Amankwah-Poku M.<sup>2</sup>, Nouwen A.<sup>3</sup>***

<sup>1</sup> Bashkir State Medical University, Ufa, Russia;

<sup>2</sup> University of Birmingham, UK;

<sup>3</sup> Middlesex University, London, UK.

**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 eating behavior types of patients with T2DM and obesity.

**Methods:** We compared samples of patients with T2DM from the UK (N=113, 49 women) and Russia (N=200; 142 men) who completed the Dutch Eating Behaviour Questionnaire (DEBQ). Mean age was 61.2±9.7 years old (range 39–85 years). Physical assessment included height, weight, body mass index and obesity degree according World Health Organization. Statistical analyses were performed using SPSS 21.0. Means (SD), 95% confidence interval (CI) were calculated.

**Results.** One hundred seventy-nine patients were classified as obese (range 30.0–53.9). Mean values for restraint, emotional and external eating for this obese group were 2.8±0.07 (95% CI 2.7–3.0), 3.3±0.08 (95% CI 3.2–3.5) and 3.0±0.05 (95% CI 2.9–3.2), respectively. Russian patients showed higher levels of external eating ( $p<0.0001$ ) and emotional eating ( $p<0.0001$ ) than their UK counterparts, but levels of restraint eating did not differ by country ( $p=0.30$ ). HbA1c was significantly lower in the Russian patients compared to the UK patients (7.5% vs 7.8%).

Multiple regression analyses showed that emotional eating, but not restraint or external eating was a significant predictor of BMI even when controlling for age, sex, HbA1c and country ( $\beta = 0.56$ ;  $p < 0.0001$ ; 95%CI 1.03–3.0)

**Conclusion:** Present study has shown that emotional eating is an important correlate of BMI in patients with T2DM patients. However, eating behaviour styles may differ by country.

## P8 INFLUENCE OF MENOPAUSAL HORMONE THERAPY ON LIPID AND CARBOHYDRATE METABOLISM IN POSTMENOPAUSAL WOMEN WITH IMPAIRED GLUCOSE TOLERANCE IN THE REPRODUCTIVE PERIOD OBSERVED WITH POLYCYSTIC OVARY SYNDROME

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**Objective:** to study of quality of life, as well as changes in lipid and carbohydrate metabolism in postmenopausal women with impaired glucose tolerance in the reproductive period observed with polycystic ovary syndrome, applying a combination of menopausal hormone therapy and metformin.

**Materials and Methods:** case records from 37 women examined, were aged 47–53, in postmenopausal women with overweight with impaired glucose tolerance in the reproductive period observed with polycystic ovary syndrome, applying metformin 2000 mg per day, for more than 6 months. All the women were more than a year in postmenopausa and for the relief of psycho – emotional and vegetative symptoms, prevention of osteoporosis, patients received continuous 17β estradiol 1mg\dydrogesterone 5 mg. Anthropometric examination before applying menopausal therapy and every month – measurement of body mass index (BMI), waist circumference had been conducted. The level of enzymes determinations, lipid profile, hemostasiogram, TSH levels and homocysteine, measurement of blood glucose, blood pressure and pelvic ultrasound had also been conducted.

**Results:** readings before combined to therapy were BMI 30,1±0,6kg\m<sup>2</sup>, waist circumference 93,5±1,9 cm, levels of transaminase were normal, triglycerides 2,8±0,2 mmol/l, total cholesterol – 5,4±0,3 mmol/l, high-density lipoprotein – 0,9±0,1 mmol/l, homocysteine levels were within 15,0±2,4 mmol\l, indicators hemostasiogram and TSH did not go beyond the norm. After 6 months on a continuous background destination 17β estradiol 1 mg\dydrogesterone 5 mg and 2000 mg metformin per day, readings were – BMI – 27,6±0,5 kg/m, waist circumference 88,3±1,3 cm, triglycerides 1,9±0,3 mmol/l, total cholesterol – 4,8±0,2 mmol/l, high-density lipoprotein – 1,3±0,1 mmol/l, homocysteine 10,0±1,3 mmol/l, transaminase, indicators of hemostasiogram and glycemic indices were normal, blood pressure remained within acceptable range. A month later, being on a therapy, patients showed general improvement, a significant decrease in the vegetative symptoms, positive mood and quality of life changes.

