

牛島廣治教授退職記念誌

Retirement Memorial Book of Prof. Hiroshi Ushijima

一つの風

A Wind

東京大学大学院医学系研究科 国際保健学専攻

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目 次

退職のご挨拶	1
牛島廣治教授のご退職によせて	
平山宗宏先生	2
日暮 眞先生	3
西尾 治先生	4
福岡秀興先生	5
略歴	6
「感染症と私」	7
教室紹介（東京医学、Vol. 112 および Vol. 113 より抜粋）	8
在任中の教室関係者一覧	12
英文業績一覧	14
主な業績（CD 在中 リスト）	39
世界の子どもの像	42

ご挨拶

大学を卒業して 60 歳の東京大学の退職まで、「一睡」といった感じがします。この間、皆様には大変お世話になりました。

はじめて故郷の佐賀から東京に来たのは昭和 40 年で東京大学に入学した年です。その当時都電が走っていましたし、景気が上向いてきたころでした。そして東京大学医学部で、最初に遭遇したのは「東大闘争」と言われる学園紛争でした。卒業後は 1 年間だけでしたが小児科に入局しました。神経、感染症に興味を持っておりました。今でも私の研究はこの領域の延長と思っています。小林登先生、鴨下重彦先生ら小児科の先生にはお世話になりました。その後、都立築地産院、東京通信病院、帝京大学病院で小児科の臨床を行いながら研究じみたことをしてきました。昭和 54 年ふとしたきっかけで米国アラバマ州立大学の微生物学教室でブニavirusの分子疫学や基礎研究を行いました。これが今まで続いているロタウイルスなどの下痢症ウイルス研究（故篠崎立彦先生の分野）につながります。

ブニavirusの一部は国際感染症となっており、それがもとで昭和 62 年から国立予防衛生研究所（現国立感染症研究所）の外来性ウイルス室に勤務しました。バイオセフティー、下痢症ウイルス、ポリオウイルス、HIV の研究・検定などに関係のある室にも勤務させていただき大きな経験をしました。その後、短期間でしたが国立公衆衛生院微生物学教室をつかさどり、研究と国内外の感染症関連機関の研修の手伝いをさせていただきました。

平成 7 年(1995)から医学部健康科学・看護学科の母子保健学教室と国際保健学専攻発達医科学を司ることとなりました。平成 8 年から大学院化となり後者の立場が強くなりました。その後、国立大学が法人化となりました。平山宗宏教授および日暮眞教授の後任として、母子保健学、感染症学の両面を引き継いだ形となります。さらに国際的研究、人獣共通感染症が加わりました。大学院、学部学生、研究生など、日本のみならずアジアの学生がそれぞれの夢に向かって励んでくれました。業績は英文原著のみをここに掲載しました。アジアの特に子どもの健康に役立つ感染症の疫学、診断薬の開発についてウイルス性下痢症を中心に行うとともに、国内外の特に少数民族の子どもたちの健康をも行いました。これらの課題は個人的体験や研究の過程から生まれたものです。この間福岡秀興助教授、織田正昭助手、沖津祥子助手、（元助手小林臻、柳生文宏）の協力に感謝します。また北潔教授を始め国際保健学の先生方、医学系研究科ならびに東京大学の諸部門の方々に感謝いたします。

Müller（ドイツ）、Maneekarn（タイ）、Fang（中国）など外国の先生方、諸々の研究所・大学の同僚等々に深謝いたします。研究生、大学院生、学生からも多くを学びました。

幸いに健康に恵まれて、有給休暇もほとんど使うことなく忙しくさせていただきました。今後もこれらの事を続けたいと思っております。また成果を社会に還元したいと思っております。今後とも皆様とのお付き合いを続けさせていただけるものと思っております。よろしくお願いします。

牛島廣治 2007 年 3 月

尚、添付されている CD も暇な折、ご覧いただければ幸いです。

牛島廣治教授のご退職によせて

東京大学名誉教授
高崎健康福祉大学大学院教授
平山 宗宏

牛島廣治先生ご退職おめでとうございます。

退職されるのをおめでとうと申し上げるのは、常識的には一寸違和感があるかなとも思うのですが、東京大学教授の重責を全うされ、ご健康で還暦という人生の節目を迎えられたのですから、やはりおめでたい限りです。私もかつて東大を退職した時、学生や院生さんたちの論文の面倒を見なくてよくなった、という肩の荷を下ろした思いがあり、それがおめでたいことだと納得した記憶があります。牛島先生はこれからも研究生活を続けられるでしょうから、めでたさをどのように受け止められるか伺いたいと存じております。

