

About OMICS Group



OMICS Group International is an amalgamation of [Open Access publications](#) and worldwide international science conferences and events. Established in the year 2007 with the sole aim of making the information on Sciences and technology 'Open Access', OMICS Group publishes 500 online open access [scholarly journals](#) in all aspects of Science, Engineering, Management and Technology journals. OMICS Group has been instrumental in taking the knowledge on Science & technology to the doorsteps of ordinary men and women. Research Scholars, Students, Libraries, Educational Institutions, Research centers and the industry are main stakeholders that benefitted greatly from this knowledge dissemination. OMICS International also organizes 500 [International conferences](#) annually across the globe, where knowledge transfer takes place through debates, round table discussions, poster presentations, workshops, symposia and exhibitions.

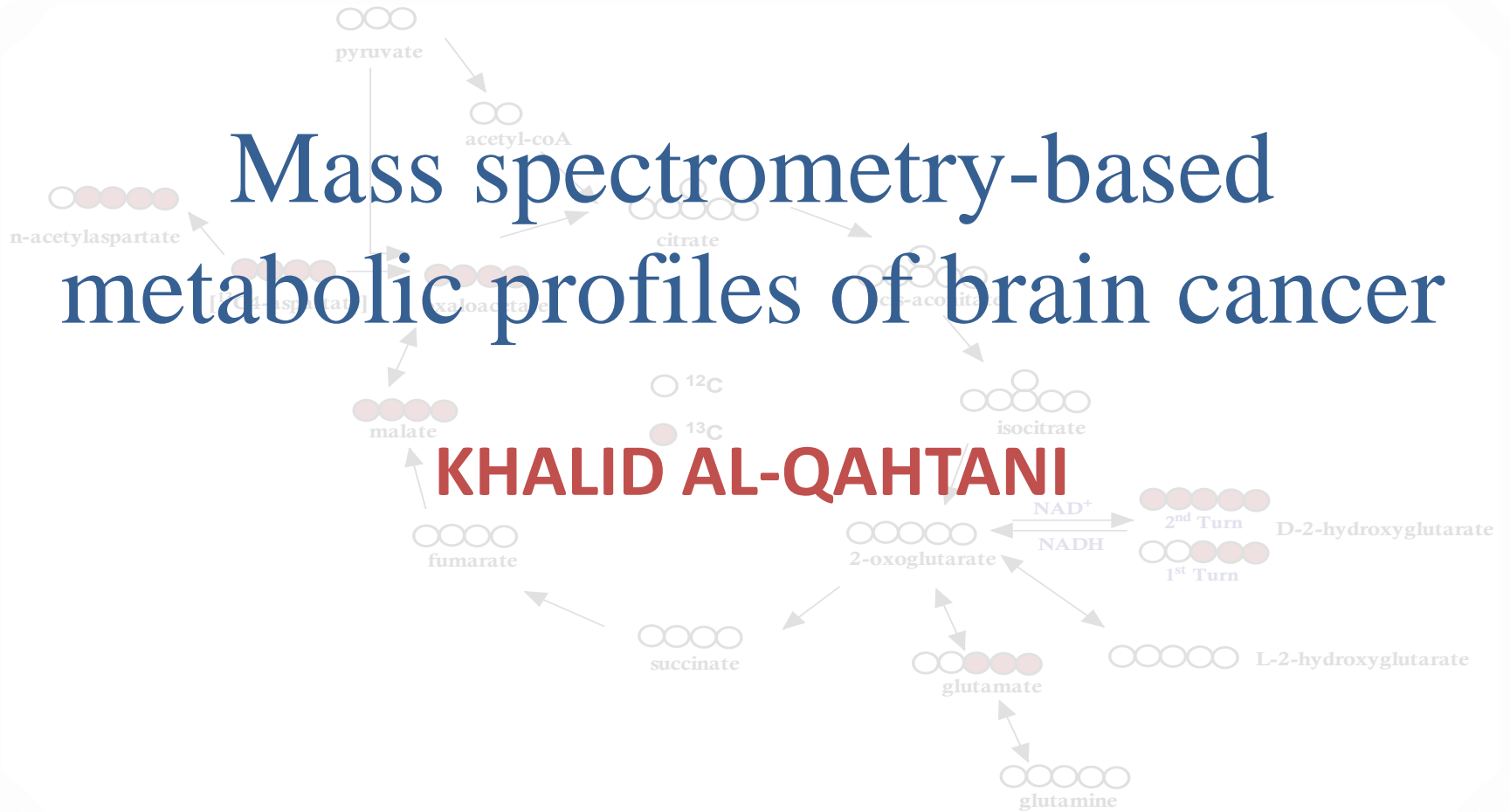
About OMICS International Conferences

OMICS International is a pioneer and leading science event organizer, which publishes around 500 open access journals and conducts over 300 Medical, Clinical, Engineering, Life Sciences, Pharma scientific conferences all over the globe annually with the support of more than 1000 scientific associations and 30,000 editorial board members and 3.5 million followers to its credit.

