Wei-Hua Lai

List of Publications by Year
in descending order

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119 papers	5,468 citations	50276 46 h-index	95266 68 g-index
119 all docs	119 docs citations	119 times ranked	4160 citing authors

#	Article	IF	Citations
1	Membrane-based lateral flow immunochromatographic strip with nanoparticles as reporters for detection: A review. Biosensors and Bioelectronics, 2016, 75, 166-180.	10.1	394
2	Ultra-sensitive and high-throughput CRISPR-p owered COVID-19 diagnosis. Biosensors and Bioelectronics, 2020, 164, 112316.	10.1	265
3	Advantages of fluorescent microspheres compared with colloidal gold as a label in immunochromatographic lateral flow assays. Biosensors and Bioelectronics, 2014, 54, 262-265.	10.1	161
4	Novel Strategies To Enhance Lateral Flow Immunoassay Sensitivity for Detecting Foodborne Pathogens. Journal of Agricultural and Food Chemistry, 2015, 63, 745-753.	5.2	146
5	Lateral Flow Immunoassay Based on Polydopamine-Coated Gold Nanoparticles for the Sensitive Detection of Zearalenone in Maize. ACS Applied Materials & Interfaces, 2019, 11, 31283-31290.	8.0	132
6	Advantages of time-resolved fluorescent nanobeads compared with fluorescent submicrospheres, quantum dots, and colloidal gold as label in lateral flow assays for detection of ractopamine. Biosensors and Bioelectronics, 2017, 91, 95-103.	10.1	127
7	Quantum dot nanobead-based multiplexed immunochromatographic assay for simultaneous detection of aflatoxin B1 and zearalenone. Analytica Chimica Acta, 2018, 1025, 163-171.	5.4	127
8	Hierarchical Flowerlike Gold Nanoparticles Labeled Immunochromatography Test Strip for Highly Sensitive Detection of Escherichia coli O157:H7. Langmuir, 2015, 31, 5537-5544.	3.5	118
9	Fluorescent Ru(phen)₃²⁺-Doped Silica Nanoparticles-Based ICTS Sensor for Quantitative Detection of Enrofloxacin Residues in Chicken Meat. Analytical Chemistry, 2013, 85, 5120-5128.	6.5	103
10	A novel method based on fluorescent magnetic nanobeads for rapid detection of Escherichia coli O157:H7. Food Chemistry, 2019, 276, 333-341.	8.2	103
11	DNA-based hybridization chain reaction and biotinâ€“streptavidin signal amplification for sensitive detection of Escherichia coli O157:H7 through ELISA. Biosensors and Bioelectronics, 2016, 86, 990-995.	10.1	97
12	A sensitive impedance biosensor based on immunomagnetic separation and urease catalysis for rapid detection of Listeria monocytogenes using an immobilization-free interdigitated array microelectrode. Biosensors and Bioelectronics, 2015, 74, 504-511.	10.1	96
13	A homogeneous immunosensor for AFB1 detection based on FRET between different-sized quantum dots. Biosensors and Bioelectronics, 2014, 56, 144-150.	10.1	91
14	Sensitive Detection of Staphylococcus aureus with Vancomycin-Conjugated Magnetic Beads as Enrichment Carriers Combined with Flow Cytometry. ACS Applied Materials & Interfaces, 2017, 9, 21464-21472.	8.0	88
15	Nanozyme-based lateral flow assay for the sensitive detection of Escherichia coli O157:H7 in milk. Journal of Dairy Science, 2018, 101, 5770-5779.	3.4	86
16	Emerging design strategies for constructing multiplex lateral flow test strip sensors. Biosensors and Bioelectronics, 2020, 157, 112168.	10.1	84
17	Plasmonic ELISA based on enzyme-assisted etching of Au nanorods for the highly sensitive detection of aflatoxin B1 in corn samples. Sensors and Actuators B: Chemical, 2018, 267, 320-327.	7.8	83
18	Development of an immunochromatographic assay for rapid and quantitative detection of clenbuterol in swine urine. Food Control, 2013, 34, 725-732.	5.5	79

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19	Developing a novel immunochromatographic test strip with gold magnetic bifunctional nanobeads (GMBN) for efficient detection of Salmonella choleraesuis in milk. Food Control, 2016, 59, 507-512.	5.5	78