**Conclusions:** at the background of therapy metformin and 17β estradiol 1 mg\dydrogesterone 5 mg, amound postmenopausal women with overweight with impaired glucose tolerance in the reproductive period observed with polycystic ovary syndrome, a decrease in body weight, we could see significant, reduction of waist circumference, lipid profile, improvement homocysteine reduction, as a predictor of cardiovascular disease. The were no effects on carbohydrate metabolism and blood pressure. As it was already mentioned before, major reduction of vegetative symptoms and improvemens the quality of life for women are obvious and can be seen clearly.

## P9 THE ROLE OF DPP-4 INHIBITORS IN THE CORRECTION OF LIPID METABOLISM IN PATIENTS WITH TYPE 2 DIABETES AND OBESITY

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**Objective:** to evaluate the influence of the combined therapy by sitagliptin and metformin on the fat metabolism of patients with type 2 DM.

**Methods:** The study involved 82 patients (55,3±9,1) with obesity, lipid metabolism disorders, who have not reached target levels HbA1s after metformin and diet therapy. The Group 1 (n=42) received co-formulated drug, consisting of sitagliptin 100 mg and metformin 2g once a day. Before including to the research patients got monotherapy with metformin 1,5–2 g daily. The Group 2 (n=40) received metformin 2,0 g/day. Before including to the research patients of this group were on diet therapy only. Dynamics of fasting glycemia, postprandial glycemia, glycosylated hemoglobin, weight, BMI, WC, lipid profile, insulin, proinsulin, leptin, adiponectin, insulin resistance using the index HOMA IR and functional activity of  $\beta$ -cells (by HOMA- $\beta$  index) were evaluated at baseline and at 6 months of therapy. In addition, MRI was performed to assess the visceral fat area in a total cohort.

**Results:** At 6th months, HbA1c decreased by 18,52% ( $p < 0,001$ ) in Group 1, and by 8,17% ( $p < 0,001$ ) in Group 2. FPG and postprandial glycemia in Group 1 were reduced by 21% ( $p < 0,001$ ) and 26,35% ( $p < 0,001$ ), and in Group 2 by 1,45% ( $p > 0,05$ ) and 5,31%, ( $p < 0,05$ ) respectively. HOMA  $\beta$  grew up by 33%, in Group 1 ( $p < 0,001$ ), and by 11% in Group 2 ( $p > 0,05$ ). Adiponectin levels increase by 27,06%, ( $p < 0,001$ ) in Group 1, and by 7,16% in Group 2, ( $p < 0,001$ ). Leptin levels were reduced by 30,47%, ( $p < 0,001$ ) in Group 1, and by 5,41% in Group 2, ( $p < 0,001$ ). MRI showed a significant reduction of visceral fat area in Group 1, by 7,52 %, ( $p < 0,001$ ), compared to 1.76% reduction in Group 2. ( $P < 0,01$ ). The comparison of subcutaneous fat dynamics did not show statistically significant difference between the groups.

**Conclusion:** combined therapy with sitagliptin and metformin revealed a much more prominent effect on non-glycemic parameters, such as decrease of visceral fat area and leptin levels and increase of adiponectin concentrations, as compared to monotherapy with metformin.



## P10 FRAILITY AND TYPE 2 DIABETES MELLITUS

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**Object:** To perform a comparative evaluation of the aging processes in patients with and without type 2 diabetes mellitus (T2D); to evaluate physical strength levels and their relation to the mobility and disability in frail T2D patients.

