Annexure

Parameters	**Controls** (For MM study)	**MM patients**	**Group-I MM patients**	**Group-II MM patients**	**Controls** (For cervical cancer study)	**Cervical cancer patients**
Total protein (gm/dl)	6.63±0.279*	8.73±0.378	9.95±0.496	7.04±0.34	------	------
Albumin (gm/dl)	3.36±0.260	3.42±0.147	3.54±0.170	3.27±0.258	------	------
Alpha-1 (gm/dl)	0.40±0.024	0.37±0.018	0.35±0.262	0.38±0.024	------	------
Alpha-2 (gm/dl)	0.37±0.031	0.71±0.033	0.66 ±0.043	0.76±0.048	------	------
Beta (gm/dl)	1.06±0.064	0.94±0.104	1.05±0.171	0.78±0.067	------	------
Gamma (gm/dl)	1.35±0.086	3.26±0.336	4.36±0.442	1.75±0.29	------	------
A:G Ratio	2.79±0.234	1.70±0.181	1.25±0.23	2.31±0.235	------	------
IgG (mg/dl)	955.75±87.113	3313.28±608.50	------	------	------	------
IgA (mg/dl)	155.75±57.456	638.60±403.804	------	------	------	------
IgM (mg/dl)	27.00±0.000	58.76±5.0495	------	------	------	------
Total protein (gm/dl)	6.60±0.287	8.73±0.378	9.95±0.495	7.03±0.339	6.29±0.333	8.17±0.244
UnLMW (gm/dl)	0.02±0.000	0.67±0.237	0.12±0.083	0.34±0.169	0.02±0.001	0.06±0.009
Prealbumin (gm/dl)	0.12±0.019	0.33±0.074	0.17±0.038	0.27±0.049	0.12±0.024	0.13±0.015
Albumin (gm/dl)	2.18±0.077	2.59±0.138	2.95±0.187	2.08±0.144	2.13±0.095	3.31±0.142
Alpha (gm/dl)	0.76±0.062	1.10±0.085	1.19±0.126	0.965±0.099	0.69±0.072	0.61±0.028
Beta (gm/dl)	0.83±0.039	0.95±0.057	1.02±0.087	0.83±0.053	0.84±0.055	1.21±0.043
Gamma (gm/dl)	2.72±0.142	3.78±0.241	4.32±0.327	3.02±0.288	2.58±0.165	2.51±0.098
UnLMW:gamma	0.01±0.000	0.11±0.019	0.06±0.010	0.12±0.020	0.01±0.000	2.57±0.101

