

Supplemental Materials in Dynamic E-Journals

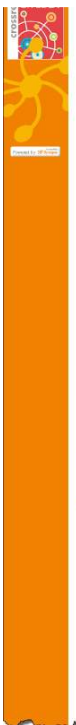
이 춘 실
숙명여대 문헌정보학과

목 차

- E-journal의 진화
- 논문의 다양한 Supplemental Materials (보조 자료)와 급격한 증가 현상
- Supplemental Materials를 적극적으로 수용하기 위하여 필요한 조치
- 참고문헌

E-journal의 진화

- 학술지 인쇄본 (Print Journal)에 수록하지 않은 (못한) 보충 자료
→ Online 학술지 (Electronic Journal)의 특성을 적극적으로 활용한 다양한 내용과 다양한 형식의 자료 제공, 또는 링크 제공
- Supplementary Materials
→ Supplemental Journal Article Materials



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Policization

Scott H. Kozin, MD



Thumbnail Video
High Resolution Video (568k .wmv)

Supplementary Materials

Background: Policization is a new concept that combines surgical skill with brain plasticity. The concept is to substitute a functioning finger for a deficient thumb. The deficient thumb is defined as one without enough function to contribute to prehension and grasp. The most common causes in hypoplasia with absence or instability of the carpometacarpal (CMC) joint, which abducts radial wrist flexion. However, there are additional causes that may require thumb amputation, such as trauma, macrodactyly, nail dystrophy, and a mirror hand. The more distal surgical options for children with congenital hand differences. The new hand I use to perform policization as an option to reconstruct the hand amputated by thumb hypoplasia and other atresia. I think believe that the best substitute for a deficient thumb is small girl, usually CMC joint, and/or modified radial wrist muscle to a suitable functional index finger. Adrian Flat, MD (personal communication) has been an inspiration, mentor, and advisor with my wife. He has extended computer indications for policization to include a thumb smaller than a small finger and I concur. Reconstruction of a small hypoplastic thumb with a small CMC joint will gain a comparison to policization of a "normal" index finger. This decision requires a "heart to heart" conversation with the parents. The parents make the ultimate decision for the established surgery has additional advantages. I spend substantial time explaining that "function trumps form" and that thumb ablation and index policization will result in enhanced function versus reconstruction of a small sensory thumb. In addition, people are not very observant and a robust thumb with residual function has better appearance compared to a small index thumb that contributes little to hand function. When in doubt, I recommend the parents discuss their decision with other parents who have made a similar difficult decision. This exchange is facilitated via a list of willing parents and support groups. Of course, cultural influences are important factors to be considered during the decision making process. Parents and society may ultimately accept the concept of thumb ablation and index finger policization. The parents are welcome to keep the "thumb" however, I would suggest reconstruct a type IIIB hypoplastic thumb as the result of index finger policization as the superior option.

BRAIN PLASTICITY

Cortical plasticity and motor relearning play a pivotal in functional following policization. There is a large region of the sensorimotor cortex (SMC) homocyclic dedicated to the hand. Researchers are trying to understand the changes in SMC following injury, repair, and reconstruction. Techniques include transcranial magnetic stimulation, transcranial magnetic stimulation, magnetoencephalography, functional magnetic resonance imaging (fMRI), structural MRI, and positron emission tomography. Functional plasticity is a complex process that involves the reorganization of previously established connections and growing of axon sprouts from nearby cortical and/or subcortical territories. Gans et al. (1) have demonstrated that after hand transplantation, the original SMC map for hand activities is restored. The transposition review the SMC has following the initial hand amputation. Subtly, successful free transfer produces temporal activation within the SMC cortex consistent with cortical plasticity. (1) Functional MRI has demonstrated that a positive training to use their new transfer lead to an expansion in their motor cortical representation. Practice suggests for changes within the SMC cortex. As the new motor skill is mastered, there is a subsequent decrease in the amount of cortical representation. (1) Functional MRI studies have provided evidence that motor reorganization continues to evolve over time and may be needed for training and relearning for a prolonged time. (2) These findings suggest that prolonged therapy and training may be necessary to maximize cortical reorganization and functional outcome. The effects of policization have yet to be studied with reference to cortical plasticity. The scope and quantity of homocyclic thumb representation before and after policization is an

related to smaller cortex and ultimately less pinch. Policization is more reliable in patients with smaller thumb hypoplasia and a mirror hand finger deformity versus an ulnar muscle resection and conservative orthopedic and non-operative treatment and conservative results.

Keywords: Policization; Thumb hypoplasia; Macrodactyly; Linear ablation; Mirror hand.