先生は小児科の臨床をされてからウイルス学の道に進まれ、東大では国際的な母子保健からウイルス分子疫学などまで幅広い研究と交流を展開されました。私もそれに近い経歴があったので、先生のお若い頃からお付き合いをさせて頂いておりましたが、私のいわば古典的ともいえる臨床ウイルス学とは格段に違う最新の研究を進めておられるのを、畏敬の目で拝見してきた、というのが実感です。

また最近には保健福祉学会の会長も務められ、これからのわが国社会で最重要になる保健と福祉の統合のあり方を健康科学の立場から示されました。今後は地域福祉学の面でのご支援もお願い申し上げます。

少子高齢化が世界にも例をもない早さで進行しているわが国の現状では、還暦の年齢はまだまだ働いて頂かなければなりません。これからも所を得られて、研究や後進の指導に当たって頂きたいとお願い申し上げます。それと同時に、少しは自由な時間を持てるようになるでしょうから、ご家族ともども楽しむ機会を増やされるようお勧め致します。後期高齢者になってからの生活設計を立てるのはこれからというのが、少し先輩の私からのアドバイスです。

牛島廣治教授の定年：退職によせて

日暮 眞

牛島廣治教授、定年ご退職おめでとうございます。

牛島教授が本教室に着任されたのは、平成七年春でしたから、十二年前ということになります。前任の私の教授在任期間が比較的短かったことから、牛島教授はまだまだ在職され後進の御指導をお願いできると感じておりました。東大小児科、帝京大小児科、アラバマ大微生物学教室、国立予防衛生研究所、国立公衆衛生院と一貫してウイルス感染症の研究に従事されて来られました。本教室に着任後は研究領域の巾を広げられ、母子保健学・国際保健学とのからみからウイルス性下痢症の分子疫学・診断学、HIV、神経感染免疫学、在日マイノリティの母子保健に関する優れた研究を推進されて参りました。

本教室は大学院医学系研究科として国際保健学専攻に属することから、バングラデシュ・中国・台湾等からの外国人大学院生・研究生を積極的に受け入れ、懇切丁寧な指導され、共同研究にも精力的に取り組んでこられ、その成果は高く評価されております。牛島教授の専門研究分野がウイルス感染症、とくに消化器のウイルス感染という点から、発展途上国からの若手研究者達との共同研究プロジェクトには適切にマッチしていたと考えられます。

併せて、保健学・看護学科の学部学生に対する教育活動では、福岡助教授以下教室の全スタッフをまとめ熱心に取り組んでこられました。さらに、国際保健学専攻の推進、医学系研究科の職務遂行にも真剣に取り組まれました。

一方、学会活動並びに社会面での活動に目を転ずると、日本小児感染症学会・日本母乳哺育学会を中心として、多くの感染症関係の学会では活発に活動されておられましたし、母子保健、食品安全、タンパクの構造決定、アジア環境などの分野でも国家レベルでのプロジェクト推進の重要メンバーの一員として活躍されました。

このように教育・研究・社会面での諸分野で多くの足跡を残されての御退職であります。牛島教授着任時に、前任者である私の積み残した課題の故に御苦勞があり、存分にお考え通り「こと」が運べなかったことがあったとすれば、私の不明の致すところであり、お許し頂きたく存じます。

東大医学部の定年規定は他大学に比して早く、その分今後の活躍が十分期待できます。御退職後の御活躍を心からお祈り致します。

牛島先生への感謝

国立感染症研究所

西尾 治

牛島先生は人生の区切りを迎えられ、長い間、研究・教育、臨床そして国際保健等にご活躍され、ご苦労様でした。私は昨年、退官しましたが、退職金と年金は長年勤務した人への褒美であり、全ては無理にしても本人が使うものであるという信念でいましたが、先生もそれを近いうちに獲得され、おめでとうございます。しかし、年金の完全支給は3年後ですので、これからもご自愛の程願います。

13年前に愛知県衛生研究所に在籍していた私を、当時国立公衆衛生院(現国立保健医療科学院)衛生微生物学部長の先生にウイルス室長として迎えて頂いたのが、先生との交友関係の始まりです。その後先生とは勤務先が別になったものの、常に温かく見守って頂き、ご指導と鞭撻を賜り、感謝いたしております。