**Materials and methods:** 1100 outpatients in Moscow aged over 65 were screened. The patient was classified as frail if he/she had more than 3 of the following conditions (classification developed by Russian Gerontology Research and Clinical Center): weight loss of 5 kg and more over the past six months; deterioration of hearing/vision; injuries, past fractures; mood changes (low mood, anxiety) over the past weeks; deterioration of memory and spatial orientation; episodes of urinary incontinence; difficulties in moving indoors or outdoors. The total geriatric status of these frail patients was assessed including somatic status (chronic conditions, drugs administered, anthropometric data); functional status (ability to hold balance); muscular strength (hand-held dynamometry); mobility (measurement of time required for a patient to walk 3 meters forward and 3 meters backward); walking speed (over 6 meters); activities of daily living (Barthel scale); instrumental activities of daily living scale (housework, shopping, cooking); ability to perform basic functions; evaluation of cognitive and emotional status (mini mental state examination (MMSE); geriatric depression test).

**Results:** Following the results of the screening, 605 (55%) frail patients were identified (average 4.1). Total geriatric status was assessed for 223 patients (aged 76,2±5,3): 49 T2D patients (22%), 174 non-T2D patients (78%). The following complications were identified in frail T2D patients, T2D duration being 11,9±9,5 years; glycated hemoglobin – 7,9±1,7%: retinopathy 29%, nephropathy 33%, neuropathy of the lower extremities 29%, macroangiopathy 2%. Frail T2D patients performed poorer in the balance test than on-T2D patients (6,4±4,1 and 9,8±9,1 sec, respectively; p<0,05); in the dynamometry test of both hands: right hand 23,1±6,7 for T2D patients and 25,2±9,4 for non-T2D patients (p=0,05); left hand 20,8±7,4 for T2D patients and 23,5±8,1 for non-T2D patients (p=0,02); demonstrated slower walking speed (0,92±0,25 and 1,07±0,48 m/s, respectively; p<0,05); poorer balance (6,41±4,15 and 9,64±9,72 sec, p=0,037); poorer ability to perform basic functions (8,79±1,38 and 9,20±1,29 points, respectively; p=0,035). 80% of T2D patients had disabilities as compared to 69% of non-T2D patients (p<0.05).

**Conclusions:** The screening demonstrated that the incidence of frailty in subjects aged over 65 was 55%. One in every five frail patients had T2D. Frail T2D patients showed more severe loss of muscular strength and balance combined with higher incidence of functional defects and disabilities as compared to the non-T2D patients.

## P11 STATE OF LIPID PEROXIDATION PROCESS AND ADIPOKINES IN OBESE PATIENTS OF BURYAT POPULATION

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**Background:** Currently, the prevalence of obesity is reaching epidemic proportions. In this regard, the study of the ethnic characteristics of obesity is of great importance.

**Methods:** 19 obese patients of Buryat population (6-males, 13-females), the average age was 33.89±2.11 years and 20 patients with obesity of Russian nationality (8-males, 12-females), the average age was 33.92±1.24 years. Control groups consisted of 19 people of Buryat population and 22 people of Russian population of the same age and sex without obesity or excess weight and other somatic diseases. To determine the diene conjugates (DC), malondialdehyde (MDA) by spectrophotometric method and adipokines by enzyme immunoassay the venous blood sampling was carried out in the morning on an empty stomach after signing the informed consent.

**Results:** Activation of lipid peroxidation of MDA accumulation in patients with obesity of Buryat population (5.43±0.27 mmol/l) was determined compared with patients of Russian population (4.68±0.21 mmol/l) ( $p<0.05$ ) on the background of stable indices of DC ( $p>0.05$ ). In patients of Buryat population with obesity there was marked increased level of leptin compared with obese patients of Russian population (75.74±7.73 and 55.34±6.55 ng/ml), lower level of adiponectin (20.97±2.07 and 27.37±2.43 ng/ml respectively) and increased level of visfatin (88.40±1.46 and 83.75±1.70 ng/ml respectively) ( $p<0.05$ ).

**Conclusions:** In patients with obesity of Buryat population there was observed activation of processes of lipid peroxidation along with increased levels of leptin and visfatin and decreased level of adiponectin. Determined hormonal and metabolic characteristics in different ethnic patients groups with obesity can possibly influence the formation of adaptive mechanisms.