20	Emerging strategies to develop sensitive AuNP-based ICTS nanosensors. TrAC - Trends in Analytical Chemistry, 2019, 112, 147-160.	11.4	77
21	Development of a colloidal gold strip for rapid detection of ochratoxin A with mimotope peptide. Food Control, 2009, 20, 791-795.	5.5	72
22	Ultrabright fluorescent microsphere and its novel application for improving the sensitivity of immunochromatographic assay. Biosensors and Bioelectronics, 2019, 135, 173-180.	10.1	71
23	Green Enzyme-Linked Immunosorbent Assay Based on the Single-Stranded Binding Protein-Assisted Aptamer for the Detection of Mycotoxin. Analytical Chemistry, 2020, 92, 8422-8426.	6.5	68
24	Developmental trend of immunoassays for monitoring hazards in food samples: A review. Trends in Food Science and Technology, 2021, 111, 68-88.	15.1	68
25	Sensitive and Matrix-Tolerant Lateral Flow Immunoassay Based on Fluorescent Magnetic Nanobeads for the Detection of Clenbuterol in Swine Urine. Journal of Agricultural and Food Chemistry, 2019, 67, 3028-3036.	5.2	65
26	Dual gold nanoparticle lateflow immunoassay for sensitive detection of Escherichia coli O157:H7. Analytica Chimica Acta, 2015, 876, 71-76.	5.4	64
27	A modified lateral flow immunoassay for the detection of trace aflatoxin M1 based on immunomagnetic nanobeads with different antibody concentrations. Food Control, 2015, 51, 218-224.	5.5	64
28	Engineered gold nanoparticles as multicolor labels for simultaneous multi-mycotoxin detection on the immunochromatographic test strip nanosensor. Sensors and Actuators B: Chemical, 2020, 316, 128107.	7.8	63
29	Nanospherical Brush as Catalase Container for Enhancing the Detection Sensitivity of Competitive Plasmonic ELISA. Analytical Chemistry, 2016, 88, 1951-1958.	6.5	61
30	Multicolor and Ultrasensitive Enzyme-Linked Immunosorbent Assay Based on the Fluorescence Hybrid Chain Reaction for Simultaneous Detection of Pathogens. Journal of Agricultural and Food Chemistry, 2019, 67, 9390-9398.	5.2	61
31	Recent advances of lateral flow immunoassay for mycotoxins detection. TrAC - Trends in Analytical Chemistry, 2020, 133, 116087.	11.4	61
32	Development of a rapid and sensitive quantum dot nanobead-based double-antigen sandwich lateral flow immunoassay and its clinical performance for the detection of SARS-CoV-2 total antibodies. Sensors and Actuators B: Chemical, 2021, 343, 130139.	7.8	61
33	A remarkable sensitivity enhancement in a gold nanoparticle-based lateral flow immunoassay for the detection of Escherichia coli O157:H7. RSC Advances, 2015, 5, 45092-45097.	3.6	60
34	Synthesis of PDA-Mediated Magnetic Bimetallic Nanozyme and Its Application in Immunochromatographic Assay. ACS Applied Materials & Interfaces, 2021, 13, 1413-1423.	8.0	58
35	Development of an immunomagnetic separation method for efficient enrichment of Escherichia coli O157:H7. Food Control, 2014, 37, 41-45.	5.5	56
36	Development of colloidal gold immunochromatographic signal-amplifying system for ultrasensitive detection of Escherichia coli O157:H7 in milk. RSC Advances, 2015, 5, 62300-62305.	3.6	56

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37	A novel fluorescence immunoassay for the sensitive detection of Escherichia coli O157:H7 in milk based on catalase-mediated fluorescence quenching of CdTe quantum dots. Analytica Chimica Acta, 2016, 947, 50-57.	5.4	56
38	Immunomagnetic nanobeads based on a streptavidin-biotin system for the highly efficient and specific separation of Listeria monocytogenes. Food Control, 2014, 45, 138-142.	5.5	53
39	Novel ELISA based on fluorescent quenching of DNA-stabilized silver nanoclusters for detecting E. coli O157:H7. Food Chemistry, 2019, 281, 91-96.	8.2	53