国立公衆衛生院に転勤の際には、先生から夜に「国立公衆衛生院に採用が決定しました」と連絡を受け、翌日私は昼休みの時に、推薦していただいた二人の先生に「お蔭様で内定の連絡をいただきました」と報告したところ、「既に牛島先生から電話をいただきました」と聞き、先生の気配りと対応の早さに感銘すると共に、私の未熟さを痛感しました。その上、数日後に牛島先生がご多忙にも拘わらず、愛知県にお願いと挨拶に来ていただいたお陰で、スムーズに転勤することができました。人の上に立つ人の気遣い、気概を痛感しました。

国立公衆衛生院に赴任し、先生の下で研究と教育を行なうことになりました。ある時、先生はぼつりと「牛島廣治が生きていたという証を残さなければ寂しい人生になるので、」と言われた事が、強く脳裏に刻み込まれています。その強い目的意識から、先生の探究心、知識欲は非常に旺盛で、「新しい論文」、「新しい検査法」発表されると、それをさらに進展させるために次から次と、研究を推進されてきました。研究成果はウイルス（下痢症ウイルス、HIV、肝炎ウイルス、アデノウイルス等）について、常に臨床(病気)と結びついたウイルス学の研究に邁進され、さらに臨床に役立つ検査法の開発に関するものでだけでも、膨大な数の論文となっています。先生は「証」を充分に残されましたが、私は先生の期待に1/10も答えることができなかった事を悔やんでいます。

今後も、先生は研究・教育に引き続き邁進されると聞いておりますが、健康に留意され、私をはじめ同志と後輩をいつまでも温かく励まし、時には叱咤激励し、見守って下さるようお願い致します。また、暇ができましたら一緒にのんびり旅行にでも出かけましょう。そのときを楽しみにしています。

牛島廣治教授を送る

発達医科学 助教授

福岡 秀興

牛島先生は、平成 7 年着任以来現在に至るまで、世界に誇る優れた研究を数多く手がけられ、それを次々と世に問い続けられました。現在なおその学問に対する情熱は、衰える事なく益々燃え滾っており、更に大きな研究が進行中との事です。今回、退官記念誌の業績目録を見せていただきましたが、着任以来 300 を越す原著論文を生み出されており、その莫大な量にはただただ感嘆の一言に尽きます。学問への熱い情熱が伝わって参ります。人類が克服しなくてはならない古くて新しい感染症の先端的研究を推進されてきた先生に対して、社会からの先生の研究に期待するところは、今後ますます大きくなって行くものと考えます。更に大きな研究の場を構築され、社会の期待に答えていただきますように、どうか宜しく願い申し上げます。

その間、私は傍で過ごして参りました。傍にいた立場から、牛島先生の人柄の一旦をお話したいと思います。教室全体に対しては常に細かく暖かい配慮をされ続けていただきました。牛島先生の研究室には常に 20-30 人を超す学生が研究に励んでいます。国際色も豊かで、中国、ミャンマー、バングラデシュ、パキスタン、台湾、タイ、ラオス、ベトナム、スリランカ、オーストラリアなど外国からの研究生が多く学び、研究室には各国の言葉が飛び交っています。これらの学生さんは、実験の素養のある方もいますが、初歩からのスタートの方もありますので、その指導は大変であったと思います。先生は、その方々に対して、誠心誠意、寸暇を惜しんで指導しておられました。その姿が鮮やかに思い浮かびます。この方々は卒業後、帰国されて指導者として活躍されていますが、牛島先生から受けた指導を思い浮かべながら、多くの人々を同様に指導しておられる姿を想像します。牛島先生の研究室が末広がり世界に世界の医学界・医療に貢献していることを改めて痛感します。まさに本、国際保健学専攻の理想の姿が具現していると言えます。きっと一期一会という思いで指導され、指導した学生研究者にはその想いが通じている事が窺われます。巣立ってもいつまでも慕われ続けておられ、卒業後も教室に顔を見せる人々の絶える事は在りません。これは、誠実な人間味溢れる牛島先生の人柄の一端を示すものです。

今の世は、新興感染症、エイズ、ウイルス下痢症等の新たに解決すべき新たな事象が益々増えていく状況です。それだけに社会の先生に期待するところは益々大きくなって参ります。どうか今後もお体に十分ご配慮戴いて、ますますご活躍いただきますようお願い申し上げます。