## P12 DEVELOPMENT OF THE MULTIDISCIPLINARY APPROACH IN THE TREATMENT OF PATIENTS WITH DIABETIC FOOT SYNDROME

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One of the most common causes of reduced quality of life in patients with diabetes is diabetic foot syndrome. The results of the treatment directly depend on timely diagnosis, appropriate treatment, multidisciplinary approach to the management of patients.

Goal of the work. Development of the multidisciplinary approach to the management of patients with diabetic foot syndrome in order to increase efficiency and improve the results of treatment.

**Materials and methods:** In order to improve the organization of medical care on the territory of Primorsky Region the Department of Health issued an order on September 17, 2015 «Routing of patients diagnosed with «Diabetes complicated by diabetic foot syndrome» which defines the levels, stages, the order of interaction and assistance tasks by medical organizations in the Region to patients in need of the organization of multilevel multidisciplinary approach to provide specialized and high-tech health care.

**Results:** During this period the number of treated patients increased at the stage of specialized and high-tech medical care by 8%, the proportion of patients with critical ischemia of the lower limbs has reached 45%. Diagnostic angiographies were performed on 9% more. The number of performed endovascular reconstructions on lower limbs increased by 7%, bypass surgery – by 1,5%. The number of patients who were receiving orthopedic types of assistance increased by 6,5%. Terms of wound healing and the rehabilitation of patients on 4,5%. The number of lower limb amputations decreased by 10%.

**Conclusions:** Continually improved scheme of the organization of the service Diabetes of the Region allows to improve the results of treatment of patients with diabetic foot syndrome and reduce the frequency of high amputations.

## P13 RELATIONSHIP BETWEEN THE LEVEL OF GLYCEMIA AND DISTAL NEUROPATHIC SYMPTOMS IN PATIENTS WITH DIABETIC SENSORIMOTOR POLYNEUROPATHY

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Diabetic sensorimotor polyneuropathy (DPN) is felt to result from nerve and blood vessel changes due to chronic hyperglycemic exposure, and can occur in either type 1 or type 2 diabetes mellitus (T1,2DM).

**Aim:** to study the relationship between glycemetic and quantitative sensory testing parameters in patients with DM.

**Methods:** A total of 38 patients with T2DM, mean age  $63,42 \pm 12,35$  and 13 with T1DM, mean age  $43,41 \pm 3,58$  years were examine. The concentration of glucose in whole capillary blood (08.00, 11.00, 13.00, 15.00, 18.00, 24.00, 01.00, 03.00, 06.00) were measured by using the glucose oxidase method. DPN was assessed using NSS, NDS and VAS.

**Results:** In T2DM patients appeared negative correlation between the lowest value of blood glucose and indicators of tactile ( $r=-0,4$ ,  $p=0.01$ ) and Ts ( $r=-0,3$ ,  $p=0.04$ ). In T2DM group a negative relationship between the level of blood glucose at 11.00 with tactile disorders ( $r=-0,4$ ,  $p=0,03$ ) and with Ts ( $r=-0,3$ ,  $p=0.02$ ) were observed. Moreover, in T2DM the indicators of Ts was negatively correlated with glucose level measuring at 18.00 ( $r=-0,3$ ,  $p=0.01$ ) and at 22.00 ( $r=-0,4$ ,  $p=0.01$ ). Studying interactions in patients with T1DM revealed a strong positive correlation ( $r=+0,6$ ,  $p=0.02$ ) between postprandial glucose level (11.00) and the score intensity pain by VAS.

**Conclusion:** In T1DM postprandial hyperglycemia correlated with the intensity of distal neuropathic symptoms. Changing in the level of glucose concentration in patients with T2DM associated with impaired tactile and Ts, and become significantly in terms of postprandial and low rates of glucose taken throughout the day.

## P14 STATE OF BONE TISSUE METABOLISM IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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**Background:** Type 2 diabetes mellitus is more common in women and is characterized by metabolic disorders. Studies of bone status in women with diabetes mellitus in different age periods are continued.