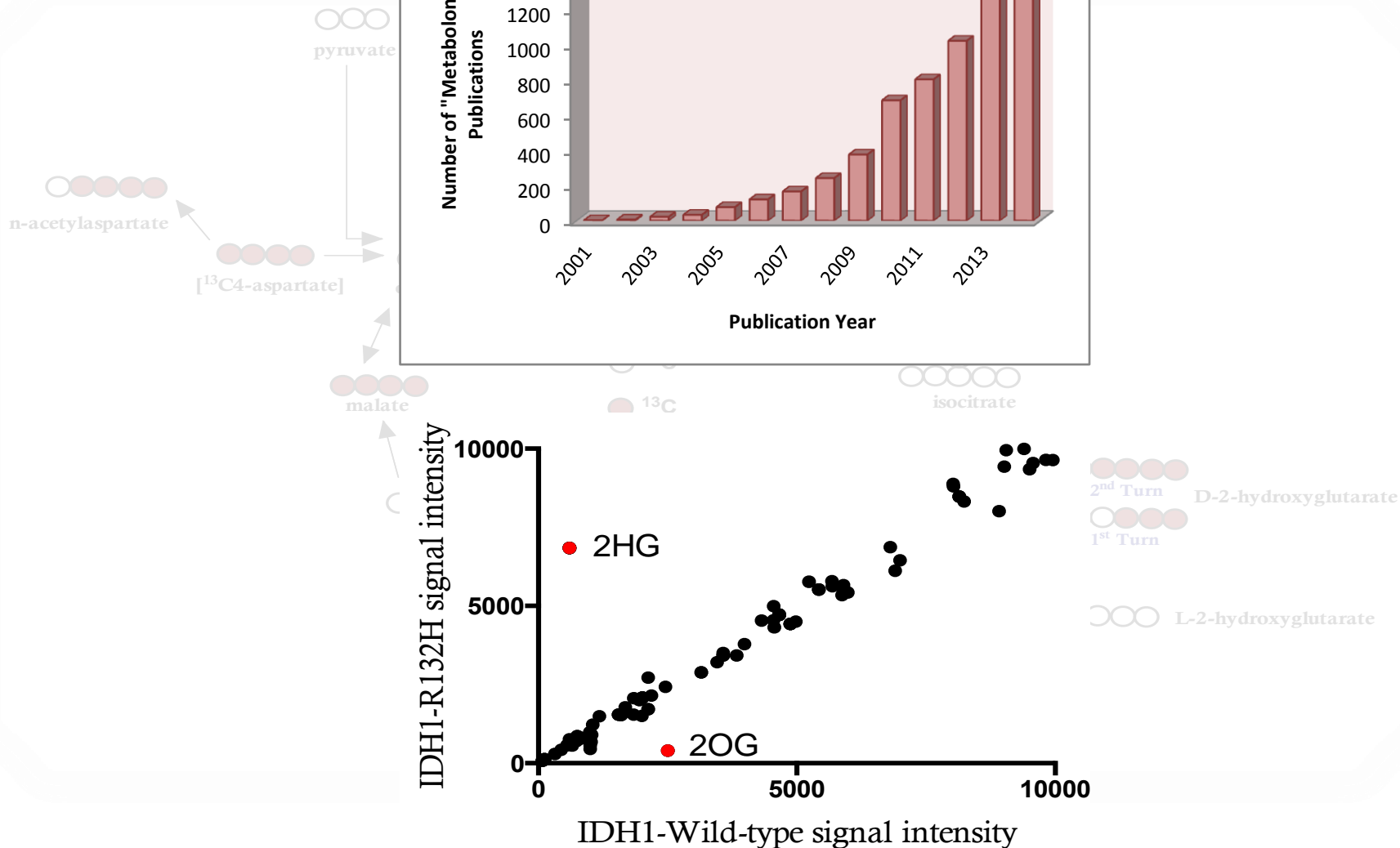
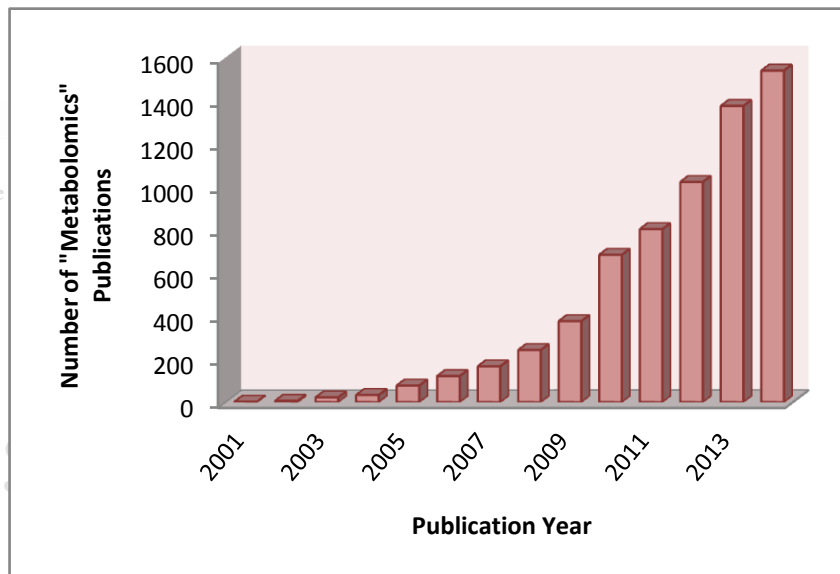
OMICS International has organized 500 conferences, workshops and national symposiums across the major cities including San Francisco, Las Vegas, San Antonio, Omaha, Orlando, Raleigh, Santa Clara, Chicago, Philadelphia, Baltimore, United Kingdom, Valencia, Dubai, Beijing, Hyderabad, Bengaluru and Mumbai.