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Fields of Research: 1972-1987 Pediatrics (Neurology, Immunology) 1979- Virology (Bunyavirus, Rotavirus, Norovirus) HIV (1986-) 1995- Pediatrics (Developmental Medicine, Immunology)

Academic Affiliation: Member of the Japanese Society of Pediatrics, Member of Society of Japanese Virologists (Councilor), Member of the Japanese Society of Infectious Disease (Councilor), Member of the Japanese Society of Pediatric Neurologist (Councilor), Member of American Society of Microbiology, Head of the Japanese Society of Pediatric Infectious Disease 1996-2000 Japanese Society of Breast Feeding Secretariat, Head of Diarrheal Virus Research in Japan and others.

Recent Publications:

1. Phan TG, Ushijima H et al. 2006. Novel Recombinant Norovirus in China. *Emerg Infect Dis.* 12(5): 857-858.
2. Phan TG, Ushijima H et al. 2006. Identification of Novel Recombinant Sapovirus in Japan. *Emerg Infect Dis.* 12(5): 865-867.
3. Khamrin P, Ushijima H et al. 2006. Molecular characterization of a rare G3P[3] human rotavirus reassortant strain reveals an evidence for human-animals multiple interspecies transmissions. *J Med Virol* 78(7):986-994.

感染症と私

2005年1月11日海外から帰国の飛行機の中で数日ぶりの日本の新聞を読んだところ、年末年始にかけて、某特別養護老人ホームで入所者約70人中42人が下痢などを起こし、そのうち7人がなくなったとの報道を見た。ノロウイルスの集団発生は以前から学校、施設などで主として食中毒として報告されていたが、これほど多数の死亡例はなかったように思う。食中毒とは関連がないヒトからヒトへの感染、空気感染が危惧されている中で起きた事件である。正月という時期であり、看護も手薄であったことがより不幸な結末となったように思う。

現時点では下痢症ウイルスに関する治療は対症療法であり、インフルエンザのような直接ウイルスの増殖を抑制する治療法はない。ワクチンはないし、目に見えないウイルスがどこに付着しているかわからないし、空気感染も起きると考えると予防といってもなかなか難しい。

下痢便中には最大 $10^8 \sim 10^{10}$ 個/gのノロウイルスが含まれる。また吐物の中に 10^4 個/gのウイルスが含まれる。一方100個程度のウイルスでも胃腸炎を発症しうる。冬場で気密性の高い上にエアコンをつけての集団の生活、おむつの使用、トイレ・風呂の共用などにより、感染の危険性は増



1946年佐賀県生まれ。1972年東京大学医学部医学科卒業。1972～1987年、東京大学、帝京大学などの小児科に勤務。1988～1995年、国立予防衛生研究所、国立公衆衛生院でエイズ、小児の下痢症ウイルスの研究に従事した。

1995年から東京大学医学部健康科学・看護学科母子保健学教室ならびに大学院医学系研究科国際保健学専攻発達医科学教室に属する。国際的な母子の健康に関する研究が加わった。日本小児感染症学会、ウイルス性下痢症研究会とともに、日本母乳哺育学会 国際的子ども学会等で活動する。

大する。

最近のSARS、トリインフルエンザの集団感染症(ヒトだけでなくトリも)と同様に、いつ集団感染が起きてもよい危険な状況であった。その状況はもっと前からあったように思う。いろいろな環境の変化がノロウイルスの流行に影響していると思われる。

ノロウイルスという名前が一般に使われるようになった背景

には、遺伝子増幅法による診断法の普及により、正確に診断ができるようになったことが関係する。そして従来よくわからなかった子どもの下痢症でも診断がつくようになり、ウイルス性下痢症ではロタウイルスに続いて多いことがわかった。私自身、遺伝子診断法そして現在は簡易で迅速なイムノクロマト法の開発に力を注いでいる。まさに“便学”である。

同時に20年以上の下痢症ウイルスとのつきあいから、ウイルスの方も変化していくことがわかる。すなわち血清型・遺伝子型が変わり、ヒトの免疫から免れて新しく感染が広がることである。ウイルス性下痢症は、ワクチンで免疫が獲得できれば重症化することは少なくなるであろうが、現時点では貧富に関わらずどの子どもも等しく感染する病気である。“優しく感染”し、重症化しないことが唯一の対策である。

