



## GENE THERAPY APPROVALS & QPS MILESTONES

### QPS

<b>2003</b>	Oligo PK via LC-MS/MS
<b>2006</b>	CLIA Assay - Inclusion/Exclusion Criteria Biomarkers - Primary End-point
<b>2007</b>	Oligo PK via hybridization-ELISA
<b>2009</b>	Oligo PK via hybridization-LC-FLD Oligo PK via LC-UV
<b>2010</b>	Oligo Biodistribution via Autoradiography Oligo <i>in vitro</i> Metabolic Stability
<b>2011</b>	Oligo Biodistribution via QWBA Oligo Mass Balance/Excretion
<b>2012</b>	Oligo Biodistribution via Microautoradiography
<b>2013</b>	Oligo ADA Oligo <i>in vitro</i> CYP Induction
<b>2014</b>	Oligo PK via LC-HRMS Oligo <i>in vitro</i> Protein Binding mRNA PK/Biodistribution/Shedding via QPCR
<b>2015</b>	Vector PK/Biodistribution/Shedding via QPCR Oligo <i>in vitro</i> Reaction Phenotyping
<b>2016</b>	mRNA ADA Vector ADA Oligo <i>in vitro</i> Drug Transport



### KEY

BIOANALYSIS      ADME      GENE THERAPY APPROVALS