Mass spectrometry-based metabolic profiles of brain cancer

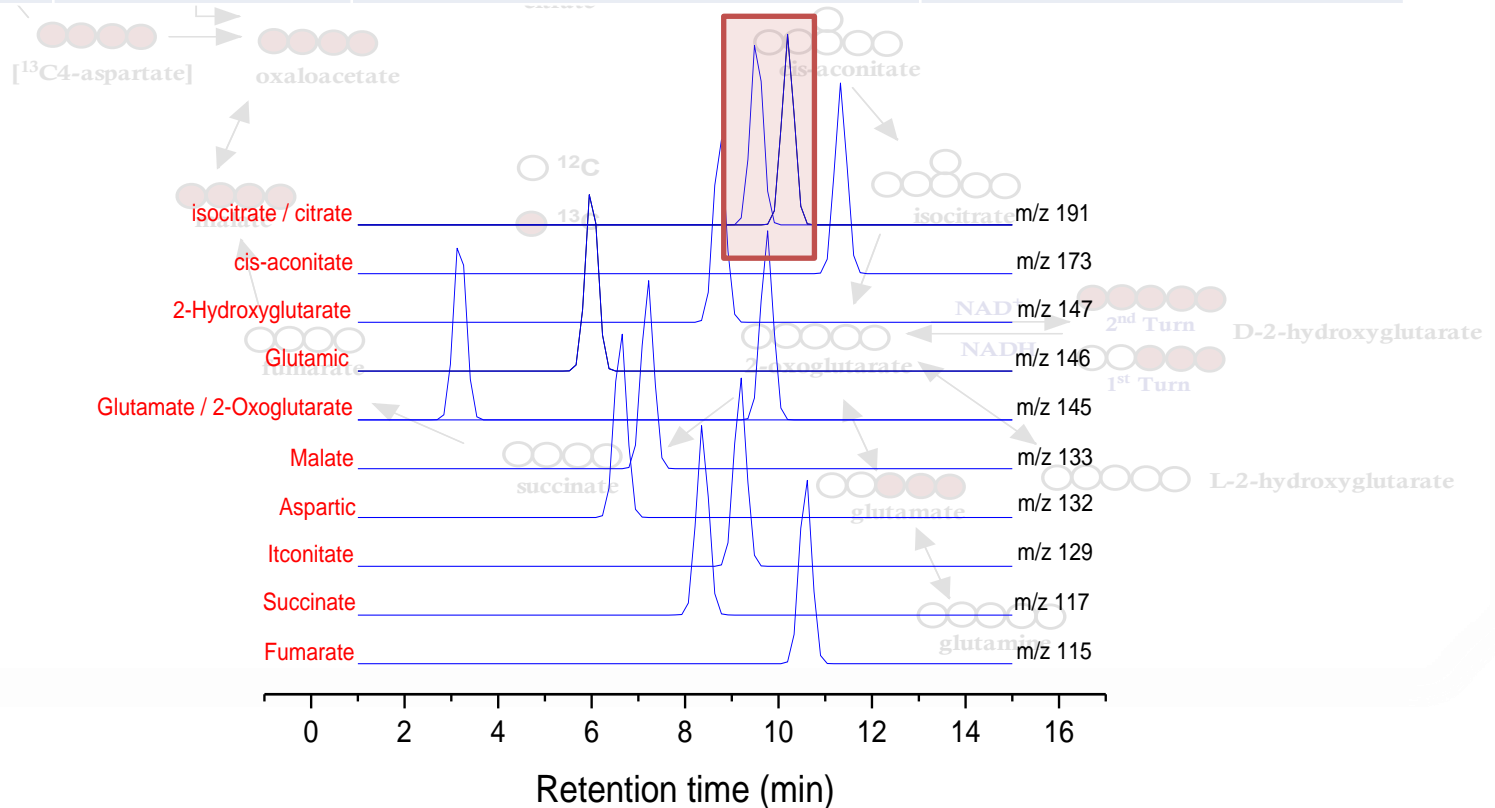


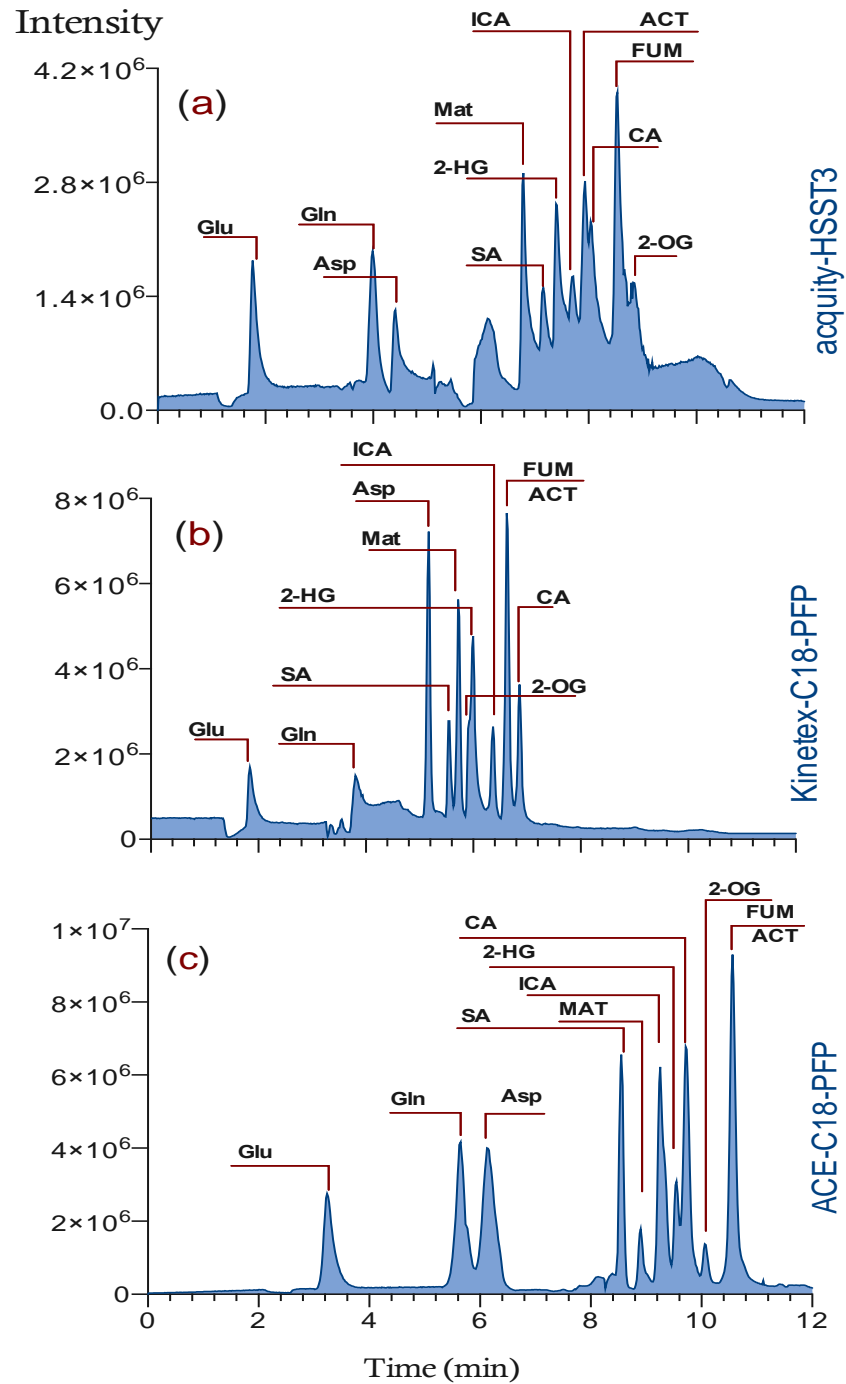
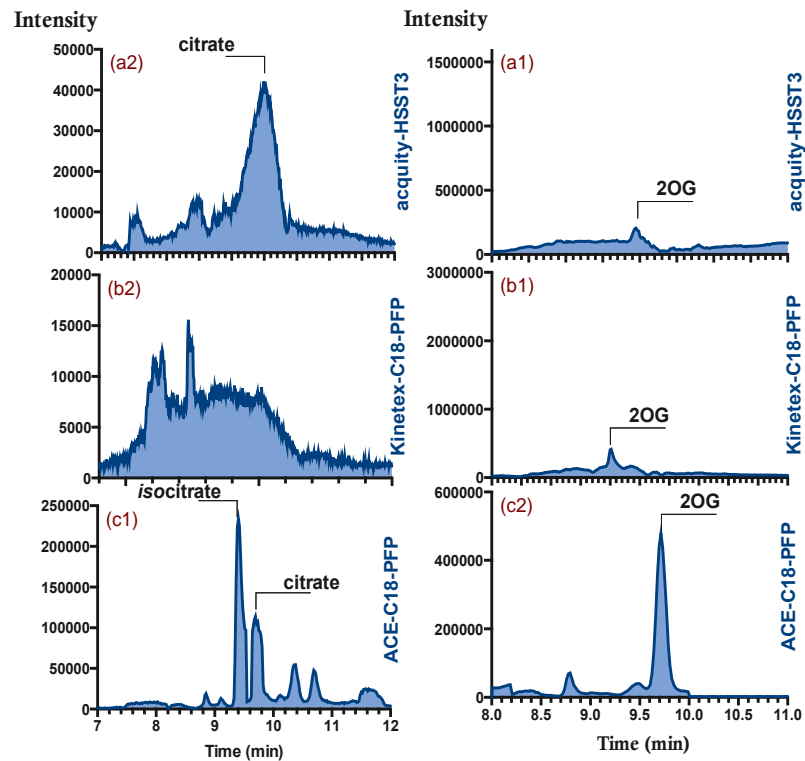
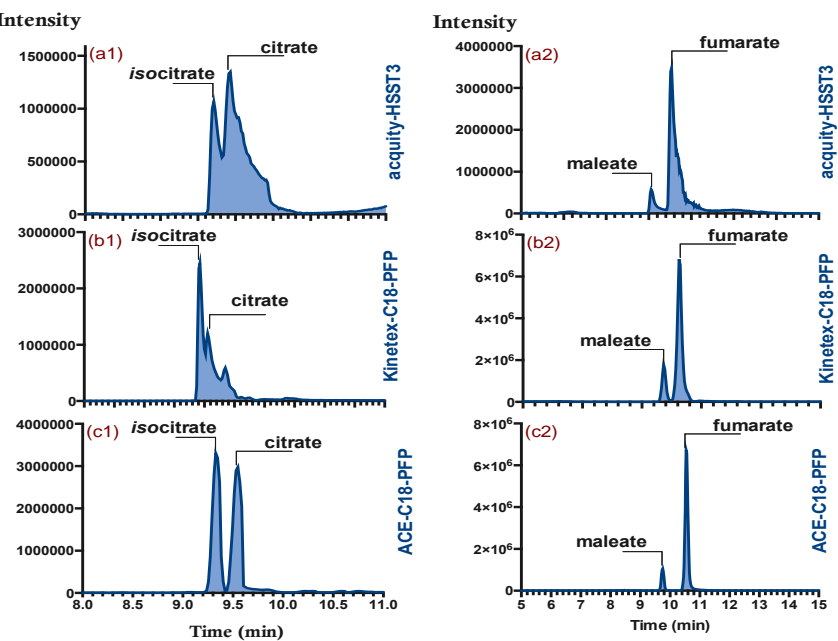
Method 1 | Direct infusion mass spectrometry metabolomics



