ANNUAL REPORT 2021

CARDIOnetworks.org

Improving access to medical knowledge
The Cardionetworks Foundation is a non-profit organization founded in 2007 and based in The Netherlands. The goals of the foundation are: “to improve medical knowledge, especially in the field of cardiology, and to provide access to this knowledge by facilitating publications in digital or other form, amongst other means by building and maintaining websites.” As a not-for-profit organization, all revenues are spent in the pursuit of this cause.

Cardionetworks manages specialized websites, providing high quality and up-to-date information freely to physicians all around the world. Our websites are all published under a creative commons license and the information is accessible without login or registration.

Make a donation

As a charitable enterprise, we rely entirely on the generosity of our supporters to allow us to continue in our work. To join our growing list of supporters please contact vanderwerf@cardionetworks.org to discuss the best way to contribute.

Every cent you are able to give helps us further promote free global access to vital medical information and resources. Please know that the board members of the Cardionetworks.org Foundation are not receiving financial compensation for their work.

Thank you for your generosity.
MESSAGE FROM THE FOUNDATION BOARD

Welcome to the 2021 annual report of Cardionetworks. Since its inception in 2007, the goal of the Cardionetworks Foundation has been to provide free and open access to unbiased and up-to-date medical knowledge to the global medical community. The non-profit organization enjoys a significant international online presence from its base in The Netherlands.

The foundation publishes and maintains a series of websites offering physicians, nurses and students invaluable, reliable and up-to-date information on certain specialized subjects. Our websites are published under a creative commons license, allowing free, global access without login or registration.

While we are in the aftermath of the COVID-19 pandemic, we recognize the struggle of the global health care community to get back to 2019 levels of care under different circumstances. As referred to last year, even if we can devaluate SARS-COV-2 to flu-like dimensions, the aftermath on health care, on socio-economic balances and on international relations will last for years if not decades. We still sincerely hope that those who survived will be able to build back a better world in terms of health, equality, prosperity, peace, and a durable green environment. In Europe, where we are based, sadly a different scenario developed. The war that was inflicted on Ukraine places yet another terrifying scenario on the citizens of Ukraine and our Ukrainian health care colleagues. In our ‘bubble’, we have probably been denying the possibilities of physical war in our side of the world, even amongst the increasing international and national political tension that has been growing in the last decade. But still, we have been tremendously lucky that our parents raised us in an amazingly protected environment with so much wealth and prosperity and without such aggressors next door. While so many people around the world have not been so lucky, we still feel fortunate aside our fears for the future of our international societies.

Back to cardiology, and to our Foundation. Last year, we welcomed a slightly increased number of visitors compared to the two previous years. Although we did not yet level our previous records, with over 1.2 million visitors from all over the globe, we are rather satisfied. We are particularly proud that developing countries remain large users of our sites. India, the Phillipines, Malaysia and Pakistan have become stable partners in the top 10 visiting countries.

Although we have not received commercial funding for the past years, since costs have also been decreased, and we still have revenue from our reference cards, we were able to maintain a positive end result, albeit again with a negative balance.

None of the achievements of this year, or during the lifetime of Cardionetworks, would have been possible without the tremendous efforts of the many volunteers who have helped in the process. As always, the foundation board is grateful for all the work and time that have been freely given to make this project such a success.

Jonas de Jong, MD, PhD, Chair
Pieter Postema, MD, PhD, Secretary
Christian van der Werf, MD, PhD, Treasurer

The Cardionetworks Foundation board.

The Cardionetwork Foundation — Annual Report 2021
The majority of visitors located the site through a search engine. A variety of search terms were used to locate the site, including “myocardial infarction”, “pathologic q waves”, “QTc calculator”, and “QRS axis”, demonstrating the genuine need for this service.

The geographical distribution of visits to our own en.ecgpedia.org is shown in the map. The majority of users continue to be based in English-speaking ‘developed’ countries. However, visitors from countries such as India, the Philippines and Malaysia represent a significant proportion of our users.

