



INTERNATIONAL GENETIC EPIDEMIOLOGY SOCIETY

Newsletter - Pre-Conference 2013

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| <p>Letter from the President Andreas Ziegler</p> |
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The annual meeting of our Society will take place in Chicago in 2 weeks. The Scientific Program Committee, which was chaired by Celia Greenwood, has put together a great program with four invited and many contributed presentations. Lynn Carrasco has been a great support in getting this meeting going -- as always. Delaine Anderson and Lynn will take care of us at the Chicago meeting.

I hope that you all agree to the statement that we should be careful with the resources our Mother Earth is delivering. As such, we should probably try to print as few documents as possible. As a result, the Board has decided not to print the abstracts of our IGES meeting in Genetic Epidemiology, and we will not provide printed abstract books at the meeting. Instead, we have uploaded the abstract volume in advance on the IGES web site

(<http://www.geneticepi.org/wp-content/uploads/2012/07/Formatted-IGES-Abstracts-Final.pdf>)

so that all attendees can access the abstract volume in advance. The abstracts can be cited as ISBN 978-1-940377-00-1.

A few months ago we called for volunteers to serve on one or another committee. The response was absolutely great, and the Board of Directors has gratefully followed the wishes of our colleagues willing to serve. A big thank you goes out to everyone serving on any IGES committee.

This newsletter is the first created by our new Secretary Heike Bickeböller who started her term in July. Welcome Heike! Thank you very much for your service for IGES! Thank you John Witte for your service as IGES Secretary in the past four years!

In the past few months, Mariza de Andrade, our Treasurer, has had a very close look at the financial situation of IGES. We would like to discuss the changes arising from this analysis in detail at the Business Meeting. So, please come to the Business Meeting to stay tuned!

Hope to see all of you in Chicago!

Andreas Ziegler

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| <p style="text-align: center;">Program Committee Chair: Celia Greenwood</p> |
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The 2013 Program Committee has assembled an exciting set of both invited and contributing speakers for the upcoming meeting in Chicago.

We have

- Dr. **Alviz Brazma** (European Bioinformatics Institute) on what has been learned on genome function through the sequencing and functional assays of the ENCODE Project,
- Dr. **Teri Manolio** (National Human Genome Research Institute) on how genomics can alter designs and models in large prospective studies,
- Dr. **Stephen Montgomery** (Stanford) on the joint analysis of gene expression and rare genetic variation, and
- Dr. **Nadeem Sarwar** (Pfizer) discussing the contemporary role of genetic epidemiology in drug development.
- We also have a session on sequence data in family studies featuring Dr. **Adrienne Cupples**.

In addition, there are two poster sessions and many exciting talks contributed by conference attendees. The **2013 Program Committee** included Justo Lorenzo Bermejo, Brooke Fridley, Celia Greenwood (Chair), Jeanine Houwing-Duistermaat, Andrew Paterson, Sanjay Shete, Alec Wilson (President-Elect) and Andreas Ziegler (President). We thank the 2012 IGES conference participants for their suggestions for topics.

Almost a year prior to each meeting, the Program Committee chooses topics of interest for the upcoming IGES meeting, and invites the featured speakers. These discussions on speakers and topics are always inspired by the results of participant surveys at the preceding IGES conference. Submitted abstracts are scored blindly (without author or affiliation information) by all members of the Program Committee, to identify finalists for the Neel and Williams awards, and to select platform presentations at the upcoming conference. The Scientific Program of the conference is then laid out by the Chair with input from the committee and the President. This year, for the first time, all submitted abstracts have been published electronically (ISBN 978-1-940377-00-1).

Many thanks to the outgoing members for their services (Brooke Fridley, Sanjay Shete), and a welcome to the new members for 2014 (Nathan Tintle and Andre Scherag). The **Chair for the 2014 meeting** is Justo Bermejo.

Celia Greenwood

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| Education Committee Chair: Elizabeth Gillanders |
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The IGES Education committee shall recommend activities concerned with information relevant to genetic epidemiology as it relates to the education of students in general, the training of professionals in genetic epidemiology, and to a lesser extent the awareness of genetic epidemiology by the general public. The committee shall be especially concerned with education at all levels relating to genetic epidemiology, particularly at the professional level, and should encourage liaison with the education committees of other groups. The committee shall also consider requests to communicate basic genetic epidemiology knowledge, its advances, and its applications to the public at large.

The IGES Education Committee works on a variety of educational and training initiatives each year. The primary focus of the group to date has been this year's Education Workshop entitled **"Advancing Scientific Progress through Genomic Data Sharing: Access and Analysis"** to be held in conjunction with the annual meeting Sept 15, 2013 from 1 to 5pm.