**Methods:** The study group – 14 patients with type 2 diabetes, average age  $58.3 \pm 4.7$  years, disease duration is from 3 to 15 years. Comparison group consisted of 15 women of comparable age without somatic diseases. All women resided in Irkutsk region and were in a state of menopause. Venous blood sampling was carried out on an empty stomach after signing an informed consent. There were determined levels of osteocalcin, C-terminal Telopeptide of Type-1 Collagen, N-terminal propeptide of type 1 procollagen in the laboratory “Invitro”.

**Results:** It was found to have decreased levels of osteocalcin compared to the control group ( $14.2 \pm 4.2$  ng/ml and  $28.4 \pm 11.5$  ng/ml respectively) and N-terminal pro-peptide of procollagen type 1 ( $34.2 \pm 13.8$  ng/ml,  $57.0 \pm 18.7$  ng/ml respectively) compared to the control group ( $p < 0.05$ ) that indicated a depression of osteosynthesis. Simultaneously there was observed a decrease in osteoresorption of C-terminal Telopeptide of Type-1 Collagen in the group of patients with diabetes compared with the control group ( $0.4 \pm 0.2$  ng/ml and  $0.7 \pm 0.2$  ng/ml respectively) ( $p < 0.05$ ).

**Conclusions:** Thus, in women with type 2 diabetes mellitus there was determined significant decrease in osteocalcin, C-terminal Telopeptide of Type-1 Collagen, N-terminal propeptide of type 1 procollagen compared with the control group. The obtained results may indicate the slowing down of the processes both the synthesis of bone tissue and resorption in women with type 2 diabetes mellitus in postmenopausal period.

## P15 THE IMPACT OF ANTIDIABETIC THERAPY ON THE RISK OF MYOCARDIAL INFARCTION AND ACUTE DISORDERS OF CEREBRAL CIRCULATION ACCORDING TO THE DIABETES REGISTER OF THE ALTAY TERRITORY

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**Introduction:** Recently the literature has reported an increase in the frequency of occurrence of cardiovascular events in patients with diabetes mellitus (type DM2) on various types of hypoglycemic therapy. Myocardial infarction (MI) and acute ischemic stroke are one of the most important macroangiopathies in patients with DM2, leading to death.

**Objective:** studying the effect of antihyperglycaemic therapy in patients with DM-2 on the risk of developing MI and stroke this year, according to the register DM-2 of the Altay Territory.

**Materials and methods:** the register of DM of the Altay Territory was the research base, the patients of type DM-2 that have passed medical examinations in 2014 were chosen from it. Such patients were divided into 2 groups. The control group included patients with no prior MI and stroke, the study group consisted of patients who had MI and stroke this year. We studied the frequency of prescribing Metformin, sulfonylureas, insulin both in monotherapy and in combination with each other. After that the odds ratio (OR) of MI and the development of stroke depending on the received glucose-lowering therapy was calculated with determination of the coefficient of reliability using the criterion  $\chi^2$ -square test according to Pearson. The result was considered significant at  $p < 0.05$ .

**Results:** in a recent study, a statistically significant univariate analysis of MI was associated with insulin in monotherapy (OR OF 1.84 95% CI 1,16-2,93  $p = 0,013$ ), with insulin in combination with drugs of Metformin (OR 2,13 95% CI 1,26-3,61  $p = 0,007$ ), insulin in combination with sulfonylureas (OR 2,65 95% CI 1,77-of 3,98  $p < 0,001$ ) and combined insulin, Metformin and sulfonylureas (OR 2.27 95% CI of 1.36-3,79  $p < 0,001$ ). When conducting multivariate analysis with other RF the association of MI with insulin alone, insulin with Metformin and sulfonylurea was neutralised. But the association of MI with insulin in combination with Metformin (OR 2,13 univariate analysis and 2.30 multivariate analysis) and insulin in combination with sulfonylurea (OR and 2.30 to 2.65, respectively) has been preserved. Statistically significant appeared that stroke was associated with insulin in monotherapy (OR 2,30 95% CI 1,71-3,13  $p < 0,001$ ), insulin with sulfonylurea (OR 2,10 95% CI 1.56 to 2,94  $p < 0,001$ ), insulin with Metformin and sulfonilmocevina (OR 2,16 95 % CI of 1.49-3.14,  $p < 0,001$ ). In multivariate analysis with other RF this statistically significant association remained, but the strength of the association decreased when treated with insulin to sulfonylurea OR has decreased from 2.1 to 1.51; when treating with insulin with Metformin and sulfonylurea – 2,16 to 1.52. When treated with insulin in monotherapy, the risk of stroke increased slightly from 2.3 to 2.4.