40	Ru(phen)32+ doped silica nanoparticle based immunochromatographic strip for rapid quantitative detection of Î²-agonist residues in swine urine. Talanta, 2013, 114, 160-166.	5.5	51
41	Application and development of superparamagnetic nanoparticles in sample pretreatment and immunochromatographic assay. TrAC - Trends in Analytical Chemistry, 2019, 114, 151-170.	11.4	51
42	Lateral flow immunoassays combining enrichment and colorimetry-fluorescence quantitative detection of sulfamethazine in milk based on trifunctional magnetic nanobeads. Food Control, 2019, 98, 268-273.	5.5	51
43	Biotin-exposure-based immunomagnetic separation coupled with nucleic acid lateral flow biosensor for visibly detecting viable Listeria monocytogenes. Analytica Chimica Acta, 2018, 1017, 48-56.	5.4	50
44	Comparison of 4 label-based immunochromatographic assays for the detection of Escherichia coli O157:H7 in milk. Journal of Dairy Science, 2017, 100, 5176-5187.	3.4	49
45	A sensitive biosensor using double-layer capillary based immunomagnetic separation and invertase-nanocluster based signal amplification for rapid detection of foodborne pathogen. Biosensors and Bioelectronics, 2018, 100, 583-590.	10.1	49
46	Rapid and accurate detection of viable EscherichiaÂcoli O157:H7 in milk using a combined IMS, sodium deoxycholate, PMA and real-time quantitative PCR process. Food Control, 2014, 36, 119-125.	5.5	47
47	Supramolecular Recognitionâ€Mediated Layerâ€byâ€Layer Selfâ€Assembled Gold Nanoparticles for Customized Sensitivity in Paperâ€Based Strip Nanobiosensors. Small, 2019, 15, e1903861.	10.0	47
48	Gold nanorods etching-based plasmonic immunoassay for qualitative and quantitative detection of aflatoxin M1 in milk. Food Chemistry, 2020, 329, 127160.	8.2	44
49	Lateral flow immunoassay based on dual spectral-overlapped fluorescence quenching of polydopamine nanospheres for sensitive detection ofÂsulfamethazine. Journal of Hazardous Materials, 2022, 423, 127204.	12.4	43
50	Novel immunochromatographic assay based on Eu (III)-doped polystyrene nanoparticle-linker-monoclonal antibody for sensitive detection of Escherichia coli O157:H7. Analytica Chimica Acta, 2018, 998, 52-59.	5.4	41
51	Ensuring food safety using fluorescent nanoparticles-based immunochromatographic test strips. Trends in Food Science and Technology, 2021, 118, 658-678.	15.1	41
52	Rapid detection method for aflatoxin B1 in soybean sauce based on fluorescent microspheres probe. Food Control, 2015, 50, 659-662.	5.5	40
53	Sextuplex PCR combined with immunomagnetic separation and PMA treatment for rapid detection and specific identification of viable Salmonella spp., Salmonella enterica serovars Paratyphi B, Salmonella Typhimurium, and Salmonella Enteritidis in raw meat. Food Control, 2017, 73, 587-594.	5.5	40
54	Urease-induced metallization of gold nanorods for the sensitive detection of Salmonella enterica Choleraesuis through colorimetric ELISA. Journal of Dairy Science, 2019, 102, 1997-2007.	3.4	37

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55	Development of a competitive immunochromatographic assay for the sensitive detection of amantadine in chicken muscle. Food Chemistry, 2017, 232, 770-776.	8.2	36
56	A fluorescent cascade amplification method for sensitive detection of Salmonella based on magnetic Fe3O4 nanoparticles and hybridization chain reaction. Sensors and Actuators B: Chemical, 2019, 279, 31-37.	7.8	36
57	Hollow Au-Ag Nanoparticles Labeled Immunochromatography Strip for Highly Sensitive Detection of Clenbuterol. Scientific Reports, 2017, 7, 41419.	3.3	35
58	Sulfonated polystyrene magnetic nanobeads coupled with immunochromatographic strip for clenbuterol determination in pork muscle. Talanta, 2014, 129, 431-437.	5.5	34
59	Ultrasensitive direct competitive FLISA using highly luminescent quantum dot beads for tuning affinity of competing antigens to antibodies. Analytica Chimica Acta, 2017, 972, 94-101.	5.4	34
