

EXHIBIT 5

TIMELINE OF EPIDEMIOLOGICAL STUDIES CITED IN APPENDIX P.¹

Studies Bearing on Naproxen Cardioprotection

Study	Known to Merck	Design	Key Findings	Supportive of the Naproxen Cardioprotection Hypothesis?
Watson NSAID Study Published: May 27, 2002	Jan. 2001	Case-control study of rheumatoid arthritis patients in the U.K. General Practitioner's Research Database (809 cases of acute thromboembolic events; 2285 controls).	Current naproxen users had a significantly lower risk of acute thromboembolic events than non-users (odds ratio 0.61; 95% confidence interval, 0.39 to 0.94).	Yes
Rahme NSAID Study Published: May 27, 2002	May 2001	Case-control study of patients \geq 65 years old in the RAMQ and Med-Echo Canadian healthcare databases (14,163 cases of acute myocardial infarction; 14,160 controls).	Concurrent-chronic users of naproxen had a significantly lower incidence of acute myocardial infarction than concurrent-chronic users of other NSAIDs (odds ratio 0.64; 95% confidence interval, 0.48 to 0.86).	Yes

¹ Listed studies are discussed in Appendix P.

Study	Known to Merck	Design	Key Findings	Supportive of the Naproxen Cardioprotection Hypothesis?
Solomon NSAID Study Published: May 27, 2002	Oct. 2001	Case-control study of patients in the new Jersey Medicaid or Medicare and Pharmaceutical Assistance for the Aged and Disabled programs (4,425 cases of acute myocardial infarction; 17,700 controls).	Naproxen users had a significantly lower risk of acute myocardial infarction than patients who used no NSAID (odds ratio 0.84; 95% confidence interval, 0.72 to 0.98).	Yes
Ray NANSOID Study Published: Jan. 12, 2002	Jan. 2002	Cohort study of patients in the Tennessee Medicaid program (181,441 periods of new NANSOID use in 128,002 individuals and 181,441 matched control periods in 134,642 individuals).	Naproxen users did not have a significantly different risk of serious coronary heart disease than patients who did not use any NSAID (rate ratio 0.95; 95% confidence interval, 0.82 to 1.09).	No
Kimmel NANSOID Study Published: Mar. 17, 2004	Mar. 2002	Case-control study of patients between the ages of 40 and 75 in 36 hospitals in a five-county region around Philadelphia, PA (1,055 cases of myocardial infarction; 4,135 controls).	Naproxen users had a significantly lower risk of myocardial infarction than patients who did not use any NSAID (including aspirin) (odds ratio 0.48; 95% confidence interval, 0.28 to 0.82).	Yes

Study	Known to Merck	Design	Key Findings	Supportive of the Naproxen Cardioprotection Hypothesis?
Mamdani Myocardial Infarction Study Published: Feb. 24, 2003	Feb. 2003	Cohort study of patients at least 65 years old in administrative healthcare databases in Ontario, Canada (5,669 naproxen users; 100,000 controls).	Naproxen users did not have a statistically different risk of acute myocardial infarction than patients who did not use any NSAID (rate ratio 1.0; 95% confidence interval, 0.6 to 1.7).	No
Ingenix Study Published online: 2005	Nov. 2003	Cohort study of 425,000 patients in the United Healthcare database.	Naproxen was not associated with a statistically different risk of acute coronary syndrome than ibuprofen or diclofenac (relative risk 1.14, 95% confidence interval, 0.93 to 1.39).	No
Garcia-Rodriguez NSAID Study Published: June 22, 2004	June 2004	Cohort study of patients aged 50 to 84 years in the U.K. General Practitioner's Research Database with a nested case-control analysis (4,795 cases; 20,000 controls).	Naproxen users did not have a statistically different risk of acute myocardial infarction than patients who did not use any NSAID (odds ratio 0.89, 95% confidence interval, 0.64 to 1.24).	No

Study	Known to Merck	Design	Key Findings	Supportive of the Naproxen Cardioprotection Hypothesis?
Graham MI/SCD Study Published: Jan. 25, 2005	Aug. 2004	Cohort study of all patients between the ages of 18 and 84 in the Kaiser Permanente California database with a nested case-control analysis (8,143 cases; 31,496 controls).	Current naproxen use was not associated with a significantly increased risk of acute myocardial infarction relative to remote NSAID users (odds ratio 1.14; 95% confidence interval, 1.0 to 1.3).	No
Juni Meta-Analysis Published online: Nov. 5, 2004	Dec. 2004	Meta-analysis of eight case-control and three cohort studies of naproxen's cardiovascular effects.	Naproxen was associated with a statistically significant lower risk cardiovascular events compared to controls (0.86; 95% confidence interval, 0.75 to 0.99).	Yes

