



European Association of Echocardiography: Research Grant Programme

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The European Society of Cardiology (ESC) offers a variety of grants/fellowships to help young professionals in the field of cardiological training or research activities throughout Europe. The number of grants has significantly increased in recent years with contributions from the Associations, Working Groups and Councils of the ESC. The European Association of Echocardiography (EAE) is a registered branch of the ESC and actively takes part in this initiative. One of the aims of EAE is to promote excellence in research in cardiovascular ultrasound and other imaging modalities in Europe. Therefore, since 2008, the EAE offers a Research Grant Programme to help young doctors to obtain research experience in a high standard academic centre (or similar institution oriented to clinical or pre-clinical research) in an ESC member country other than their own. This programme can be considered as a valorization of the geographical mobility as well as cultural exchanges and professional practice in the field of cardiovascular imaging. The programme has been very successful so far, therefore in 2012 the EAE has increased its offer to two grants of 25 000 euros per annum each.

Keywords

European Association of Echocardiography • Research Grants

Past recipients

Until now, six cardiologists with experience in the field of ultrasound have benefited of the Research Grant Programme offered by EAE. *Figure 1* shows age distribution of grant recipients. Interestingly all of them were well below the age of 35.

Mario Kasner (31 years old) was the first recipient of the grant in 2008. He moved from the University Hospital Centre in Zagreb, Croatia (supervisor Dr Davor Milic) to Charité Universitätsmedizin in Berlin, Germany (supervisor Prof. Carsten Tschope) with a project entitled: 'The role of tissue Doppler and 3D Echocardiography in diagnosing exercise induced Heart Failure with Normal Ejection Fraction (HFNEF) – a diastolic stress echocardiography study'. He has recently published on the European Journal of Echocardiography a manuscript entitled: 'Global strain rate imaging for the estimation of diastolic function in HFNEF compared with pressure-volume loop analysis'.

Gergely Agoston (27 years old) moved in 2009 from the 2nd Department of Medicine and Cardiology Centre of the University of Szeged, Hungary (supervisor Prof. Albert Varga) to the Institute of Clinical Physiology of the National Research Council of Pisa, Italy (supervisor Dr Eugenio Picano) with a project entitled: 'The SCLAIRE Study: Systemic sCLerosis Assessment with

Integrated Rest and stress Echocardiography'. He presented an abstract at EUROECHO 2009 in Madrid entitled: 'Ultrasound lung comets as a long-term prognostic determinant in systemic sclerosis', and an abstract at EUROECHO 2010 in Copenhagen, entitled: 'Left atrial myocardial dysfunction detected by speckle tracking in patients with systemic sclerosis'. He is one of the authors of the submitted manuscript 'Clinical and echocardiographic correlations of exercise-induced pulmonary hypertension in systemic sclerosis: a multicenter study'.

Arco Teske (27 years old) moved in 2009 from the Department of Cardiology of the University Medical Center in Utrecht, the Netherlands (supervisor Dr Maarten J Cramer) to the Medical Imaging Centre U.Z Gasthuisberg, Catholic University in Leuven, Belgium (supervisor Prof. Jan d'Hooge) with a project entitled: 'Echocardiographic deformation imaging: moving towards a reliable assessment of left ventricular contractility'. He presented an abstract at EUROECHO 2009 in Madrid entitled: 'Influence of the increase in preload by passive leg lifting on left ventricular deformation parameters in healthy subjects'.

Aleksandra Goncalves (31 years old) moved in 2010 from the Cardiology Department – FMUP/Hospital S. Joao Alameda in Porto, Portugal (supervisor Dr. José Carlos Silva Cardoso) to Fundacion para la investigacion biomedical del Hospital Clinico San

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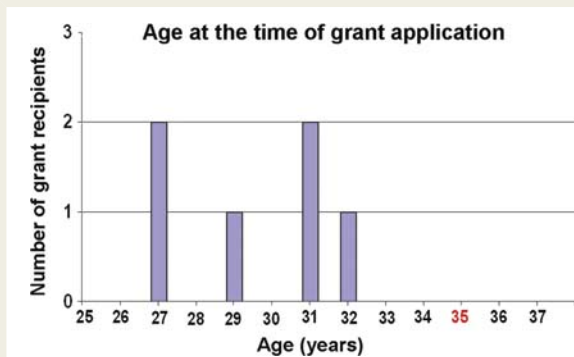


Figure 1 Depicts the age distribution of awardees at time of application.

Carlos in Madrid, Spain (supervisor Prof. José Luis Zamorano) with a project entitled: 'Left ventricular diastolic function after transcatheter aortic valve implantation'. She is author of the manuscripts entitled: 'Quality of life improvement at midterm follow-up after transcatheter aortic valve implantation', and 'Clinical outcomes of patients with intramyocardial bridging diagnosed by multi-detector cardiac computed tomography', both published on the International Journal of Cardiology in 2011. She is also author of the submitted papers 'Three-dimensional echocardiography in paravalvular aortic regurgitation assessment after transcatheter aortic valve implantation' and 'Acute left ventricle diastolic function improvement after transcatheter aortic valve implantation'.