私の日常の活動には、国際保健学としてアジアの少数民族の子どもの健康や在日外国人の子どもの健康が加わる。そして社会的活動には日本母乳哺育学会や日本子ども学会がある。これらの活動は、これからのわが国の子どもの未来に関係する。今後、私の活動としての比重が大きくなると思っている。

発達医科学

教授

牛島廣治

助教授

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織田正昭、沖津祥子

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沿革と組織の概要

旧母子保健学講座は 1966 年に設立され、わが国で最初に発足した講座であった。大学院化に伴い発達医科学と名称を変更した。母子保健とは、母子の心身の健康を保持、増進するためのすべての活動をいい、その基盤となる学問が母子保健学である。さらに近年の社会状況から父子および生涯の保健学にも目を向けている。1998 年発達医科学分野となり、さらに関連領域が広まった。実験系では感染症、免疫、ホルモン、代謝など、調査系では発達、母子、保健などに関する幅広い研究である。

現在の構成員は、教授 1、助教授 1、助手 2、リサーチレジデント 1、事務補佐員（非常勤）2、非常勤講師 11、客員研究員 22、大学院生 23（うち外国人留学生 13 名）、研究生 5 名である。

学部の講義、大学院生への講義のほか、研究グループごとの会合、外部の研究者・学内の他の教室等との交流を深めるため発達医科学懇話会を行なっている。外国の研究者を招待し東京医学会との共催でのセミナー・集会も行なっている。

海外との共同研究を、米国、ドイツ、中華人民共和国、タイ、ベトナム、マレーシア、バングラデシュ、韓国、台湾、パキスタン、スリランカ、極東ロシアなどに行っており、人事交流も盛んで

ある。世界の母子および家族の健康を向上させるため、そして人間の生活と環境の調和のために研究をするとともに人材の養成を目的とする。

教 育

医学部健康科学・看護学科学学生に対する講義として（1）人間発達学、（2）微生物・医動物学、（3）母子疾病論、（4）免疫学、（5）母子保健学、（6）学校保健・看護を担当している。さらに、（7）国際保健学の一部を受け持っている。実習は保健学実験・検査法実習のうち、血液検査一般・感染学（細菌学・ウイルス学）・免疫学の分野を担当し、学内外の母子疾病論実習が加わる。医学科の講義や実習も受持つ。さらに、健康科学・看護学科の卒論生に対して卒論指導を行なっている。

大学院に関しては、国際保健学専攻修士課程の 1 年生を中心に、発達医科学特論（Ⅰ）（Ⅱ）を毎年 にわたり開講している。さらに、院生・研究生を対象に毎週 1 回教室内カンファレンスを開講しており、これは院生に対しては、発達医科学演習となっている。

研 究

当教室では、実験系では感染症、免疫、ホルモ

ン、代謝等を、調査系では発達、母子、保健に関する幅広い研究を行なっている。いずれも国際的視点で行なっている。研究テーマの主なものを以下に列挙する。

- (1) 母子あるいは生涯人間発達の国内外の保健に関する研究。例えば、母乳栄養などの栄養と発育、乳幼児のケア、老人のケアに関する調査研究
- (2) 感染症の分子疫学的研究、例えば HIV の遺伝子変異、薬剤耐性、下痢症ウイルス（ロタウイルス、アデノウイルス、ノロウイルス、サポウイルス、アストロウイルス）、肝炎ウイルスの分子疫学
- (3) マウスレトロウイルス、下痢症ウイルスを用いての抗ウイルス薬、ワクチン開発の基礎研究、動物実験
- (4) 百日咳菌菌体成分を用いた免疫応答の調節に関する研究—ワクチンの改良、副反応の機序解明
- (5) 都市型住居環境（高層高密度住居環境など）
- (6) 妊娠、産褥における免疫学的視点からみた特異的な骨およびカルシウム代謝制御機構の解析
- (7) 糖蛋白ホルモン（hCG,FSH,LH など）のプロセッシングおよび生理作用に関する研究
- (7) 学校保健教育の活性化に関する研究
- (8) 小児の障害の原因および障害児のケアに関する研究
- (9) 児童・生徒のメンタルヘルスに関する研究
- (10) 国内外の少数民族の母子の健康に関する研究
- (11) 成人病胎児期発症のフィールド調査及びその分子機序をエピジェネティクスの視点から解析