Studies Concerning Vioxx

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
<p>Rahme Coxib Study</p> <p>Published in abstract: 2004</p>	<p>Mar. 2002 (preliminary results only)</p>	<p>Cohort study of patients 65 to 84 years old who filled a prescription for a study drug in the Quebec government health insurance databases (14,056.4 patient-years of NSAID exposure; 37,371.0 patient-years of Vioxx exposure)..</p>	<p>There was no statistically significant increased risk of hospitalization for acute myocardial infarction among Vioxx users relative to diclofenac/ibuprofen users (hazard ratio 1.03; 95% confidence interval, 0.83 to 1.27).</p>	<p>No</p>

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
<p>Ray Coxib Study</p> <p>Published: Oct. 5, 2002</p>	<p>Aug. 2002</p>	<p>Cohort study of patients between the ages of 50 and 84 in the Tennessee Medicaid program (251,046 NSAID users; 202,916 non-users).</p>	<p>New users of high-dose Vioxx (> 25 mg) faced a higher risk of serious coronary heart disease than patients who did not use any NSAID (rate ratios 1.93; 95% confidence interval, 1.09 to 3.43) and than Celebrex users (rate ratio 2.20, 95% confidence interval, 1.17 to 4.10). There was no statistically significant increase in risk among new users of lower doses of Vioxx (\leq 25 mg) relative to patients who did not use any NSAID (rate ratio 1.02; 95% confidence interval, 0.76 to 1.37). Nor was there a statistically significant increased risk associated with current use of Vioxx relative to non-use of NSAIDs at a dose greater than 25 mg (rate ratio 1.70; 95% confidence interval, 0.98 to 2.95) or at a dose less than or equal to 25 mg (rate ratio 1.03; 95% confidence interval, 0.78 to 1.35).</p>	<p>Yes, for new users of high dose Vioxx relative to non-users of NSAIDs and to Celebrex users; no, for users of normal doses of Vioxx and for users of high dose Vioxx relative to non-users of NSAIDs.</p>

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
Levy Coxib Study Published in abstract: Sept. 2002	Oct. 2002	Cohort study of patients over 50-years old who received 50 consecutive days of a study medication in a large group-model HMO database (172,260 patients with 182,331 exposures).	There was no statistically significant difference in the rates of myocardial infarction of patients treated with Vioxx relative to those treated with Celebrex (odds ratio 1.06; 95% confidence interval, 0.7 to 1.6); naproxen (odds ratio 1.4; 95% confidence interval, 0.96 to 2.06); or ibuprofen (odds ratio 1.38; 95% confidence interval 0.97 to 1.98).	No
Mamdani Myocardial Infarction Study Published: Feb. 24, 2003	Feb. 2003	Cohort study of patients at least 65 years old in administrative healthcare databases in Ontario, Canada (5,669 naproxen users; 100,000 controls).	New users of Vioxx were not at an increased risk of acute myocardial infarction relative to patients who did not use any NSAID (rate ratio 1.0; 95% confidence interval, 0.84 to 1.4).	No

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
<p>Solomon Coxib Study</p> <p>Published: May 4, 2004</p>	<p>Mar. 2003 (preliminary results only)</p>	<p>Case-control study of patients 65 years and older who received medications through two state-sponsored pharmaceutical benefits programs (10,895 cases of acute myocardial infarction; 43,580 controls).</p>	<p>There was no statistically significant difference in risk of acute myocardial infarction between Vioxx users and patients who did not use any NSAID (odd ratio 1.14; 95% confidence interval, 1.00 to 1.31); ibuprofen users (odds ratio 1.21; 95% confidence interval, 0.92 to 1.58); or naproxen users (odds ratio 1.17; 95% confidence interval, 0.90 to 1.52). Risk of acute myocardial infarction was elevated in Vioxx users relative to Celebrex users (odds ratio 1.24; 95% confidence interval, 1.05 to 1.46).</p>	<p>No, relative to no NSAID, ibuprofen, or naproxen; yes, relative to Celebrex.</p>