• Visitor statistics of en.ECGpedia.org in 2021

<table>
<thead>
<tr>
<th>Country/Territory</th>
<th>Acquisition</th>
<th>Behavior</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Users</td>
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<tr>
<td>Pakistan</td>
<td>7249</td>
<td>7156</td>
</tr>
</tbody>
</table>
The majority of visitors located the site through a search engine, demonstrating the genuine need for this service.
CARDIONETWORKS:
A TIMELINE OF ACHIEVEMENT

Highlights of 2021

Over 1.2 million visitors from 227 countries were logged, with an average visit lasting around 2 minutes.
Launch of www.QTcalculator.org following a research paper in Circulation November 2018

Another server update December 2018

Inclusion of ECG cases kindly provided by Dr. Alberto Giniger, chief of the Electrophysiology and Arrhythmias Department of the Instituto Cardiovascular de Buenos Aires (ICBA), Argentina January 2019

Inclusion of ECG cases and pacemaker and ICD tracings kindly provided by Vincent de Rover, ICD and PM technician at the Academic Medical Center in Amsterdam, The Netherlands Mid 2019

SARS-COV-2 strikes upon the world Early 2020

Health care collapses in many parts of the world due to SARS-COV-2/COVID-19. Vaccines are in preparation and are being tested. Many suggested therapies result in cardiovascular toxicity 2020

With decreasing COVID-19 pressure, health care systems try to restore care 2021

With decreasing COVID-19 pressure, health care systems try to restore care 2021
Anyone can contribute to Cardionetworks. We welcome all improvements to our websites. Anyone can contribute to the Cardionetworks websites through Mediawiki software. We welcome all improvements to our websites. All suggestions for improvement are screened by physician moderators.

ECGpedia

ECGpedia is a free electrocardiography (ECG) course and textbook designed for medical professionals such as cardiac care nurses and physicians. It is the primary website of the CardioNetworks Foundation. Since it’s foundation ECGpedia has become an important source of up-to-date information on ECG interpretation. The website now includes more than 2500 example ECG’s provided by contributors around the world. Current efforts are directed towards improvement of the readability of the websites, more interactivity with visitors (quizzes and polls). A comprehensive online ECG basics course with exam is now available (moodle.ecgpedia.org). In addition, an iBook version of the website has been developed.

Textbook of Cardiology

The Textbook of Cardiology is an up-to-date and freely accessible online cardiovascular reference work. This is a project in collaboration with the Health[e]Foundation. The Health[e]Foundation has much experience with HIV education for medical professionals in developing countries. Requests came forward from participants for cardiovascular education. In collaboration the textbook has now been written. It will be made available online by Cardionetworks and offline by the Health[e] Foundation which will include the text on USB sticks that are distributed through their network.
Contributors to the online Textbook of Cardiology

Editors
- Jonas S.S.G. de Jong, MD, PhD, FESC, OLVG, The Netherlands
- Fransje van der Waals, MD, PhD, The Netherlands

Authors
- Renée van den Brink, MD PhD, AMC, The Netherlands
- Alex Crystal, MD, USA
- Peter Damman, MD, AMC, The Netherlands
- Ronak Delewi, MD, AMC, The Netherlands
- James Heilman, MD, CCFP-EM, Clinical Assistant Professor
- Tim van de Hoef, MD, AMC, The Netherlands
- S. Yen Ho, PhD FRCPATH FESC FHEA, Royal Brompton Hospital, UK
- John Kastelein, MD, PhD, AMC, The Netherlands
- Wouter Kok, MD, PhD, AMC, The Netherlands
- Sébastien Krul, MD, AMC, The Netherlands
- Alice Li, MD, PhD, USA
- Heather Melrose, Manchester, UK
- Barbara Mulder, MD, AMC, The Netherlands
- Ineke Nederend, AMC, The Netherlands
- Louise Olde Nordkamp, MD, AMC, The Netherlands
- Annelieke van Riel, MD, AMC, The Netherlands
- Josien Rozenburg, Msc, The Netherlands
- Hayang Yang, AMC, The Netherlands
- Esther Wiegerinck, AMC, The Netherlands
- Arthur Wilde, MD, PhD, AMC, The Netherlands
- Janneke Wittekoek, MD, PhD, The Netherlands
- Pier Woudstra, MD, AMC, The Netherlands
Echopedia

Echopedia is a free echocardiography textbook, designed for medical professionals such as cardiologists and echocardiography technicians. The site is still under development. Echopedia now contains more than 900 echocardiogram images from more than 170 cases provided by the AMC Echolab. An overview of all echocardiographic normal values is now presented on the website. In 2013 we received an excellent contribution of basic text chapters that were missing and are currently being converted to the website format.