The past decade has seen a virtual explosion in the generation and analysis of genomic data. Due in part to data sharing policies, much of this information is available through controlled access databases, such as the database of Genotypes and Phenotypes (dbGaP) and the European Genome-phenome Archive (EGA). Although there are a growing number of examples of key scientific findings stemming from this shared data, we are only at the tip of the iceberg in terms of fully leveraging these rich resources. The goals of this session are to highlight the potential for scientific advances as a result of broad data sharing, and to educate participants (particularly trainees) on how to best capitalize on these resources.

At the start of the session, we will provide an overview of access policies and mechanisms. This will be followed by a review of currently available datasets, providing information on format and content. The second half of the session will feature a panel of researchers who will share expertise and first-hand experiences using shared genomic data (from both dbGaP and EGA) in their own research programs. The panelists will stimulate discussion on current scientific issues arising when using existing data for analysis and methods development, with a focus on enhancing knowledge by combining and integrating data from multiple sources. They will also provide practical advice on topics including: facilitating data sharing; and navigating common pitfalls and obstacles in accessing controlled access data.

Confirmed speakers include: Mike Feolo, NCBI; Nancy Cox, University of Chicago; Brandon Pierce, University of Chicago; Marylyn Ritchie, Penn State University; Laura Bierut, Washington University in St. Louis School of Medicine; Justin Paschall, EBI; and Martin Tobin, University of Leicester.

Look forward to an 'education' survey which would be focused on sharing pedagogical techniques/case studies/slides.

The IGES Education Committee shall consist of members appointed for three-year terms. This year we welcome Ellen Goode, Heather Ochs-Balcom, Stephanie Santorico and Silke Szymczak.

Elizabeth Gillanders

Publication Committee
Chair: Alexander F. Wilson

The role of the IGES Publications Committee is to select the Best Paper from the previous year's volume of *Genetic Epidemiology*. We would like to thank Drs. Andrew Paterson (2009-2013) and Mario Cleves (2010-2013), who are rotating off the Committee this year, for their contributions during the indicated years and welcome Drs. Rasika Mathias (2013-2016) and Shelley Bull (2014-2016). This year the Committee reviewed the 70 contributed research articles in volume 36 of *Genetic Epidemiology* [2012]. The Best Paper was selected at the end of July and will be announced during this year's Annual Meeting, with a platform presentation by the first author.

Alec Wilson

Editor's Corner of Genetic Epidemiology
Editor-in-Chief: Sanjay Shete

Genetic Epidemiology is a peer-reviewed journal publishing articles related to the identification of genes and environmental factors that contribute to human traits. The new impact factor for the journal is 4.015, and it is ranked 14th out of 158 journals in the "Public Environmental and Occupational Health" category and 43rd out of 161 journals in the "Genetics and Heredity" category. *Genetic Epidemiology* is the official journal of IGES.

Genetic Epidemiology publishes a wide range of high quality original full-length research articles, brief communications, letters to the editor, point/counterpoint or discussion articles, review articles, and book reviews in the fields of statistical genetics, epidemiology, and population genetics. I would like to emphasize that applied genetic epidemiology papers are of interest to the journal. I would be happy to hear your ideas for review articles. If you are interested in writing one, please contact me with a short abstract.

Please feel free to visit the journal website for further details on the journal: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1098-2272](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1098-2272). Also, please register on the Wiley online library to receive email alerts for new content and saved searches. The website for registration is <http://onlinelibrary.wiley.com/user-registration>. I look forward to your active participation in the journal. Please contact me if you have any ideas to improve the profile of the journal.

Sanjay Shete

Young Investigators (YI) Committee
Chair: Elizabeth Blue (formerly Marchani)

What we have done in the past year:

- The 2012 IGES YI mixer had a great turn out with approximately 50 YI. All who attended mentioned that it was a great way to network with other YI's and made them feel more comfortable during the rest of the meeting.
- The 2012 YI lunch with IGES board members at IGES 2012 was attended by approximately 20 YI, who again mentioned this was an overall great networking experience that provided the opportunity for all YI's to receive informal advice from experienced investigators.
- We created the IGES YI Facebook page, where we post regarding upcoming conferences and other opportunities for YI. This is also the site for informal room share postings for IGES 2012 and 2013 meetings.

Suggestions on what we would like to do in the next year/ at this upcoming meeting:

- We will again hold a kick-off mixer and YI lunch with board members at the IGES 2013 Meeting.
- We will formally define YI as all early career investigators, adding this 2 sentence description for the website/ Facebook page.
- We wish to explore how to increase YI involvement in IGES. Perhaps the YI lunch in the future may include a mini-workshop, with advice on grant applications or job searching.
- We want to identify tools for early career scientists, and post them on the YI page on IGES website.