Mihaela Amzulescu (27 years old) moved in 2010 from 'Prof. Dr. C.C. Iliescu' Emergency Institute of Cardiovascular Diseases in Bucharest, Romania (supervisor Prof. Carmen Ginghina) to the Department of Cardiology of the University Hospital Gasthuisberg in Leuven, Belgium (supervisor Prof. Jens-Uwe Voigt) with a project entitled: 'Right ventricular adaptation to pressure overload: myocardial deformation and contractile reserve as prognosis marker in pulmonary hypertension, pulmonary stenosis and corrected transpositions of great arteries'.

Denisa Muraru (31 years old) moved in 2011 from 'Prof. Dr C.C. Iliescu' Emergency Institute of Cardiovascular Diseases in Bucharest, Romania (supervisor Dr Bogdan A. Popescu) to the Department of Cardiac, Vascular and Thoracic Sciences of the University of Padua, Italy (supervisor Dr Luigi P. Badano) with a project entitled: 'Left and right atrial size and function assessment by a novel semi-automated software tailored for atrium analysis by three-dimensional echocardiography'. She will present several abstracts at the next EUROECHO 2011 in Budapest.

Eligibility

Applicants eligible for the grant are those who:

- are member of the EAE;
- are citizens or residents for tax purposes of a country which is a regular ESC Member Country;
- are medical graduates at any stages in their career, but before obtaining a 'permanent', 'senior staff' or 'consultant' post, or for science graduates with research experience up to Junior

Investigator, Lecturer, Assistant Professorship or equivalent level, whose work has been or is related to ultrasound research with potential clinical applications;

- are under 38 years of age at the day of application deadline (for female doctors who had pregnancies the age limit is increased by 1 year for each baby).

Applicants must have an agreement with a host institution outside their own country and other than the country in which they followed their initial medicine training. This institution should offer not only good research opportunities, but also be among the most appropriate for the particular research subject. The application and research proposal for the period covered by the grant has to be prepared in collaboration with the proposed host centre. The host centre has to nominate a supervisor who will take the main responsibility on the assistance of the applicant in the preparation of the research proposal and on the supervision of the research project, if the grant is awarded. The applicant is encouraged to work closely with the selected supervisor in developing the research proposal. However, the evaluating committee focuses on the quality of the research project, its feasibility and likelihood of success without ascertaining the quality of the host institution.

Criteria for selection

The overall merit of the research project will be considered and evaluated by the EAE Scientific Committee. Criteria for selection include scientific quality of the project, qualifications and commitment of the applicant, support of the environment to foster the proposed project and applicant's success. To avoid any potential conflict of interest between candidates and host laboratories directed by evaluators, the evaluator with potential conflict of interest will be excluded from evaluation of all submitted grants. Evaluators grading all the projects will be blind to other grades and individual grading results will be known only to the chair of the Scientific Committee that averaged the votes. This procedure is aimed at guaranteeing fairness, avoiding potential conflict of interest, and allowing the selection of the best project. Still, the evaluating committee feels that the number of host institutions targeted in previous applications was small.

The grant covers a period of 12 months that might start after completion of the whole application process and after receiving formal confirmation from the EAE at any time during the year covered by the grant. The grant recipient will receive a sum of 25 000 euros per annum to cover his/her living expenses. An agreement must be signed between the host institution and the grant applicant.

Research Grant recipients are encouraged to submit their original research to EUROECHO and other Imaging Modalities annual Congress and to the European Journal of Echocardiography. This is not mandatory, but again it enlightens the efforts of the Association in promoting and sponsoring original research. A detailed report about the research activity and related publications will be published online within 2 years after grant termination for all awardees. In the meantime, after 6 months of the granted period the supervisor is asked to send a detailed report to the EAE Scientific Committee to summarize the main achievements of the candidates. In addition, it is mandatory for EAE grant recipient to disclose the financial support received by the EAE in all their

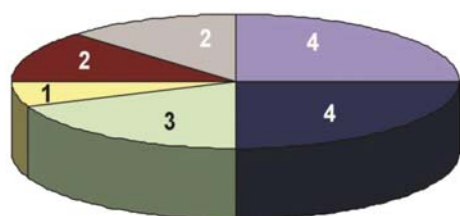
publications related to the grant (abstracts, full papers, book chapters etc.) and acknowledge it.