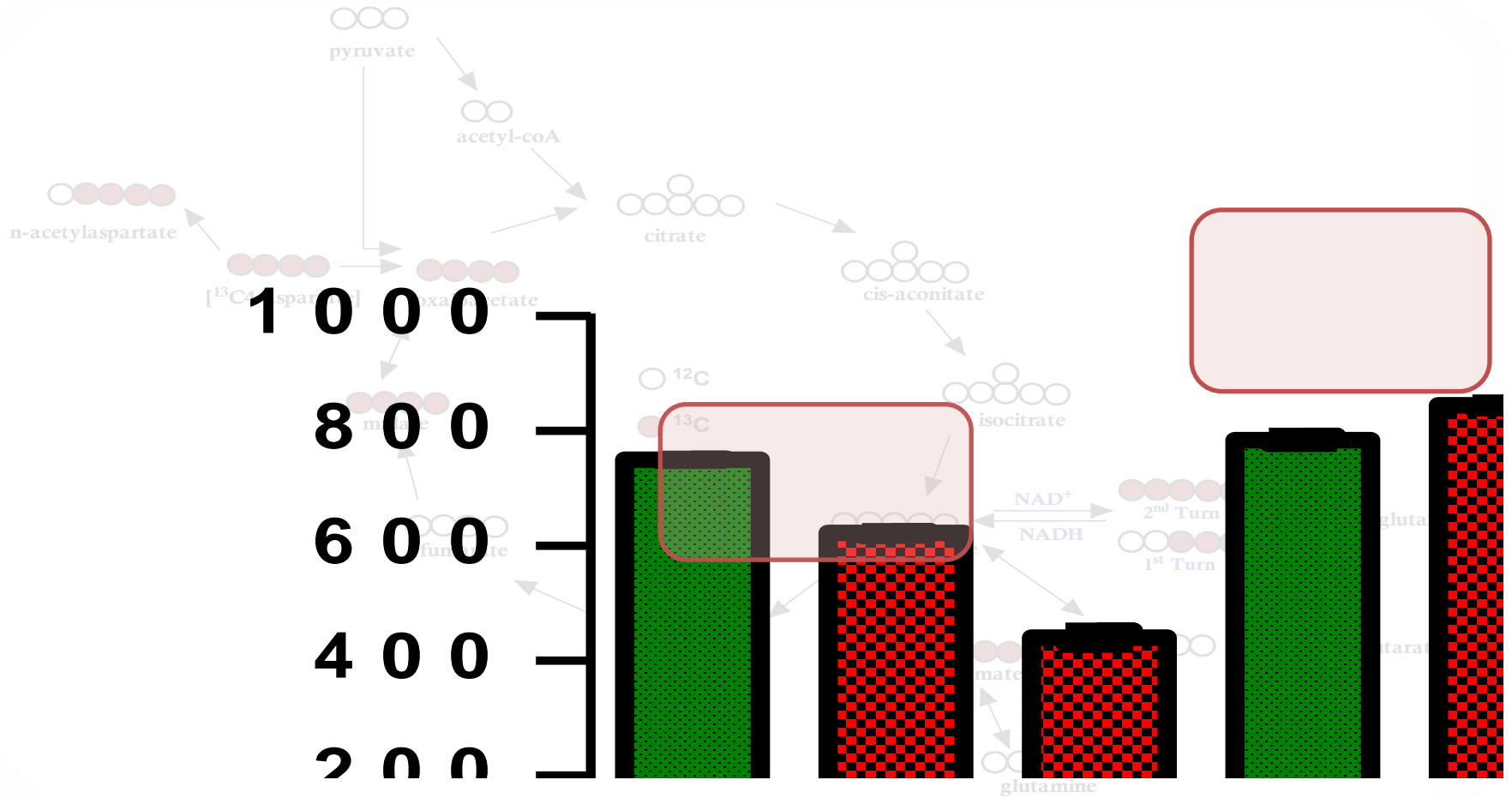
Method 2 | Development of an LC/MS for the quantifications of TCA cycle intermediates in human gliomas

Time (min)	Flow ml/min	% Mobil phase A 10mM TBA + 15 AcOH	% Mobil phase B ACN + 0.1% FA
initial	0.18	100.00	0.00
8.00	0.18	100.00	0.00
9.00	0.18	65.00	35.00
15.00	0.18	100.00	100.00



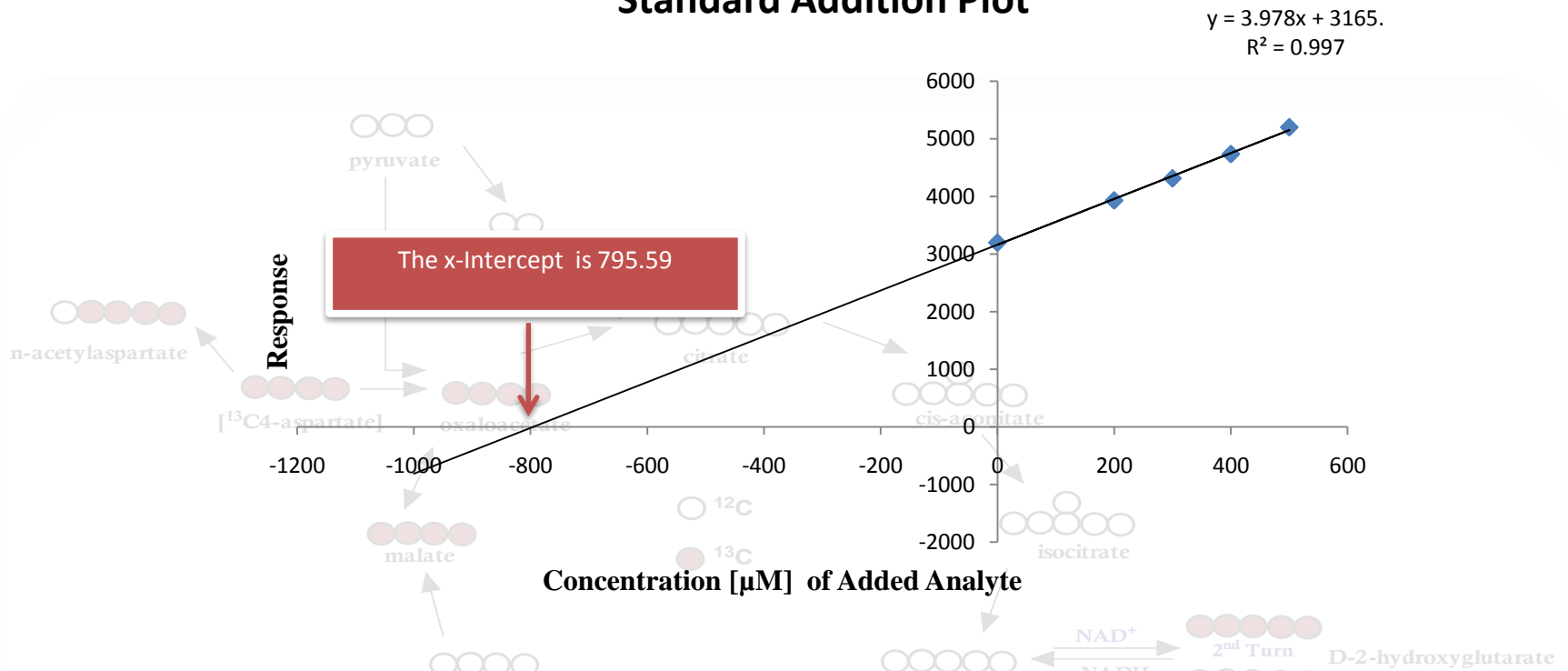


Results 2 | Development of an LC/MS for the quantifications of TCA cycle intermediates in human gliomas