Parameters	**Controls** (For MM study)	**MM patients**	**Group-I MM patients**	**Group-II MM patients**	**Controls** (For cervical cancer study)	**Cervical cancer patients**
UnLMW:gamma	0.01±0.000	0.11±0.019	0.06±0.010	0.12±0.020	0.01±0.000	2.57±0.101
Prealbumin:gamma	0.04±0.005	0.11±0.019	0.06±0.010	0.12±0.020	0.04±0.006	2.64±0.101
Albumin:gamma	0.83±0.029	0.82±0.065	0.82±0.089	0.82±0.099	0.86±0.039	5.82±0.220
Alpha:gamma	0.28±0.017	0.31±0.019	0.29±0.040	0.34±0.041	0.27±0.026	3.12± 0.110
Beta:gamma	0.31±0.014	0.31±0.029	0.31±0.014	0.31±0.029	0.34±0.017	3.72±0.126
TSA (mg/dl)	15.93±1.033	50.92±3.716	49.97±5.202	52.23±5.297	15.96±0.945	27.01±1.748
TSA/TP (mg/gm)	2.45±0.155	6.32±0.506	5.27±0.553	7.78±0.849	2.57±0.154	3.40±0.239
Fucose (mg/dl)	14.84±1.447	12.40±1.485	11.82±1.861	13.54±2.545	16.28±1.332	20.39±1.777
Fucose/TP (mg/gm)	0.61±0.118	1.50±0.168	1.22±0.181	2.06±0.283	0.42±0.046	2.46±0.237
Hexoses (mg/dl)	19.37±2.770	29.56±2.308	28.48±3.173	31.05±3.384	16.13±2.084	25.70±2.573
MP (mg/dl)	114.13±8.762	179.33±17.331	152.58±14.935	216.27±34.688	113.17±11.613	140.32±11.614
Total glycoprotein ($OD \times mm^2$)	6.24±0.430	10.70±0.969	8.11±0.729	14.26±1.832	6.90±0.643	14.46±0.920
Prealbumin ($OD \times mm^2$)	0.16±0.022	1.57±0.557	0.82±0.327	2.05±0.875	0.19±0.023	0.88±0.174
Albumin ($OD \times mm^2$)	0.87±0.058	1.26±0.101	1.13±0.119	1.43±0.174	0.88±0.081	1.60±0.084
Alpha ($OD \times mm^2$)	0.52±0.034	0.70±0.080	0.53±0.062	0.93±0.157	0.55±0.052	1.10±0.097
Beta ($OD \times mm^2$)	1.30±0.074	1.67±0.143	1.28±0.127	2.20±0.253	1.36±0.112	2.07±0.122
Gamma ($OD \times mm^2$)	3.50±0.298	6.30±0.607	4.97±0.545	8.13±1.129	4.04±0.436	8.99±0.609

Parameters	Controls (For MM study)	MM patients	Group-I MM patients	Group-II MM patients	Controls (For cervical cancer study)	Cervical cancer patients
Gamma (OD×mm^2)	3.50±0.298	6.30±0.607	4.97±0.545	8.13±1.129	4.04±0.436	8.99±0.609
Prealbumin:gamma	0.04±0.007	0.17±0.049	0.13±0.038	0.19±0.0788	0.02±0.006	0.06±0.010
Albumin:gamma	3.50±2.243	0.33±0.0426	0.32±0.053	0.33±0.070	0.25±0.029	0.21±0.017
Alpha:gamma	0.96±0.559	0.12±0.008	0.12±0.010	0.14±0.015	0.16±0.026	0.13±0.010
Beta:gamma	3.71±2.308	0.38±0.059	0.31±0.029	0.47±0.134	0.36±0.023	0.29±0.031
ProMMP-2(OD×mm^2)	13.23±0.634	15.859±1.051	16.09±1.618	14.36±1.546	17.84±1.725	15.41±1.067
Active MMP-2(OD×mm^2)	1.68±0.685	7.495±0.897	11.11±0.807	10.95±1.240	0.48±0.483	3.52±0.864
Total MMP-2(OD×mm^2)	16.05±0.932	19.07±1.030	17.95±1.368	20.60±1.540	18.33±1.701	18.93±0.995
Activation ratio-2	0.07±0.03	0.31±0.049	0.72±0.065	0.50±0.028	0.02±0.023	0.16±0.040
ProMMP-9(OD×mm^2)	12.68±0.583	16.43±1.389	16.99±2.356	13.39±1.105	22.908±3.925	16.150±1.841
Active MMP-9(OD×mm^2)	1.68±0.685	7.495±0.897	0.000±0.000	9.824±8.768	0.000±0.000	7.246±1.033
Total MMP-9(OD×mm^2)	11.39±0.468	14.53±1.474	17.11 ±2.357	14.14±1.350	22.908±3.925	23.395±2.045
Activation ratio-9	0.031±0.022	8.24±1.907	21.76±5.731	19.46±3.030	0.000±0.000	0.271±0.035
Total MMP-2 (ng/ml)	193.68±12.311	224.51±16.398	211.50±16.883	246.61±33.908	202.72±17.757	192.13±5.615
Total MMP-9 (ng/ml)	499.02±50.729	601.61±55.249	587.99±76.493	624.75±77.659	649.24±68.108	1003.20±52.66
TIMP-1 (ng/ml)	172.42±30.164	398.70±28.495	417.21±39.360	367.22±38.425	150.73±75.418	235.43±19.988
TIMP-2 (ng/ml)	125.66±11.021	144.37±8.752	145.50±12.203	142.22±11.316	135.11±17.296	113.00±3.643