60	Improving the performance of upconversion nanoprobe-based lateral flow immunoassays by supramolecular self-assembly core/shell strategies. Sensors and Actuators B: Chemical, 2020, 318, 128233.	7.8	33
61	Development of a propidium monoazide treatment combined with loopâ€mediated isothermal amplification (<scp>PMA</scp>â€<scp>LAMP</scp>) assay for rapid detection of viable Listeria monocytogenes. International Journal of Food Science and Technology, 2012, 47, 2460-2467.	2.7	31
62	Lateral flow immunoassay integrated with competitive and sandwich models for the detection of aflatoxin M1 and Escherichia coli O157:H7 in milk. Journal of Dairy Science, 2018, 101, 8767-8777.	3.4	30
63	Establishing of a Method Combined Immunomagnetic Separation with Colloidal Gold Lateral Flow Assay and Its Application in Rapid Detection of Escherichia coli O157:H7. Chinese Journal of Analytical Chemistry, 2013, 41, 1812-1816.	1.7	29
64	Sensitive detection of Escherichia coli O157:H7 based on cascade signal amplification in ELISA. Journal of Dairy Science, 2016, 99, 7025-7032.	3.4	29
65	Controlled copper in situ growth-amplified lateral flow sensors for sensitive, reliable, and field-deployable infectious disease diagnostics. Biosensors and Bioelectronics, 2021, 171, 112753.	10.1	29
66	Gold Nanoflower-Enhanced Dynamic Light Scattering Immunosensor for the Ultrasensitive No-Wash Detection of Escherichia coli O157:H7 in Milk. Journal of Agricultural and Food Chemistry, 2019, 67, 9104-9111.	5.2	28
67	Rapid pretreatment and detection of trace aflatoxin B1 in traditional soybean sauce. Food Chemistry, 2014, 150, 99-105.	8.2	27
68	Short communication: A novel method using immunomagnetic separation with a fluorescent nanobeads lateral flow assay for the rapid detection of low-concentration Escherichia coli O157:H7 in raw milk. Journal of Dairy Science, 2016, 99, 9581-9585.	3.4	26
69	Rapid Detection of Aflatoxin M1 by Immunochromatography Combined with Enrichment Based on Immunomagnetic Nanobead. Chinese Journal of Analytical Chemistry, 2014, 42, 654-659.	1.7	25
70	Biosensing multiplexer based on immunochromatographic assay for rapid and high-throughput classification of Salmonella serogroups. Sensors and Actuators B: Chemical, 2019, 282, 317-321.	7.8	25
71	Invited review: Advancements in lateral flow immunoassays for screening hazardous substances in milk and milk powder. Journal of Dairy Science, 2019, 102, 1887-1900.	3.4	24
72	Using molecular descriptors for assisted screening of heterologous competitive antigens to improve the sensitivity of ELISA for detection of enrofloxacin in raw milk. Journal of Dairy Science, 2019, 102, 6037-6046.	3.4	24

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73	Specific colorimetric ELISA method based on DNA hybridization reaction and nonâ€“crosslinking gold nanoparticles aggregation for the detection of amantadine. Food Chemistry, 2018, 257, 382-387.	8.2	23
74	Silver nanoprism-based plasmonic ELISA for sensitive detection of fluoroquinolones. Journal of Materials Chemistry B, 2020, 8, 3667-3675.	5.8	22
75	Quantitative detection of Î²₂-adrenergic agonists using fluorescence quenching by immunochromatographic assay. Analytical Methods, 2016, 8, 627-631.	2.7	21
76	Using hapten cross-reactivity to screen heterologous competitive antigens for improving the sensitivity of ELISA. Food Chemistry, 2020, 303, 125379.	8.2	21
77	Sensitive tracking of circulating viral RNA through all stages of SARS-CoV-2 infection. Journal of Clinical Investigation, 2021, 131, .	8.2	21
78	Reliable performance of aggregation-induced emission nanoparticle-based lateral flow assay for norfloxacin detection in nine types of animal-derived food. Talanta, 2020, 219, 121245.	5.5	20