Results 3 | STANDARD ADDITION METHOD

Standard Addition Plot

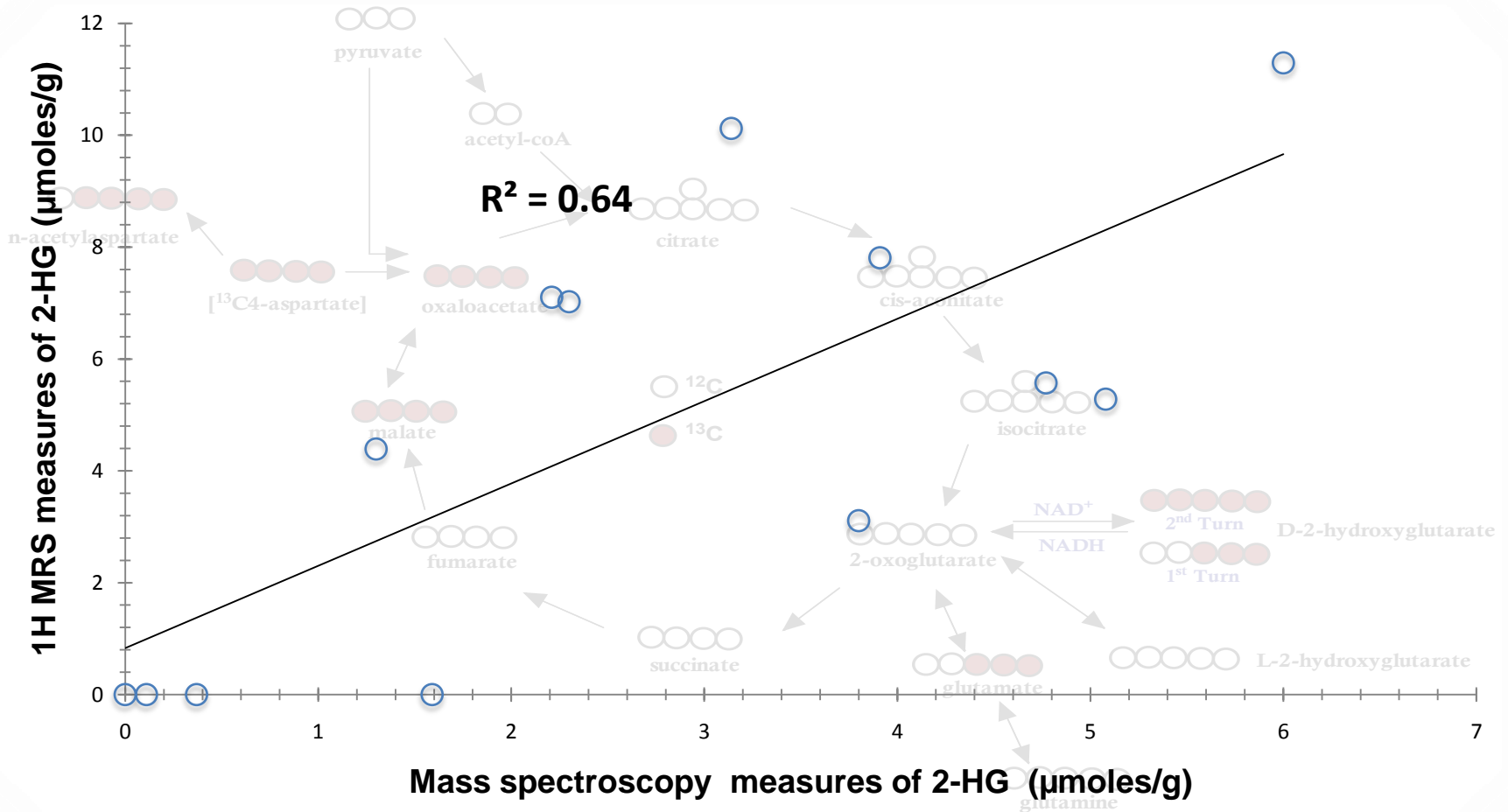


Sample No.	Extraction methods	Mean conc. of 2-HG [$\mu\text{mol/g}$]	2HG conc. PCA extract [$\mu\text{mol/g}$]	STD	%CV
741	MeOH	1.47	-	0.018	1.25
	PCA	1.07	1.60	0.025	1.24
827	MeOH	0.70	-	0.01	1.11
	PCA	0.50	0.75	0.01	0.79
741	MeOH	Un-LOD	-	-	-
827	Re-extracted	Un-LOD	-	-	-

Results 3 | 1H MRS estimates of 2-HG concentration

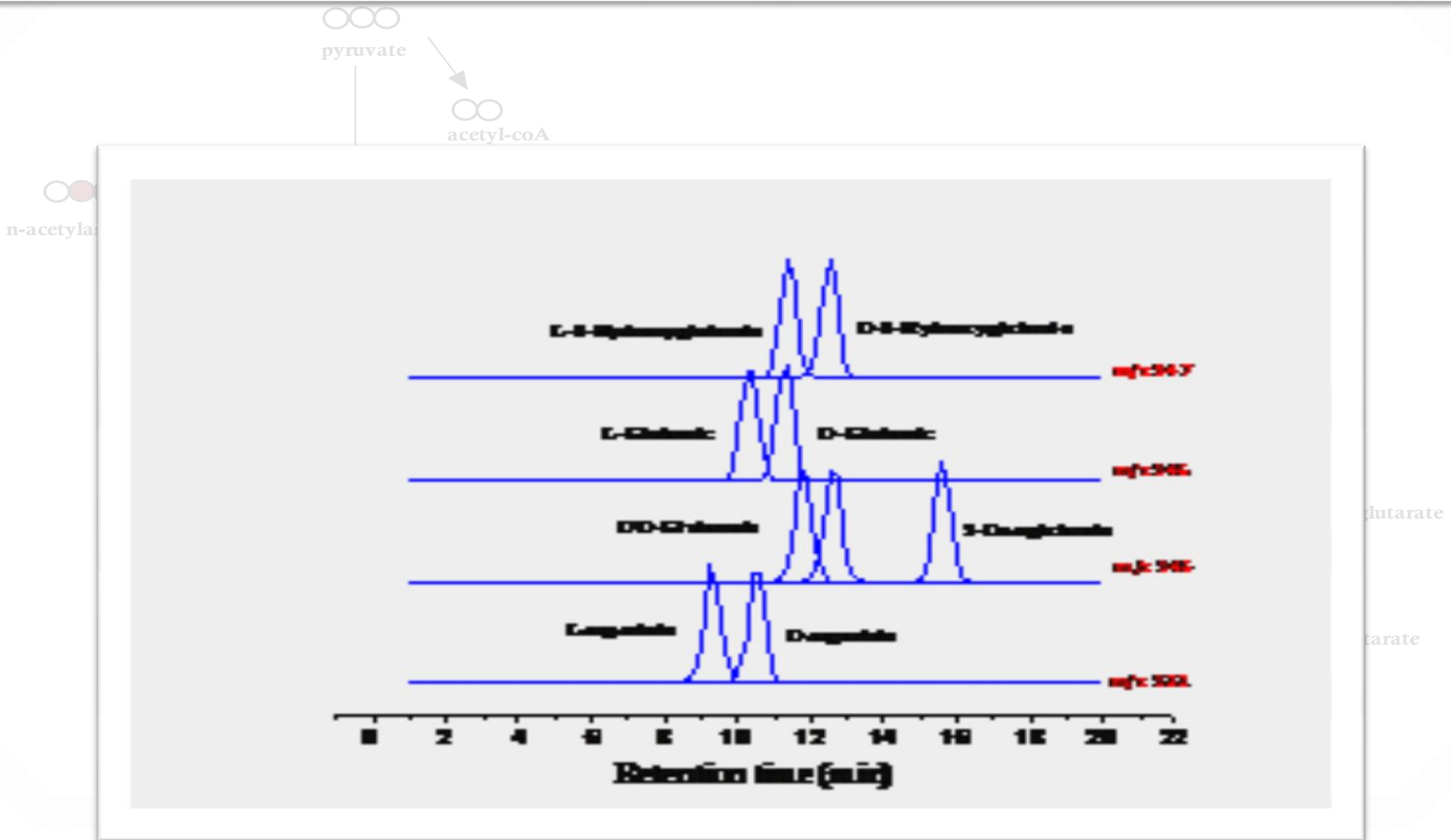
vs.

mass spectrometry measures of 2-HG.