*The values are expressed as mean± S.E.M

Conference presentations, Publications and Awards

Conference presentations from Ph. D. work:

The results of the present study were presented at various conferences

- **Amisha A Desai,** Alka A. Mehta, Shilin N. Shukla, Prabhudas S. Patel.
  Role of gelatinases in multiple myeloma
  Armed Forces Medical College, Pune, November 23-26, 2006.

- **Amisha A. Desai,** Alka A. Mehta, Shilin N. Shukla, Prabhudas S. Patel
  Serum protein profiling and glycoprotein changes in multiple myeloma
  Update for Paramedical Techniques in Pathology, GCRI, Ahmedabad October 8, 2006.

Other conference presentations:

(Nizam Institute of Medical Science, Hyderabad - NIMS AWARD)*

- **Amisha A. Desai**, Shilin N. Shukla, Pankaj M. Shah, Prabhudas S. Patel.
  Alterations in plasma lipid profile patterns in head and neck Cancer and oral precancerous conditions
  31st Annual Conference of Association of Clinical Biochemists of India. Department of Biochemistry, J. N. Medical College, Belgaum, Karnataka. December 2-4, 2004.

- **Amisha Desai**, Bharat Parikh, Pankaj Shah, Devendra Patel, Prabhudas Patel.
  Study of protein abnormalities in multiple myeloma
  29th Annual Conference of Association of Clinical Biochemists of India, Department of Biochemistry, SMS Medical College, Jaipur, February 3-5, 2003

Workshop participitation:

Variant Electrophoresis

- 33rd Annual National Conference of Association of Clinical Biochemists of India. Armed Forces Medical College, Pune, November 26-29, 2006.

Current Trends in Pharmacogenomics and Proteomics

- Zydus Cadila Research Centre, Ahmedabad, January 22, 2005.

Publications:

- Prabhudas S. Patel, Alka A. Mehta, **Amisha A. Desai**
  Techniques of cancer research in post-genomic era.
  Amala Cancer Research Bulletin, 2005; 25: 50-66.

- Rachana N. Sainger, Shaila D. Telang, Manisha H. Shah, **Amisha A. Desai,** Shilin N. Shukla, Pankaj M. Shah, Prabhudas S. Patel.
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- Beena P. Patel, Pankaj M. Shah, Upendra M. Rawal, **Amisha A. Desai,** Shakuntala V. Shah, Rakesh M. Rawal, Prabhudas S. Patel.
  Activation of MMP-2 and MMP-9 in patients with oral squamous cell carcinoma
  International Journal of Surgical Oncology, 2005; 90: 81-88.

- Patel Beena P, Shah Manisha H, **Desai Amisha A**, Dave Teena K, Rawal Rakesh M, Shah Pankaj M, Patel Prabhudas S.
  Serum iron, total iron binding capacity and transferrin saturation in patients with anemic condition and cancer.
  GCRI Bulletin, 2003; 8: 35-41.

Awards:

- **(Nizam Institute Of Medical Science, Hyderabad - NIMS AWARD)***
  Role of gelatinaese in multiple myeloma patients, November 26-29, 2006.

- **Dr. T.B. Patel Young Scientist Award (Silver medal)**
  Activation of MMP-2 and MMP-9 in patients with oral squamous cell carcinoma, May 5, 2005.

- **Best Essay Award (IACR Gujarat Chapter);** Title: Cancer Biology: Current status and future perspectives, April 25, 2005.

- **(Nizam Institute of Medical Science, Hyderabad - NIMS AWARD)***
  Alterations in plasma lipid profile patterns in head and neck cancer and oral precancerous conditions, December 2-4, 2004.