79	Immuno-HCR based on contact quenching and fluorescence resonance energy transfer for sensitive and low background detection of Escherichia coli O157:H7. Food Chemistry, 2021, 334, 127568.	8.2	20
80	Comparison of immunochromatographic assays based on fluorescent microsphere and quantum-dot submicrobead for quantitative detection of aflatoxin M1 in milk. Journal of Dairy Science, 2017, 100, 2501-2511.	3.4	19
81	Monoclonal antibody-based enzyme-linked immunosorbent assay for detection of total malachite green and crystal violet residues in fishery products. International Journal of Environmental Analytical Chemistry, 2013, 93, 959-969.	3.3	18
82	Improvement of the stability of immunochromatographic assay for the quantitative detection of clenbuterol in swine urine. Analytical Methods, 2014, 6, 7394-7398.	2.7	18
83	Fluorescent microspheres lateral flow assay for sensitive detection of the milk allergen casein. Food and Agricultural Immunology, 2017, 28, 1017-1028.	1.4	18
84	Aggregation-induced emission-based competitive lateral flow immunoassay for rapid detection of sulfamethazine in honey. Food and Agricultural Immunology, 2019, 30, 1303-1317.	1.4	18
85	Development of a label-free plasmonic gold nanoparticles aggregates sensor on the basis of charge neutralization for the detection of zearalenone. Food Chemistry, 2022, 370, 131365.	8.2	18
86	Matrix effect of five kinds of meat on colloidal gold immunochromatographic assay for sulfamethazine detection. Analytical Methods, 2018, 10, 4505-4510.	2.7	16
87	Rapid and sensitive detection of Salmonella enteritidis by a pre-concentrated immunochromatographic assay in a large-volume sample system. RSC Advances, 2017, 7, 55141-55147.	3.6	15
88	Ultra-sensitive method based on time-resolved fluorescence immunoassay for detection of sulfamethazine in raw milk. Food and Agricultural Immunology, 2018, 29, 1137-1149.	1.4	15
89	Matrix effect of swine urine on time-resolved fluorescent nanobeads and colloidal gold immunochromatographic assay. Food and Agricultural Immunology, 2018, 29, 711-721.	1.4	15
90	Integrated gold superparticles into lateral flow immunoassays for the rapid and sensitive detection of Escherichia coli O157:H7 in milk. Journal of Dairy Science, 2020, 103, 6940-6949.	3.4	15

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91	Development of a one-step immunochromatographic assay with two cutoff values of aflatoxin M1. Food Control, 2016, 63, 11-14.	5.5	14
92	Fluorescent microsphere immunochromatographic assays for detecting bone alkaline phosphatase based on biolayer interferometry-selected antibody. RSC Advances, 2017, 7, 32952-32959.	3.6	14
93	Immunochromatographic assay based on timeâ€resolved fluorescent nanobeads for the rapid detection of sulfamethazine in egg, honey, and pork. Journal of the Science of Food and Agriculture, 2021, 101, 684-692.	3.5	13
94	Sensitive immunoassays based on a monoclonal antibody for detection of marbofloxacin in milk. Journal of Dairy Science, 2020, 103, 7791-7800.	3.4	12
95	AN IMMUNOASSAY FOR DETERMINING AFLATOXIN B₁ USING A RECOMBINANT PHAGE AS A NONTOXIC COATING CONJUGATE. Journal of Food Safety, 2012, 32, 318-325.	2.3	11
96	Gold nanoflowers labelled lateral flow assay integrated with smartphone for highly sensitive detection of clenbuterol in swine urine. Food and Agricultural Immunology, 2019, 30, 1225-1238.	1.4	11
97	Integrated immunochromatographic assay for qualitative and quantitative detection of clenbuterol. Analytical Biochemistry, 2019, 577, 45-51.	2.4	11
98	Highly Specific Anti-tylosin Monoclonal Antibody and Its Application in the Quantum Dot Bead-Based Immunochromatographic Assay. Food Analytical Methods, 2020, 13, 2258-2268.	2.6	11
99	Sensitive and hook effectâ€“free lateral flow assay integrated with cascade signal transduction system. Sensors and Actuators B: Chemical, 2020, 321, 128465.	7.8	11