Policization is an emerging operation that combines surgical skill with brain plasticity. The concept is to substitute a functioning finger for a deficient thumb. The deficient thumb is defined as one without enough function to contribute to prehension and grasp. The most common causes in hypoplasia with absence or instability of the carpometacarpal (CMC) joint, which abducts radial wrist flexion. However, there are additional causes that may require thumb amputation, such as trauma, macrodactyly, nail dystrophy, and a mirror hand. The more distal surgical options for children with congenital hand differences. The new hand I use to perform policization as an option to reconstruct the hand amputated by thumb hypoplasia and other atresia. I think believe that the best substitute for a deficient thumb is small girl, usually CMC joint, and/or modified radial wrist muscle to a suitable functional index finger. Adrian Flat, MD (personal communication) has been an inspiration, mentor, and advisor with my wife. He has extended computer indications for policization to include a thumb smaller than a small finger and I concur. Reconstruction of a small hypoplastic thumb with a small CMC joint will gain a comparison to policization of a "normal" index finger. This decision requires a "heart to heart" conversation with the parents. The parents make the ultimate decision for the established surgery has additional advantages. I spend substantial time explaining that "function trumps form" and that thumb ablation and index policization will result in enhanced function versus reconstruction of a small sensory thumb. In addition, people are not very observant and a robust thumb with residual function has better appearance compared to a small index thumb that contributes little to hand function. When in doubt, I recommend the parents discuss their decision with other parents who have made a similar difficult decision. This exchange is facilitated via a list of willing parents and support groups. Of course, cultural influences are important factors to be considered during the decision making process. Parents and society may ultimately accept the concept of thumb ablation and index finger policization. The parents are welcome to keep the "thumb" however, I would suggest reconstruct a type IIIB hypoplastic thumb as the result of index finger policization as the superior option.

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Long-term complications are more prevalent. Any unsatisfactory outcome requires an additional approach to find the root of the problem (Table 1). Additional surgery may or may not be available to improve the static and function of the thumb. (3,4)

Supplementary Material

A video clip is available on the electronic version of this paper at the CIDSS web site, www.cidss.org.

Click here to view (568k .wmv)

Figures



Allegry, Asthma & Immunology Research

Journal List > *Allegry Asthma Immunol Res* > v.3(4): Oct 2011

Original Article

Asthma Predictive Genetic Markers in Gene Expression Profiling of Peripheral Blood Mononuclear Cells

Seung Il Shin,¹ Tae Jeong Oh,² Su Min Park,³ Jung Sun Park,⁴ An Soe Jeong,⁵ Sang Hye Park,⁶ Soe Tae Oh,⁷ Sang Hee Lee,⁸ Sang Hye Park,⁹ Sang Hye Park,⁹

¹Gyame Research Center for Allergy and Respiratory Disease, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

²Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

³Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁴Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁵Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁶Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁷Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁸Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

⁹Department of Internal Medicine, Soonchunhyang University, Bucheon Hospital, Bucheon, Korea

Received October 11, 2010; Accepted March 04, 2011

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Abstract Go to:

Purpose
We sought to identify asthma-related genes and to examine the effect of these genes to predict asthma based on gene expression.

Methods
The subjects were 42 asthmatics and 10 normal healthy controls. PBMC RNA was subjected to microarray analysis using Affymetrix GeneChip arrays. Differentially expressed genes were identified (differentially between the two groups). A multiple logistic regression analysis was applied to the differentially expressed genes, and six genes (the same as the ones in ROC curves from stable operating characteristics) were obtained.

Results
In total, 175 genes were selected using the following criteria: Padj < 0.01 and > 2-fold change. Among these genes, 37 were up-regulated and 138 were down-regulated in asthmatics versus normal controls. A multiple logistic regression analysis was also applied to these differentially expressed genes, and six genes were selected as candidate genes for asthma. Using these genes, 265 cases of asthma were identified in a combined gene expression analysis. Using these genes, 265 cases of asthma were identified in a combined gene expression analysis. Using these genes, 265 cases of asthma were identified in a combined gene expression analysis.

Conclusions
MNE, IL12C1, and TRAF3 may be useful biomarkers for asthma.

Keywords: Asthma, gene expression profiling, PBMC, ROC.

INTRODUCTION Go to:

Asthma is a common and heterogeneous respiratory disease characterized by intermittent airway obstruction and respiratory symptoms that are related to chronic airway inflammation and remodeling. Pathological features of airway remodeling include goblet cell hyperplasia, subepithelial fibrosis, airway wall thickening, and hyperplasia of bronchial smooth muscle.

Excel file

PowerPoint file

Korean Journal of Urology

Journal List > *Korean J Urol* > v.51(9): Sep 2010

Original Article

Development and Validation of the Korean Version of Expanded Prostate Cancer Index Composite: Questionnaire Assessing Health-Related Quality of Life after Prostate Cancer Treatment

Seung Il Shin,¹ Jung Sun Park,² Soe Hyeon Lim,³ Tae Jeong Oh,⁴ An Soe Jeong,⁵ Sang Hye Park,⁶ Soe Tae Oh,⁷ Sang Hye Lee,⁸ Sang Hye Park,⁹

¹Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

²Department of Urology, Gachon University Gil Hospital, Incheon, Korea

³Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁴Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁵Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁶Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁷Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁸Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

⁹Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

Received June 01, 2010; accepted July 26, 2010

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Abstract Go to:

Purpose
Although the quality of life (QoL) of prostate cancer (PCa) patients is a major issue, there is no validated instrument for assessing QoL. The Expanded Prostate Cancer Index Composite (EPIC) is a globally accepted prostate-specific quality-of-life instrument that comprises urinary, bowel, sexual, and hormonal domains. Considering the need for such a tool applicable to Korean PCa patients, we translated EPIC into Korean and validated the new version.

