

Community: Harrow Digital Inclusion and Diabetes Community Club at the Harrow International Christian Centre

Topic: An overview of type 2 diabetes and an introduction to a research project investigating potential targets to improve the treatment of type 2 diabetes

On 5 July 2024, we were invited by the Harrow Digital Inclusion and Diabetes Community Club to speak to members at one of their regular Friday morning meetings, which are held at the Harrow International Christian Centre (HICC).

The speaker was Dr Aida Martinez-Sanchez (Senior Lecturer, Department of Metabolism, Digestion and Reproduction, Imperial College London), who was joined by two members of her team: Michal Paszek (PhD student) and Dr Rosa Alen Alonso (Post doc).

Background and development of the session

The session came about by an invitation from an Imperial Biomedical Research Centre (BRC) Community Partner for the Metabolic Medicine and Endocrine Imperial BRC research theme, who is on the organising committee of the Harrow Digital Inclusion and Diabetes Community Club, hosted at the HICC.

The Harrow Digital Inclusion and Diabetes Community Club is a social club and peer support group, which meets on Friday mornings at the HICC to:

- share information on topics related to type 2 diabetes
- provide support with IT skills
- run fitness classes
- socialise

Most members are aged 60+ and include individuals who are either non-diabetic, prediabetic or living with type 2 diabetes. Attendance at sessions averages between 20-25 people, depending on the time of year.

Prior to the session, a lay summary of Dr Martinez-Sanchez's research project and a pre-session questionnaire was shared with members. Naomi Asantewa-Sechereh (Imperial Patient Experience Research Centre) had a call with two members of the organising committee of the Harrow Digital Inclusion and Diabetes Community Club to coordinate how to collect member's responses to the pre-session questionnaire and to discuss the logistics of the first session.

The member's responses to the pre-session questionnaire demonstrated that the lay summary was not understandable to several members and that there were other areas of type 2 diabetes that were of more interest to members. Dr Martinez-Sanchez used this feedback to tailor her talk, instead choosing to talk more widely about the cells that make insulin and what happens to them in people with type 2 diabetes, and why are team are researching them.

Agenda

The agenda of the session was:

- 10:00am: Arrival and refreshments
- 10:30am-11:30am: Talk and Q&A
- 11:30am: Socialise and chair-based exercise (regular Club activity)
- 12:30pm: Event close

Overview of the session

The session covered the following:

- How the body keeps blood sugar levels in a narrow range
- How insulin is produced in response to high blood sugar
- Introduction to what beta cells are, their role in the pancreas and their role in diabetes progression
- Overview of Dr Martinez-Sanchez and her team's research on beta cells and investigating the role of cation-dependent mannose-6-phosphate receptor (M6PR) in insulin secretion, and its use as a potential target for type 2 diabetes therapies.

We were allocated 1 hour for the talk and Q&A, which was roughly split as 30 minutes for the talk and the remaining 30 minutes to allow sufficient time for questions and discussion. A PowerPoint presentation was used for visual aids and to get key information across.

Attendees were invited to ask questions if anything wasn't clear during the talk. In addition, as Dr Martinez-Sanchez presented, she frequently checked with attendees that they understood and to ask if any clarification was needed. Aida and her team stayed after the talk to speak to the attendees 1:1 and answer their questions.

Attendees

Attendees at the session included:

- 18 Harrow Digital Inclusion and Diabetes Community Club members
- 3 Imperial College London staff/researchers
- 1 Imperial Patient Experience Research Centre staff member

Session outcomes

Of the 18 attendees, 12 attendees completed a feedback form.

They were positive about the session, for example: "It helped me to understand what effects glucose has on the body and the part insulin plays".

They were also keen for further sessions to be arranged, for example commenting: "Please send other researchers to us" and "We would like to have the team back again".

Attendees shared that the session had helped increase their awareness of lifestyle changes, for example: *“I feel more conscious to make better efforts to control my eating habits”*.

Suggestions for future session topics included: *“Talk about dietary and what is best”* and a focus on *“More preventative information”*.

Of those attendees who completed a feedback form:

- 75% rated the session as good or excellent (25% did not respond to this question).
- 100% ‘Agree’ or ‘Strongly Agree’ with the statement *‘I feel more knowledgeable about how insulin is produced in response to blood sugar’*
- 100% ‘Agree’ or ‘Strongly Agree’ with the statement *‘I feel more knowledgeable about what beta cells are and their role in diabetes progression’*
- 100% ‘Agree’ or ‘Strongly Agree’ with the statement *‘I gained a basic understanding of one of the specific projects that the speaker’s lab is working on’*
- 92% ‘Agree’ or ‘Strongly Agree’ with the statement *‘I feel more confident that this type of research (such as the project presented here) is important to improve diabetes therapies in the future’*

Full details of the completed feedback forms and comments can be found in **Appendix 1** and demographics of attendees can be found in **Appendix 2**.