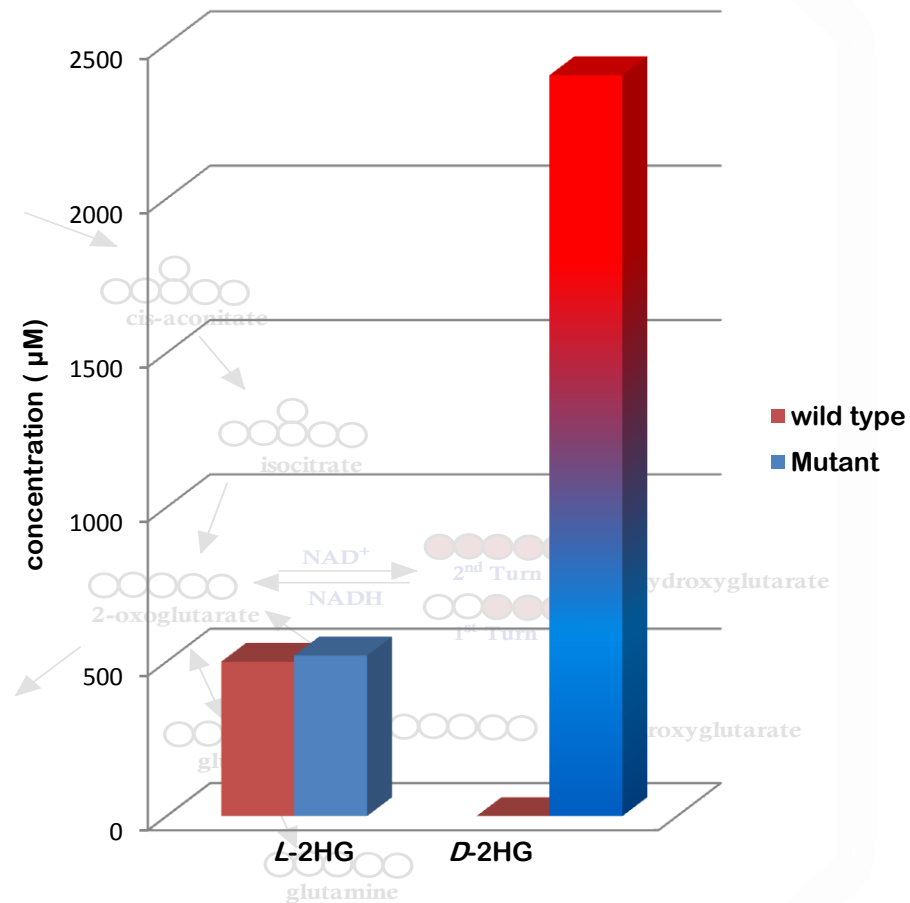
2-Hydroxyglutarate as the Key Effector of IDH Mutations Promoting Oncogenesis

Method 3 | Chiral liquid chromatography LC-MS in the determination of the configuration of 2-hydroxyglutaric acid in Cancer

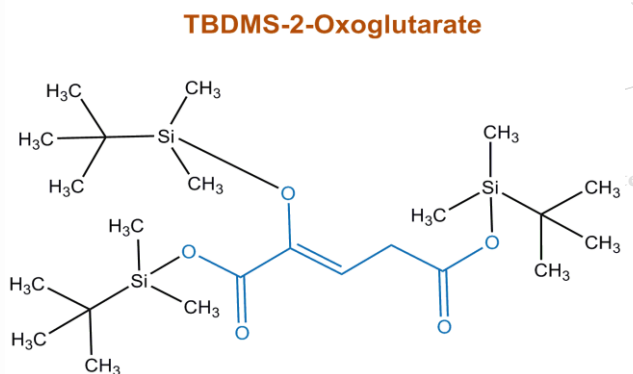
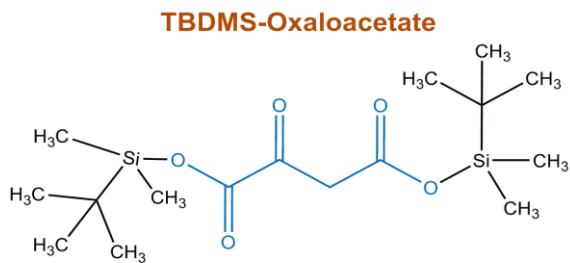


Results 3 | Chiral liquid chromatography LC–MS in the determination of the configuration of 2-hydroxyglutaric acid in Cancer

Limit of detection	5 μ M
Limit of quantification	10 μ M
calibration curve linearity	beyond 2000 μ M
Intra-day precision (n=3)	5.8%
inter-day precision (n=3)	13.6%
standard deviation (SD)	7.3



Method 4 | Development of an GC/MC for the quantifications of TCA cycle intermediates in human gliomas