**Conclusions:** some types of glucose-lowering therapies increase the risk of MI and stroke in patients with DM2 and this should be considered in their treatment.

## P16 ERYTHROPOIETIN AND PARATHYROID HORMONE LEVELS IN MALE PATIENTS WITH TYPE 1 DIABETES MELLITUS WITH DIFFERENT RENAL FUNCTION

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**Background and aim:** To investigate serum erythropoietin, hemoglobin (Hb) and parathyroid hormone (PTH) levels in male patients with type 1 diabetes mellitus (T1DM) with different renal function.

**Methods:** The study included 84 male patients with T1DM with diabetic nephropathy (DN). Depending on the stage of chronic kidney disease (CKD) patients were divided into 4 groups: CKD in 1–4 stages.

**Results:** It has been shown, that despite progressive decline in Hb level, serum erythropoietin level did not have a compensatory increase. The median (Me) of erythropoietin in patients with DN (84) equaled 11, 35 mME/ml; depending on the stage of CKD: 1 stage – 9,84 mME/ml, 2 – 12,09 mME/ml ( $p_{2-1} > 0,05$ ), 3 – 13,60 mME/ml ( $p_{3-1} < 0,05$ ), 4 – 10,70 mME/ml ( $p_{4-1} > 0,05$ ). However, depending on the stage of CKD the following Me of Hb in patients with DN were obtained: 1 stage – 153,5 g/l, 2 – 150 g/l, 3 – 126 g/l, 4 – 110,5 g/l. Secondary hyperparathyroidism was observed in patients with CKD in 2, 3, 4 stages with frequency 13,3%, 17,6% and 50.0%, respectively. However, decreased level of PTH was observed in patients with CKD in 3-4 stages with frequency 35,3% and 37,5%, respectively.

**Conclusions:** The relative deficiency of erythropoietin in patients with DN was observed. Therefore, as CKD advances different changes of PTH take place.



**P17 STEPS TO ACHIEVE CONTROL OF DIABETES:  
A CLINICAL CASE****Badmaeva D.A.**

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The case concerns a woman 44 years old, which is observed with type 2 diabetes in 2006 (identified with a random survey), received treatment start with metformin 1000 mg/day.

After suffering a heart attack in 2013, translated into basal-bolus insulin therapy – Actrapid 30 Units; Biosulin H 68 Units in combination with metformin 2000 mg, hypoglycemia episodes deleted. It revealed at the same time, non-proliferative diabetic retinopathy.

Further therapy Detemir changed to 70 units; Aspart 22 Units in combination with metformin 2000 mg, while blood glucose varied from 13.0 to 24.6 mmol / l. Then, in the conditions of the department of endocrinology Republican Hospital therapy changed to 47 Glargine units; Aspart 22 units; metformin canceled due to anemia for uterine fibroids. On CGMS glycemia varies from 7.8 to 12.3 mmol / l. The level of HbA1c equal to 11.0%. It was decided to intensify therapy, added to the treatment Degludek 55 Units, Detemir canceled.; Aspart 18 units; Metformin 1000 mg; reinforced with dapagliflozin 10 mg therapy. In the dynamics of HbA1c decreased from 11% to 8.8%, hypoglycemia episodes are excluded. Currently glycemia from 7.8 to 8.8 mmol / l.

This case shows the application of long-term insulin Degludek combined inhibitor SGLT2dapagliflozin without side effects has been achieved target values of glycemia in the patient, and only an integrated approach to treatment is yielding results.