Materials and Methods
The Korean version of EPIC was devised to transition, back-translation, and revalidation. Subsequently, we prospectively studied 101 patients with localized PCa treated with radical prostatectomy (RP) (21.9%), radical prostatectomy (RP) (12.4%), hormone therapy (HT) (12.4%), or a combination of RP and HT (12.4%). Sociodemographic characteristics and clinical data were collected. Test-retest reliability and construct validity of the Korean version of EPIC were assessed by factor analysis, inter-rater correlation, and correlation with Functional Assessment of Cancer Therapy-Prostate (FACT-P).

Results
Test-retest correlation and Cronbach's alpha were high in each of the domains (0.92, 0.91, 0.76, 0.84 and 0.85, 0.84, 0.82, 0.83, p < 0.001). Intraclass correlation among the domains was low (r = 0.37), which indicates that EPIC is a predictor of major domains. Intraclass correlation between the function and other subscales was high (r = 0.81, 0.84 and 0.80, p < 0.001). EPIC domains had low correlation with FACT-P, primarily complementary use.

Conclusions
The Korean version of EPIC was developed by a proper process, as evident by its high reliability and validity. Therefore, it is a simple, comprehensive, systematic method that includes QoL in Korean patients after PCa treatment. Furthermore, it can be adapted as an objective methodology for research projects.

Keywords: Prostate neoplasms, Quality of life, Reproducibility of results.

INTRODUCTION Go to:

Prostate cancer (PCa) is the fifth most common cancer in the Korean male population as well as the most prevalent cancer in the prostate gland. (1) Owing to early diagnosis

PDF file

Korean Journal of Radiology

Journal List > Korean J Radiol > v.11(1); Jan-Feb 2010

Review Article

Korean J Radiol 2010; Jan-Feb 11(1):4-18 (English)
 Published online 2009 December 28; doi:10.3349/kjro.2010.11.1.4
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State-of-the-Art CT Imaging Techniques for Congenital Heart Disease

Heon Woo Cho, MD¹
 Department of Radiology and the Research Institute of Radiology, Asan Medical Center, University of Ulsan College of Medicine, Seoul 138-736, Korea

¹ Address reprint requests to Heon Woo Cho, MD, Department of Radiology and the Research Institute of Radiology, Asan Medical Center, University of Ulsan College of Medicine, Asan-dong, Songpa-gu, Seoul 138-736, Korea. Tel: (822) 3075-4368; Fax: (822) 473-0595; Email: hwocho@amc.seoul.ac.kr

Received July 10, 2009; Accepted August 10, 2009

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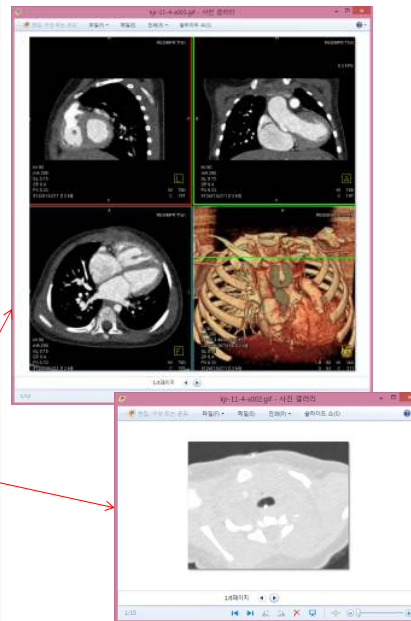
Abstracts

CT is increasingly being used for evaluating the cardiovascular structures and diseases in the patients with congenital heart disease. Although CT has limitations, there is the advantage of the eddy-current-acquire and image reconstruction because of its inherent high spatial resolution and excellent tissue contrast. Recent developments in CT technology aimed at reducing the contrast media and the radiation dose usage in congenital heart disease evaluation have helped expand the indication for CT usage. Technological advances associated with congenital heart disease can be evaluated with one CT intravenous contrast injection, but to improve the image quality, contrast media cardiovascular abnormalities. Knowledge of the state-of-the-art CT imaging techniques that are used for evaluating congenital heart disease is helpful not only for planning and performing CT examinations, but also for interpreting and presenting the CT image findings that consequently guide the proper medical and surgical management.

Keywords: Computed tomography (CT) techniques; Multi-slice CT; Congenital heart disease

The recent developments in CT techniques are characterized by faster speed, longer z-axis coverage, a more flexible ECG-synchronized scan and a lower radiation dose, and these advances have led to the increased use of CT. The increasing role of CT in the diagnosis of congenital heart disease (CHD) also includes the evaluation of congenital heart disease (1). Misdiagnosis of the radiation exposure delivered by CT is an important issue particularly for children (2). Various dose reduction techniques are currently available for cardiac CT as a result of the efforts to reduce the CT dose (3, 4). Thus, cardiac radiologists should be familiar with the CT techniques that are associated with cardiac protocol and dose reduction. The CT imaging techniques for congenital heart disease are not the same as those for acquired heart disease, due to the difference according to the impacted anatomic structures, the purposes of the study and the study population evaluated with CT (e.g. children and adults with congenital heart disease). The state-of-the-art CT imaging techniques for acquired heart disease have been extensively reported and frequently updated, while those for congenital heart disease have not been thoroughly reviewed in the literature. In this article, I review the current CT imaging techniques for congenital heart disease. These include the CT scan techniques, the dose reduction techniques and the methods for interpretation and presentation of cardiac scans. The general clinical

Image file (JPG, Gif, tif, etc.)