Conclusions

After only 4 years of life, the EAE Research Grant Programme has allowed six cardiologists to live an outstanding research experience in some of the highest standard cardiovascular Centers in Europe. Quality of the research projects has been high, as well as the results obtained, and awardees are very enthusiastic (see video at <http://www.escardio.org/communities/EAE/education/Pages/research-grants.aspx>). This year, on the website, all the submitted project titles and grades will be posted to allow the community a fair control on how grants are awarded. The EAE will continue this important effort to endorse grants and fellowships, to promote excellence in research in cardiovascular imaging. At present, Club 35 committee members are preparing a list of high level research laboratories open to young researchers with a detailed description of their main research areas in cardiovascular ultrasound that provide a wide view of the available research facilities in Europe.

Below are summarized the answers collected through a questionnaire sent to all EAE grant awardees.

- All grant winners declared themselves *very satisfied* (4/6) or *satisfied* (2/6) with the research activity held during the year covered by the EAE Research Grant.
- They felt that the supervisor/host institution was *very satisfied* (4/6) or *satisfied* (2/6) with their research activity during the year covered by the EAE Research Grant.
- Among the top three aspects that weighted the most in their decision towards the host Institution were:

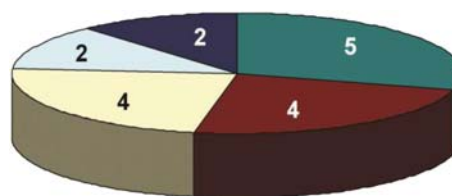


- the requirements of the scientific project in order to be successfully run
- the prestige of the Institution within the scientific world
- the prestige of the grant supervisor within the scientific world
- the recommendations received from the mentor/head of department
- the opportunities for training in various advanced echo modalities
- the variety of active research lines and high pool of publications

*Local language of the host country did not represent a major issue for any grant winner.

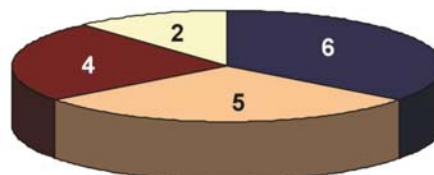
- Out of six, four of them declared that, before winning the EAE Research Grant, they had developed and run successfully one or more research projects on their own.
- Out of six, four of them had published at least one original research paper as first author before winning the EAE Research Grant, while the other two had no publication background.
- The grant winners considered as the most important achievements related to the grant experience the first five items from the following list:

- *research experience* (data collection and interpretation, statistical analysis, development of new research ideas and projects etc.);
- *scientific training* (courses, seminars, congresses, greater access to training material etc.);
- *new professional relationships* (joint projects with other institutions, relationship with industry, other scientific co-operations and networks etc.);
- *practical training* (new or improved skills in performing and/or interpreting advanced imaging techniques, new accreditations etc.);
- *publications* (papers, abstracts, book chapters etc.)
- editorial experience (drafting, submitting and completing revisions of manuscripts etc.);
- conferences (oral abstract presentations, invited lectures etc.);
- new membership in national/international organizations;
- increased international visibility;
- team work and sharing knowledge with new colleagues and peers;
- new perspectives on echo lab organization and activity (staff, patient management, reporting, quality control etc.);
- new cultural experiences (social, geographical, historical, local traditions, language etc.).



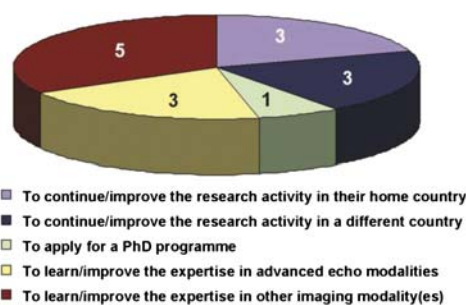
- research experience
- scientific training
- new professional relationships
- practical training
- publications

- The top 3 "assets" that they would want to bring to their home Institution after the grant termination were:



- greater experience in various echo techniques (conventional and/or new)
- international joint projects and professional relationships
- research experience
- experience in other imaging modalities

- Most of the grant winners declared that this experience *could definitely* (2/6) or *possibly* (2/6) *increase their chance to find a permanent position* in their country.
- Most of the grant winners (5/6) declared that they had *not encountered any unexpected difficulties* to run the projects and *neither had undertaken significant changes* to the original research plan.
- Most of the grant winners (5/6) declared that they had also been involved in *other research project(s)* apart from the application project during the grant term.
- After the termination of the grant period, most grant winners *continue(d) the scientific collaboration* with the supervisor/host Institution for finalizing projects and publishing results (4/5), and are presently collaborating with them also in *newly developed joint projects* (3/5). *This item did not apply for one grant winner, who had not finished yet the 1-year grant period at the moment of the completion of this survey.
- All grant winners believed that winning the EAE grant *influenced their career plans* in various ways, choosing:



- Only one grant winner has the intention to apply again for a research grant/fellowship offered by ESC/EAE, while the others (5/6) declared themselves undecided.

For more information, please visit the EAE website: <http://www.escardio.org/communities/EAE/education/Pages/research-grants.aspx>.