Questions asked following the talk:

- What are you hoping for at the end of all this research?
- Apart from medication, is there such a thing as islet transplantation (pancreatic islet cell transplantation) for type 2 diabetes?
- What is the difference between being borderline diabetic and type 2 diabetic?
- I was on metformin for some time and now have been given linagliptin – why?
- Are there any new treatments for type 2 diabetes coming up?
- Comment made: When a GP puts you on medication, it doesn’t always agree with you so you don’t always take it.

Appendix 1: Feedback from attendees

The responses from the 12 completed feedback forms are written up below:

Q1. Overall, how would you rate the session?					
No response	Very bad	Bad	Average	Good	Excellent
3	0	0	0	5	4

Q2. Please rate the following statements:					
a) I feel more knowledgeable about how insulin is produced in response to blood sugar					
No response	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
0	0	0	0	8	4
b) I feel more knowledgeable about what beta cells are and their role in diabetes progression					
No response	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
0	0	0	0	8	4
c) I gained a basic understanding of one of the specific projects that the speaker's lab is working on					
No response	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
0	0	0	0	9	3
d) I feel more confident that this type of research (such as the project presented here) is important to improve diabetes therapies in the future					
No response	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	0	0	0	5	6

Q3. Do you think the information presented at today's session has helped you in any way? If yes, please let us know how. (free-text)
Aida started with the basics of the cell, the things that helped the cell produce insulin and then progressed to her project.
Yes. It helped me to understand what effects glucose has on the body and the part insulin plays.
Really interesting to learn about insulin and glucose.
Give me a better understanding of how beta cells work in the body.
I feel more conscious to make better efforts to control my eating habits.
To try hard to reduce to amount of food going into my mouth.
Yes you've talk about things I haven't heard before.
Had an idea about type 2 diabetes.
Yes. To know about how these organs work in our body.

Yes, definitely. We would like to have the team back again.

Q4. What did you like most about the session? (free-text)

The usual - linked to Dr Aida's explanation i.e. diagnostic, actual cells under the microscopes and the videos.

The importance of the pancreas in the production of insulin.

It's exciting to learn about your research. It seems to have a lot of potential for improving diabetes management.

The question and answer.

The explanations of the cells and their uses to the body.

The storage of use in glucose in the body.

The way you explain.

Quite informative.

Knowing which we did not know before.

The session as a whole was very interesting.

Q5. What could be done better next time? (free-text)

Nothing – Dr Aida and her colleagues had broken down the paper info and scientific language into understandable info for us. Also the analogies they used were practical e.g. consider M6PR like 'scissors'

I know it's difficult to explain technical details in layman terms, but it will be a great help in simplifying the presentation.

As diabetes is so complex, using as much every day language as possible is helpful. The scientific names won't stick with us but the concepts/processes will if they are explained in a practical way i.e. scissors analogy.

Not sure.

Talk about dietary and what is best.

More preventative information.

To learn more.

Not much.

Q6. Please add any thoughts/comments or suggestions about the proposed project presented at today's session below: (free-text)

Now I've understood it I highly recommend this project going forward. Our group at HICC (all seniors from 60+ to 83+ years) were engaged and involved. I think it helped Dr Aida and our group to develop a relationship and start to build a language of understanding, put faces to members. Please send other researchers to us.

Diabetes had been with us a long time and affects a great number of people. I am surprised this research has taken so long.

Thank you for everything that you're doing.

I understand a lot more. Thank you.

It was very informative.

This was well presented and very informal. You were allowed to ask questions.

Appendix 2: Attendee demographics

The demographics of attendees taken from the completed feedback forms (n=12/18) are reported below:

Age groups (in years)

Characteristics	Number	%
25 or under	0	0
26 – 35	0	0
36 – 45	1	8
46 – 55	0	0
56 – 65	0	0
66 – 75	6	50
76 – 85	4	33
86+	0	0
Prefer not to say	1	8

Ethnicity (self-reported)

Characteristic	Number	%
African - Caribbean	1	8
Asian	1	8
Black - Caribbean	1	8
British	2	17
Indo - Caribbean	1	8
Jamaican	1	8
Prefer not to say	5	42

Highest level of education completed

Education level	Number	%
GSCE	1	8
GSCE / Other	1	8
Undergraduate BA/BSc (science)	1	8
Postgraduate – Masters level (non-science)	2	17
Prefer not to say	7	58