出版物等

- (1) Gu Y-H, Lee S, Ushijima H. A study on the needs of medical, maternal and child health care in Chinese women students at the University of Tokyo. *Tohoku J Exp Med* 2004 204: 71-8.
- (2) Ali M, Ushijima H. Emerging role of private sector in HIV/AIDS disease prevention in Pakistan. *Tropical Doc* 2004 34(3):189-190.
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Homepage

Introduction and Organization

From the scholarly point of view, the history of maternal and child health, which is the previous name of our department, has started recently. As far as Japan is concerned, our department, which was established a few decades ago, is the very first one. Maternal and child health involves all activities conducting to maintain and promote psychological and physiological health of mothers and children. The field of maternal and child health covers (1) countermeasure for infectious diseases, (2) maternal and child nutrition, (3) prevention of diseases, and (4) protection of mothers and children from environmental unhealthy factors.

Under the study of maternal and child health, medical care and welfare are also considered to compensate diseases and abnormalities that cannot be prevented. Maternal and child health services in communities are the responsibilities of administration, however, optimal policy making and technological development for ideal services must fall within the scope of researches in the study of maternal and child health.

Since 1998, the department changed to a new name, Developmental Medical Sciences for the purpose of expansion of research and teaching activities. Aging, human and environment, and their related items are newly added to our theme.

Teaching activities

1. Undergraduate course, Faculty of Medicine, School of Health Science and Nursing (Lectures: all staff, 150 hr; Laboratory course: 50 hr)
 - 1) Maternal and child health
 - 2) Growth and development
 - 3) Aging
 - 4) School health
 - 5) Molecular medicine for maternal and child health
 - 6) Virology
 - 7) Immunology
 - 8) Diseases in maternity cases and in children
 - 9) Human embryology
 - 10) Special topics in maternity cases and children
 - 11) Practicing how to care diseases in maternity cases and in children
 - 12) Sexual medicine and sexual education
2. Graduate course, Faculty of Medicine, School of International Health Science (Lecture, 90 hr)
 - 1) Child health
 - 2) Maternal health
 - 3) Growth and development

In addition to lectures and laboratory courses by our own staff, special lectures are given by the experts both inside and outside the University.

Research activities

- (1) Community health services for mothers and children
- (2) Studies on molecular epidemiology of infection
- (3) Studies on prenatal and perinatal behavior in relation to child health
- (4) Effects of high-rise living on physical and mental development of children.
- (5) Biochemical study of post-translational modification of glycoprotein hormones
- (6) Calcium and bone metabolism in puberty, during pregnancy and puerperium and in the post-menopausal state
- (7) Research on statistical evaluation, sex education and health promotion in maternal and child health
- (8) Immunological and molecular immunogenetical approach to bacteria
- (9) Brain and development
- (10) Biochemical analysis of immobilization on calcium and bone metabolism
- (11) Gene expression of biologically active peptide in the human placenta
- (12) Antiviral agents and their mechanisms
- (13) Development of new diagnosis
- (14) HIV
- (15) Research on Children's Environments
- (16) Mother to Child Transmission of Infection
- (17) Fetal origins of adult disease

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Full papers of No. 1, 6, 7, 37, 73, 115, 150, 169, 172, 200, 203, 206, 214, 216, 222, 224, 237, 241, 266, 270, 276 are in the attached CD.

CD の内容

A. 業績集

(1) 21 篇の英文原著

思い出のある英文原著を 21 個選びました。なるべく多くの研究者が選ばれるようにしました。番号は英文論文の番号をつけています。21 個以外の原著は、PubMed などからダウンロードいただければ幸いです。

(2) Pediatrics International に掲載された、あるいは掲載予定の特集を選びました。

- 2000 Rotavirus infection in Asia
- 2004 Molecular epidemiology of viral infection in Asia
- 2007 Mother and child health in Asia and Africa

B. 写真

(3) 代表的な写真

(4) 記念誌写真子どもの像 1

(5) 記念誌写真子どもの像 2

(1) 21 篇 英文論文 (掲載した PDF)