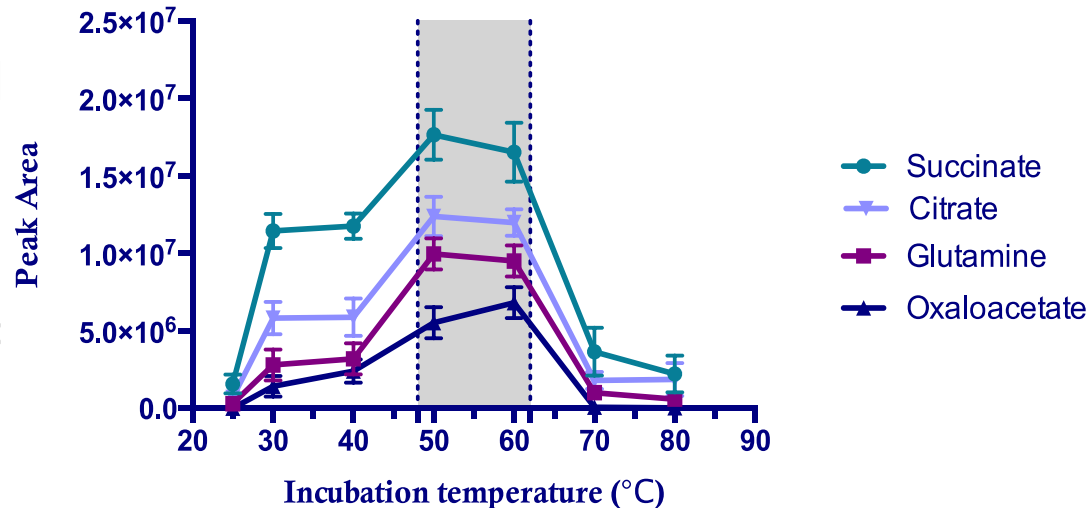


2-Oxoglutarate

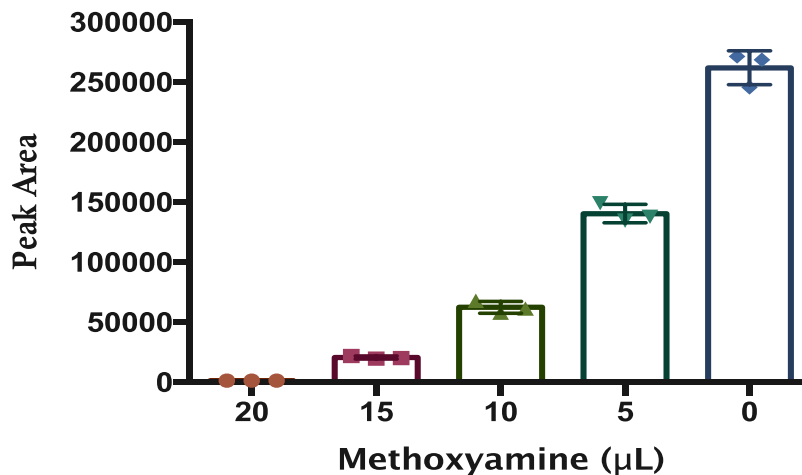
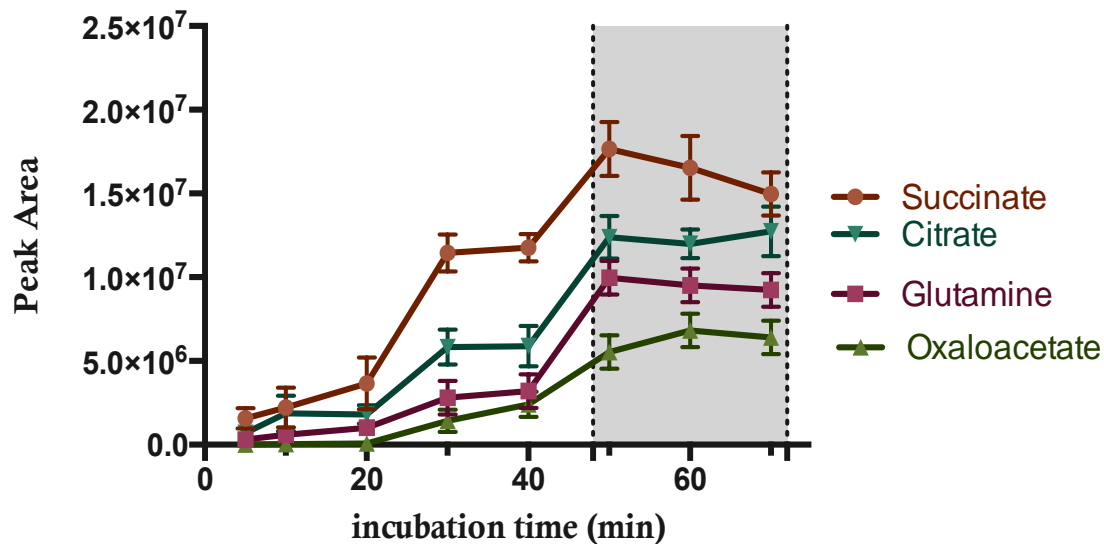
coA

