GÁBOR ORBÁN

National Academy of Scientist Education, 6th year

Semmelweis University
Faculty of Medicine, 6th year

YEAR OF BIRTH:

1996

FORMER SZENT-GYÖRGYI PUPIL:

no

SZENT-GYÖRGYI MENTOR:

Nándor Szegedi

JUNIOR MENTOR:

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SPECIALIZATION:

Cardiology, cardiac eletrophysiololgy

SECONDARY SCHOOL:

Lovassy László High School

NAME OF TEACHER:

Tünde Szalainé Tóth

LANGUAGES:

English/advanced

IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH

The importance of my research stems from the prevalence and severe, life-threatening potential complications of the heart rhythm disorder we are investigating, atrial fibrillation. Atrial fibrillation is adults' most common sustained arrhythmia, and its prevalence increases gradually with age. Its serious complications include arterial embolization, mainly in the form of stroke and heart failure. Our work aims to improve the invasive treatment of atrial fibrillation. This method is radiofrequency catheter ablation, but its therapeutic success rate can vary widely. We aim to increase ablation's efficiency by developing novel real and virtual imaging methods used before or during ablation. From the development and application of these new techniques, we hope that the ablation of patients can become more personalized and, therefore, more successful.

AMBITIONS AND CAREER GOALS

I have been fascinated by science and scientific thinking since childhood. I chose the wonderful field of cardiac arrhythmias. I aim to use the tools of science to increase humanity's knowledge of cardiac arrhythmias. I also aim to present my discoveries at conferences and build international relationships and collaborations to broaden the knowledge spectrum. Finally, my main goal is to use science to help patients suffering from atrial fibrillation to recover and improve their quality of life.

HONORS AND PRIZES

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PUBLICATIONS

Orbán, G., Salló, Z., Perge, P., Ábrahám, P., Piros, K., Nagy, K. V., Osztheimer, I., Merkely, B., Gellér, L., & Szegedi, N. (2022) Characteristics of Very High-Power, Short-Duration Radiofrequency Applications, **Front Cardiovasc Med 13:**9:941434.

Salló, Z., Perge, P., Balogi, B., **Orbán, G.**, Piros, K., Herczeg, S., Nagy, K. V., Osztheimer, I., Ábrahám, P., Merkely, B., Gellér, L., & Szegedi, N. (2022) Impact of High-Power and Very High-Power Short-Duration Radiofrequency Ablation on Procedure Characteristics and First-Pass Isolation During Pulmonary Vein Isolation. **Front Cardiovasc Med 7:**9:935705.

Szegedi, N., Simon, J., Szilveszter, B., Salló, Z., Herczeg, S., Száraz, L., Kolossváry, M., **Orbán, G.**, Széplaki, G., Nagy, K. V., Mahdiui, M. E., Smit, J. M., Delgado, V., Bax, J. J., Maurovich-Horvat P., Merkely B., Gellér L. (2022) Abutting Left Atrial Appendage and Left Superior Pulmonary Vein Predicts Recurrence of Atrial Fibrillation After Point-by-Point Pulmonary Vein Isolation. **Front Cardiovasc Med 15:**9:708298.

Boussoussou, M., Szilveszter, B., Vattay, B., Kolossváry, M., Vecsey-Nagy, M., Salló, Z., **Orbán, G.**, Péter, P., Katalin, P., Vivien, N. K., István, O., Maurovich-Horvat, P., Merkely, B., Gellér, L., Szegedi, N. (2022) The effect of left atrial wall thickness and pulmonary vein sizes on the acute procedural success of atrial fibrillation ablation. **Int J Cardiovasc Imaging**, Online ahead of print.