- 1) Disorder of subpopulation of lymphocytes in Prader-Willi syndrome.
- 6) The progress of Adrenoleukodystrophy as revealed by auditory brainstem evoked responses and brainstem histology.
- 7) Analyses of Patois Group Bunyaviruses: Evidence for naturally occurring recombinant bunyaviruses and existence of immune precipitable and nonprecipitable nonviral proteins included in Bunyavirus infected cells.
- 37) Suspected rotavirus encephalitis
- 73) Differential effect of serum on syncytium formation and virus production in cells chronically infected with human immunodeficiency virus in vitro.
- 115) Detection and Sequencing of Rotavirus VP7 Gene from Human Materials (Stools, Sera, Cerebrospinal Fluids, and Throat Swabs) by Reverse Transcription and PCR
- 150) Maternal Child -Rearing Behaviors and Correlates in Rural Minority Areas of Yunnan, China.
- 169) Development of rotavirus agents in Asia.
- 172) Infantile convulsions with mild gastroenteritis.
- 200) Evaluation of a newly developed immunochromatographic method for detection of norovirus.
- 203) High prevalence of hepatitis B virus pre-S mutant in countries where it is endemic and its relationship with genotype and chronicity.
- 206) Genetic diversity of Norovirus and Sapovirus in hospitalized infants with sporadic cases of acute gastroenteritis in Chiang Mai, Thailand.

- 214) Development of RT-multiplex PCR assay for detection of adenovirus and group A and C rotaviruses in diarrheal fecal specimens from children in China.
- 216) Perceptions of men on role of religious leaders in reproductive health issues in rural Pakistan.
- 222) Characterization of adenovirus type 41 isolated from children with acute gastroenteritis in Japan, Vietnam, and Korea.
- 224) Determination of HIV-1 subtypes (A-D, F, G, CRF01_AE) by PCR in the transmembrane region (gp41) with novel primers.
- 237) Etiologic agents of acute gastroenteritis among Japanese infants and children: virus diversity and genetic analysis of sapovirus.
- 241) Existence of multiple outbreaks of viral gastroenteritis among infants in a day care center in Japan.
- 266) Detection of norovirus antigens from recombinant virus-like particles and stool samples by a commercial norovirus enzyme-linked immunosorbent assay kit.
- 270) Detection of rare G3P[19] porcine rotavirus strains in Chiang Mai, Thailand, provides evidence for the origin of the VP4 genes of Mc323 and Mc345 human rotaviruses.
- 276) Norvel porcine rotavirus of the genotype P[27] shares new phylogenetic lineage with G2 porcine rotavirus strain

(2) Pediatrics International

• 2000 Rotavirus infection in Asia

Foreword

- 1) Development of a simple and rapid latex test for rotavirus in stool samples
- 2) Child rotavirus infection in association with acute gastroenteritis in two Chinese sentinel hospitals
- 3) Overview of rotavirus infections in Korea
- 4) Epidemiologic features of rotavirus infection in Taiwan: A review
- 5) Epidemiology of rotavirus infection in Thailand
- 6) Rotavirus infection among infants with diarrhea in Vietnam
- 7) Rotavirus infection among infants with diarrhea in Pakistan
- 8) Rotavirus infection in children in Japan
- 9) Development of antirotavirus agents in Asia

• 2004 Molecular epidemiology of viral infection in Asia

Foreword

- 1) Molecular epidemiology of rubella virus in Asia: Utility for reduction in the burden of diseases due to congenital rubella syndrome

- 2) Molecular epidemiology of measles virus in Japan
- 3) Molecular epidemiology of hepatitis B and C virus infections in Asia
- 4) Molecular epidemiology of enterovirus 71 infection in the Western Pacific Region
- 5) Molecular epidemiology of HIV: Tracking AIDS pandemic
- 6) Molecular epidemiology of viral gastroenteritis in Asia

• 2007 Mother and child health in Asia and Africa

Foreward

- 1) Nutritional status of low birth weight ethnic minority infants in Backan province, Vietnam
- 2) Malnutrition Improvement for Infants and Young Children under 18 months old of Dai Minority in Luxi, China
- 3) Moderate to vigorous physical activity and body fatness in Chinese urban school children
- 4) Risk factors for protein-energy malnutrition of children under 5 years: A study from Luangprabang province, Lao PDR
- 5) Factors determining prenatal HIV testing for PMTCT in Dar Es Salaam, Tanzania
- 6) Situational analysis of maternal and child health services for foreign residents in Japan

子　ど　も　の　像　1



023-ブラジル



028-フィリピン



078-羽田



038-春日部



050-小樽



050-広島



034-箱根



081-鳥取



088-韓国

子　ど　も　の　像　2



109-タイ



133-西新井



148-長崎



203-ドイツ



163-秋田



204-ドイツ



171-米国



177-台湾



134-所沢