The NEW ENGLAND JOURNAL of MEDICINE

Genomic and Epigenomic Landscapes of Adult De Novo Acute Myeloid Leukemia

The Cancer Genome Atlas Research Network
 May 1, 2013 | DOI: 10.1056/NEJMoa1201689
 Comments open through May 8, 2013

Abstract Article References Glossary Comments

BACKGROUND
 Many mutations that contribute to the pathogenesis of acute myeloid leukemia (AML) are undefined. The relationships between patterns of mutations and epigenetic phenotypes are not yet clear.

METHODS
 We analyzed the genomes of 200 clinically annotated adult cases of de novo AML, using either whole-genome sequencing (50 cases) or whole-exome sequencing (150 cases), along with RNA and microRNA sequencing and DNA-methylation analysis.

RESULTS
 AML genomes have fewer mutations than most other adult cancers, with an average of only 13 mutations found in genes. Of these, an average of 5 are in genes that are recurrently mutated in AML. A total of 23 genes were significantly mutated, and another 237 were mutated in two or more samples. Nearly all samples had at least 1 nonsynonymous mutation in one of nine categories of genes that are almost certainly relevant for pathogenesis, including transcription-factor fusions (10% of cases), the gene encoding nucleophosmin (NPM1) (27%), tumor-suppressor genes (16%), DNA-methylation-related genes (44%), signaling genes (59%), chromatin-modifying genes (30%), myeloid transcription-factor genes (22%), cohesin-complex genes (13%), and spliceosome-complex genes (14%).

FIGURE 1
 Characterization of Mutations.

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RELATED ARTICLES: Genomic and Epigenomic Landscapes of Adult De Novo Acute Myeloid Leukemia

Supplementary Material: Supplementary Appendix (PDF File, 102KB), Disclosure Forms (PDF File, 202KB)

Lessons from Boston
 April 24, 2013 | A.L. Kellermann and K. Peleg
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The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE
Genomic and Epigenomic Landscapes of Adult De Novo Acute Myeloid Leukemia

The Cancer Genome Atlas Research Network
May 1, 2013 | DOI: 10.1056/NEJMoa1301659

Abstract | Article | References | Glossary | Comments

BACKGROUND
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FIGURE 1
Characterization of Mutations.

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April 24, 2013 | Q. Li and Others
- PERSPECTIVE**
Lessons from Boston
April 24, 2013 | A.L. Kellermann and K. Peleg

Synapse Clinics in Orthopedic Surgery

Journal List > Clin Orthop Surg > 4(2) Mar 2012

Hypoplasia: Congenital Deformities of the Hand

Clin Orthop Surg. 2012 Mar;416:30. Epub.
Published online 2012 February 28. doi:10.1007/s12018-012-1111-8
Copyright © 2012 by The Korean Orthopedic Association

Policization: The Concept, Technical Details, and Outcome
Seok H. Kwon MD¹
Department of Orthopedic Surgery, Tottori University School of Medicine, Shimane Hospital for Children, 203 Tottori East Street, Tottori-shi 680-8554, Tottori, Japan (e-mail: kseokh@ott.tottori-u.ac.jp)

Abstract
Policization is a valuable technique for a pedicle thumb. The most important factor in policization is the selection of the recipient thumb. However, there are still some controversies regarding the selection of the recipient thumb. This article discusses the concept, technical details, and outcome of policization. The author's experience is presented, and the author's recommendations are discussed. The author's experience is presented, and the author's recommendations are discussed.

Synapse Clinics in Orthopedic Surgery

FIGURE 1
Your 4th Finger (Courtesy of Shimane Hospital for Children, Tottori)



Table 2
Publication Factors
Factors that influence publication outcome

Status of finger
Age of surgery
Technical factors: incision, technique, dressings, etc.
Surgeon
Rehabilitation

Synapse Clinics in Orthopedic Surgery

Abstract
Policization: The Concept, Technical Details, and Outcome
Seok H. Kwon MD¹
Department of Orthopedic Surgery, Tottori University School of Medicine, Shimane Hospital for Children, 203 Tottori East Street, Tottori-shi 680-8554, Tottori, Japan (e-mail: kseokh@ott.tottori-u.ac.jp)

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BMJ (HighWire)

The screenshot displays the BMJ (HighWire) website interface. At the top, there is a navigation bar with 'Research', 'Education', 'News', 'Comment', 'Multimedia', 'Careers', 'Specialties', and 'Archive'. Below this is a search bar and a date filter set to 'Tue 2012'. The main content area features the article title 'Breast cancer detection and survival among women with cosmetic breast implants: systematic review and meta-analysis of observational studies' with a red arrow pointing to it. The article is dated 16 May 2012. To the right of the article, there are sections for 'Data supplement', 'Latest comments', and 'Most commented'. A blue box with the text 'Anytime, Tamiflu open data campaign' is overlaid on the right side. Below the article title, there is an 'Abstract' section. A second screenshot of the same article is shown below, with a red arrow pointing to the 'Data supplement' link.