PCIpedia

PCIpedia is a free textbook on intervention cardiology, designed for medical professionals such as cardiologists and cathlab technicians. The site is still under development. The first batch of coronary angiography cases is now online. Also, a start has been made to introduce visitors to angiographic coronary anatomy and technique. A pocket reference card has been developed and printed to give a quick review of coronary angiographic views.

BrugadaDrugs.org

The Brugada syndrome has been recognized as an important cause of sudden cardiac death in individuals at a relatively young age. Many drugs have been associated with adverse events in Brugada-syndrome patients. These drugs may either induce life-threatening ventricular arrhythmias and/or induce the characteristic Brugada syndrome-linked ECG abnormalities which are associated with poor outcome.

BrugadaDrugs.org provides an overview on the available evidence and expert opinion regarding drug safety in Brugada syndrome. And is the result of a recently performed review of the literature. BrugadaDrugs.org ensures worldwide and up-to-date availability of this knowledge base to physicians and patients. This site was launched by Pieter Postema and is hosted by Cardionetworks.

Foundation websites

www.brugadadrugs.org
www.cardiolinks.org
www.cardionetworks.org
www.ecgpedia.org
www.echopedia.org
www.pcipedia.org
www.syncopedia.org
www.textbookofcardiology.org
www.thefailingheart.org
www.thrombopedia.org
www.QTcalculator.org
Offline content

While the majority of our effort at Cardionetworks is focused towards delivering high-quality, freely-available medical information over the Internet, we also offer certain information and training offline.

ECGpedia pocket cards are available and have been proved very popular. They can be printed out online, and ordered in a full colour and laminated print. More than 12000 preprinted cards have been distributed.

Live ECGpedia courses have proved very popular amongst the following groups:

- Dutch medical students
- Anesthetist residents
- General practioners
- Junior doctors
- Anesthesia and internal medicine residents

A PCipedia pocket card has been published
An Echopedia pocket card has been published

Visit statistics 2021:

<table>
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<tr>
<th>Domain</th>
<th>Visits</th>
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</table>
FOUNDATION BOARD

Jonas S.S.G. de Jong, MD, PhD, FESC
Chair
Cardiologist, electrophysiologist
Onze Lieve Vrouwe Gasthuis
The Netherlands.

Pieter G. Postema, MD, PhD
Secretary
Cardiologist, electrophysiologist
Amsterdam University Medical Centers, Academic Medical Centre, University of Amsterdam
The Netherlands.

Christian van der Werf, MD, PhD
Treasurer
Cardiologist
Amsterdam University Medical Centers, Academic Medical Centre, University of Amsterdam
The Netherlands.
COMMERCIAL BENEFACCTORS OF THE FOUNDATION IN 2021:

~NONE~

PREVIOUS YEARS COMMERCIAL SPONSORS

MSD  
SERVIER  
NOVARTIS  
ST. JUDE MEDICAL  
BIOTRONIK  
Boston Scientific  
Medtronic
### Financial Report

**Accounts 01.01.2021**

<table>
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<td>Website development</td>
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<td>Reference card &amp; book revenues</td>
<td>Content development &amp; office</td>
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**Accounts 31.12.2021**

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The Cardionetwork Foundation — Annual Report 2021
CARDIONETWORKS’ MISSION

“To improve medical knowledge, especially in the field of cardiology, and to provide access to this knowledge by facilitating publications in digital or other form, amongst other by building and maintaining websites.”
The Cardionetworks Foundation

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info@cardionetworks.org

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The Dutch Tax Administration has designated the Cardionetworks Foundation as an Public Benefit Organisation (ANBI, Algemeen Nut Beogende Instelling). Gifts to the Cardionetworks Foundation can be tax deducted in the Netherlands. This not only applies to the deduction of donations for the income tax but also to the company tax and inheritance tax.
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- to Remix — to adapt the work.

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