Welcome to new members

Welcome to our two newest members, Elizabeth Blue (formerly Marchani) and Lara Sucheston. Elizabeth is an Assistant Professor in the Division of Medical Genetics at the University of Washington whose research includes population genetics, statistical genetics, and the genetic epidemiology of complex and Mendelian traits. Lara is an Assistant Member in Cancer Prevention and Control at the Roswell Park Cancer Institute, whose research focuses on variants that modify susceptibility to complex phenotypes, and their relationship with exposures.

Thank you to outgoing members

Three of the founding members of the YI committee are leaving the committee this year. Thank you to Saskia Freytag, Amy Spencer (formerly Baddeley), and Katie O'Brien for all of their service. In particular, thanks to Katie for establishing and maintaining the YI website.

Elizabeth Blue

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| <p style="text-align: center;">Ethical, Legal and Social Issues (ELSI) Committee Chair: Claire Simpson</p> |
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The IGES (ELSI) Committee seeks to address the intersection between current genetic epidemiological research and the impacts on medical ethics, research ethics, aspects of the law, and the social impact of research. Our role is both to listen to the concerns and considerations of the IGES membership and to provide general policy guidance. In the recent past, the committee has **responded to the setup of dbGaP and wrote the position statement of the Society in response to an RFI on broad data sharing in GWAS.**

As genetic epidemiological research findings are increasingly finding their way into the clinic, and research tools such as whole genome sequencing are now both in the clinic and being sold directly to consumers, the main focus of our discussions this year has been the topic of “incidental findings” in GWAS and whole genome / whole exome sequencing data. Dr Cathy Stein obtained a seed grant through the bioethics group at CWRU and has been collaborating with bioethicists familiar with current research directions in this area. This work is developing a simple and **short survey to administer to the IGES membership regarding their experiences and questions about return of incidental findings.** We hope these findings will lay the groundwork for policy development by bioethicists. We have also discussed the policy guidelines published by the American College of Medical Genetics and are currently exploring writing a response to those recommendations.

2013 also saw the resolution of the ongoing court case against Myriad Genetics and their patents on the human BRCA 1 and 2 genes. This supreme court ruling was discussed at length and although some members had concerns about parts of the ruling in relation to cDNA, overall it was felt that the ruling was good for the future of genetic research.

We did not get any new members for the 2012-2013 year. Alison Klein and Gail Jarvik are rotating off this year and I would like to extend my thanks on behalf of the entire committee for your service.

Claire Simpson

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| <p style="text-align: center;">Membership Committee Chair: Yan Sun</p> |
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The Membership Committee promotes the International Society of Genetic Epidemiology (IGES) and its annual meeting, conducts surveys regarding to the activities and interests of IGES members, establishes and maintains the resources for IGES members, and facilitates the communication between IGES members and the IGES officials. To achieve these missions, the Membership Committee has been involved in a number of activities, including the following highlights.

- For the first time, we have two IGES ambassadors to Africa, Drs. Adebowale Adeyemo and Bamidele Tayo. They help to promote IGES on the African continent.
- We conducted an online survey on IGES annual meetings (led by Prof. Inke König, an IGES ambassador). We thank IGES members around the world for their inputs. We look forward to your continuous support!
- We investigated the membership benefits in addition to attending the IGES annual meeting, particularly in the developing countries.

We would like to express our thanks to Drs. Saurabh Ghosh, Hemant Tiwari and Dharambir Sanghera, who are leaving the committee after years of service. We welcome three new members on the Membership Committee: Drs. Ching-Ti Liu, Anwar Santoso and Ronnie Sebro.

Yan Sun

In Memoriam GEORGE BONNEY
by Chris Amos and Robert Elston on behalf of IGES



The International Genetic Epidemiology Society remembers the joy brought to our members by George E. Bonney. Dr. Bonney was an active member of the Society, having served on the advisory board of Genetic Epidemiology, starting in 1995. Dr. Bonney developed the Regressive Modeling approach for analyzing data with dependencies, whereby sequential conditioning approaches are introduced for the multivariate outcome variables. The novelty and utility of this approach, which he published as a sole-author paper in 1984*, led to his being awarded the George W. Snedecor award in 1987, an extremely prestigious award jointly administered by the Institute of Mathematical Statistics, the International Biometric Society, the American Statistical Association, and the Statistical Society of Canada.

Dr. Bonney's early training was in Ghana, where he received degrees in mathematics in 1973 and genetics in 1976. During his early research in Ghana, he published two papers on Hardy Weinberg equilibrium, including one letter to Nature. He subsequently pursued doctoral research under the mentorship of Dr. Robert Elston, at the University of North Carolina, and completed his thesis entitled **Maximum likelihood methods for genetic analysis of multivariate pedigree data** in 1981.