Science (HighWire)

The screenshot shows the Science (HighWire) website. The navigation bar includes 'NEWS', 'SCIENCE JOURNALS', 'CAREERS', 'BLOGS & COMMUNITIES', 'MULTIMEDIA', 'COLLECTIONS', and 'ABOUT/ABOUT'. The article title 'Rational HIV Inmunogen Design to Target Specific Germine B Cell Receptors' is highlighted with a red arrow. The authors listed are Joseph A. Jordano, Jose-Phillipe Julien, Sergey Moroz, Tatyana Ots, Oksana Kalyuzhny, Andrew McGuire, Devlin Suk, Pei-Shu Huang, Shya MacPherson, Kaughn Jones, Tara Neouze, John Matthews, David Baker, Andrew B. Ward, Dennis R. Burton, Leonidas Stamatou, David Nemeczek, Ian A. Wilson, and William R. Schief. The article is dated 16 May 2012. Below the title, there are sections for 'Abstract', 'Full Text (PDF)', and 'Figure Only'. A 'Supplementary content' section is also visible, listing 'Materials/Methods, Supplementary Text, Tables, Figures, and/or References'. The abstract text is partially visible, starting with 'The development of a synthetic (S)2-targeting HIV immunogen...'. There are also 'Help with File Types' and 'Download Supplement Materials and Methods' links.

This is another screenshot of the Science (HighWire) website, showing the same article as the previous screenshot. The navigation bar and article title are consistent. The 'Supplementary content' section is more prominent, listing 'Materials/Methods, Supplementary Text, Tables, Figures, and/or References'. The 'Help with File Types' section is also visible, listing various file formats like PDF, TEXT, SPREADSHEET, VIDEO, AUDIO, and ZIP. The 'Download Supplement Materials and Methods' section is also present, listing 'Fig. S1 to S20' and 'Tables S1 to S9'. The 'References' section is also visible at the bottom.

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Genes Health December 2013, 4:102

HLA typing from RNA-Seq sequence reads

Sebastian Thiel, Martin Doser, Michael Schaller, Thomas Huber, Jos de Graaf, Valeria Iribiguen, Clémence Trépo, Maudie Ebou, John C. Castle, Ugo Dalry

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Abstract

We present a method, seqHLA, for obtaining an individual's human leukocyte antigen (HLA) class I and II type and expression using standard next-generation sequencing (NGS) data. RNA-Seq reads are mapped against a reference database of HLA alleles, and HLA type, confidence score and locus-specific expression level are determined. We successfully applied seqHLA to 30 individuals included in the HapMap project, picking 100% specificity and 98% sensitivity at a false discovery rate of 0.1 for non-diploid HLA types. We determined HLA type and expression for previously untyped Bantu Ebyi Map topics and a cohort of Korean patients with lung cancer. Because the algorithm uses standard NGS data reads and requires no change in laboratory protocols, it can be used for both existing datasets and future studies, thus adding a new dimension for HLA typing and biomarker studies.

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- Results and discussion
- Conclusions
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Related Content

Supplementary Material (2)

10073_2012_A01_MSD041_C01.pdf (171 KB)

Additional file 1: Additional figures. Figure S1: Mean self-distances of all reference sequences (between 2 and 31 = 546 nucleotides) within and between the groups of alleles to quantify and visualize HLA polymorphisms. Figure S2: Pedigree and HLA types of 102 individuals (M1000, M1001 and M1003). Figure S3: Comparison of the distribution of predicted HLA types of this study with population-specific HLA distributions. Figure S4: Average locus-specific expression of HLA class I and II in the 30 Montgomery test samples using seqHLA. Figure S5: Locus-specific expression of HLA class I and II in the 16 Bantu Ebyi Map samples. (PDF 171 KB)

10073_2012_A01_MSD041_C02.pdf (171 KB)

Additional file 2: Additional tables. Table S1: Number of alleles containing at least one T-mut, which is unique for 168 nucleotide sequences when compared with all alleles within a locus. Table S2: Accuracy of seqHLA in determining the HLA class I type of the 50 Montgomery test samples using different mapping parameters. Table S3: HLA class I type of the 50 Montgomery test samples. Table S4: Sensitivity, various specificity of different mapping and technical parameters. Table S5: Number of predictions, false predictions and missed alleles per allele group. Table S6: Accuracy of seqHLA in determining the HLA class II type of the 10 Montgomery test samples using the optimal mapping parameter. Table S7: HLA class II type of the 10 Montgomery test samples. Table S8: HLA class II and class III type of nine previously untyped CEU HapMap individuals. Table S9: Predicted HLA class I type of 77 normal lung tissues from Korean individuals. (PDF 171 KB)

References (54)

About this Article

논문의 다양한 Supplemental Materials (보조 자료) 와 급격한 증가 현상

Research Highlights

Research Highlights consist of a short collection of bullet points that convey the core findings of the article.