^{14}C

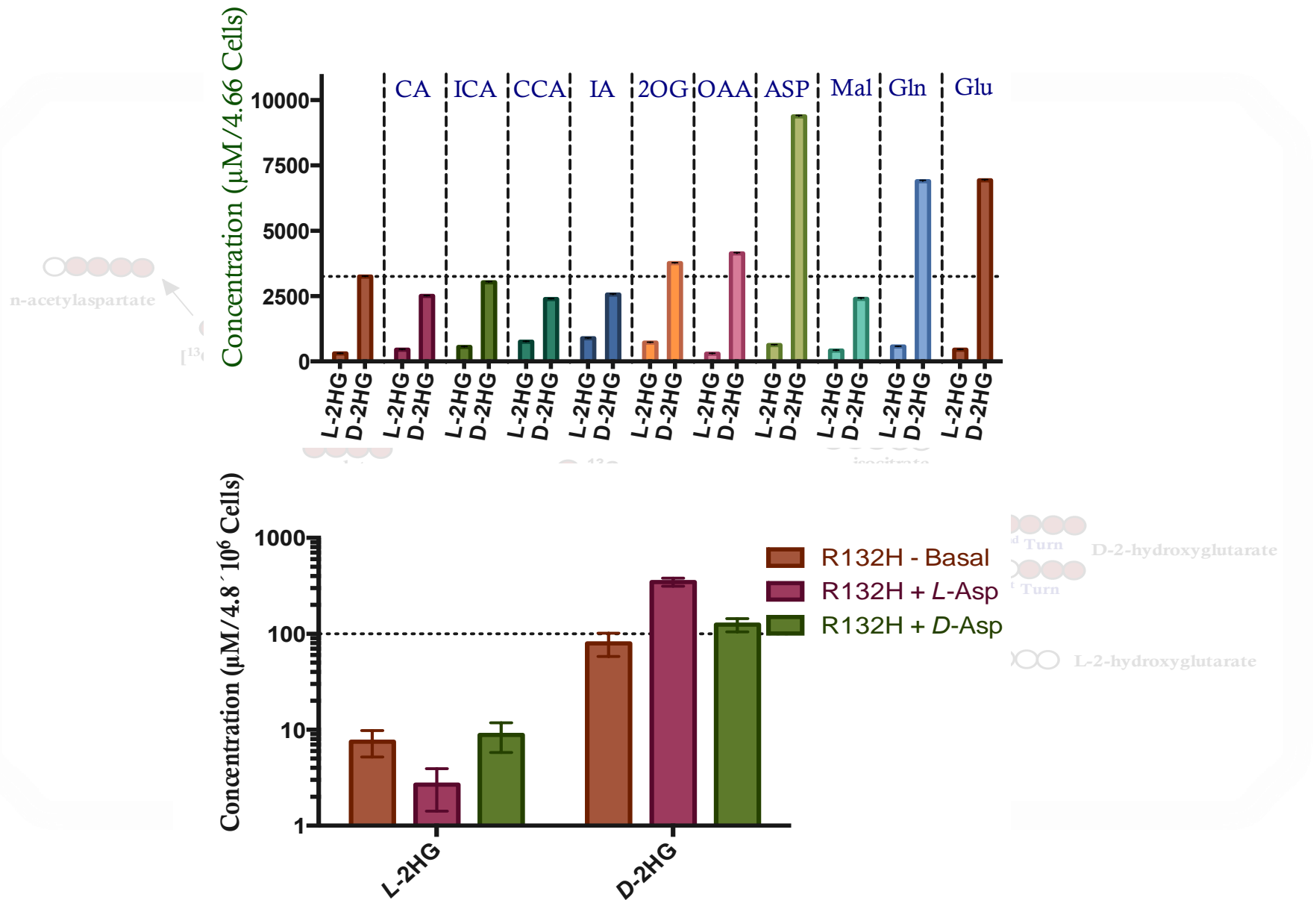
Peak area vs Incubation temperature



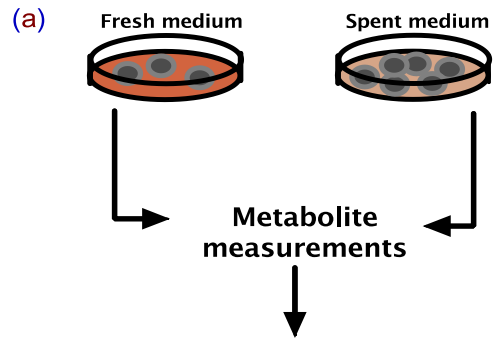
peak area vs Incubation time



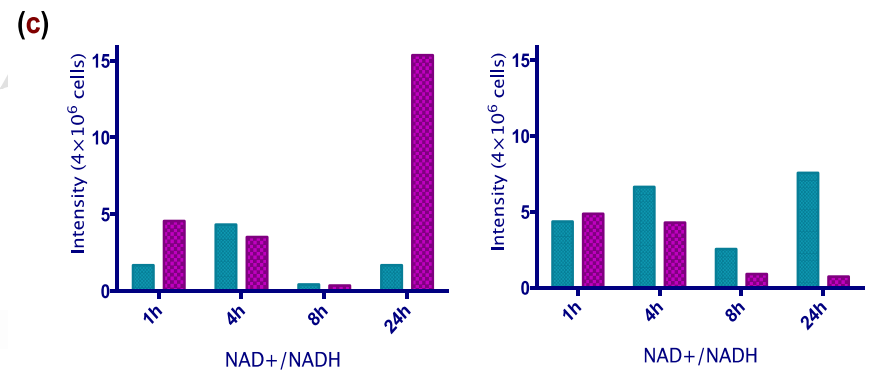
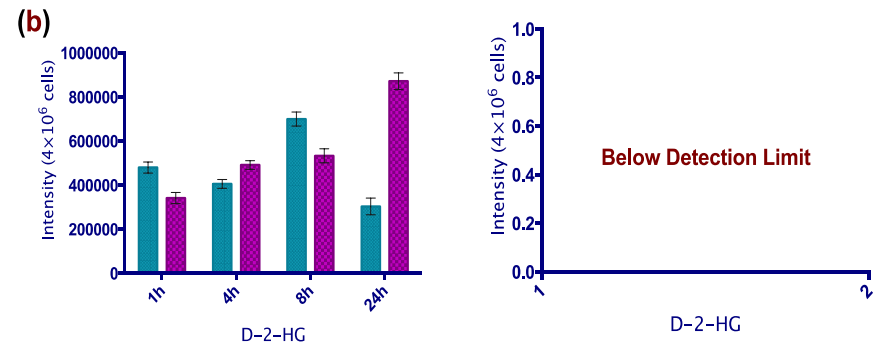
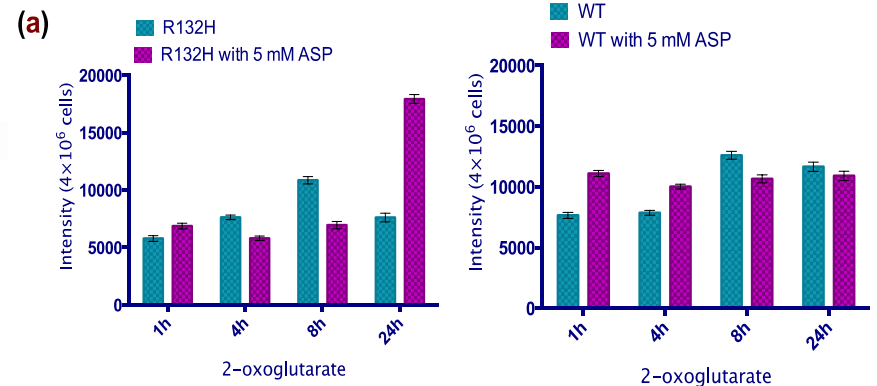
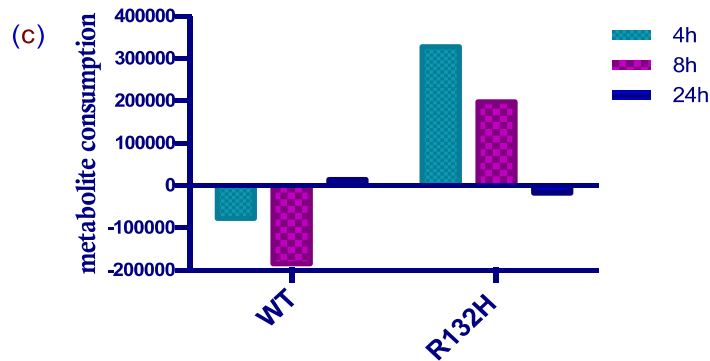
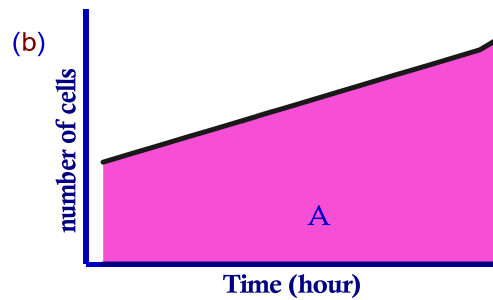
Results 4 | The effect of the TCA cycle metabolites spiked (5mM) in the IDH1^{R132H}



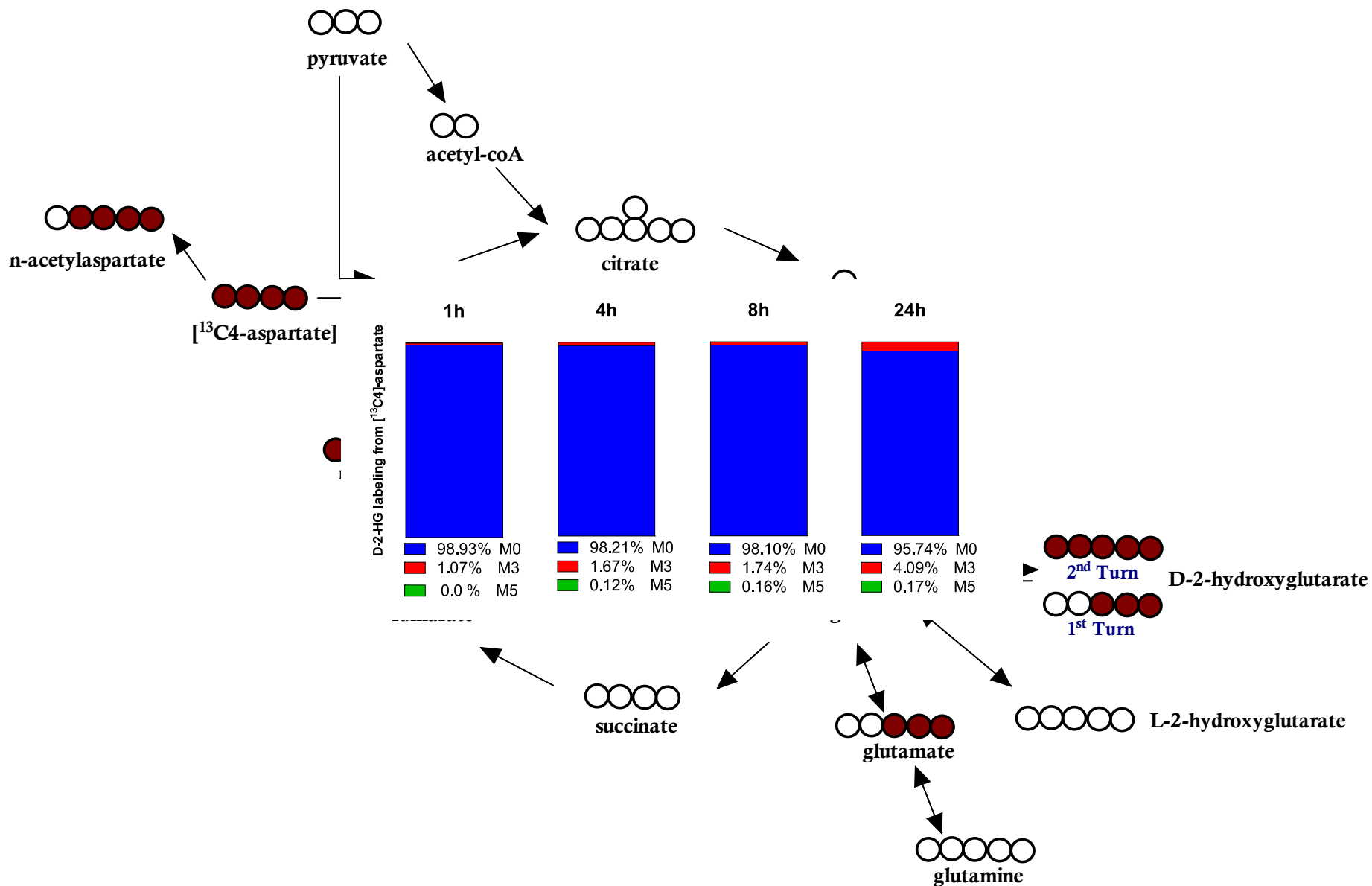
Results 4 | The effect of the TCA cycle metabolites spiked (5mM) in the IDH1^{R132H}



$$\text{Metabolite consumption} = \frac{[X]_{\text{spent}} - [X]_{\text{fresh}}}{A}$$



Results 5 | Use of [¹³C₄]-aspartate to Label cytosolic metabolites in the IDH1^{R132H}





glutamate

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OMICS International

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