100	Chrysanthemum-like Au@Polydopamine synthesized using one-pot method and its advantage in immunochromatographic assay. Sensors and Actuators B: Chemical, 2021, 343, 130097.	7.8	11
101	I2/Iâ¯-mediated fluorescence quenching of an Ag+-doped gold nanocluster-based immunoassay for sensitive detection of Escherichia coli O157:H7 in milk. Journal of Dairy Science, 2022, 105, 2922-2930.	3.4	10
102	Strategy for Accurate Detection of Escherichia coli O157:H7 in Ground Pork Using a Lateral Flow Immunoassay. Sensors, 2017, 17, 753.	3.8	9
103	Preparation of an Antidanofloxacin Monoclonal Antibody and Development of Immunoassays for Detecting Danofloxacin in Meat. ACS Omega, 2020, 5, 667-673.	3.5	8
104	A novel method based on Agâ€“Au nanorings with tunable plasmonic properties for the sensitive detection of amantadine. Journal of Hazardous Materials, 2022, 431, 128498.	12.4	8
105	Fluorescence immunoassay through histone-ds-poly(AT)-templated copper nanoparticles as signal transductors for the sensitive detection of Salmonella choleraesuis in milk. Journal of Dairy Science, 2019, 102, 6047-6055.	3.4	7
106	Glucose oxidase-induced colorimetric immunoassay for qualitative detection of danofloxacin based on iron (â…¡) chelation reaction with phenanthroline. Food Chemistry, 2020, 328, 127099.	8.2	7
107	Development of a signal-enhanced LFIA based on tyramine-induced AuNPs aggregation for sensitive detection of danofloxacin. Food Chemistry, 2022, 375, 131875.	8.2	7
108	Detection of stx1 and stx2 and subtyping of Shiga toxin-producing Escherichia coli using asymmetric PCR combined with lateral flow immunoassay. Food Control, 2021, 126, 108051.	5.5	6

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109	Quantum dot nanobead immunochromatographic assay based on bispecific monoclonal antibody for the simultaneous detection of aflatoxin B₁and amantadine. Food and Agricultural Immunology, 2022, 33, 403-418.	1.4	6
110	A fluorescence immunochromatographic assay for rapid and sensitive detection of human prealbumin in serum. Analytical Methods, 2015, 7, 8683-8688.	2.7	5
111	Silver Nanoplates and Gold Nanospheres as Probesfor Revealing an â€œInterferenceâ€•Phenomenon in a Simultaneous Quantitative Immunochromatographic Assay. Food Analytical Methods, 2019, 12, 1666-1673.	2.6	5
112	Dual signal insight: field-efficient qualitative/quantitative detection of sulphamethazine in raw milk. Food and Agricultural Immunology, 2019, 30, 163-177.	1.4	3
113	Dual-mode immunoassay system based on glucose oxidase-triggered Fenton reaction for qualitative and quantitative detection of danofloxacin in milk. Journal of Dairy Science, 2020, 103, 7826-7833.	3.4	3
114	Intelligently identifiable membrane immunochip sensor based on Braille-like code for simultaneous multi-veterinary drug detection. Sensors and Actuators B: Chemical, 2022, 359, 131571.	7.8	3
115	Novel Dual-Color Immunochromatographic Assay Based on Chrysanthemum-like Au@polydopamine and Colloidal Gold for Simultaneous Sensitive Detection of Paclobutrazol and Carbofuran in Fruits and Vegetables. Foods, 2022, 11, 1564.	4.3	2
116	Two-step aggregation of gold nanoparticles based on charge neutralization for detection of melamine by colorimetric and surface-enhanced Raman spectroscopy platform. Journal of Dairy Science, 2022, 105, 7298-7307.	3.4	2
117	Quantum dots-based lateral flow strip assay for rapid detection of clenbuterol. , 2011, , .		1
118	Quantum dots-based system for the detection of bacteria in drinking water. , 2012, , .		1
119	Development of a lateral-flow assay for rapid screening of the performance-enhancing sympathomimetic drug clenbuterol used in animal production; food safety assessments. Asia Pacific Journal of Clinical Nutrition, 2007, 16 Suppl 1, 106-10.	0.4	1