The screenshot shows a research article page from 'Biosensors and Bioelectronics'. The article title is 'Improvement of the anodic bioelectrocatalytic activity of mixed culture biofilms by a simple consecutive electrochemical selection procedure'. The authors are Yang Liu, Falk Harnisch, Katja Frische, Robert Steinhilber, and Uwe Schröder. The article is published in Volume 24, Issue 1, December 2008, Pages 1006-1011.

The **Research highlights** section, enclosed in a red dashed box, contains the following bullet points:

- Electroactive biofilms can be directly evolved from natural inoculums such as wastewater, but their original electrocatalytic performance is limited.
- The catalytic performance of the primary electroactive biofilms can be improved by a simple procedure;
- In this procedure primary electroactive biofilms are used as inoculum for the formation of secondary biofilms.
- The performance increase from primary to secondary biofilms was found to be up to 100%.

The figure shows a scanning electron microscope (SEM) image of a biofilm on the left and a graph of current density i (mA/cm²) versus potential E (V/mk cmf) on the right. The graph compares the performance of a 'Primary biofilm' (dashed line) and a 'Second biofilm' (solid line). The primary biofilm shows a peak current density of approximately 400 mA/cm² at 0.2 V/mk cmf. The secondary biofilm shows a significantly higher peak current density of approximately 1400 mA/cm² at 0.4 V/mk cmf.

Abstract
In this paper we demonstrate that the anodic, bioelectrocatalytic performance of wastewater inoculum based, mixed culture microbial biofilms can be considerably improved by using a consecutive, purely electrochemical selection and biofilm acclimatization procedure. The procedure may represent an alternative to a repetitive mechanical biofilm removal, re-suspension and electrochemically facilitated biofilm formation. By using the proposed technique, the bioelectrocatalytic current density was increased from the primary to the secondary biofilm from 260 $\mu\text{A cm}^{-2}$ to about 500 $\mu\text{A cm}^{-2}$ and the power density of respective microbial fuel cells could

Graphical Abstracts

A Graphical Abstract summarizes the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online.

The screenshot shows the same research article page as above. The **Graphical Abstract** section, enclosed in a red dashed box, contains the same SEM image and graph as seen in the Research Highlights section. The graph shows the current density i (mA/cm²) versus potential E (V/mk cmf) for the primary and secondary biofilms, demonstrating a significant increase in performance for the secondary biofilm.

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Highlights

Cell

Volume 155, Issue 6, 29 August 2015, Pages 1157–1170

S. cerevisiae Chromosomes Orient via Gradual Resolution of Syntely between S Phase and Anaphase

Eduardo Marín^{1,2,4,5}, Jonas F. David³, Hisaaki Inai¹, Khushbu Jaiswal¹, Peter K. Sorger¹, Guohao Dong¹

¹Department of Cell Biology, Harvard Medical School, Boston, MA 02115, USA
²Department of Cell Biology, Harvard Medical School, Boston, MA 02115, USA
³Franklin D. Rowley Research Laboratory and Cancer, University of Montreal, Montreal QC H3C 3J7, Canada

Reviewed by: Joseph R. Giacchino
 At the (Editorial Board), "Tread Ready Are Like People"
 Cell, Volume 155, Issue 6, 29 August 2015, Pages 1157–1170
 DOI: 10.1016/j.cell.2015.08.030

Highlights

- S. cerevisiae chromosomes orient in a stochastic process until anaphase onset
- Microtubule length controls chromosome kinetochore from syntelic attachments
- Bivalent kinetochore distribution is not synonymous with biorientation

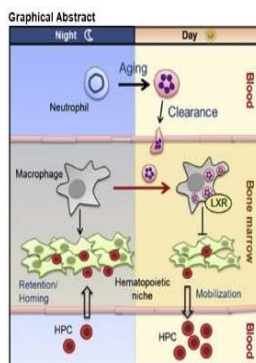
Summary

Fusing *Clb1* replication, aneuploid cells must orient on either chromosome prior to cohesion cleavage at anaphase. In animal cells, sister chromatids gradually orient during prometaphase, but current models of mitosis in *S. cerevisiae* assume that biorientation is established shortly after S phase. This assumption is based on the observation of a bivalent distribution of yeast kinetochores early in mitosis and suggests fundamental differences between yeast mitosis and mitosis in animal cells. By applying super-resolution imaging methods, we show that yeast and animal cells share the key property of gradual and stochastic chromosome biorientation. The characteristic bivalent distribution of yeast kinetochores, hitherto considered synonymous for biorientation, arises from kinetochore-to-microtubule attachment status to microtubules, the length of which discriminates between syntelic attachments. Our results offer a revised view of mitotic progression in *S. cerevisiae* that augments the relevance of mechanistic information obtained in this powerful genetic system for mammalian mitosis.

