Supplementary table S3

This table summarizes discussed application potentials for MMF based on pathway analysis, explicit synlet network and existing clinical use. This list does not present all possibly synergistic drug combinations, only those for which certain experimental or clinical evidence exists or where extension of existing practice seems to be particularly interesting. Also, this compilation is not a complete representation of current MMF applications, particularly as it has been used in allograft transplantation and numerous auto-immune disorders to some degree.

Legend for Rationale to support a drug/disease MMF association:
(1) Molecular footprint
(2) SYNLET pathway enrichment (including diseases clearly implicated by a pathway)
(3) explicit SYNLET network

Proposed Indication	**Rationale**	**Suggested relationship**	**Combined synlet Drugs**	**Most advanced level of development**
Well established applications and advanced trials				
Allograft rejection	1 / 2 / 3	Inhibition	+ Pentostatin + Tacrolimus + Sirolimus	Standard of care
SLE	1 / 2	Inhibition	-	Standard of care
Multiple Sclerosis	2	Inhibition	Monotherapy	Beneficial in small-scale clinical studies
			+ Interferon-beta-1a	Phase II/III study; unclear status
Vasculitis	2	Inhibition	+ Infliximab	Phase II study; unclear status
Chagas disease	2	Amelioration or Exacerbation?	+ Pentostatin + Tacrolimus + Sirolimus	In use for heart transplantation
Relationships which experimental/clinical basis but which need further investigation				
Inflammatory bowel diseases	3	Inhibition	Monotherapy	Early clinical success
			+ Sulfasalazine	Synergy ?
Rheumatoid Arthritis			Monotherapy	In use
			+ Sulfasalazine	Synergy ?
Asthma	1 / 3	Inhibition	Monotherapy	Early clinical success
			+ Theophylline	Synergy ?
Atherosclerosis	3	Inhibition	Monotherapy	Beneficial effect in murine model
			Combination with drugs from the six approved groups	hypothetical
ventricular hypertrophy / ventricular diastolic	3	Reversal ?	+ Sirolimus	Clinically beneficial; Synergy ?

dysfunction				
Type I diabetes mellitus	1	Inhibition	Monotherapy	Lack of effect
			+ Anakinra	Phase I/II completed; Synergy ?
Potentially interesting applications/dependencies without or including only sparse experimental data				
HTLV-Iinfection	2	Amelioration or Exacerbation?	+ Tofacitinib	hypothetical
Amyotrophic lateral sclerosis (ALS)	2	Inhibition	-	hypothetical
Autoimmune thyroid disease	1	Inhibition	-	?
Viral myocarditis	1	Amelioration or Exacerbation?	-	hypothetical
Colorectal cancer	2	Inhibition	-	In-vitro ?
Acute myeloid leukemia	2	Inhibition	Monotherapy	In-vitro ?
			+ Infliximab	hypothetical
Chronic myeloid leukemia	2	Inhibition	-	In-vitro ?
			+ Infliximab	hypothetical
Pancreatic cancer	2	Inhibition	-	In-vitro ?
Renal cell carcinoma	2	Inhibition	-	In-vitro ?
Prostate cancer	2	Inhibition	-	In-vitro ?
Small cell lung cancer	2	Inhibition	-	hypothetical
ErbB-1/EGFR positive cancers	2	Inhibition	+ Nilotinib + Sorafenib + Gefitinib + Panitumumab + Cetuximab	hypothetical
Surgery (+/- Cushing's syndrome)	3	Side-effects; dosage	+ Flurane anesthetics	hypothetical