## **P18 THE TREATMENT OF MODY1 WITH COMBINATION OF GLICLAZIDE AND DAPAGLIFLOZIN: A CASE REPORT**

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This case concerns a 28-year-old male who was treated for 1 year with basal-bolus insulin therapy for type 1 Diabetes Mellitus (DM1). The diabetes beginning was acute with classical symptoms (thirst, dry mouth, polyuria, weight loss of about 10 kg in 4 months), the non-proliferative diabetic retinopathy, nephropathy in the microalbuminuria stage were also revealed. The pancreatic islet cells antibodies (ICA), glutamate decarboxylase antibodies (GAD) were negative. C-peptide was 338 pmol/L (NR 298–2350 pmol/L). The insulin therapy in the basal-bolus regimen was provided with glargin and lispro 30 U/day with a gradual dose reduction to 20 U/day due to frequent hypoglycemia. Onetime the severe hypoglycemia with loss of consciousness was happened. The progression of retinopathy was revealed after 4 months of therapy. The panretinal photocoagulation of both eyes was done for preproliferative retinopathy with maculopathy. A molecular genetics study revealed a mutation in the gene HNF4a (c.61C>A, leading to the replacement of p.Pro21Thr) which is the MODY1 characteristic. The HbA1c was 5.1%. The insulin therapy was canceled and the treatment of gliclazide MR 60 mg/day was initiated. While taking gliclazide within a week glycemia was in range 3.6–11.0 mmol/L. Then the dapagliflozin 10 mg/day was added. No adverse effects were noted, blood glucose at the time of discharge 5,2-8,0-4,9-11,1-8,5-9,6-8,5 mmol/L. Taking into account severe hypoglycemia the target level of HbA1c was increased to <7.0%. After 3 months of gliclazideMR+dapagliflozin therapy the HbA1c level was 6.0% without hypoglycemia. This report demonstrates potential benefit of SGLT2 inhibitors in the treatment of MODY 1.

## P19 EFFICACY AND SAFETY OF THE COMBINATION THERAPY SAXAGLIPTIN WITH METFORMIN

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Clinical case.

The patient is 62 years old. Type 2 diabetes first diagnosed in 2008. At the time of diagnosis of blood, glucose levels up to 10.0 mmol / L, HbA1c 8.5%, weight 87 kg (BMI 33.1 kg / m<sup>2</sup>) in the UIA – not urine analysis found. LHC without deviations. According electroneuromyographic pathology is not revealed. Appointed fixed combination glibenclamid + metformin (Glibomet 2.5 / 400 1 tablet 2 times a day), the conversation carried on the correction of nutrition and lifestyle changes. Against the background of this therapy HbA1c 6.9–7.5%. Since August 2015 noted the deterioration of health, there were complaints about the tremors, periodically sweating, weakness. Glycemia 15–16 mmol / l according to the self-control. On examination: tachycardia of 96 beats / min. BMI is 26.5. Survey data: HbA1c 7.2%.

### **Glycemic profile**

8.00 11.00 13.00 15.00 16.00 18.00 20.00 3.00

15.5 8.2 5.5 7.5 3.8 15.8 9.8 4.2

Creatinine 72 (glomerular filtration rate 75 mL / min / 1,73m<sup>2</sup>)

Urea 6.5 mmol / l

ALT 12 IU

AST 10 U

MAU – not Detect.

Comorbidities: hypertonic disease 2st, risk4.

Spend therapy correction: appointed glimepiride 1 mg in the morning, metformin 500 mg in the evening. Hypoglycemia stopped, but after a month of symptomatic hypoglycemia appeared again in connection with glimepiride than canceled, the dose of metformin increased to 850mg 2 times a day. Against the background of monotherapy with metformin glycemic targets are not achieved.

### **Glycemic profile:**

8.00 11.00 13.00 15.00 18.00 20.00

7.2 8.9 9.2 12.4 9.6 12.0

Intensification of therapy carried out by adding the DPP-4 inhibitors saxagliptin 5 mg once a day with metformin monotherapy dose of 850mg to 2 times a day, so that after 3 months of therapy, the target values of glycemia achieved: 6.9% HbA1c. Episodes of hypoglycemia is not fixed.