Graphical Abstract

Figure 1

Abstract



Graphical Abstract

Source: www.sciencedirect.com

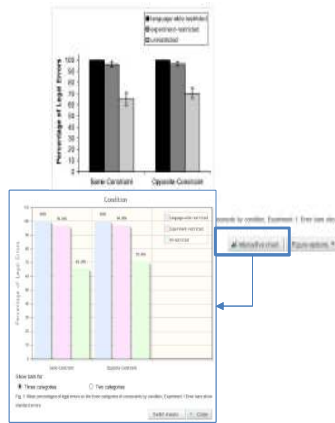


Video Abstract

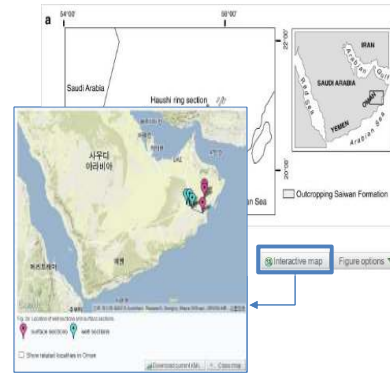


Audio Abstract

Interactive images



Interactive Chart



Interactive Map

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Science Magazine Live Chat

Journal of Visualized Experiments (JoVE)

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A test-retest of attention func

Krzysztof J Gorgolew
Wardlaw¹ and Cyril R

GigaScience

Semantic, Ontology, API 등 활용 → 고급 관련 정보 제공 및 연결

TABLE 4. File types commonly observed among the 100 SDRs sampled, particularly for export purposes.

File type category	File type/extension
Archives	.zip, .tar, .tar.gz, stuffit (binhex)
Statistical analysis	R, SPSS, SAS, STATA
GIS	many SDRs indicated using GIS related files including raster formats like .bil, ESRI map file formats like .e00, and vector formats like .shp
Extensible markup	.xml, .sgl, .eml (ecological metadata language), VOTable (Virtual Observatory Table)
Flat file	.txt, .ascii, .csv
Image	.tiff, .jpg, .gif, .pic, .fits and .png
Movie/multimedia	.wav, .swf, .mpg, .mov, .mp3, .mp4, .avi, quicktime and anis (Flash animations applet)
Word processor	.pdf, .ps, .doc
Spreadsheet	.xls
Presentation	.ppt
Proprietary or specific tools:	
Geosciences	Open Geospatial Consortium's Web Map Service (WMS) map and legend images, Web Feature Service (WFS) vector source data in GML format, Web Coverage Service (WCS) raster source data in GeoTIFF format NetCDF (common data format, http://www.unidata.ucar.edu/software/netcdf/docs/faq.html) and .grib (gridded binary)
(Medicine) bioinformatics	GO, FASTA, Contig
Web page	.html

다양한 Supplemental materials 파일 형식

Marcial LH and Hemminger BM. Scientific data repositories on the Web: An initial survey. JASIST, 61(2010): 2029-2048.

Supplemental Material의 급증

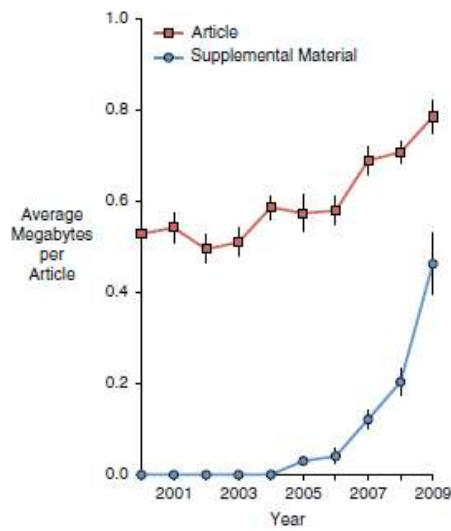


Figure 1. Average size of a *Journal of Neuroscience* article and supplemental material in megabytes. Values are trimmed means (5th–95th percentile) to exclude a handful of unaccountably large articles and supplemental files. Supplemental movies are excluded to facilitate comparisons because a megabyte of a movie is arguably easier to evaluate than a megabyte of text, figures, or tables. Data include only articles published in January of each year. Error bars are standard errors of the trimmed means.

Journal of Neuroscience Announcement Regarding Supplemental Material. *J Neurosci* 30(32):10599–10600. August 11, 2010. Data include only articles published in January of each year.

Supplemental Materials를 적극적으로 수용하기 위하여 필요한 조치

- 각 보조 자료 (object)를 식별할 수 있는 충분한 정보를 논문 본문에 표기
(제목, 요약, 파일 형식, meta data, DOI 등)
- 투고규정에 명시
- E-Journal platform에서 이용 가능하도록 user friendly interface 구현
(다양한 링크, interactive multimedia, 보조 자료 검색 기능)



Highlights

Required for papers published from January 2010 onward. Highlights are a short collection of bullet points that convey the core findings of the article. This list of points will be displayed online with the summary of the article but will not appear in print. Specifications: up to 4 bullet points can be included; the length of an individual bullet point should not exceed 85 characters (including spaces); only the core results of the paper should be covered.