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
<p>Kimmel Coxib Study</p> <p>Published: Feb. 1, 2005</p>	<p>May 2003 (preliminary results only)</p>	<p>Case-control study of patients between the ages of 40 and 75 in 36 hospitals in a five-county region around Philadelphia, PA (1,718 cases of myocardial infarction; 6,800 controls).</p>	<p>There was no statistically significant difference in risk for myocardial infarction between Vioxx users and patients who did not use any NSAID (odds ratio 1.16; 95% confidence interval, 0.70 to 1.93). Vioxx was associated with an increased risk relative to Celebrex (odds ratio 2.72; 95% confidence interval, 1.24 to 5.95). There was a statistically significant increased risk among Vioxx users relative to naproxen users (odds ratio 3.39; 95% confidence interval, 1.37 to 8.40).</p>	<p>No, relative to non-users of NSAIDs; yes, relative to Celebrex and naproxen</p>

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
Ingenix Study Published online: 2005	Nov. 2003	Cohort study of 425,000 patients in the United Healthcare database.	Current Vioxx use was associated with an increased risk of acute coronary syndrome relative to ibuprofen/diclofenac (rate ratio; 95% confidence interval, 1.09 to 1.68). There was no statistically significant increased risk of myocardial infarction with Vioxx relative to ibuprofen/diclofenac (rate ratio 1.30; 95% confidence interval, 1.00 to 1.69).	Yes, for acute coronary syndrome; no, for myocardial infarction
Whelton Coxib Study Published in abstract: Mar. 3, 2004	March 2004	Cohort study of treated hypertensive osteoarthritis and rheumatoid arthritis patients in a private New England health claims database.	Vioxx users had a statistically significant increased risk of acute myocardial infarction or stroke in treated hypertensive patients relative to such patients who did not use any NSAID (relative risk 2.45; 95% confidence interval, 1.71 to 3.51).	Yes

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
<p>Mamdani Congestive Heart Failure Study</p> <p>Published: May 29, 2004</p>	<p>May 2004</p>	<p>Cohort study of patients 66 years and older in the Quebec administrative healthcare databases (100,000 controls; 18,908 Celebrex users; 14,583 Vioxx users; and 11,606 other NDSAID users).</p>	<p>Vioxx was associated with a statistically significant increased rate of congestive heart failure relative to patients who did not use any NSAID (rate ratio 1.8; 95% confidence interval, 1.5 to 2.2); Celebrex users (rate ratio 1.8, 95% confidence interval 1.4 to 2.4); and users of non-selective NSAIDs (rate ratio 1.5; 95% confidence interval, 1.1 to 2.1).</p>	<p>Yes</p>
<p>Graham MI/SCD Study</p> <p>Published: Jan. 25, 2005</p>	<p>Aug. 2004</p>	<p>Cohort study of all patients between the ages of 18 and 84 in the Kaiser Permanente California database with a nested case-control analysis (8,143 cases; 31,496 controls).</p>	<p>Current Vioxx use was associated with an increased risk of myocardial infarction or sudden cardiac death relative to current Celebrex use (odds ratio 1.59; 95% confidence interval, 1.10 to 2.32). Current Vioxx use at > 25 mg was associated with a higher increase in risk relative to both remote NSAID use (odds ratio 3.00; 95% confidence interval, 1.09 to 8.31) and current Celebrex use (odds ratio 3.58; 95% confidence interval, 1.27 to 10.11).</p>	<p>Yes, relative to remote NSAID use and Celebrex use</p>

Study	Known to Merck	Design	Key Findings	Association Between Vioxx and Increased CV Risk?
Shaya Coxib Study Published: Jan. 25, 2005	Aug. 2004	Cohort study of 6,5210 patients in the Maryland Medicaid population (5,245 non-naproxen NSAID users; 1,005 selective Cox-2 inhibitor users).	Vioxx was not associated with an increased risk of cardiovascular thrombotic events relative to non-selective NSAIDs (excluding naproxen) (odds ratio 0.99; 95% confidence interval, 0.76 to 1.30)	No
Juni Meta-Analysis Published online: Nov. 5, 2004	Dec. 2004	Meta-analysis of eight case-control and three cohort studies of naproxen's cardiovascular effects.	Vioxx was associated with a significantly increased risk of myocardial infarction relative to controls (relative risk 2.24; 95% confidence interval, 1.24 to 4.02).	Yes