Upon graduation, he moved with Dr. Elston and other leaders of IGES, including Alexander Wilson, Joan Bailey-Wilson and Bronya Keats, to the Louisiana State University Medical Center in New Orleans. During that period, Dr. Bonney played a key role in developing the research and teaching environment and provided mentorship to new and visiting faculty, including Varghese George and Dan Schaid, post-doctoral fellows, and students.

In 1986, Dr. Bonney moved to Howard University to become the Associate Director, Division of Biostatistics & Epidemiology. Dr. Bonney brought world class investigators to Howard during this time, including Florence Demenais and Laurent Abel from France, Efua Laing from Ghana, Grace Kissling from the University of North Carolina and Chris Amos from NIH, to work with him and further develop approaches for modeling multivariate data. Dr. Bonney collaborated extensively with Drs. Georgia Dunston, Charles Rotimi and Lucille Adams-Campbell.

In 1987, Dr. Bonney became the chair of the Department of Biostatistics at Fox Chase Cancer Center, and served as a leader there until 1998, supporting the careers and advancement of several notable faculty in his department, including Ed Lustbader and Andre Rogatko. Dr. Bonney returned to Howard in 1998, where he served as the Director, Statistical Genetics and Bioinformatics Unit, National Human Genome Center at Howard University until his sudden death at the age of 65. He led a team of statistical geneticists at Howard, including Victor Apprey, Ao Yuan, and Qingqi Yue, who have continued to further develop approaches to statistical modeling for complex genetic data. Several of his major contributions, for instance including approaches to modeling genetic data under population based constraints on prevalence, were published in the Journal of Statistics, Biometry and Genetics, which is not widely circulated. In addition to his well-known work in the development of regressive models, Dr. Bonney also developed novel approaches to modeling genetic data using machine learning

approaches with Dr. Heping Zhang at Yale University, and worked extensively to understand genetic and environmental causes of breast cancer.

Dr. Bonney was always excited to develop novel approaches for modeling data. He was a tireless proponent for his colleagues and will be greatly missed by the many scientists he has helped.

Our thanks go to Joan Bailey-Wilson for sourcing the photographs.

* Bonney GE On the statistical determination of major gene mechanisms in continuous human traits: Regressive models - American Journal of Medical Genetics, 1984: 18:731-749

Dr. George Ebow Bonney



22nd August 1947 – 29th June 2013

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| 2013 IGES Officials |
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All IGES officials can be found on our **website** (<http://www.geneticepi.org/organization/>).

The **officers are**: President: Andreas Ziegler; Past President: Suzanne Leal; President-Elect: Alexander F. Wilson; Treasurer: Mariza de Andrade; Secretary: Heike Bickeböllner; Editor-in-Chief, Genetic Epidemiology: Sanjay Shete.

The **Education Committee** is led by Elizabeth Gillanders. The committee has 13 members. The newest members are Ellen Goode, Heather Ochs-Balcom, Stephanie Santorico and Silke Szymczak.

The **ELSI Committee** is chaired by Claire Simpson. It has 14 members. Outgoing members are Alison Klein and Gail Jarvik.

The **Membership Committee** consists of Yan Sun (chair), Danny Fallin, Jenny Chang-Claude, David Fardo, the outgoing members Saurabh Ghosh, Hemant Tiwari and Dharambir Sanghera, and the incoming members Ching-Ti Liu, Anwar Santoso and Ronnie Sebro. There are many more active ambassadors to particular regions of the world.

The **Publication Committee** is chaired by Alexander Wilson (Baltimore, USA). Standing member as editor of Genetic Epidemiology is Sanjay Shete. Further members are Andreas Ziegler (President), Nancy Saccone, Andrew Paterson, Mario Cleves, David Conti, Peter Kraft, Bertram Müller-Myhsok, Rasika Mathias and Shelley Bull.

The **Program Committee** included Justo Lorenzo Bermejo, Brooke Fridley, Celia Greenwood (Chair), Jeanine Houwing-Duistermaat, Andrew Paterson, and Sanjay Shete, Alexander Wilson (President-elect) and Andreas Ziegler (President).

The **Young Investigators Committee** includes Elizabeth Blue (formerly Marchani)(chair), Katie O'Brian, Melanie Quintana, Lara Sucheston, Amy Spencer and Saskia Freytag.

The **office** is organized by Delaine Anderson and Lynn Carrasco.

IGES needs you: we would like to remind you that your suggestions regarding IGES, especially regarding the 2014 program are appreciated. If you wish to become even more active and get involved in one of your committees, please do not hesitate to contact us. We would also welcome suggestions for a fitting, paper-saving design for this newsletter if you are talented in this direction.