Conclusion: The intensification of therapy by adding the DPP-4 inhibitorsto metformin monotherapy is effective and safe in patients with type 2 diabetes.

## P20 MONOGENIC FORMS OF DIABETES: DIAGNOSTIC EXPERIENCE IN CHILDREN OF PRIMORSKY REGION

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**Objective:** To clarify diabetes type in particular cases among children by using of molecular-genetic diagnostic methods.

**Methods:** In 3 patients with atypical debut and course of diabetes we analyzed clinical and routine laboratory parameters, used molecular genetic analysis (sequencing, parallel sequencing) for typing diabetes. Molecular genetic studies carried out within the programs for children with endocrine pathology «Alfa Endo» in the Department of genetic endocrinopathies.

**Results:** Three patients: 8, 12 and 13 years old, were accidentally detected to have fasting hyperglycemia from 6.0 to 7.5 mmol / L, HbA1c level ranging from 6.1 to 7.1% and SDSBMI normal parameters. The basal and stimulated C-peptide secretion was preserved in all patients. Autoimmunity markers were detected in one patient – as increased levels of antibodies to IA-2 and antibodies to GAD. According to OGTT in all patients fasting hyperglycemia was detected, and in combination with carbohydrate metabolism disorders in their parents this allowed to suspect MODY2. These molecular genetic studies have identified heterozygous mutations in the glucokinase gene exon 2 in all patients. One mutation was previously identified and described in the proband and his father – p. L20R.

**Conclusions:** Molecular genetic research allows specifying the type of diabetes, to conduct correction of therapy and to determine the further prognosis of disease course.

## P21 ROLE AND IMPORTANCE OF PRIMORSKY REGIONAL DIABETES CENTER AND ENDOCRINE DISEASES IN THE DEVELOPMENT OF SPECIALIZED ENDOCRINOLOGY AID IN PRIMORSKY REGION

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**Objective:** To determine significance of the Primorsky regional center of diabetes and endocrine diseases (PRC DM ED) in improving efficiency of endocrinology service in Primorsky Region.

**Materials and Methods:** analysis of the work carried out under the provisions of Healthcare Ministry Department order №899n «Approval of medical assistance in adult population on the profile of» Endocrinology », November 12, 2012.

**Results:** PRC DM ED was created on January 5, 1998 (Order № 84), reorganized in 2013, it includes inpatient departments for adult patients (90 beds), children (20 beds), day hospital (10 beds), 2 diabetes schools, Diabetic foot offices, cardiologist, endocrinologist, clinical psychologist, registers of endocrine diseases, functionally coupled surgical department of the diabetic foot, intensive care, laser eye center RH № 2, as well as multi-disciplinary medical centers FEFU routing software, VRH № 1. The Center is a clinical base for training endocrinologists, specialists, meets Endocrinologists Association, provides online consultation of all hospitals edge, provides specialized assistance to more than 3,000 patients per year, including high-tech (insulin pump therapy with monitoring of blood glucose, an interdisciplinary surgical team for assistance in case of hormonal pituitary adenomas, adrenal gland, highly differentiated thyroid cancer, vascular reconstruction for diabetic foot syndrome). In Primorsky region, the prevalence of diabetes during 15 years increased in 2.2 times, which is comparable with the Russian Federation data, 86% of patients requiring insulin analogs, 156 people get CSII. Treatment regimens of patients with type 2 diabetes constantly improved. Currently, the 9.8% used the iDPP, 1%-4 iNGLT2, 0.6% 1-aGPP. During 15 years indicators of the average share of diabetes complications decreased by 6.7%, primary disability at 42.2%, mortality 0.59%, life expectancy increased up to 4.2%.

**Conclusions:** Organization of the endocrinology service with establishment of multi-disciplinary structures headed by PRC DM ED improves the quality of patient care in Primorsky Region.





