Graphical Abstract

A graphical abstract should allow readers to quickly gain an understanding of the main take-home message of the paper and is intended to encourage browsing, promote interdisciplinary scholarship, and help readers identify more quickly which papers are most relevant to their research interests. Examples of this feature can be seen in the online version of articles published in *Cell* from January 2010 onwards. Graphical abstracts may be submitted at any stage but are only required once a paper has been accepted for publication (it is not necessary to provide a graphical abstract for a new submission). Graphical abstracts can be uploaded in EES by selecting "Graphical Abstract" when uploading files. Preparation guidelines: A graphical abstract should be one image and should not contain multiple panels; visualize one process or make one point clear; have a clear start and end, preferably 'reading' from top to bottom or left to right, for ease of browsing; try to reduce distracting and cluttering elements as much as possible; and provide a visual indication of the biological context of the results depicted (subcellular location, tissue or cell type, species, etc.). Simple labels are often useful. Please also try to avoid including features that are more speculative (unless the speculative nature can be made apparent visually), and highlight the new findings from the current paper without including excess details from previous literature. Specifications: the maximum size of the image should be 400 x 400 pixels, using Arial font with a size of 12-16 points. Preferred file types are .ai, .psd, and .eps; .jpg and .tif are also acceptable.

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Guidelines for web extra material

Audio/video material

- The paper to which the audio or video clip relates should be mentioned in the recording
- Audio clip and video files should be accompanied with brief text explaining the content of the audio, names of interviewers/interviewees, date of recording, and place of recording if relevant
- Written consent from all parties must be supplied at submission

Audio

- Audio material submitted as an mp3 file, no larger than 50 Mb
- Your paper may be selected for a podcast. If so, the Web Editor will contact you to arrange a pre-recorded interview to discuss your paper. For more information, see Audio.

Video

- Video material should preferably be submitted in .mpg (or .mov, .avi, or .gif) format with aspect ratio of 16:9, no larger than 50 Mb
- We welcome your videos and invite you to submit any video material (reports, interviews, scans, imaging) for consideration in the online journal. Patient consent issues apply if there is a chance that the patient can be identified from either the article or accompanying video (see the above section on Patient and other consents).
- All video files can be submitted alongside your article in EES.

The screenshot displays the ScienceDirect website interface for a specific article. At the top, the ScienceDirect logo and navigation links are visible. The main content area features the article title, authors (Prof Debbie A. Lawlor, Andrew K. Wills, Aggelos Frster, Jonathan H. Tobias, William D. Fraser), and a brief abstract. The article is categorized under 'Pregnancy' and 'Maternal vitamin D status during pregnancy and bone mineral content in offspring'. The page includes a 'Summary' section, a 'Background' section, and a 'Methods' section. A video player is embedded on the right side of the page, showing a woman speaking. The left sidebar contains navigation options like 'New Features in this issue', 'Table of Contents', and 'Supplementary Material'. The bottom of the page features a 'MedClick' logo and a 'Download PDF' button.

NISO RP-15-2013

- Recommended Practices for Online Supplemental Journal Article Materials

The screenshot displays the Synapse search interface. At the top, it identifies itself as a "Digital Archive & Reference Linking Platform of Korean Medical Journals" and features the Synapse and KoreaMed logos. A search bar is present with a "Basic Search" button. The main section is titled "Advanced Search" and includes several input fields and dropdown menus for refining the search. On the left side, there is a vertical navigation menu with links for "About Synapse", "Overview", "Help", and "Disclaimer", along with logos for KoreaMed, KoMCI, KAMJE, WorldWideScience.org, Crossref, and CitedBy. At the bottom right, there is a copyright notice for 2013 by the Korean Association of Medical Journal Editors.

Search: Synapse for [Basic Search](#)

Advanced Search

Term(s):

<input type="text"/>	All Fields	AND
<input type="text"/>	Full Text	AND
<input type="text"/>	Abstract, Title, Keywords	AND
<input type="text"/>	DOI	

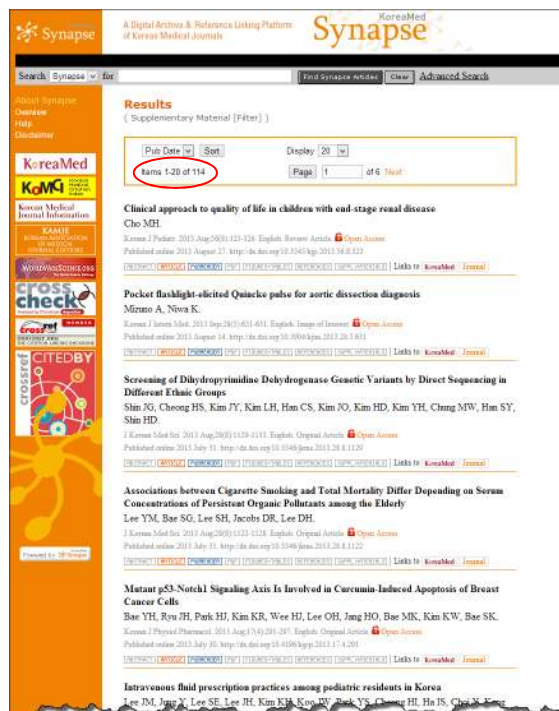
Journals: - All Journals -
Allergy Asthma & Respiratory Disease
Allergy, Asthma & Immunology Research
Anatomy & Cell Biology
Annals of Clinical Microbiology
+ Hold down the Ctrl key to select multiple journals.

Year(s): All Years 1963 to Present

Languages: All English Korean

Articles Cited by Synapse Crossref Articles.
 Articles Cited by KoMCI Articles.
 Articles with Supplementary Materials

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<http://www.koreamed.org>
<http://synapse.koreamed.org>